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SANITATION OF THE TROPICS WITH SPECIAL REFERENCE TO MALARIA AND YELLOW FEVER *

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If we go back to the year 1898 and consider the point of view of Europeans and their American descendants about to enter the tropics, yellow fever to them was by far the most dangerous disease with which they were likely to come in contact. I am referring now principally to the American tropics, as yellow fever affected principally this region. And this was particularly the case when it was intended to send large bodies of non-immune persons, such as our army of occupation in Cuba. Yellow fever had caused more disaster to military expeditions going to these tropics than had all the other tropical diseases put together, and it had been equally fatal to non-immune individuals in civil life. Our military surgeons, therefore, in their sanitary recommendations considered more particularly this disease.

Yellow fever frequently affected the southern portions of the United States, and military surgeons were very confident of their ability to manage it as it affected small bodies of troops, such as were stationed in the southern portions of the United States. While they knew that they could not eradicate it from a locality in which it had taken hold, their experience had taught them that by marching a small command a few miles out into the country this command would be entirely safe for a considerable length of time. This was the only measure that they knew of at that time whereby considerable bodies of men could avoid this fatal disease: that is, they could move away from the infected locality and would not carry the infection with them.

With a considerable army in active military operations, however, this method can not always be carried out, as military necessity would frequently require the army to remain in the infected locality. For the above reasons the Army Medical Corps at this time concentrated its attention on the prophylaxis of yellow fever. For two years the sanitary authorities tried by all then known sanitary means to free Havana from yellow fever. Havana at that time was properly looked on as the center from which yellow fever frequently spread to all the neighboring regions in North, Central and South America. Yellow fever had never entirely disappeared from this city for a hundred and fifty years previous to this time. Non-immune population coming in all the time furnished sufficient fuel to keep this disease constantly active.

By February, 1901, we found that after two years of steady sanitary work we had made no impression on yellow fever in Havana. Instead of this disease decreasing, we found that it had rather increased as the non-immune population increased. A board of army medical officers had been especially detailed for the investigation of this work. They did a great deal that bore no particular fruit, but they finally found that Dr. Carlos Finlay, a distinguished physician of Havana, had been maintaining for the previous twenty years that a particular mosquito, the *stegomyia*, transmitted yellow fever from person to person. They took the matter up, experimented on human beings who volunteered for this purpose, and proved that yellow fever was transmitted in this way and probably in no other way. I think this work, as conceived by Dr. Reed, the chairman of this commission, is the most mathematically convincing experimental work ever carried out on a medical subject. The results were announced in the spring of 1901 and have since been accepted by all the scientific world. The sanitary authorities of Havana at once instituted measures based on this knowledge obtained by the Army Medical Board, and in less than a year yellow fever was entirely eradicated from Havana. Since that time the same measures have been tried at other places, and sufficient success has been attained to establish these measures as the routine to be adopted in freeing a municipality from yellow fever.

We have been equally successful in freeing the city of Panama, the city of Colon and the Canal Zone from yellow fever, although it was rife here when we came, and although we have introduced some 30,000 non-immunes from the United States since that time. In order to make our methods clear I will describe what I would consider a model organization for caring for a municipality of that size. Mind you, I am describing a model organization, not what we have, but what we would like to have. We have succeeded in getting yellow fever out of Panama, but it could have been done much more expeditiously with a better organization. I write this description for the benefit of men who are undertaking municipal sanitary work of this kind. I think it advisable to always try to get the very best, and then to go ahead and do all one can, on the best that one can get.

The *stegomyia*, the mosquito which transmits yellow fever, is a mosquito which infests cities and towns and the dwelling-houses of man. It breeds principally in rain-water barrels, cisterns, wells, house gutters, etc. Therefore, the chief work of sanitation would be done from the urban centers, through the municipal sanitary organization.

The first thing in undertaking such a work is to get the necessary funds, and to establish some system of account-keeping which will both protect the officer disbursing the funds and not be too cumbersome in admin-

* Paper read before the Fourth Pan-American Scientific Congress, Dec. 25, 1908, Santiago, Chile.

istration. The next step is to get the authority necessary for enforcing the sanitary measures. To this end I would have an ordinance passed declaring it a nuisance for any property owner to have on his premises any mosquito larvæ, and prescribe a fine of from \$5 to \$10 for such offense. The sanitary officer should have powers, as far as these sanitary ordinances are concerned, such as the *alcaldes* of most Latin-American municipalities have. This would give the sanitary officer the power of assessing the fines or of revoking them at any stage of the proceedings. The fine should be collected through the courts, but the sanitary officer should be officially informed by the judge when the fine is collected, and also by the treasurer when the fine has been deposited in the treasury. In this way he can keep control of all the steps in the process.

Another ordinance should be passed giving the sanitary officer authority to abate these nuisances himself with his own force when they have not been abated by the owner of the property after a week's notice, and providing that the cost of such work be made a lien against the property, which cost is to be collected through the courts against the owner of the property. This is a very important measure, as it enables the sanitary officer at no great public expense rapidly to carry into effect his sanitary measures himself when the people affected are slow in executing the measures ordered.

A third ordinance should be passed directing that all cisterns, wells, gutters and water collections likely to breed mosquitoes must be either abolished or so screened and cared for that mosquitoes can not breed in them. With these three ordinances the health officer can rapidly get his community in such condition that very few *stegomyiæ* can breed, and the locality will soon be in such condition that there will be so few *stegomyiæ* that yellow fever can not spread.

The municipality should then be divided into inspection districts, each district to contain about 600 houses. An intelligent inspector should be placed in charge of each one of these districts and required to make a written report on every house in his district once a month concerning its sanitary condition. (An intelligent inspector should readily inspect twenty-five houses a day on the average.) His report should show the condition of the houses and premises, more particularly with regard to mosquito breeding places; how many receptacles actually had larvæ; how the barrels and cisterns were with regard to the screening; how the gutters were with regard to containing water, and as to whether there were other receptacles on the premises which were likely to breed mosquitoes. This report should go to the office daily, and the health officer should base his action thereon. The health officer should notify the owner of the premises to correct the nuisance reported by the inspector, and if on reinspection, which should be made at the end of the week, the nuisance was found to be still unabated, then the health officer should send his "cleaners" around who should clean up the premises. The inspector in charge of the cleaning squad should keep an accurate account of the expenses and this should be charged up against the property owner. If cisterns, barrels, etc., needed screening, gutters repairing, etc., the general carpenter should go around with his squad, put the property in good condition, keep an accurate account of his expenses, and charge this to the property owner. If it is a suburb of the town, and ditching and draining is needed, the health officer should send the inspector in charge of the draining squad out, who should

see that the necessary ditching is done, rendering an account of his expenses and charging this against the property owner. For this phase of the work, then, the health officer should have a very intelligent man as inspector, at the rate of one to every 600 houses: a good inspector with a sufficient number of men to do the general cleaning up; an intelligent foreman carpenter in charge of a sufficient number of carpenters to do the necessary screening of cisterns, barrels, etc. All receptacles should be fixed by this squad so that they can not breed mosquitoes. Cisterns should be thoroughly covered and the hole that is left for the water to enter should be screened so that mosquitoes can not gain access to the cistern. Water barrels should be covered in the same way and a cheap wooden spigot placed near the bottom. Gutters should be so fixed that they will not retain water. If a general water supply can be introduced into the city the matter is much simplified, as then all receptacles for storing water can be done away with.

Such an organization, in my opinion, is all that is essential for yellow fever prophylaxis. While street cleaning, garbage collection, caring for night soil, etc., are very useful adjuvants to the general health and good appearance of the municipality, they have no direct bearing on yellow fever, and the people of a poor community, that had little money to spend, would be entirely justified, I think, in adopting the organization outlined, with the idea of keeping it up for a year or two, freeing their locality from yellow fever, and considering the other municipal work mentioned at some future time when they would be better able financially to carry it out.

The actual cost for a small municipality of about 600 houses, with an approximate population of 3,000 people, would be as follows:

	Monthly Salaries.
1 Health officer	\$400
1 Clerk	125
1 Sanitary inspector	125
1 Chief carpenter	125
1 Head cleaning squad.....	125
1 Head ditching squad.....	125
20 Laborers at \$30.....	600
Material	275
Total	\$1,900

These are maximum figures and would probably not be paid under ordinary circumstances. They are based on the rates and salaries that at present prevail at Panama.

In addition certain measures should be carried out looking to the caring for the sick. An ordinance should be passed requiring all yellow fever suspects to be reported at once to the health officer. As soon as a case is reported the health officer, if he considers it yellow fever, should have the patient isolated at once, either by being sent to the hospital, which hospital should be carefully screened, or he should have the room where the patient is lying screened. I think it best to leave this to the choice of the patient. If the patient elects to stay at home the screening should be so done that there would be only one door of entrance, and this door should be guarded by a watchman of the sanitary department whose duty it is to see that no one has access to the patient except those authorized by the health officer; this with the object of seeing that non-immunes do not go and come.

After the case has terminated the building occupied by the sick person, and the contiguous buildings, should be fumigated with some good insecticide. I prefer sulphur wherever possible. Where sulphur can not be used I recommend pyrethrum. It is very important that the man at the head of affairs should have a thorough knowledge of the details of all these matters. He should know whether the screening is properly done; when fumigating, whether the pasting has made the building sufficiently tight, etc. It requires considerable experience to become expert in all these details, and a mere theoretical knowledge is at first not of much avail.

For the small community, above described, these measures of caring for the sick and destroying infected mosquitoes need not add to the force. The health officer himself would have plenty of time to look after the sick. The chief carpenter with his squad could do the screening, and the inspector in charge of the cleaning squad could do the fumigating.

The relative cost would, of course, decrease as the size of the municipality increased. Take a municipality ten times the size of the one described, with a population of about 30,000 people, who would live in some 6,000 houses. The personnel would be increased about as follows:

	Monthly Each.	Salaries. Total.
1 Health officer	\$400	\$400
10 Sanitary inspectors	125	1,250
2 Clerks	125	250
1 Chief carpenter	125	125
2 Carpenter foremen	75	150
1 Head of cleaning squad.....	125	125
4 Foremen	75	300
1 Chief of ditching squad.....	125	125
1 Foreman	75	75
60 Laborers	30	1,800
Material	400	400
Total		\$5,000

Here you see that our unit of 600 houses, instead of costing \$1,900 per month, would cost only \$500 per month, and, of course, as the municipality increases in size the cost per unit would continue to decrease. In this estimate for a large municipality I am not including the cost of care of the sick, as the municipality of this size would necessarily have some hospital in which the sick would be cared for.

In the municipality the same measures that are directed against yellow fever will avail against malaria. This has occurred in Havana, Cuba. The anti-mosquito work done there in the past ten years has practically eliminated malarial fever. The deaths from malaria prior to 1896 averaged about 250 per year. This has gradually fallen until in the last year or two they have had less than fifty deaths per year. In a city situated as is Havana, this, I think, means the extinction of malaria. The fifty deaths occurring every year at present in Havana, due to malaria, are probably caused by the persons affected by malaria who come in from the rest of the island. Havana is the metropolis of Cuba; all the large hospitals are located there, and a great many people, whenever taken sick, come in from all parts of the island to these hospitals for treatment. In the ordinary course of affairs a large number of malaria patients come into the city from the rest of the island in connection with their routine business.

Great strides in diminishing the spread of yellow fever all over the world have been made in the last ten years. Ten years ago the four principal centers of yellow fever in the world were Vera Cruz, Havana, Rio

Janeiro and Guayaquil. Of these Havana and Rio Janeiro were much more important centers of infection than Vera Cruz and Guayaquil. From Havana yellow fever has practically been eliminated, and within the last six months Rio Janeiro has been almost as successful. In Vera Cruz yellow fever has become sporadic instead of being endemic. Sporadic cases within the last year have occurred in several different parts of tropical America, and a few on the west coast of Africa, but nothing comparable with what it was ten years ago. It seems to me that yellow fever will entirely disappear within this generation, and that the next generation will look on yellow fever as an extinct disease having only a historic interest. They will look on the yellow fever parasites as we do on the three-toed horse—as an animal that existed in the past, without any possibility of reappearing on the earth at any future time.

Concerted effort on the part of the countries in which it now occurs, I think, would extinguish the disease at once at no very great expense and without undue labor. I believe that if this congress could get the governments of the various countries in which yellow fever has occurred during the past year to agree to keep such an organization as I have outlined, which could be sent at once to the locality where yellow fever appears, and there stamp it out, at the end of two years yellow fever would have disappeared from the western hemisphere.

THE FUNCTION OF THE END-ORGANS IN THE VESTIBULE AND SEMICIR- CULAR CANALS

AND SOME METHODS FOR EXAMINING THESE CANALS IN
PRACTICAL DIAGNOSIS

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CHICAGO

In order to understand the disturbances in function arising from the diseases of the vestibule and semicircular canals, as well as the principles involved in diagnosing these conditions, it is necessary that one keep clearly in mind a few fundamental facts in regard to the anatomy and the physiology of these structures.

Only a few years ago physiologists looked on the internal ear as a mechanism that had to do solely with the function of hearing. This function they assigned to the three parts of the labyrinth as follows: To the end-organs in the cochlea was attributed the function of tone perception; to the end-organs in the vestibule the function of noise perception, and to the semicircular canals was attributed the function of determining the direction from which sound comes.

The more recent studies of the internal ear justify the conclusion that the cochlea alone is interested in sound perception, whether this be in the nature of noises or musical tones, and that the end-organs in the vestibule and semicircular canals have to do with the important function of preserving the equilibrium. This latter function is accomplished by these several end-organs as follows: From the vestibule we get our knowledge of position in space; from the semicircular canals our knowledge of turning motions. The data derived from these two sets of end-organs seems to be sufficient to account for the function of equilibrium.

The function attributed to the vestibule is accomplished as follows: There are located in the vestibule two end-organs, identical in structure, but placed on

planes at right angles to each other. These are the so-called macula acustica of the utricle and the macula acustica of the saccule. These end-organs consist of a large number of hair-bearing cells. The hairs from these cells project into a superimposed jelly-like structure, in which there is imbedded a large number of small crystals of oxalate of lime, called otoliths. The otoliths give to this otolith membrane a specific gravity slightly greater than the surrounding endolymph. These end-organs in the vestibule perform their function of giving us our idea of position in space as follows: Placed at right angles as they are to each other, with each change in the position of the head, the otolith membranes, owing to their greater specific gravity, either press or drag on the hairs of the underlying hair cells in such a way as to produce a different kind of stimulus for each different position assumed.

The semicircular canals are three in number and occupy approximately the three planes in space. Each canal is provided with an expansion at one end, called the ampulla. In this ampulla is located the end-organ for the canal, which is constructed as follows: A ridge from the outer wall projects into the space of the am-



Diagram of horizontal canal.

pulla and is covered with the hair-bearing neuroepithelium. This ridge is known as the crista acustica ampullaris. Capping the ridge is a peculiar elastic structure, called the cupula, with the under surface of which the hairs of the hair cells come in direct contact. This entire apparatus is so arranged that any motion in the endolymph of the semicircular canal must impinge directly against this cupula and tends to bend it over in one direction or the other. A turning motion of the head in any plane whatsoever must necessarily result in a motion of the endolymph in one or several of these semicircular canals, thus producing a stimulation of the hair cells in their respective ampullæ.

In order to get a clear idea of the physiology of the semicircular canals we have but to attach to the inside of a bucket filled with water a tuft of elastic hairs. Let this tuft represent the cupula placed over the crista acustica of the ampulla, then a bending over of this tuft in either direction would constitute a stimulation of the underlying hair cells of the crista ampullaris. If now the bucket is rotated very slowly the water will be able to take on the motion of the sides of the bucket, and the tuft of hair will not be bent over, and there will result no stimulation of the hair cells. When the bucket is rotated more rapidly the tuft will be bent backward in a direction opposite to the motion of the bucket,

being carried back by the water which does not, for some time, take on the motion of the turning bucket. If, however, the turning of the bucket is kept up long enough the water will finally be turning just as rapidly as the bucket itself, and again the tuft of hairs will project straight out into the water and will not be bent to either side. If the bucket is suddenly stopped the water will continue whirling for some time, and the tuft will now be bent over again, but this time in the same direction as that in which the bucket was being turned.

After witnessing this demonstration with the turning bucket of water one can readily understand the following phenomena that present themselves when a person is placed on a rotating chair: If the chair is rotated very slowly no sense of turning is experienced, provided the eyes are closed, for the reason that the endolymph in the semicircular canals takes on the motion of the walls of the canal and the cupula is bent neither this way nor that. If the turning is more rapid a sense of turning is readily experienced, at the same time a reflex eye symptom will become apparent. This is a nystagmus, increased when the eyes are turned in the direction of the rotation. In case the whirling continues long enough the person will lose all sense of turning and the nystagmus will cease, for the reason that the endolymph in the semicircular canals takes on the motion of these canals and the cupula is not pressed on, and so can not stimulate the hair cells. On stopping suddenly the individual will immediately experience vertigo and the nystagmus will return, but now it will be directed to the side opposite to the turning, just as would be expected from an observation of the experiment with the bucket of water. With the rotating chair it is possible to demonstrate that there is destruction of the semicircular canal apparatus such as occurs in epidemic cerebrospinal meningitis. In these cases neither vertigo nor nystagmus can be produced by turning, and such persons do not experience seasickness.

Besides this experiment of the rotating chair there are several other methods of examining the semicircular canals; two of these methods are dependent on the production of a motion in the endolymph in the canals.

In 1892 Ewald performed the interesting experiment of making a small opening in the horizontal canal of the pigeon, into which he fixed a small canula, and found that when pressure was exerted on the fluid in the canal by compressing a rubber bulb attached to the canula, marked nystagmus was readily induced. This experiment is successfully used in diagnosing the presence of an opening into the labyrinth such as sometimes occurs by erosion in cases of cholesteatoma. All that is required in these cases to produce vertigo and nystagmus is to compress or rarefy the air in the external meatus.

The third method of examining the condition of the semicircular canals is that recently elaborated by Barany of Vienna. This consists of the production of a motion in the endolymph of the semicircular canals by chilling or warming the part of the capsule of the labyrinth exposed in the tympanum and antrum by syringing the external canal with cold or with warm water. The motion in the endolymph produced by syringing the ear with cold water will, of course, be just opposite to that produced by syringing with warm water. Using water at the temperature of the body will naturally produce no motion in the endolymph. The stimulation of the semicircular canals by means of hot or cold water

will be much more readily obtained in cases in which a large perforation of the membrana tympani permits the water to come into direct contact with the wall of the labyrinth. This stimulation is also the more readily obtained by using water quite warm or quite cold. The force of the stream has naturally no influence on this stimulation.

The study of the occurrence of vertigo and nystagmus, both that observed in disease of the labyrinth and that brought on by syringing the ear with hot and cold water, has established the following facts, which are of great assistance in diagnosis not only of the labyrinth but of the cerebellum as well:

1. If the semicircular canals are normal and the ear is syringed with cold water, vertigo will result, and there will be set up a nystagmus increased by directing the eyes toward the opposite side. If the ear is syringed with warm water the same symptoms will occur, but the nystagmus will be toward the same side.

2. Should there exist an irritation of the endings of the vestibular nerve in the labyrinth, such as may be occasioned by a circumscribed suppuration in the labyrinth, there will be spontaneous nystagmus directed toward the same side. Syringing the ear with cold water will produce a positive reaction.

3. If there occurs a sudden destruction of endings of the vestibular nerve, such as would be occasioned by a diffuse suppuration in the labyrinth, there will be set up a spontaneous nystagmus directed toward the opposite side, but lasting only from a few days to several weeks. This nystagmus has its origin in the opposite normal ear. Syringing the affected ear with hot and cold water produces no response.

4. In case of long standing destruction of the nerve endings in the vestibular nerve, such as occurs in chronic diffuse labyrinth suppuration, there will be no spontaneous nystagmus and no reaction can be obtained by syringing the ear with hot or cold water.

5. In case of cerebellar disease, such as cerebellar tumor, cerebellar abscess or a meningitis in this locality, there will occur a spontaneous nystagmus directed toward the affected side.

It follows, therefore, that in case there exists pronounced rotating nystagmus, and the membrana tympani is normal, showing an absence of an inflammation in the middle ear, the presence of a cerebellar tumor should be suspected. On the other hand, should there exist pronounced spontaneous rotating nystagmus in a case of suppurative otitis media without fever, but with severe deafness, and this nystagmus is directed toward the affected side, while the syringing of the ear with cold water produces no response, the diagnosis of a cerebellar abscess is the probable one. Here the complete destruction of the hearing in the affected ear would indicate a probable diffuse suppuration of the labyrinth. The failure to get the caloric response on syringing points to destruction of end-organs in the semicircular canals. The only spontaneous nystagmus which this lesion could produce would be directed toward the opposite side. The absence of rise of temperature would in most cases eliminate a meningitis as the source of the nystagmus, while a cerebellar abscess pressing on the vestibular nerve could produce a spontaneous rotating nystagmus, which would be increased by directing the eyes toward the affected side.

100 State Street.

INTESTINAL LOCALIZATION

WITH CERTAIN OTHER SUBJECTS RELATING TO THE SURGERY AND SURGICAL ANATOMY OF THE SMALL INTESTINE AND ITS MESENTERY

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This article is, with a few changes, the text of a demonstration on the cadaver which I gave in Boston, May 1, 1908, by invitation, before the Society of Clinical Surgery. The subjects considered have little to connect them, except that all of them relate to the surgery, or to the surgical anatomy, of the small intestine and its mesentery. The procedures described are taken mostly from cadaver studies which I have made from time to time. Some of these studies have already been published at greater length in former articles.¹ The object of the present article is to present, in a form as condensed and practical as possible, some of the procedures with which these studies were concerned. An effort has been made to elucidate the text by a free use of illustrations—a method which, useful as it may be in many instances, is unfortunately not wholly satisfactory as a substitute for actual demonstration.

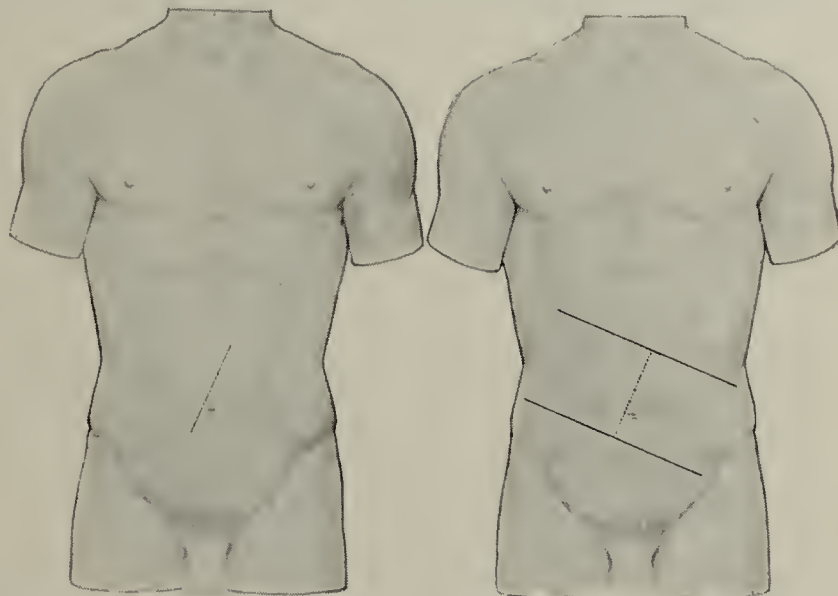


Fig. 1.—Diagram showing on the abdominal wall a surface marking, which corresponds approximately with the root of the mesentery. (This diagram and the next one are taken from a former article, but a different figure has been used.)

Fig. 2.—Diagram showing on the abdominal wall three oblique lines. The dotted line (the same as already shown in Fig. 1) corresponds approximately with the root of the mesentery; the two heavier lines indicate the division of the abdominal cavity into thirds.

While some of the procedures described have repeatedly been employed with success in operations, others—which have not been used in operations—are presented merely as procedures which, from an anatomic point of view, are possible. Others, again, are simply anatomic demonstrations.

THE MESENTERY

As the mesentery will frequently be referred to in this article, it is desirable at the outset to make a few general remarks about this structure, especially in regard to its root, its shape, and the disposition of its different parts.

The Root of the Mesentery.—The part of the mesentery where the vessels enter is, as pointed out by Treves,

1. Intestinal Localization, Ann. Surg., October, 1903; Studies in the Surgical Anatomy of the Small Intestine and its Mesentery, Ann. Surg., October, 1905; Experiments in Flushing the Intestinal Canal with Salt Solution Through Multiple Enterotomy Openings, Ann. Surg., June, 1908.

the real root of the mesentery. For the reason, however, that the mesentery is attached to the back part of the abdominal cavity for about six inches below this point, the term "the root of the mesentery"—in practice, at least—is usually considered to include the six inches of attachment. This root lies obliquely in reference to the spine, and, as shown in Figure 1, can be marked out with a fair degree of accuracy on the abdominal wall.

The Shape of the Mesentery and the Disposition of Its Different Parts.—Though the root of the mesentery measures only about six inches, the intestinal border of

In order to make this determination, the surgeon depends principally on two factors:²

1. A knowledge in regard to the part of the intestine he is most likely to meet with in a wound which has been made through any part of the abdominal wall.

2. A familiarity with the general characteristics of the intestine in the different parts of its course, and also with the characteristics of the adjacent portion of the mesentery.

1. *The Part of the Intestine Most Likely to Be Encountered in Wounds in Different Parts of the Abdominal Wall.*—Although the intes-

tines may readily change their position, because of any one of a number of causes, and, although they may not be placed in exactly the same way in any two abdominal cavities, nevertheless the different parts of the intestine have their usual lodging-places, and it would seem to be worth while for the surgeon to know where these places are. Now, in a general way, the uppermost third of the intestine usually occupies the large cavity on the left side of the abdomen, high up underneath the ribs; the middle third occupies the middle part of the abdomen and the left iliac fossa; and the lowest third the right iliac fossa and the pelvis. Occasionally a loop from the lowest part of the intestine may be found high in the abdomen, but this is un-

usual; it is even more unusual for a loop from the highest part of the intestine to lie near the pubes—a statement the truth of which any one may test by attempting, on cadavers, to draw down such a loop.

The three compartments which the different parts of the small intestine usually occupy can roughly be

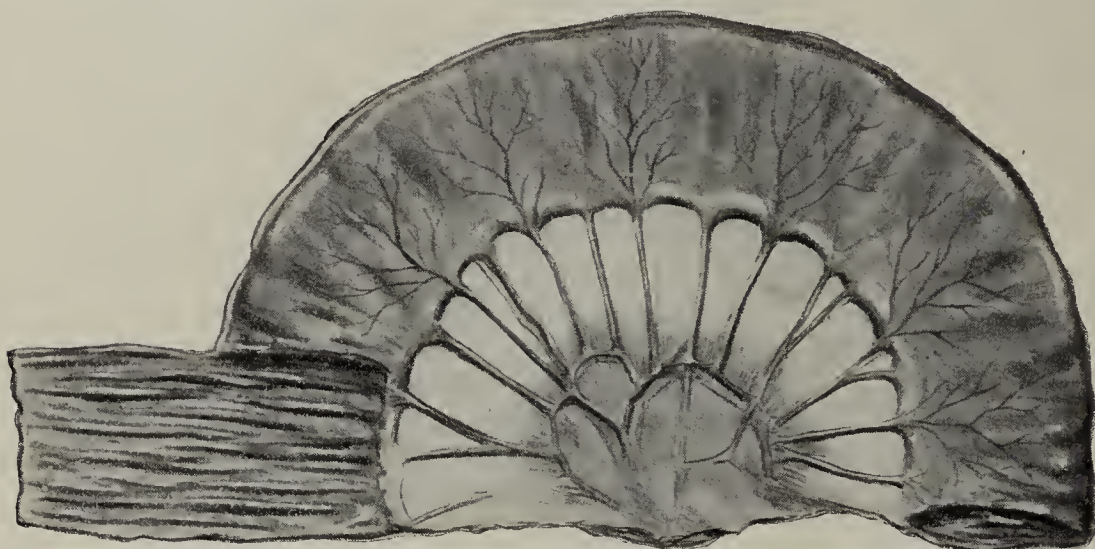


Fig. 3.—A loop, with attached mesentery, from the small intestine of a thin muscular (male) subject. It belongs to the uppermost part of the bowel, as is shown by its large size, its obvious thickness, its vascularity, and by the presence of large and numerous valvulae conniventes; and also because of the presence of large, long and straight vessels in the mesentery radiating to the gut from arches mostly primary. There is very little fat in the mesentery, and the transparent spaces between the vessels are very extensive.

this structure measures thirty to sixty times as much. This means, of course, an enormous expansion—an expansion which, however, is greatest in the outer third or fourth of the mesentery. It is with this greatly elongated outer border, or "ruffled border"—a term I have applied to it—that the surgeon has most to do.

It is obvious that such a structure as the mesentery, in order that it may be accommodated in the abdominal cavity, must be thrown into many folds—folds which are even more numerous in cases in which the length of the intestine is greater than usual. These folds are, naturally, simplest near the root of the mesentery, where the diameter of that structure from above downward is comparatively little increased. Of these main folds, the first one, arising from the upper part of the mesenteric root, is generally directed to the left side of the abdomen; the one next lower down to the right; while those arising below proceed somewhat indefinitely from the lower part of the mesenteric attachment to both sides of the abdomen and the pelvis. The various coils of intestine, naturally, occupy the same regions as the corresponding parts of the mesentery.

INTESTINAL LOCALIZATION

"Intestinal localization" (a term which I suggested some years ago) means the determination by the surgeon of the part of the intestine to which any given presenting in an abdominal wound, belongs.



Fig. 4.—A loop, with attached mesentery, from the small intestine of the same subject as shown in Fig. 3. It belongs to the lowest part of the bowel, as is shown by its smaller caliber, its comparative thinness, the absence of vascularity and of valvulae conniventes; and also by the presence in the mesentery of comparatively short, small and somewhat tortuous vessels which radiate from arches mostly secondary or tertiary. The fat in the mesentery is more abundant than in the specimen shown in Fig. 3, and it approaches nearer to the intestine. For this reason the mesentery here is much more opaque, the vessels are somewhat obscured, and the transparent areas small.

indicated on the surface of the abdomen by means of two lines, drawn at the extremities of the oblique line already shown in Figure 1, and at right angles to it.

2. The absence of such pathologic conditions as might interfere with the process of localization, here described, is, of course, assumed.

This division of the abdomen into three compartments is shown in Figure 2. Now, speaking generally (for one should not forget that there are occasional exceptions) the compartment above the first line lodges the uppermost third of the small intestine, that between the first and second lines lodges its middle third, and that below the second line its lowest third. The surgeon may, therefore, knowing what compartment his incision has opened up, roughly determine what part of the intestine he is most likely to encounter there. If his incision is in the upper part of the abdomen, especially if it is in the middle line or to the left of it, any loop of small intestine he meets will belong probably to the uppermost third of the intestine; if his incision is in the middle part of the abdomen or in the left iliac fossa, the loops will belong probably to the middle third; and, finally, if his incision is in the right iliac fossa or to the right of the rectus muscle, or even in the median line between umbilicus and pubes, the loops will probably belong to the lowest third of the intestine.

2. *The Characteristics of the Intestine (and Attached Mesentery) in the Uppermost Third of the Bowel Compared with Those of the Intestine (and Attached Mesentery) in the Lowest Third.*—If the surgeon picks up a loop of small intestine which belongs to the uppermost third of the bowel (Figs. 3 and 5) he will notice that it is thick,³ and that in many cases it feels even "fleshy." Holding it now between the thumb and fingers of one hand, and stroking it downward in the direction of its axis, between the thumb and fingers of the other, he will distinctly feel the valvulae conniventes, as his fingers pass over them. He will probably observe

that the intestine is of large size and very vascular, being covered with numerous branching vessels. Indeed, everything about the loop will probably suggest to him a high degree of physiologic activity of this part of the bowel.

The amount of information which the surgeon will get by an examination of the attached mesentery depends largely on the amount of fat there. If, as one would expect in a thin subject, there is little fat in the mesentery, he will be able to see the blood vessels, to note their characteristics, and thus to get considerable



Fig. 6.—A loop, with attached mesentery, from the small intestine of the same subject as the loop in Fig 5. It belongs to the lowest part of the bowel, as is shown by its thinness, its small caliber, the absence of vascularity, and of valvulae conniventes; also by the fact that the vessels in the mesentery are hidden in a thick layer of fat. Little tabs of fat encroach on the wall of the intestine itself.

information as to the part of the mesentery he is examining; but, if there is so much fat as to conceal the vessels entirely, he will, for localization purposes at least, not secure very much information, unless, by transmitted light, he is able to get some idea as to the course of the vessels. Luckily, however, the fat is not often present to such a degree as entirely to conceal the vessels (Fig. 5), and they—at least that part of them nearest to the intestine—are usually fairly well defined.

In a case, then, where the vessels are visible, the surgeon will probably notice at once that these vessels are large, long and straight and that they radiate from the depths of the mesentery directly to the intestine. He will probably also be able to see, especially if he retracts the edge of the wound, that these vessels arise mostly from primary arches, deep in the mesentery. A few secondary arches may be seen, but these are usually more characteristic of the mesentery opposite lower parts of the intestine. The parts of the mesentery between the vessels will probably be more or less translucent, or, near the intestine, even transparent. These transparent spaces between the vessels appear like little windows, as it were, through which one may look; because of their shape and transparency I have

called them "Innettes." Sometimes these little spaces are so small that they can not be seen without firmly drawing up the loop of bowel, when, the mesentery being tense, they can usually be made out very close to the intestine.



Fig. 5.—A loop, with attached mesentery, from the small intestine of a subject (female), which had less muscle and more fat than the subject which furnished the specimens in Figs. 3 and 4. This loop belongs to the uppermost part of the bowel, as is shown (just as in Fig. 3, though most of the characteristics are less marked here than there) by its large size, its comparative thickness, its vascularity, and the presence of large and numerous valvulae conniventes; also, by the large, long and straight vessels in the mesentery, which vessels radiate to the gut from arches mostly primary. There is a good deal of fat in the mesentery, and, because of this, the vessels are somewhat obscured, and the transparent areas near the intestine are very small.

3. The word "thick" is used here in a relative sense. It means that this loop of bowel is thick as compared with a loop from the lowest part of the same bowel. Vigorous males would be apt to have a thick muscular intestine, while in less strongly developed individuals, as, for instance, in women, the intestine would be thinner throughout. In any intestine, however, the upper part of the bowel is usually appreciably thicker than its lower part. Most of the other characteristics spoken of are also relative.

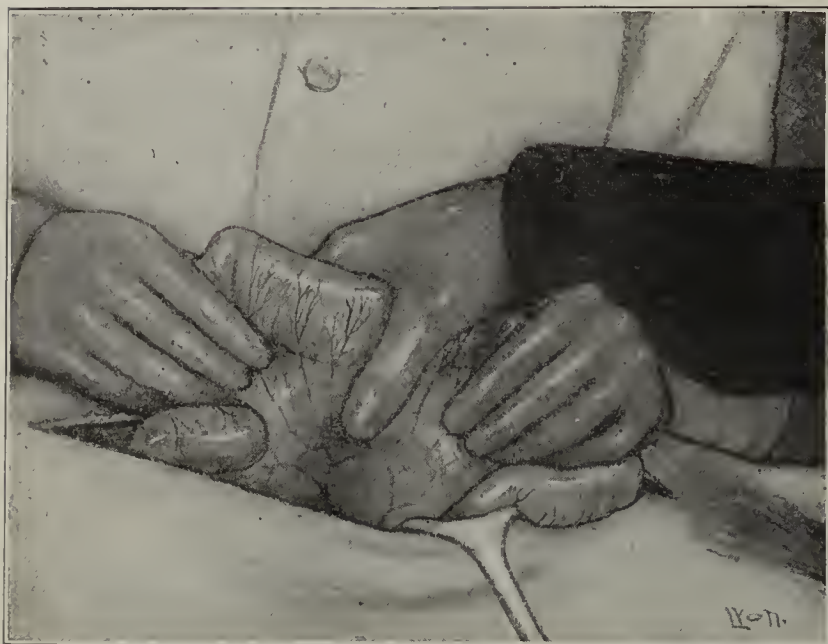


Fig. 7.—A method of determining the real direction of the intestine by palpation of the root of the mesentery.

The liberal supply of large vessels in this part of the mesentery suggests at once to the surgeon's mind that more blood is going to the attached loop of intestine than is necessary for the nourishment of this loop; and, again, the idea of the high degree of physiologic activity of this part of the intestine is forced on his attention. Occasionally the surgeon may be able to see the lacteals in this part of the mesentery; for these little vessels, when filled with chyle, appear as milk-white streaks proceeding, in an irregular course, from the intestine to the deeper parts of the mesentery.

Turning now to a consideration of a loop of bowel—with its attached mesentery—from the lowest third of the intestine, the surgeon sees a different picture (Figs. 4 and 6). This loop of bowel is usually thin, and is generally of a smaller caliber than that of a loop from the uppermost part of the bowel.⁴ Few valvulae conniventes can be felt through its walls, or even none at all. Finally, it is probably less vascular than is the loop higher up in the bowel.

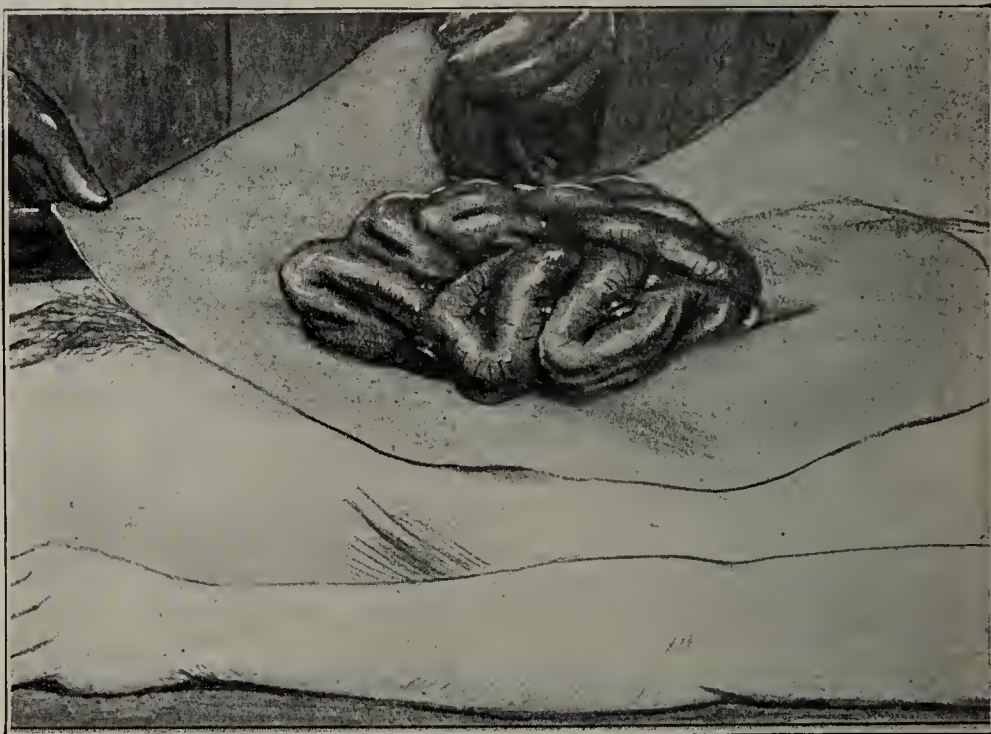


Fig. 9.—Method of using a single sheet of thin rubber tissue for the purpose of protecting the coils of small intestine during the period while they are outside of the abdominal cavity.



Fig. 8.—Method of using two sheets of rubber tissue for the protection of intestinal coils while they are outside of the abdominal cavity.

The vessels of the mesentery, if they can be seen at all through the fat, are comparatively short, small and often more or less tortuous in their course. If the edge of the abdominal wound is strongly retracted these vessels may, in case the mesentery is very thin, be seen to rise from secondary or even tertiary arches. It is unlikely that the surgeon will see any lacteals in the mesentery opposite this part of the intestine. Everything, in fact, will probably suggest to him a low degree of physiologic activity. This low degree of physiologic activity probably explains why such great lengths of this part of the intestine may be excised without seriously interfering with the nutrition of the patient. Excision of only a few feet of the upper part of the jejunum would probably kill him.

There is almost always more fat in this part of the mesentery than there is in that part of it attached to the upper portion of the bowel. For this reason the mesentery here is much more opaque. Moreover, the fat usually lies nearer to the intestine, a common characteristic of this part of the mesentery being, in fact, that

little tabs of fat project from it on the bowel itself (Fig. 6)—a condition rarely found in the mesentery opposite the upper part of the intestine, except in subjects with an unusual amount of fat.

Recapitulation.—The distinguishing characteristics, then, of a loop of bowel near the upper end of the intestine, and of the mesentery attached to it, are as follows:

The bowel is usually thick, of large caliber, very vascular, and it contains large and numerous valvulae conniventes, which can easily be felt through the walls of the intestine. The attached mesentery—if there is not too much fat in it—exhibits large, long, straight vessels radiating to the intestine from arches (principally primary) deep in the mesentery. There may be so much fat in the mesentery as to obscure the vessels, or even to hide them, but ordinarily the mesentery here is likely to

4. One should not forget, however, that, on the living subject, the apparent size of a loop of bowel as well as the thickness of its walls may vary in accordance with its state of contraction or distension. In some cases of chronic obstruction, also, the size of the intestine above the obstruction may be greatly increased, as well as the thickness of its walls.

be thin and to show the vessels, and between them translucent, or even transparent, areas close to the intestine.

On the other hand, the distinguishing characteristics of a loop of bowel near the lower end of the intestine, and of the mesentery attached to it, may be summarized as follows:

The bowel is usually thin, is likely to be of comparatively small caliber, and only moderately vascular; while probably no valvulae conniventes can be felt through its walls. The attached mesentery has relatively small, short, tortuous vessels, which spring from secondary, or even tertiary loops deep in the mesentery. There is usually more fat in this part of the mesentery than there is in that part opposite a loop near the upper end of the intestine, and, for this reason, the mesentery here is usually thick and opaque and the vessels are obscured, or, in very fat mesenteries, entirely hidden. In many cases little tabs of fat can be seen extending from the mesentery a short distance on each side of the bowel.



Fig. 10.—Method of drawing to one side the small intestine (enveloped in thin rubber) and retracting the abdominal wall on the other side, so as to bring into view the great left fossa of the abdominal cavity.

The characteristic features of the intestine (and its attached mesentery) in its upper part are thus contrasted with those of the intestine (and its mesentery) in its lower part, in order to emphasize the differences between them. The transition which these features undergo from one end of the intestine to the other is a gradual one; and it is by an estimate on the part of the surgeon as to the stage in this transition, which any given loop represents, that he is assisted in getting a fair idea as to the position of this loop in reference to the rest of the intestine. The thicker, the larger, the more vascular the loop, the more distinctly the valvulae conniventes can be felt through its walls; and, in the mesentery, the larger, the longer, the straighter the vessels, and the greater the transparency, or, at least, the translucency, of that structure, the more probable it is that the loop in question belongs to the upper part of the bowel.

On the other hand, the thinner, the smaller, the less vascular the loop, the less the valvulae conniventes can be felt through its walls; and, in the mesentery, the smaller, the shorter, the more tortuous the mesenteric

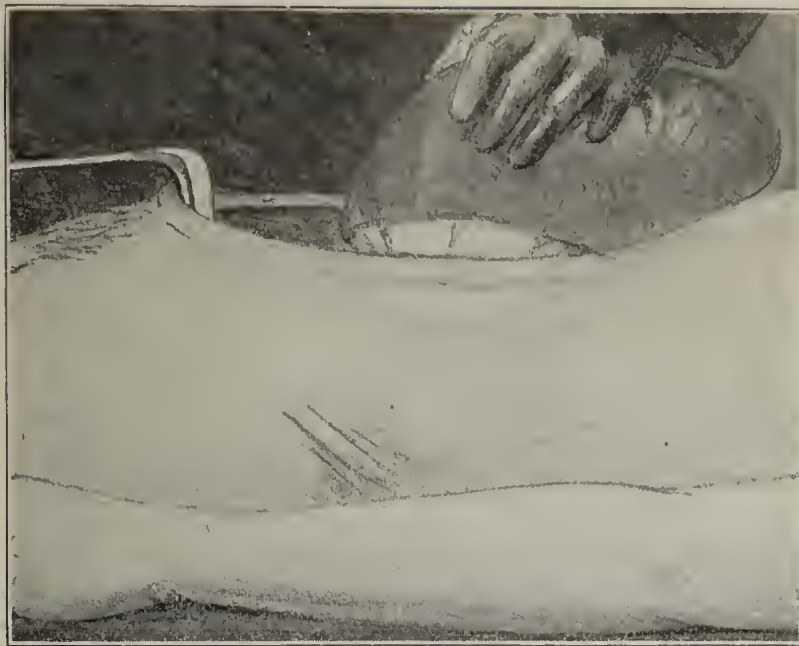


Fig. 11.—Method of inspecting the pelvis while the abdominal wound at its lower end is broadened and drawn downward and the small intestine, protected by a thin rubber covering, is gently drawn upward.

vessels, the thicker and more opaque the mesentery itself, especially if tabs of fat project from it on the bowel, the more certain it is that the loop belongs to the lower part of the bowel.

It is not by the presence of any one of these characteristics that the surgeon is able to get a satisfactory idea as to the real position in the intestine of any loop he may examine, for there is no single sign so characteristic of any part of the intestine as to enable him to determine what that part is, except at the two extremities where the intestine is fixed. He must, therefore, estimate the position of a given loop by a combination of characteristics just as he makes a diagnosis of a disease by a combination of symptoms. In making this estimate he is also influenced, as already stated, by knowing what part of the intestine he is most likely to meet with in the wound he has made.

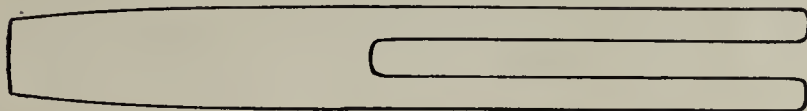


Fig. 12.—The elevation of all the coils of the small intestine on an instrument specially designed for this purpose.

It is in this way that the surgeon localizes a loop of bowel, and, though he may never do so exactly, yet, with a little practice, he ought to do so near enough for his purpose. When he needs the information, this is certainly better than no localization at all.

THE DETERMINATION OF THE REAL DIRECTION OF THE BOWEL IN ANY GIVEN LOOP

To know the real direction of the bowel in any given loop (or, in other words, to discover which is the proximal end of the loop and which is the distal) is, of course, often useful to the surgeon; therefore, it seems appropriate here to describe a method by which, in cases in which the abdominal wound is large enough to permit palpation of the mesenteric root, he can, without much trouble, determine it.⁵ The procedure is as follows (Fig. 7): The loop is drawn well out of the wound, and its two extremities held upward by the assistant, the axis of the loop being kept by him parallel to the known axis of the root of the mesentery. The surgeon's right hand is now applied to the loop in such manner that his thumb is on one side of the mesentery



Fig. 13.—Small intestine suspended on a rod, after having been gathered up on it loop by loop.

and his first two fingers are on the other. The thumb and fingers are then gently pushed downward in the direction of the root of the mesentery. If, by palpation of the mesentery, the surgeon detects no twist in it, he at once knows that the upper end of the loop (as it is then held) will, if followed up, conduct him to the duodenum, and that the lower end will conduct him to the ileocecal valve. If, however, there is a twist in the mesentery, the surgeon should withdraw his hand, remove the twist by turning the bowel, and examine again. When, finally, no twist remains in the mesentery, the surgeon knows, just as in the first instance in which no twist was found, that the end of the loop which is uppermost is the one which leads to the duodenum, and that which is lowest to the ileocecal valve.

The same determination may, in certain cases, be

made by inspection alone, if the abdominal wall on one side of the wound, and the coils of intestine under it, are strongly retracted.

PROTECTION OF COILS OF INTESTINE OUTSIDE THE ABDOMINAL CAVITY

As it often happens that the surgeon brings out a considerable part of the intestine through an abdominal wound, or that, in spite of his efforts to keep coils, when they are distended, within the abdominal cavity, they still protrude through the wound, it is obviously desirable to protect them so long as they remain outside of the abdominal cavity. Towels, which have been wet with hot saline solution and wrapped about them, are heavy, rough and easily displaced; they also soon get cold. In a number of operations on patients, as well as on animals, I have found the use of two sheets of thin rubber to be of much value in protecting these intestinal coils from injury and infection, and in keeping them warm and moist (Fig. 8). One of these sheets, with a short slit near its center, is laid on the abdomen in such position that the slit is directly over the abdominal wound. The intestines are then drawn out through the wound and through the slit, and are made to rest on the smooth upper surface of the sheet of rubber. If this sheet is large enough—it should be at least eighteen inches square—the bowels, on account of the restraining effect of the mesentery, can not reach beyond its borders. The second sheet of rubber is used to cover the bowel. If the surgeon wishes for any purpose to open the bowel, he can perforate the second sheet, and, through the opening thus made, he may draw out the loop of the bowel on which he intends to operate; or, if he prefers to do so, he may, without perforating the second sheet, draw this sheet around the loop of bowel, constricting the loop as much as he wishes by drawing a piece of the rubber sheet tightly about it, and fastening the ends of this piece together with the hemostatic forceps.

By means, then, of these two sheets of thin rubber the bowels may be kept moist and warm and protected from injury and infection.

If the lower sheet of rubber is large enough it may be turned up over the bowels in the way indicated in Figure 9, and thus be sufficient protection to them, without the second sheet being needed.

Even in cases in which, for the purpose of opening the intestine, only a single loop of bowel is drawn outside of the abdominal cavity, this loop may, before it is opened, first be drawn through a small slit in a sheet of this rubber, and the peritoneal cavity, by this maneuver, be sufficiently protected from the escaping contents of the bowel. It would seem that surgeons might well learn a lesson from the dentists in regard to the use of the rubber dam.

It is well to have these sheets of rubber sterilized, and, like rubber gloves, kept ready for use. They may be soaked in warm salt solution just before using.

INSPECTION OF THE ABDOMINAL CAVITY WHEN THE SMALL INTESTINE LIES OUTSIDE OF THE ABDOMINAL WALL

If all of the movable part of the small intestine is outside of the abdominal cavity, and rests between the two rubber sheets, the great cavities of the abdomen (that is, the fossa on the left side, that on the right, and, also, the cavity of the pelvis) may be inspected with comparative ease—and such of their contents as

5. When I first made tests in reference to this procedure I thought that the principle on which this determination rested was new; but, later, I learned that it had already been suggested by Dr. R. F. Rand (Lancet, Dec. 22, 1883, p. 1083). I have also found a few references to the principle in text-books—of later date, however, than that of Dr. Rand's article. But, so far as I know, the idea of the surgeon's thumb and fingers "straddling" the loop, as it were, so as to allow palpation of both sides of the mesenteric root at once, is not suggested in any of these places.

remain examined—by gently drawing the rubber sheet and the bowels first to one side, then to the other, and finally upward, a broad retractor being used at the same time to draw the abdominal wall away from the mesentery (Figs. 10 and 11).

This same procedure has been carried out (on the cadaver, at least) even more satisfactorily by the use of a large instrument, shaped like a tuning-fork, and consisting of two parallel arms and a broad handle (Fig. 12). The instrument is well rounded and smooth, so as to minimize the possibility of damaging the intestine or mesentery. The arms are eight and one-half inches long, and the interval between them is a little less than three-quarters of an inch. The whole instrument is about fifteen inches long. It is intended for the purpose of elevating and supporting the intestines; during which process the mesentery, in a continuous flat sheet, occupies the long narrow interval between its two arms. This instrument is placed in position in one of two ways:

1. It may be held flatwise over the abdomen, and in such position that the long space between its two arms lies parallel with and directly over the abdominal wound. A loop of small intestine near the ileocecal valve is drawn out of the wound and pulled through the space between the two arms of the instrument, and then turned to one side or the other. The upper end of the loop is then gently pulled on, and as much more of the intestine as it is desired to take out is gradually drawn up through the opening and turned over one of the arms. Nearly the whole of the small intestine can in this way be drawn up between the arms of the instrument and made to rest on their upper surface. When the intestines are on this instrument, they can easily be moved *en masse* to one side or the other, thus making it easy to inspect the large fossæ of the abdomen, the edge of the abdominal wound being first, of course, strongly retracted.

2. The instrument may be passed at once under the mass of intestines, its two arms slipping along the two sides of the mesenteric root, the mesentery itself entering the space between them. This is done by taking up the lower end of the ileum into the space between the arms of the instrument, and then working them gently upward along the back part of the abdominal cavity, so as to include the whole of the mesentery along its base. This procedure will probably be found much easier to execute than the first method in cases in which the intestinal coils are much distended with gas.

DEMONSTRATION OF INTESTINE AND MESENTERY AT THE SAME TIME

For the purpose of demonstrating the mesentery and small intestine at the same time I have frequently gathered up the intestine on a rod, the rod being introduced into the intestine through a small wound a few inches above the end of the ileum, and the whole, or nearly the whole, of the intestine drawn over the end of the rod.

When this has been done and the rod, with the intestine on it, is drawn upward so as to stretch the mesentery, a very satisfactory view of intestine and mesentery together may be obtained (Fig. 13).

INTESTINAL TUBAGE

It was several years ago (1903), while demonstrating the intestines gathered on a rod, as already described, that the idea occurred to me of using a rigid tube in

much the same manner that I used the rod, the tube being for the purpose, however, of emptying an intestine full of gas and liquid feces. Since then I have experimented on many occasions with such a tube on the distended intestines of cadavers, and, in a number of instances, I have used the method on patients. The tube can not be pushed into the intestine, but the intestine must gradually, by means of a piece of gauze, be drawn over the end of it (Fig. 14). The tube opening into the intestine, for passage of the tube, may be made near one end of the intestine, and the intestine slowly drawn over the end of the tube, or it may be made somewhere near the middle of the intestine, and the intestinal canal emptied in both directions.

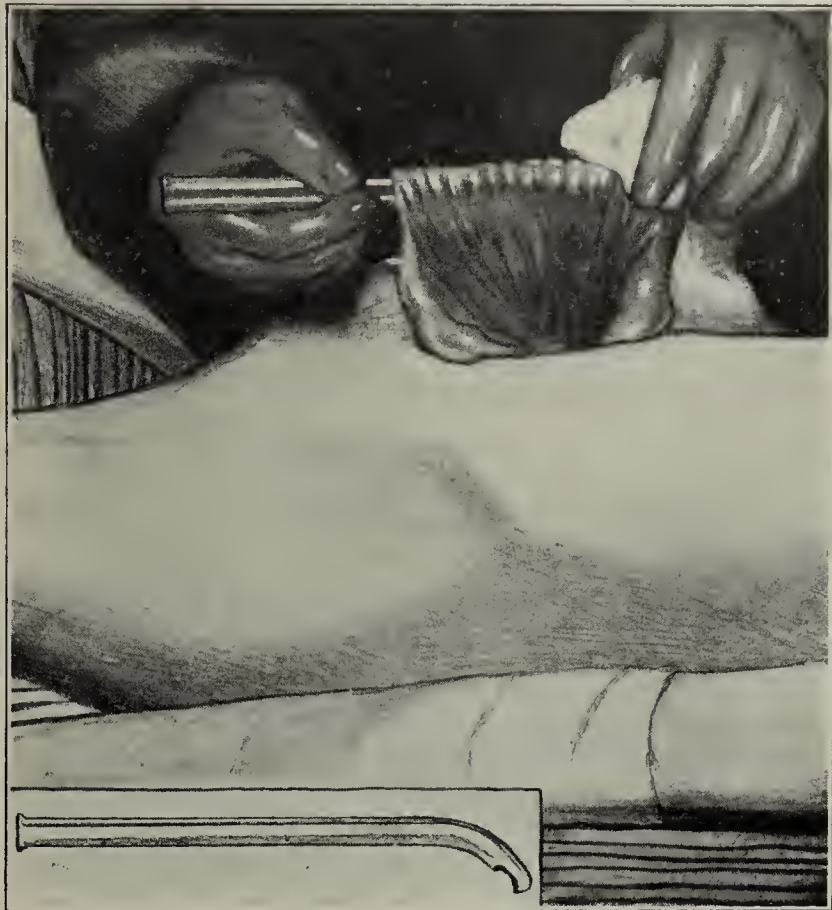


Fig. 14.—Intubation of the intestine on the cadaver. The intestine is being drawn over the end of the tube by means of a piece of gauze. Some of the tubes used in these experiments were straight and some were curved. The one shown at the lower left-hand corner of the picture has a curved extremity.

THE PELVIC FOLD OF THE MESENTERY

I can not close this article without referring to certain surgical procedures which, directly or indirectly, have to do with the lowest fold in the mesentery, which fold—for lack of a better name—I have ventured to call “the pelvic fold of the mesentery.” This fold consists of that part of the mesentery which is attached to the intestinal coils in the pelvis. The posterior border of this fold forms a definite landmark there. From a wound in the right iliac region, it can easily be reached and palpated by the forefinger of the operator; in fact, if the wound is large enough all the pelvic coils of intestine can be lifted out of the pelvis by pressure upward on this fold, to which, of course, the coils of intestine are all attached.

In case it is thought necessary to irrigate the abdomen from a wound in the right iliac region, it is well to know that the irrigating nozzle may best reach the great fossa on the left side of the abdomen by being carried behind this pelvic fold and then upward.

In connection with the technic of irrigating the abdominal cavity, it is well to remember that, in a way,

the mesentery may be looked on as a sort of partition, or fence, separating the two sides of the abdominal cavity. Though this partition may be curved, twisted and reduplicated in many different ways, yet it still remains a partition, and, in a sense, it separates one side of the abdominal cavity from the other. Now, for those operators who practice irrigation of the peritoneal cavity, it is well to know that the fossæ on both sides of this partition may easily be reached by the nozzle of the irrigating tube, through almost any wound where a loop of small intestine presents itself; for the nozzle may be passed down on each side of the mesentery attached to the loop toward the mesenteric root, care being taken to follow the surface of the mesentery closely. In this way the tip of the irrigating tube may, in almost any abdominal wound, be carried first to the bottom of one abdominal fossa and then to that of the other.

There is one more point concerning the pelvic fold of the mesentery which seems well to deserve the surgeon's attention. It is that whenever, through an incision in the right iliac region, the operator desires at



Fig. 15.—Method of picking up the lowest end of the ileum through an abdominal wound. The forefinger is seen, as it rounds the pelvic fold of the mesentery. The thumb (indicated in dotted lines) is on the other side of the mesentery. (Reproduced, with a few changes, from a figure in a former article.)

once to find the lower end of the ileum (as in perforated typhoid ulcer, for instance) he can do so by the following method: He passes his index-finger (two fingers are sometimes better) along the parietal peritoneum at the back of the pelvis, and around the base of the pelvic fold of the mesentery (Fig. 15). He now hooks his finger about the pelvic fold and closes the tip of the thumb on the tip of the finger, so as to grasp that fold and the loop of intestine which is with it. If he now allows the fold of mesentery gradually to slip away from between his thumb and finger, and then brings up the loop of bowel attached to it, he will find, in almost all instances, that he has in his grasp the ileum at a point close to the ileocecal valve. From this point he can then follow the ileum to any distance from below upward. If, on the other hand, he wishes to find the cecum, or appendix, he can be conducted to them by following the ileum for a few inches in the other direction.

SUMMARY

The special points which I wish to emphasize in this article are as follows:

1. The surgeon can, approximately at least, tell to what part of the small intestine any given loop belongs.
2. He can tell the real direction of the bowel in that loop, provided the wound is large enough to allow him to palpate the mesenteric root; or, after the bowels and the abdominal wall have been retracted, to see it.
3. Intestinal coils outside of an abdominal wound can be efficiently protected between two thin sheets of rubber.
4. When the intestines are enveloped (in the sheets of rubber) the abdominal fossæ and the pelvis may be inspected much more thoroughly than when the coils of intestine are within the abdominal cavity.
5. As a demonstration, the mass of bowels, comprising nearly the whole of the small intestine, can be supported well above an abdominal wound by means of a special holder.
6. As a demonstration, the intestine and mesentery may be satisfactorily shown at the same time by gathering the intestine on a rod, and then elevating the rod horizontally above the abdominal wound.
7. In order properly to introduce a long rigid tube into the intestines for the purpose of emptying them, the intestines should be drawn over the end of the tube, and "gathered" on it in a manner similar to that in which, for demonstration, the rod was used.
8. The base of the pelvic fold of the mesentery is an important landmark in the lower abdomen, and it can usually be palpated from a wound in that part of the abdomen.
9. The great fossa on the left of the abdomen may be reached from a wound in the lower abdomen by carrying the tip of an irrigating nozzle well around the pelvic fold of the mesentery, and then pushing it upward.
10. Finally, the lowest coil of the ileum can be picked up at once between the surgeon's thumb and finger by causing them to grasp the base of the pelvic fold of the mesentery and the loop of bowel which is attached to it.

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I wish to acknowledge assistance in regard to the anatomic disposition of the mesentery and the course of the intestine, from the excellent articles by Trevers, Henke, Sernoff, Weinberg and Mall, and also—concerning the arrangement of the mesenteric vessels—from the valuable paper by Prof. Thomas Dwight.

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 67 Marlboro Street.

Deaf-Mutism in Idiots.—H. B. Sheffield, New York, states that congenital deafness is associated with mutism, but that even when hearing is intact few idiots are able to speak. Some of them by imitation learn to utter a few words, but their expressions usually bear no relation to any distinct desire or action, and they understand words spoken to them no better than what they speak. Moreover, their power of imitation is very much delayed in development or may never become manifest—all depending on the faculty of attention. In partial idiocy, such as mild forms of infantilism, cretinism, encephalitis or microcephalus, the power of conversation may reach a certain degree of potency, but the vocabulary is very limited and fragmentary.—*Post-Graduate*, February.

THE REPAIR OF THE INTERNAL RING IN
OBLIQUE INGUINAL HERNIA*

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OSHKOSH, WIS.

An understanding as to the various steps necessary in the repair of oblique inguinal hernia may be materially aided by a comparison of the relations of the normal structures with those in which a hernia exists; and these are shown in the following parallel columns and in Figures 1, 2, 3 and 4:

Structures.	Normal.	Hernia.
Parietal peritoneum.	Smooth and even..	Outward bulging, forming the sac.
Internal ring.....	Snugly surrounds cord.	Enlarged downward and inward, surrounds the cord and sac.
Internal oblique muscle.	Covers and protects the internal ring.	Does not cover, or only partially covers the internal ring.
Inguinal canal.....	Oblique, long and narrow.	Less oblique, shorter and wider.
External ring.....	Small and triangular.	Enlarged upward and round.

Radical operation for the cure of inguinal hernia should consist of an attempt to restore the various structures to their normal relations.

In the majority of operative methods in vogue at present no attempt is made to reproduce the anatomic relations, the result being an alleged improvement on Nature, as is exemplified by the Bassini method. Synchronous with and largely due to the teachings of Ferguson, there has been an increased employment of operative procedures in which the anatomic relations are more or less completely replaced, Nature being imitated in the attempt at cure.

The rationale of so doing has been well emphasized by various observers. For example: the removal of the sac at the neck with the redundant parietal peritoneum has been emphasized by many, but the etiologic importance of a congenital sac as brought out by Mr. Hamilton Russell¹ of Melbourne in his "sacculus theory" is a most convincing argument in favor of this detail of the operative treatment.

The advisability of placing active, red muscle, the internal oblique, external to the internal ring, to act as a protection or cheek against the protrusion of viscera through the ring, we owe to Ferguson.²

That the inguinal canal must be long and oblique so that with increased intra-abdominal pressure the walls of the canal will be held in more intimate apposition, and hernia be prevented by a valve-like action of the canal, was perhaps first emphasized by Marcy.³

The necessity of the walls of the canal fitting snugly around the cord has been met by the imbrication or double breasting of the walls as applied to inguinal hernia by Andrews.⁴

The attempt to secure a strong and small external ring was a part of, and in some instances the entire aim of some of the early and incomplete forms of operation. The strength of the external ring has of late been assured by the incision of Mayo,⁵ which allows the preservation of the intercolumnar fibers of the external oblique.

A new internal ring is made in the majority of the operations now employed. But in an anatomic operation the original internal ring should be repaired, that is, (a) made smaller of suitable size properly to surround the cord after the removal of the sac, and of equal importance, (b) replaced to its normal position and in proper relation with the inguinal canal, and the external ring.

The internal ring may be diminished in size by suture of the transversalis fascia, either above or below the opening for the passage of the cord.

The suturing of the transversalis fascia from below upward, that is beneath the cord, was first performed in 1878 by H. O. Marcy.⁶

This detail was likewise a step in the "combination operation" reported by Ferguson⁷ in 1895.

But in the "typic or anatomic operation," a description of which was published by Ferguson in 1899, all the structures are replaced to their normal anatomic relations, with the single exception of the internal ring, which is depressed because of the advice that the internal ring be strengthened, "with a few stitches above the root of the cord."⁸

From inquiry and from observation I am led to believe that in many so-called Ferguson operations this detail, the minimizing of the internal ring, is often omitted, which may, in part, account for recurrence where this does occur.

When these stitches are placed above the cord, only one of the essentials for the repair of the ring is fulfilled, that is, the ring is made smaller. The lower and inner margin of the dilated ring, which is the most abnormal and displaced portion of the circumference, is used as the fixed margin; while the upper, the normal superior boundary, is brought together and displaced downward. In this way the ring while being made smaller is at the same time depressed (Figs. 5 and 6). So it would seem that diminution in the size of the internal ring by suture of the transversalis fascia above the cord does not constitute proper repair. While mere diminution in caliber is an important step in operation, the results would be still better if the ring were elevated to its normal position and relation at the same time that it is made smaller. And this is accomplished by placing the stitches beneath the cord, which pleat and reinforce the abnormally dilated and attenuated lower margin, while the superior margin, that portion of the ring that has not been stretched, dilated and displaced by the protrusion of the sac, is not interfered with but is used as the fixed margin.

The necessary stitches in the transversalis fascia, preferably of the mattress type, may be inserted and tied, in such a manner that the cord is not extensively separated from its attachments, and the knots may be placed to one side so that they will not irritate the cord.⁹ As a result the upper margins of a repaired ring and a normal ring are in the same relative position, which is at the proper distance above and external to the outlet of the canal.

This apparently trivial difference in the manner of repairing the internal ring will, with a study of the subject, be found to be of the utmost importance regarding the length and obliquity of the resulting inguinal canal.

* Read at the Western Surgical and Gynecological Association, Dec. 29, 1908.

1. Lancet, London, 1905, p. 7.
2. Ferguson, A. H.: THE JOURNAL A. M. A., 1899, xxxiii, 6.
3. Marcy, H. O.: Anatomy and Surgical Treatment of Hernia, Appleton, 1892.
4. Andrews, E. Willys: Chicago Med. Recorder, August, 1895.
5. Judd, E. S.: Jour. Minn. State Med. Assn., Feb. 15, 1908.

6. Anatomy and Surgical Treatment of Hernia, p. 346.
7. Ferguson, A. H.: Ann. Surg., May, 1895.
8. Ferguson, A. H.: Modern Operations for Hernia, Cleveland Press, 1907, p. 282.
9. Connell, F. Gregory: Radical Operation for the Cure of Hernia, Surg., Gynec. and Obst., October, 1908, p. 431.

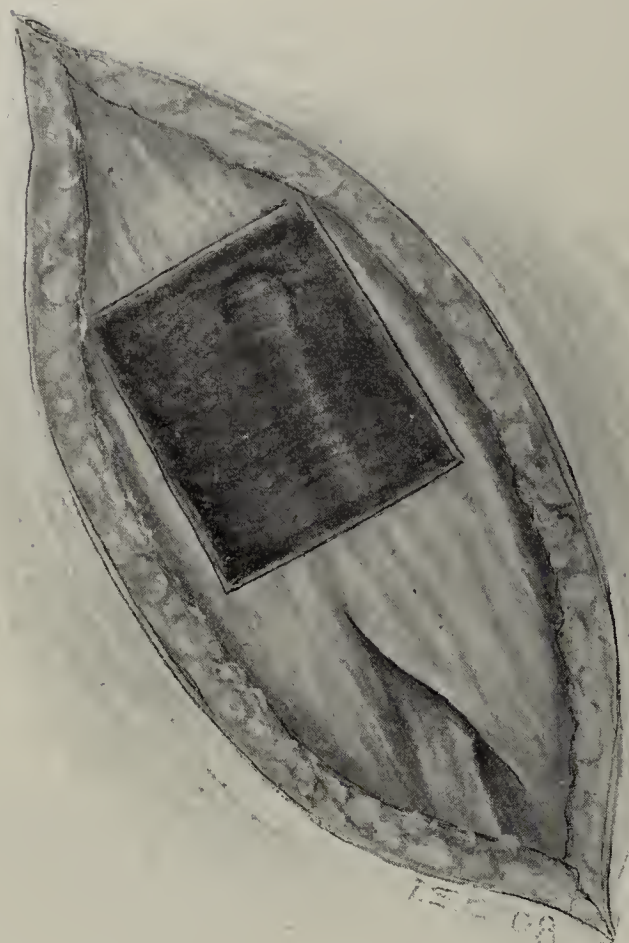


Fig. 1.—Front view, inguinal region, normal relations, showing, through an opening in aponeurosis of external oblique muscle, the size and position of the internal ring, lying behind the internal oblique muscle.

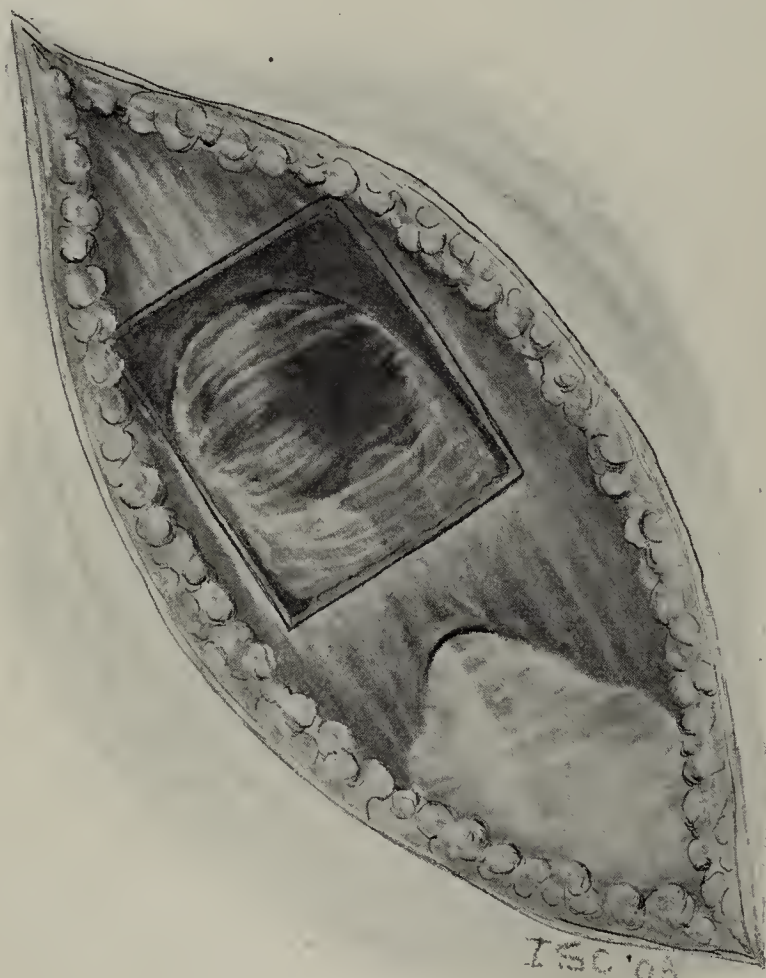


Fig. 3.—Front view, inguinal region, with oblique inguinal hernia, showing, through an opening in aponeurosis of external oblique muscle, elevation of internal oblique muscle; dilatation and descent of internal ring; with sac covering cord and presenting at dilated external ring.

Ferguson has so forcibly and ably impressed the importance of placing the internal oblique muscle external to the external ring, that the value of a small and normal internal ring has been comparatively overlooked.

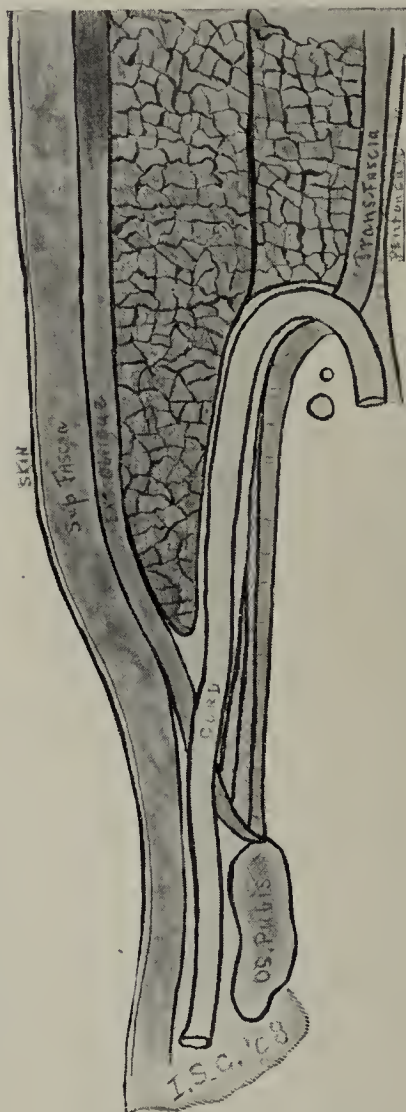


Fig. 2.—Sectional drawing of relations in Fig. 1, showing parietal peritoneum smooth; internal ring small and surrounding cord; internal oblique muscle covering internal ring; inguinal canal long, and narrow.



Fig. 4.—Sectional drawing of relations in Fig. 3, showing parietal peritoneum bulging outward forming sac; internal ring enlarged downward, surrounding cord and sac; internal oblique muscle elevated above the internal ring; inguinal canal less oblique, short and wide.

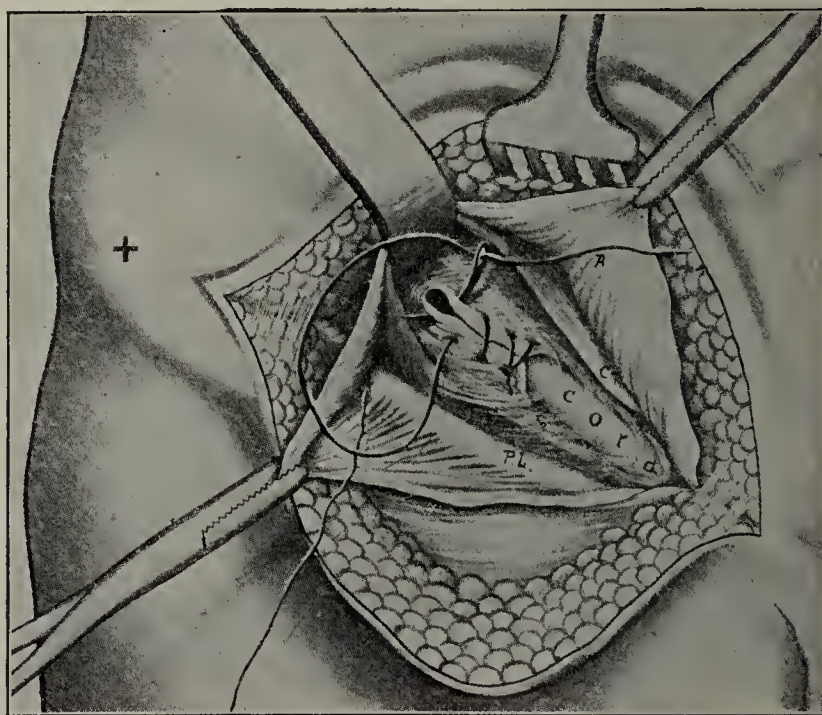


Fig. 5.—Repair of internal ring (from Ferguson).

These two factors are mutually beneficial; the higher the internal ring and the lower the internal oblique muscle, the more effectual will be the prevention of recurrence (Figs. 1 and 2).

The reason that the internal ring has not been elevated, as well as made smaller, by stitches placed be-

neath the cord, is the fear of a possible traumatism to the cord, which might cause interference with the nutrition and function of the testicle.

The question whether the transplantation of the cord is necessary in the radical cure of inguinal hernia, I have previously discussed.¹⁰



Fig. 6.—Sectional drawing of relations in Fig. 5, showing descent of internal ring.

Repair of the internal ring with a consequent elevation of the cord to its normal position can hardly be considered a transplantation of that structure.

In conclusion: I would emphasize the repair of the internal ring by suture of the transversalis fascia beneath the cord, which causes both minimization and elevation of that structure, with the attachment of the internal oblique muscle to the outer two-thirds of Poupart's ligament, so that it covers and protects the repaired internal ring. The above details cause a relationship which results in a valve-like formation of the inguinal canal, which is important in preventing recurrence. These steps should be preceded by the removal of the sac at its neck, with the redundant

parietal peritoneum, and followed by the reunion of the divided external oblique aponeurosis, and the formation of a suitable external ring.

THE MANAGEMENT AND TREATMENT OF A CASE OF INFECTION BY THE BACILLUS TYPHOSUS *

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In consideration of the prevalence and mortality rate of typhoid, as ordinarily treated, I desire to present a method of management in this infection which promises to reduce the mortality to a large extent.

The most constant objective symptom of infection is fever, and it has been considered the physician's duty to combat it at all hazards. The use of the coal-tar antipyretics, however, was followed by an increased mortality rate, while the Brand method, founded on the idea that fever should be lessened, if possible, does not, I believe, materially lower the mortality rate. A consideration of the complex of symptoms which we call fever leads me to believe the rise of temperature in fever to be, as Bunge says, "one of the processes of self-protection and regulation of which we have so many examples in the body." On the assumption that fever is a physiologic effort at self-defense, the physician can surely occupy himself with something better than attempts at dulling this valuable weapon.

A case of typhoid infection presents pre-eminently a picture of toxemia; the trembling tongue, the slow cerebration, the diarrhea with anorexia and insomnia,

all point to profound intoxication produced by the toxins set free by the disintegrating bacilli. If the individual lives, he will have established immunity to the bacillus in from three to five weeks. The physician at present possesses no drug or combination of drugs capable of destroying the bacteria or of hastening the immunizing process. Writers in current medical literature concern themselves chiefly with devising methods of lowering the temperature, but not a single writer, so far as I know, has suggested a plan for lessening the toxemia which is the sole cause of the patient's rise of temperature.

In my experience with the Brand method, in the absence of bath facilities, I had to resort to the application of bath towels saturated in water inversely proportionate to the temperature of the patient. The clearing up or non-appearance of delirium, the lessening of diarrhea and tympanites, and the improvement in sleep and digestion, really due to lessening of toxemia, I attributed at first to the antipyretic effects of the bath, which, however, seemed out of all proportion to the insignificant lowering of the temperature. But a series of cases in women and children, who refused the cold toweling, compelled me to compromise by warmer but more frequent baths. To my surprise, these patients did much better than those who had received the cold toweling. This led me to formulate a method of treatment that includes, first, the water supply necessary; second, a regular elimination of toxins, and, third, the food supply—these being, to my mind, the fundamentals of successful treatment of a patient with typhoid infection.

The method is briefly this: As soon as a diagnosis is made with reasonable certainty a calomel purge is given at bedtime and is followed with a saline cathartic next morning, not with the idea of modifying the infection, but for the purpose of clearing the intestinal tract of particles of undigested and fermented food, for during the prodromal period of the disease most of these patients eat food that they can not digest.

The baths are now instituted at once without reference to the patient's temperature. The bath is first given at 7 a. m. and repeated regularly every two hours during the day until 9 p. m., unless the patient is restless, when the last bath is given at 11 p. m. Immediately preceding each bath the patient is required to drink from four to eight ounces of water; and immediately after each bath he is required to sip slowly from two to six ounces of milk, the amount depending largely on the appetite of the patient.

TECHNIC OF THE BATH

One-half of the bed is covered with any material (an ordinary quilt, folded once, answers the purpose perfectly), the patient's nightgown is removed and he is moved on to the covered portion of the bed. Two large bath towels are then saturated in a bowl of water of the required temperature: the patient is told to extend the arms parallel with the body, and the anterior surface of the body is covered with the towels that have been slightly squeezed—not wrung—when taken from the water. The towels are allowed to remain for three minutes; then they are removed, rewetted, and the process is repeated on the posterior surface of the body. The patient's body should be entirely covered from head to heel, the towels overlapping somewhat in the middle of the body. The whole process, including time spent

10. Connell, F. Gregory: *Am. Jour. Med. Sc.*, March, 1905.

* Read before the Military Tract Medical Association, Oct. 15, 1908.

in giving water before the bath and milk afterward, should occupy about twelve minutes. If the patient complains of chilliness following the bath he may have a hot-water bottle and some extra cover for fifteen or twenty minutes, and if the chilliness is not relieved in this time it is best to raise the temperature of the water used in the bath.

These baths should be continued in this manner and time until the patient seems on the point of achieving his immunity, as evidenced by a marked fall in temperature, an ability to take solid food, the occurrence of a formed fecal movement, a normal tongue, etc. Then they should be given every three hours, and after the temperature has been normal in the evening for two or three days they may be discontinued, unless the disease should later show signs of recrudescence, when they should promptly be again instituted.

CONTRAINDICATIONS

The only contraindication I have recognized is the occurrence of severe intestinal hemorrhage. The baths should then be stopped for a few hours, until it appears that the hemorrhage is controlled, when they should be resumed. The temperature of the bath for a robust adult should be about 60 F., and for most women and all children from 20 to 30 degrees higher. When the reaction is delayed more than ten minutes it is too cold and the temperature should be raised.

ADVANTAGES OF THIS SYSTEM OF BATHING

The baths are as practicable in the humblest home and as readily given there as in the best appointed hospital. They do not require the ministrations of a trained nurse. Any fairly intelligent woman can learn the method in fifteen minutes, and a little criticism on the part of the attending physician will render her work perfect in the first few days of the case. This contrasts strongly with the Brand system, the appointments for which were scarcely obtainable outside of a hospital. And really less than 0.5 per cent. of patients ever received this treatment on account of lack of facilities.

PURPOSE AND EFFECT OF THESE BATHS

These baths have little or no effect on the temperature, but there is every clinical evidence that they do eliminate the typhoid toxins. A patient who receives these baths regularly from the time of diagnosis will not develop troublesome diarrhea, delirium and insomnia. I always leave orders that the patient must have his bath on time, even if it is necessary to wake him, because I am certain that he will have no trouble subsequently in getting all the sleep he needs. I believe the elimination of toxins takes place through the skin.

These baths shorten the period of immunization to three weeks or less in the great majority of cases, but do not, in my opinion, lessen the tendency to loss of immunity or what is generally termed a relapse. If this occurs the baths should be promptly resumed, and the relapse usually runs an exceedingly short and mild course.

MEDICINE AND DIET

The only drug administered is copper arsenite, 1/100 gr., dissolved in half a glass of water and taken four times a day, for the purpose of precipitating the toxin in the intestinal canal. Alcohol should not be given, either as a food or as a medicine, as it interferes with the physiologic activity of the phagocyte, the most important factor in the immunization process.

By lessening toxemia this method tends to prevent hemorrhage, and if perforation occurs the patient is in better condition to stand an operation than under customary methods of treatment.

Milk, I believe, is the best food. If it disagrees I lessen the amount and cause it to be sipped slowly, or, if necessary, buttermilk is substituted. Bread and butter may be given after the second week if the patient desires solid food, but previously to that time even liquid mixtures containing starch should be avoided, as the patient is not likely to be able to digest them. The condition of the mind should be considered in regulating the diet, for a patient with a normal sensorium is much more likely to digest food than one who is in a low muttering delirium. I believe that the majority of patients are fed too much during the first week, for their power of assimilation at this time is at its lowest. Some fruit juices should be allowed, avoiding the citrus fruits, however, during the early stage of the disease.

The patient should be instructed to wash the mouth and teeth two or three times a day with a mild alkaline solution. I use a Carl Seiler tablet dissolved in half a glass of warm water.

RESULTS

Now, do results justify this method? During the period from 1898 up to the present time ninety-seven cases of typhoid have come under my care, and during the eleven years I have been using this method the mortality has been absolutely *nil*.

This experience extends over such a long period of time it must of necessity have included cases of almost every degree of virulence. And I believe that the merits of any method of treatment must be judged by a time test as extensive as this one. We all see epidemics of this infection so mild that the patients practically all recover, no matter what the treatment; while other epidemics are so virulent that the mortality is as high as 40 or 50 per cent. These facts have been borne in mind, and after eleven years' experience with the method that I have placed before you to-day I firmly believe that I am justified in making the assertion that this is the ideal treatment for typhoid fever: first, because it is founded on physiologic principles capable of demonstration; second, because it is practicable with all patients and under all circumstances; third, because results are all that could be desired.

COMPLEMENT FIXATION IN MALIGNANT DISEASE

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In a recent paper published in conjunction with Dr. W. S. Thomas,¹ I have pointed out that the blood serum of cancer patients may contain a substance or substances which, in the presence of cancer extract, will bind a larger amount of complement than the blood serum of normal individuals. It was found that this reaction could be obtained in about 65 per cent. of the cancer cases, while it was absent in 98 per cent. of our non-cancerous patients and in all normal persons. The small number of positive results in non-malignant cases finds its probable explanation in the fact that cancer

1. Simon, C. E., and Thomas, W. S.: Complement Fixation in Malignant Disease, Jour. Exper. Med., 1908, x, No. 5, p. 673.

antigen may react with the blood serum of syphilitic individuals and thus likewise bring about an abnormal degree of complement fixation. Our paper was sent to the *Journal of Experimental Medicine* early in May, and we were hence unable to notice certain papers bearing on the same subject which appeared in the *Wiener klinische Wochenschrift* about the same time and since then. Elias, Neubauer, Porges and Salomon² report that they found complement fixation "relatively frequently" in cases of tumor, and they are strongly inclined to attribute their positive reactions (which were obtained with an alcoholic heart extract as antigen), not to antecedent syphilis, or the advanced age of most of the cases, but to the malignant disease *per se*. They speak specifically of one case, that of a girl 15 years old, a "virgo intacta" with positive, though slight, complement fixation, in whom there was no basis whatever for presupposing a syphilitic infection, either acquired or hereditary. The condition was an ovarian sarcoma with metastases to the peritoneum, the pleura and the mediastinum.

Weil and Braun³ obtained marked reactions in 4 tumor cases out of 14, viz.: in 1 case of carcinoma of the liver, following cancer of the stomach; in a case of general carcinomatosis and 1 of sarcomatosis, in both of which the fixation was obtained with the pleural exudate, *sc.* transudate; and in 1 case of cancer of the breast with extensive metastases. Weil and Braun emphasize that there was not the least reason for assuming a syphilitic infection in these four cases; that they were all severe cases; that the milder ones did not give the reaction, and that it would be unreasonable to conclude that only the severely affected patients should have had syphilis in the past, while the slightly affected ones had been free from the disease. Like the preceding investigators, Weil and Braun also used alcoholic heart extracts as antigen.

Besides these, Gross and Volk⁴ mention two cases of non-syphilitic tumor patients in whom a very marked reaction was obtained, and Salomon⁵ reports briefly from von Noorden's clinic that complement fixation was frequently observed in older people with carcinoma in whom no indications existed of past syphilitic infection.

Other data bearing on the question at issue have, so far as I know, not been published.

During the past three months Dr. Thomas and I have continued our own investigations and we now have data bearing on 59 cases of cancer. In our first series fixation was noted in 65 per cent. of the cases and in our second series in only 50 per cent. This discrepancy we are inclined to refer to the fact that we were obliged to use a tumor extract as antigen which was several months old and had not been kept on ice during that time. A relatively fresh medullary cancer was not available during the fall months, and for obvious reasons we did not wish to use any other than cancer antigen in our research. As we have pointed out before, much depends on the character of the antigen. In our work we have only used breast-cancer antigen, and we have

found that quantitatively good results can be obtained only with very cellular growths. Whether or not complement fixation can be obtained in a higher percentage of cases than what we found in our first series, future investigations will show.

So far as the occurrence of the reaction in non-cancerous cases is concerned, our studies have led to the conclusion that, except in syphilis, it is rare, and in the few cases in which it did occur we can not exclude syphilis altogether. The substitution of the usual antigens which are used in syphilitic work does not help us to solve the question, for we now know that cancer antigen may react with syphilitic sera, and that "syphilitic" antigen may react with cancer serum. This fact, of course, lessens the diagnostic value of complement fixation in malignant disease. At the same time it overthrows the usually accepted idea of the specificity of the reaction so far as syphilis is concerned. To what extent this will interfere with the diagnostic significance of the fixation reaction in syphilis will depend, to a considerable extent, on the individual case. In many instances—indeed, in most—its importance will remain unimpaired; in cases, however, in which we are dealing with tumors each case will have to be judged by itself. Generally speaking, *absolute* fixation may be regarded as pointing towards syphilis, while it is usually only partial in cancer; it may, however, also be complete. The Porges lecithin reaction unfortunately does not help us either to differentiate the cancer from the syphilis cases. For, while certain observations (such as the solubility in ether of the substance or substances present in syphilitic sera, which is responsible for the precipitation of lecithin, in contradistinction to the "fixing" substance) suggest that the Porges and the Wassermann reaction may not be referable to the same substance,⁶ the fact remains that, so far as syphilis is concerned, the two furnish practically the same results, and it is especially noteworthy that the lecithin reaction also is quite commonly obtained by Stumme,⁷ who found a positive lecithin reaction in 8 cases of malignant disease out of 10, and a doubtful one in the 2 remaining instances. No difference in this respect was noted between carcinoma and sarcoma and between ulcerating and non-ulcerating growths. Shortly afterward Weil and Braun published an account of 17 cases of cancer, in 8 of which the reaction was strongly positive and in 1 doubtful. They remark that their lower percentage of positive findings may have been owing to the fact that in some of the negative cases they were obliged to use smaller quantities of serum than Stumme had advocated. Their positive list includes both sarcomas and carcinomas.

To recapitulate, then, it may be said that both complement fixation and lecithin precipitation may be obtained in malignant disease and that under certain conditions both reactions may have a diagnostic significance. Further research will be necessary to establish the relative frequency of the reactions in the diseases in question and, above all, to determine whether the quantitative differences which seem to exist in cancer as compared with syphilis are such that diagnostic inferences are justifiable in the differential diagnosis between the two conditions.

2. Elias, H., Neubauer, E., Porges, O., and Salomon, H.: Ueber die Spezifität d. Wassermannschen Syphilisreaktion. *Wien. klin. Wchnschr.*, 1908, xxi, No. 18, p. 652.

3. Weil, E., and Braun, H.: Ueber positive Wassermann-Neisser-A.-Brucksche Reaktion bei nichtluetischen Erkrankungen. *Wien. klin. Wchnschr.*, 1908, xxi, No. 26, p. 938.

4. Gross, S., and Volk, R.: Weitere serodiagnostische Untersuchungen bei Syphilis. *Wien. klin. Wchnschr.*, 1908, xxi, No. 44, p. 1522.

5. Salomon: Protok. d. k. k. Gesellsch. d. Aerzte in Wien, *Wien. klin. Wchnschr.*, 1908, xxi, No. 11, p. 377.

6. Pick, E. P., and Pribram, E.: Beiträge zur Kenntniss aetherempfindlicher Substanzen des Blutserums und ihr Einfluss auf einige Immunitätsreaktionen. *Biochem. Ztschr.*, 1908, xi, Nos. 5-6, 418.

7. Stumme: Protok. d. k. k. Gesellsch. d. Aerzte in Wien, *Wien. klin. Wchnschr.*, 1908, xxi, No. 11, p. 377.

In conclusion, I would emphasize that a very considerable amount of experience is necessary, and more especially in the partial reactions of cancer, with the technic involved in the fixation reactions, and that conclusions should be attempted only by investigators who are thoroughly familiar with the subject. There are many pitfalls which are trying even to experienced workers.

NOTE.—In *Progressive Medicine*, December, 1908, Dr. Bloodgood, referring to the question of the possibility of hemolysis in blood transfusion, remarks that I recommend the examination of the recipient's serum against the donor's corpuscles, while according to Crile hemolysis between the donor's corpuscles and the patient's serum will do little harm, whereas the reverse hemolysis strictly contraindicates transfusion: that two tests should accordingly be made, of which the most important one is just the reverse of the one ascribed to me. This statement, so far as my attitude is concerned, rests on a misunderstanding on the part of Dr. Bloodgood. If the blood test is made at all then it should be made on both sides, viz.: both the donor's and the recipient's serum should be tested against the recipient's and the donor's corpuscles respectively. The concentrated serum, moreover, should be used, and not the diluted serum, as is erroneously stated in Bloodgood's article.

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SOME FACTS ABOUT THE ARMY MEDICAL CORPS

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As the young physician nears the end of his hospital service as interne, the matter of a career occupies much of his attention, and his uncertainty and hesitancy in making definite plans for the future lessen that confidence with which he received his diploma. It is this young man to whom I address this paper. If he is of good character, physically fit, and possesses good professional attainments what I have to say will point out to him a definite career which offers a good living, high social and professional standing and opportunities to improve himself in the broadest sense. I speak of the Medical Corps of the United States Army.

The Army Medical Corps is composed of commissioned officers grading in rank from first lieutenant to brigadier-general, who as such have all the rights and privileges to which their rank entitles them, equal to those of officers of like grade in the line of the army and other staff corps.

Generally speaking, the emoluments consist of (1) a definite pay schedule fixed equally for all officers of the army according to rank; (2) foreign service pay; (3) longevity pay; (4) mounted pay; (5) travel pay when traveling under orders; (6) allowance of quarters, fuel and light; (7) leave of absence on full pay; (8) promotion; (9) retirement for age, and (10) retirement for physical disability contracted in line of duty and incident to the military service. The pay schedule and allowances, etc., for officers can be obtained by making suitable application to the War Department.¹ The pay is enough for any officer to live on if he is moderate in his tastes and careful in his personal financial affairs.

1. The following annual salaries, in divided monthly payments, are increased by 10 per cent. for each period of five years' service until a maximum of 40 per cent. is reached: An assistant surgeon, with the rank of first lieutenant, mounted, receives \$2,000 per annum, or \$166.67 monthly. At the end of five years he is promoted to the rank of captain, which, with the increase of 10 per cent. for five years' service, is \$2,640, or \$220 a month. After ten years' service the pay would be \$2,880 annually, or \$240 a month. The pay attached to the rank of major is \$3,000 a year, which, with 10 per cent. added for each five years' service, becomes \$3,600 after ten years' service, \$3,900 after fifteen years, and \$4,000 after twenty years. The monthly pay of lieutenant colonel, colonel and brigadier-general is \$375, \$416.67, and \$500 respectively.

I wish to speak more particularly, however, of the inducements to enter the medical corps other than those pecuniary, because it is difficult for any one to arrive at a definite idea of the workings of the corps until he has served in it. My remarks, therefore, have to do more with the medical officer's duties than with what he receives from the government for doing them, and I shall speak of the attractions of the service for the medical man and his opportunities for travel, study and improvement in every way professional.

Entrance to the army medical corps is secured only by examination and no appointments are made without this preliminary. Full information how to proceed in this matter and the requirements for entrance are set forth in a circular which may be obtained by making direct application to the Surgeon-General, U. S. Army, Washington, D. C.²

After the candidate has successfully passed his preliminary examination he is ordered to the Army Medical School, Washington, D. C., for a course of instruction lasting eight months. The purpose of this school is to train in such subjects as are peculiarly appropriate to the duties which a medical officer of the army is ordinarily called on to perform. The course is eminently a practical one, and, since the duties of the military surgeon differ widely in many respects from those of his confrère in civil life, the value of this instruction at the beginning of the medical officer's career is obvious. The Army Medical School is situated in the same building with the Army Medical Museum and the library of the Surgeon-General of the Army, which is the most complete medical library in the world. Student officers have free access to both museum and library. The course at the school embraces the following subjects:

1. DUTIES OF MEDICAL OFFICERS, MEDICAL DEPARTMENT ADMINISTRATION AND CUSTOMS OF THE SERVICE.—Army hospital administration must necessarily be uniform and definite in its workings. All medical department affairs are taught in this course.

2. MILITARY HYGIENE.—Including ordinary and personal hygiene; study of food, drink, habits, heat and cold in relation to health, clothing, water supply, disposal of wastes, heating, lighting, ventilation, sewer systems and sanitary plumbing; camps, permanent buildings, etc.

3. CLINICAL MICROSCOPY.—Including bacteriology, parasitology and helminthology, especially in relation to tropical and epidemic diseases; methods of immunization, opsonins, etc.

4. MILITARY SURGERY.—Imperative surgery, gunshot wounds and injuries commonly encountered in the military service in peace and war; clinical course at Army General Hospital.

5. TROPICAL MEDICINE.—Including a study of all diseases met in our own tropical possessions and those of the colonial possessions of other nations; epidemic diseases and methods of control and those due to intestinal parasites and blood-inhabiting protozoa.

6. SANITARY CHEMISTRY.—Qualitative and quantitative analysis of water, air, foodstuffs, impurities, adulterations, etc.

7. HOSPITAL CORPS DRILL.—Including duties of litter bearers, use of ambulances and other methods of collecting sick and wounded, and first aid.

8. OPERATIVE SURGERY.—Operations on the cadaver—a very practical course.

9. OPHTHALMOLOGY AND OPTOMETRY.—A practical clinical course.

10. MILITARY MEDICINE.—History of medicine; evolution of medical science as applied to armies; study of diseases pecu-

2. Information in regard to entrance to both the army and the navy medical services was given in *THE JOURNAL A. M. A.*, Oct. 19, 1907, xlix, 1286.

lar to camps, garrisons, moving commands, and preventive medicine in general.

11. *X-RAY WORK*.—Practical course. All students are required to operate the machine and take pictures. Discussions of therapeutic uses of the *x-ray* and radium.

12. *EQUITATION*.—A course in riding and use of the military horse equipments.

After this course, those who qualify and are found proficient are commissioned as officers of the regular establishment and are ordered on a two-year tour of duty in the Philippines or some other of our foreign possessions, where application is made of the training received at the school. The medical officer will serve with troops in garrison and in the field and will see at first hand those pathologic conditions peculiar to the place in which he may be serving. He may have opportunity to study the epidemiology of malaria, typhoid, cholera, plague or dysentery, and make practical application of sanitary methods and preventive medicine.

At the end of his foreign tour of duty there is opportunity to take leave of absence to visit foreign countries for study or pleasure; or the medical officer may allow his leave of absence to accumulate until he is entitled to four months, which will allow him time for post-graduate study at home or abroad. At all events, he will return to the United States for duty after his foreign tour with experience in his work and those broadening influences which travel and residence in foreign countries impose on every man.

A medical officer's duties in the United States may take him to a post or station situated in any part of the country. As a general rule the duties are the same at all garrisons. A quotation from the "Manual for the Medical Department of the Army" gives a general idea of what is required of the medical officer:

The medical department is charged with the duty of investigating the sanitary condition of the army and making recommendations in reference thereto, of advising with reference to the location of permanent camps and posts, the adoption of systems of water supply and purification, and the disposal of wastes, with the duty of caring for the sick and wounded, making physical examinations of officers and enlisted men, the management and control of military hospitals, the recruitment, instruction and control of the Hospital Corps and of the Army Nurse Corps (female), and furnishing all medical and hospital supplies, except for public animals.

The surgeon, under the direction of the commanding officer, will supervise the hygiene of the post or command, and recommend such measures as he may deem necessary to prevent or diminish disease. He will examine, at least once a month, and note in the medical history of the post, the sanitary condition of all public buildings, the drainage, the sewerage, amount and quality of the water supply, the clothing and habits of the men, and the character and cooking of the food, and immediately after such examination will report thereon in writing to the commanding officer, with such recommendations as he may deem proper.

Each permanent post has a hospital commensurate in capacity and personnel of the hospital corps with the strength of the command. Military hospitals are equipped with all appliances and scientific instruments for the proper care of the sick, for physical examination and the identification system adopted by the War Department. There is also in each post hospital a good working and reference library; all the best current medical literature is regularly supplied by the medical department. At posts the medical officer is always examiner of recruits and in charge of the identification records mentioned above, which consist of a finger-print

and photograph system applied to soldiers on enlistment and also to military convicts.

The Surgeon-General's office may consider an officer's special qualifications and aptitudes when assigning him to a station, so that he may be sent to any one of the following general hospitals which are operated and controlled by the medical department: General Hospital, Washington, D. C.; General Hospital, Presidio, San Francisco, Cal.; Army and Navy General Hospital, Hot Springs, Ark., where hydrotherapy is used in those conditions to which it is particularly applicable, and the General Hospital, Fort Bayard, N. M., which is the army sanitarium for the treatment of tuberculosis. In addition to this, there are four schools for instruction of the hospital corps, which are organized into companies, under command of medical officers.

I wish to impress the medical man with the fact that there are opportunities in the army for a man to reach more than a distinguished standing in the medical profession. Mention need only be made of the work in Cuba of the Yellow Fever Commission, the triumph of sanitation which makes the building of the Panama Canal possible, and the work of the Board for the Study of Tropical Diseases in Manila. Medical officers have contributed largely to the text-books on medicine, surgery, hygiene and tropical medicine. In mentioning these things I point out that, although the workings of the medical department must necessarily be a routine system, yet the individual officer will find his life full of various interests and a variety of work which few experience in civil life.

I speak briefly of surgery in the army, since so many young men are attracted by a possible surgical career and have ambition to succeed in this line.

There is ample opportunity to learn and practice surgery in the army. Although the class of cases is more restricted than in civil life, since the army is made up of healthy men and the incidence of disease is low, yet there are many cases of injury and many imperative surgical cases. During my service of about twelve months as operating surgeon at one of the larger army posts in this country there were 28 major operations performed there. This list includes 12 appendicectomies, 2 appendicostomies for chronic amebic dysentery, 4 operations for the radical cure of hernia, 1 suprapubic cystotomy, 1 nephrotomy, 1 craniotomy, 1 enterorrhaphy for gunshot wound, and other operations in the line of general surgery.

In addition to these general cases, the venereal service contributed a large list of minor surgical operations.

MILD ATYPICAL TYPHOID FEVER; RESULT WITH BLOOD CULTURES *

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It is my purpose to make a brief review of sixty-eight cases of typhoid fever and the findings, by blood cultures, with special reference to the mild atypical forms. The study of these fevers, and the results obtained through blood cultures, is of great practical import. It clears them from the haze of doubt and places them at once where they properly belong. Many observers —

* Read before the Nashville Academy of Medicine and Davidson County Medical Society, Jan. 5, 1909.

Osler,¹ Dock, Vaughan² and others — have believed for a long time that these indefinite fevers would ultimately prove to be typhoid infections, and a great deal of clinical evidence has been brought forward in support of this belief, but it has not been sufficiently definite to satisfy all.

In 1908 I had published an article³ in which I had studied clinically 200 cases of typhoid, with the idea of clearing up these indefinite forms. I gave in that paper evidence sufficient to convince any one who would approach the subject in a receptive state of mind, but I realized at the time it was yet open to argument. I said in that paper, among other things, the following:

There is a class of continued fevers met with in the southern portion of the United States and in Panama, and no doubt in many other portions of the world, that are resistant to quinin; they are too long in their course to be malaria fever. They are too mild in their symptoms and too short in their course to meet the clinical requirements commonly expected of typhoid fever. . . .

I am fully convinced that these fevers are typhoid fever, because their numbers always increase as the number of typical typhoid fevers increase. They occur in the same houses and same surroundings from which we meet or receive the typical cases; they frequently relapse, and the relapse may be, and often is, more severe than the initial attack. . . .

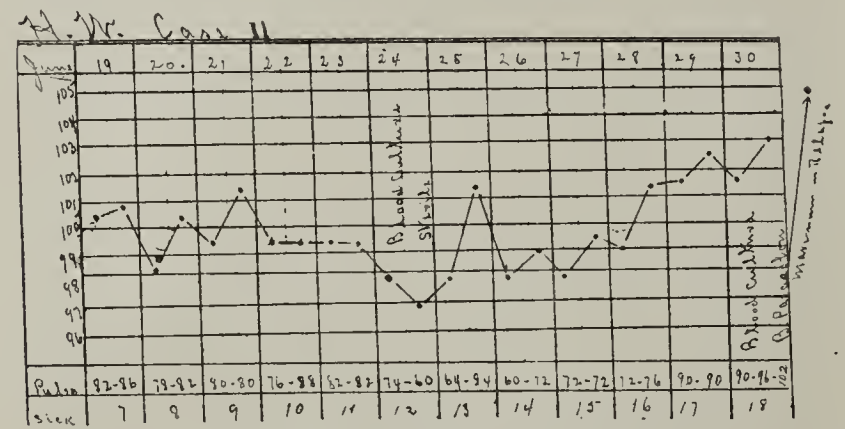


Chart 1.—Temperature in Case 2 (H. W.). Mild initial attack. Relapse of exacerbation, lasting 21 days.

In these irregular cases every opportunity is present for the spread of the disease. They are usually unrecognized as typhoid fever, and no effort is made toward disinfecting the patient's excreta; they are not reported to the sanitarian, and nothing is done toward general sanitation about the patient's surroundings. Contamination occurs, and there is then but one result—an epidemic. Thus these cases become the root from which this disease springs perennial, and are almost solely responsible for its continuance. . . .

Typhoid fever is a preventable disease, and should in time, like typhus fever, become extinct. This can never be until physicians widen their conception of what constitutes typhoid fever, and instead of always expecting the typical, diagnose and treat, from a sanitary point of view, all continued fevers as typhoid fever, until they are proved to be something else.

Everything claimed in the above has been fully borne out by the subsequent records with blood cultures, and it is extremely gratifying to me to find those claims so abundantly proved by this later and more definite work. This paper is largely a supplement to my original article, and I shall show in what follows my reason for the conclusions arrived at.

1. Practice of Medicine, Osler, Ed. 6.
2. Vaughan, Victor C.: Conclusions Reached After a Study of Typhoid Fever Among the American Soldiers in 1898; Oration on State Medicine, THE JOURNAL A. M. A., June 9, 1900, p. 1451.
3. Atypical Typhoid Fever; Its Part in Preventive Medicine and Its Differential Diagnosis from Estivo-autumnal Malaria, THE JOURNAL A. M. A., Feb. 22, 1908, L, 585-590.

ANALYSIS OF REPORTED CASES

I shall now analyze the sixty-eight cases and give a few case reports, with their charts, to show exactly the class of fevers I have in mind. The patients in this blood-culture work were negroes, and only one culture was made in each case.

The method of making these cultures was to aspirate from a vein in the forearm from 3 to 10 c.c. of blood, discharging this blood in an ox-bile medium. This was incubated, then plated, and the plated colonies worked out in the usual bacteriologic methods for identification and differentiation.

A number of comparative cultures were made on well-determined diseases, such as pneumonia, nephritis with elevated temperature, tuberculosis, and malaria; also on clinically obscure conditions. No cultures were returned positive under any circumstances except those with well-marked symptoms of typhoid fever, or the class of cases here under consideration.

- In the 68 cases:
- Positive blood cultures were obtained in 37, or 54.41 per cent.
 - Sterile blood cultures were obtained in 31, or 45.59 per cent.
 - Severe or typical forms were displayed in 67.64 per cent.
 - Mild or atypical forms were displayed in 32.36 per cent.

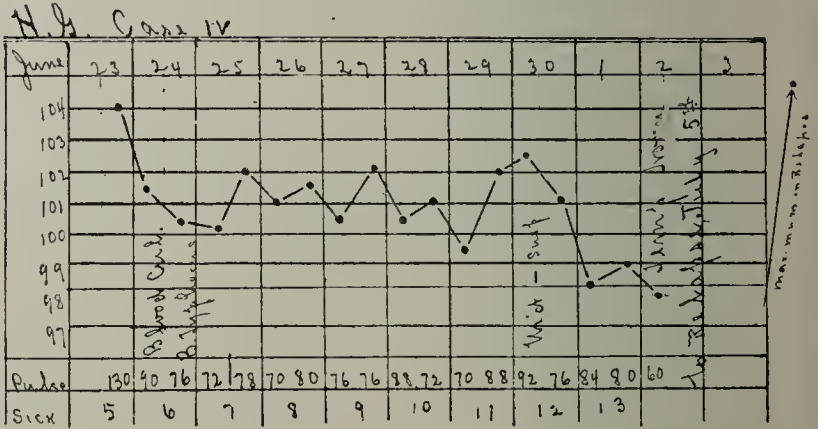


Chart 2.—Temperature in Case 4 (H. G.). Moderately severe, with malaria-like curve of temperature and relapse on twelfth day.

- Of the positive cultures:
- The findings showed *B. typhosus* in 31.
 - The findings showed *B. paracolon* in 6.
 - Severe cases yielded 28, or 75.14 per cent.
 - Mild cases yielded 9, or 24.86 per cent.
- Widal tests:
- Positive cultures yielded Widal + in 46.87 per cent.; Widal — susp., in 15.62 per cent.; Widal — in 37.50 per cent.
 - No test made in five cases.
 - Sterile cultures yielded Widal + in 41.37 per cent.; Widal — susp. in 34.48 per cent.; Widal — in 24.133 per cent.
 - No test made in two cases.

All the patients who died gave positive *B. typhosus* findings in antemortem blood, except one, who gave sterile culture and died of perforation a few days after culture blood was taken.

- Complications:
- Phlebitis—right leg, 4 times, left leg, once.
 - Relapses, 8.
 - Malaria organisms present in blood, 5 cases, or 7 per cent.
 - The longest course of fever (*B. typhosus*) was forty days.
 - The shortest course of fever (*B. typhosus*) was ten days.
 - The longest course of fever (*B. paracolon*) was twenty-eight days.
 - The shortest course of fever (*B. paracolon*) was eight days.

In one relapse from *B. paracolon* fever a positive culture of *B. typhosus* was obtained.

In one relapse (initial attack sterile) a positive culture of *B. paracolon* was obtained.

In one relapse (initial attack positive *B. typhosus*) *B. typhosus* was obtained.

In three relapses, cultures were returned sterile, and in two, which were so mild, no cultures were taken.

The total number of atypical cases, positive and sterile, was 21, or 32.36 per cent.

The Widal test in the positive cultures falls considerably below the standard, being 46.87 per cent. positive and 15.62 per cent. negative suspicious; counting both numbers as positive, which I think is proper, we get a total of 62.49 per cent.

The number of tests made to each case averaged a little over five. In two cases one test only was made, each returned positive. The largest number of tests to one case (positive *B. typhosus*) was twelve, all returned negative. The dry drop method was used, and the specimens were generally sent to the laboratory every third day.

In all the cases included as atypical the patients had fever less than fifteen days and were practically without symptoms which ordinarily characterize typhoid fever. The sterile cases included in the atypicals were diag-

test—as given in standard text-books, 95 per cent.—is too high; and that while the laboratory is our only means of clearing absolutely these indefinite fevers, we can depend, and must depend, largely on clinical findings, and on analogy, for the diagnosis in typhoid fever.

REPORT OF CASES

CASE 1.—J. W., aged 34, from Barbadoes, was ill three days before admission. Complaint—fever, headache, cough, chills and vomiting. Physical examination, negative, except for some bronchitis. Tongue broad, flabby, with toothprints. Blood examination, negative for malaria parasites. Stool, negative; urine, negative. Blood culture made third day after admission; positive *B. typhosus*. Widal seventh day after admission, positive; eighth day, positive; tenth day, negative suspicious; thirteenth day, negative suspicious; fourteenth day, negative.

CASE 2 (Chart 1).—H. W., aged 23, from Barbadoes. Sick four days before admission. Complaint, sore throat. Examination, slight redness of pharynx, tongue coated, otherwise negative. Blood negative for malaria parasites. Leucocytes, 7,500. Old facial paralysis, right side. Blood culture, eighth day after admission, sterile. Relapse, blood culture, positive, *B. paracolon*. In relapse the fever continued for seventeen days. This illustrates a mild attack with a severe relapse.

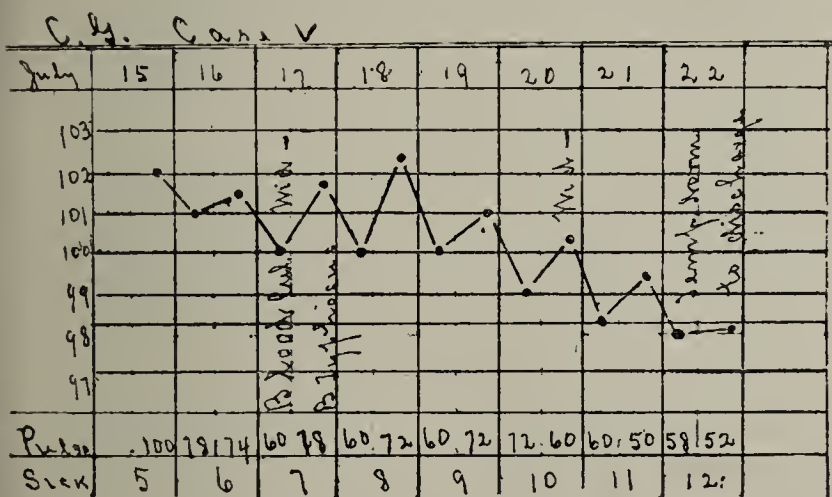


Chart 3.—Temperature in Case 5 (C. G.). Mild *B. typhosus* infection.

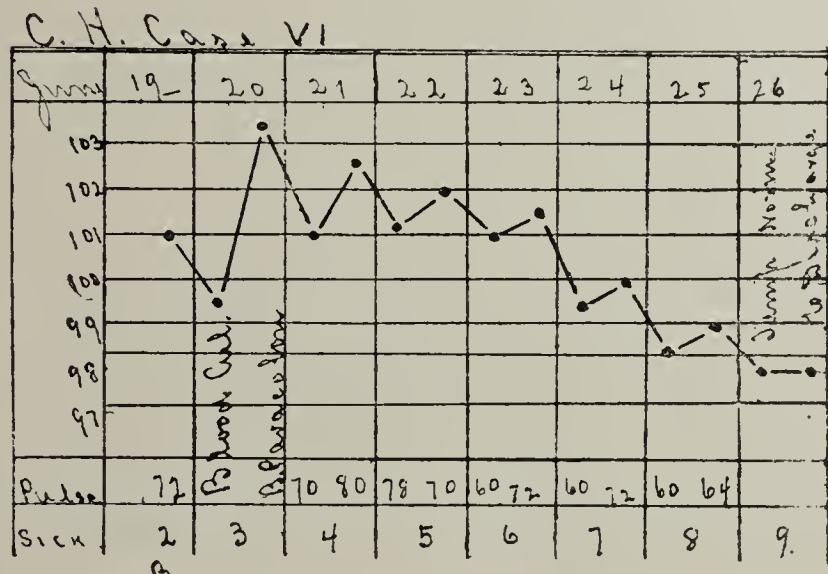


Chart 4.—Temperature in Case 6 (C. H.). Mild *B. paracolon* infection.

nosed on positive Widal's, or on two or more negative suspicious Widal's, or such complications as phlebitis and relapse. All patients, no matter how mild the case, were kept in the wards under observation for fourteen days after the temperature became normal, and most of them were kept twenty-one days or over.

The analysis then shows 32+ per cent. atypical; or, if there is any doubt of the diagnosis of the sterile cases, let us take only the thirty-seven positive cases. In this instance we shall still find the proportion to be 24 per cent. atypical.

Inasmuch as we are unable to get positive cultures in all of even the most severe cases—for instance, the sterile case with perforation and pathologic diagnosis of typhoid fever,⁴ we must feel some surprise that we get such proportion of positive cultures in these atypical cases as 9 to 12.

Reviewing this analysis, the conclusions reached are: that 60 per cent. of positive cultures will be the rule in average work, with one culture to each case; that the general average of atypical cases in typhoid fever is surprisingly high, and they demand more attention in the teaching of this disease than is usually given them; that the expected results in average work from Widal's

CASE 3.—A. F., aged 25, from Barbadoes. Sick four days before admission. Complaint, headache, fever and dysentery. Physical examination: lungs, sibilant and crackling râles, middle and lower lobes of right. Sibilant râles over left; spleen, palpable and tender; abdomen, tender over upper part. Tongue coated; other organs negative. Stool, negative; urine, trace of albumin and hyaline casts. Blood negative for malaria parasites. Blood culture second day after admission, positive, *B. paracolon*. Blood culture eighth day after admission, sterile. One Widal test, negative.

CASE 4 (Chart 2).—H. G., aged 23, from Barbadoes. Sick four days before admission. Complaint, headache, fever and constipation. Physical examination: soft, fine râles at the base of right lung; spleen, palpable; other organs negative, stool negative. Urine, slight trace of albumin, hyaline and granular casts. Blood negative for malaria; leucocytes, 7,800. Sputum, negative for tubercle bacilli. Blood culture day after admission, positive, *B. typhosus*.

CASE 5 (Chart 3).—C. G., aged 20, from Barbadoes. Sick four days after admission. Complaint, headache, fever and no appetite. Physical examination: negative, except spleen, slightly palpable; tongue, coated. Urine, negative. Stools, few degenerated epithelial cells. Blood negative for malaria parasites. Blood culture third day after admission, positive, *B. typhosus*. Three Widal tests, negative.

CASE 6 (Chart 4).—C. H., aged 20, from Barbadoes. Sick one day before admission. Complaint, languor and loss of appetite. Physical examination, negative. Urine, trace of

4. Records Pathologic Laboratory, Ancon Hospital, 1908.

albumin. Stools, negative. Blood negative for malaria parasites. Blood culture fourth day after admission, positive, *B. paracolon*.

DEDUCTIONS

The question will arise (this work having been done in Panama) whether such cases are present in the United States. In proof that they do occur in the United States, I cite H. F. Harris⁵ work at Atlanta, Ga., along the same line, in which he takes forty-five cases, the fever being one week and over, and in blood culture work finds 73.3 per cent. positive.

The question will also arise of the effects of malarial infection as a complication in typhoid fever. So far as I have seen, this complication amounts to nothing, except perhaps in the final prognosis. In the mild cases the malarial type of fever may predominate till eliminated by quinin, then runs its course as usual. In the severe cases the malarial type of fever is submerged, and quinin may be given without in any way modifying the symptoms or temperature curve. One patient—not under my observation—who had a very severe malarial infection on admission, was given 320 grains of quinin by hypodermic injections, without any effect whatsoever on the temperature or the symptoms. The patient died on the fifth or sixth day after admission, and at autopsy no malarial organisms were found in the internal organs, though malarial pigmentation of the bone marrow and spleen was present. The lesions found and cultures made from the splenic blood were positive for typhoid fever.⁶

The study of these cases will show at once what these indefinite fevers really are.

The cycle of evidence is now complete. Here are the bacteriologic findings; here are the records of cases and their clinical course, and the pathologic findings in the nine cases of death close the cycle and make it complete.

This work, too, ought to throw some light on malarial fever, that class of malarial fevers which is said to take on symptoms of typhoid fever—a theory universally accepted.

A review of these cases and charts will show that, instead of malaria simulating typhoid, exactly the reverse is true; it is mild typhoid fever in its febrile course that simulates severe malaria. The difficulty in the differentiation of these two diseases has been in the lack of facilities to make a positive distinction; and the fact that occasionally malarial parasites were found in the blood in these fevers has added to the confusion. With this last fact confronting us, and no other positive knowledge to get us out of the difficulty, we quietly placed the burden, along with other unknown things in medicine, on our favorite "pack-horse"—malarial fever—and so let it rest.

The lesson to be gained here then is that when we are confronted with a condition having typhoid symptoms, even though malarial parasites are present, the condition is typhoid fever, and always has been typhoid fever.

DIAGNOSIS

The diagnosis will not be difficult if we admit the occurrence of these fevers and are watching for them. Headache and fever are always present, and with these, one or more of three other symptoms may be present, namely, enlarged spleen, slight diarrhea and some narrowing and redness of the tongue. With any or all of

the above-named symptoms present, and with no sufficient findings to account for them, we may suspect typhoid fever. Therefore, a diagnosis must be made by exclusion. When we are in doubt about malaria, quinin should always be given, and given in solution. If such a mild fever be caused by malarial infection, it will yield in forty-eight hours under quinin. If this fails, something else should be looked for.

PRACTICAL IMPORT

These fevers are not without importance to the patient. If the patient is allowed to be up and about, as he will certainly wish to be, this fever may continue for three or more weeks. But if he is put to bed, with rest, and on as rigid diet as we prescribe in the severe cases, the fever will subside in two weeks or less. Moreover, there is always a liability to a relapse that may be severe.

As we have seen that the proportion of these cases is not less than 25 per cent. and may be over 30 per cent., it is obvious what an important part they play in the spread of typhoid fever. Their chief importance, then, is from the viewpoint of sanitation, and they demand an early diagnosis, and just as rigid effort for complete cleanliness and care from the physician and sanitary authorities as the most severe cases. Just as widespread and just as severe an epidemic may spread from a mild case as from a severe one. This is well known from the general law of infectious diseases.

This percentage of cases, or even one-half of this percentage, constantly overlooked and diagnosed as malaria, or what not, will make it impossible ever to get rid of typhoid fever; focus after focus, from no one can tell where, will be formed to plague us, and it is no exaggeration to say that these cases are the root from which this disease springs perennial.

NOTE.—I am indebted for this blood culture and Widal work to the enthusiastic support and to the painstaking endeavors of Dr. Samuel T. Darling, Chief of Laboratory of the Bureau of Health and Pathology, Ancon; Dr. Thomas R. Brown, Bacteriologist, Ancon Hospital; to Lieut.-Col. John L. Phillips, Medical Corps, U. S. A., Superintendent of Ancon Hospital, for permission to publish this report, and to several of the nurses for copying charts, etc.

501 Wilcox Building.

A STUDY OF THE ACTION OF SCOPOLAMIN-MORPHIN ON THE HEART, LIVER AND KIDNEYS

REPORT OF SIX HUNDRED AND FIFTY CASES OF SCOPOLAMIN-MORPHIN ADMINISTRATIONS PRELIMINARY TO GENERAL ANESTHESIA

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Scopolamin was discovered by Schmidt in Warbury in 1820 and at that time was obtained from a plant called scopola, named by Scopoli, the Austrian naturalist.

Scopolamin hydrobromid is an alkaloid now obtained from roots of various plants of solanaceae (nightshade family), and is identical, chemically and physiologically, with hyoscin. This family includes scopola, belladonna, stramonium, hyoscyamus, etc.

When injected alone, scopolamin does not cause anesthesia, but in combination with morphin (in sufficient dose) it produces an anesthetic state.

5. H. F. Harris, Slow Fever, THE JOURNAL A. M. A., Aug. 3, 1907, xlix, 406.

6. Records Pathologic Laboratory, Ancon Hospital, 1907.

The claim has been made that scopolamin loses its power if kept in solution, and this change in solutions of scopolamin a week old I have noted. But scopolamin in tablet form I have found reliable and see no advantage in using the crystals. For an injection as a preliminary to ether anesthesia I have used the tablets of scopolamin and morphin and these same tablets for animal experimentations.

PURPOSE OF USE

The object of the use of scopolamin and morphin in patients was first to produce complete anesthesia alone; then in case of failure, as sometimes occurs, it was necessary to use only a slight amount of chloroform or ether to complete the anesthesia. The purpose has been later to use it as a preliminary injection to ether or chloroform anesthesia, in order not only to decrease the amount of ether or of chloroform used, but also to prevent the distressing symptoms which so often follow anesthesia.

DEATHS ASCRIBED TO SCOPOLAMIN

A number of deaths have been reported after operation in which scopolamin and morphin have been injected previous to the administration of the anesthetic. I have separated them into (a) those in which a post-mortem examination was made, and (b) those without autopsy findings.

DEATHS WITH AUTOPSY

DIRK¹ reported three cases, two cases of carcinoma of the colon and one of carcinoma of the rectum. The first two cases showed purulent peritonitis at autopsy. The third patient was in bad condition surgically, and the autopsy showed extensive metastases.

In these cases death took place several hours after operation and could not have been caused by the administration of scopolamin.

BLOS VON BRUNS² describes a case of tuberculosis and emphysema. The patient was fifty years of age and autopsy showed extensive lesions of tuberculosis and amyloid degeneration of the viscera. He could not say that scopolamin had anything to do with the death of the patient.

BOKES³ reports three cases of death following the use of scopolamin. In only one case was an autopsy performed. This was an old osteomyelitis of the femur in which there had been great hemorrhage. He characterizes it as a desperate case and did not believe that scopolamin injections had anything to do with death.

SEXTON⁴ had a patient with uterine fibroid who had had extensive hemorrhages. The autopsy was superficial and showed nothing.

ISREAL⁵ reports three cases in two of which an autopsy was performed. The first was a case of tuberculosis of the kidneys; autopsy showed fatty degeneration of the heart and liver, and cloudy swelling of the remaining kidney. The second was a case of ruptured pyosalpinx; autopsy revealed extreme fatty degeneration of the liver, heart and kidneys. The spleen was not enlarged.

In the consideration of these cases there is not a single instance in which death can be attributed to scopolamin. They are all desperate cases. The time which elapsed before death took place after scopolamin was given is not stated in these reports. However, in many cases death occurred several days after the operation was performed.

DEATHS IN WHICH NO AUTOPSY WAS PERFORMED

FLATEAU⁶ reports the case of a woman of 52 with polypus of the uterus. Clinically she died from edema of the lungs. No autopsy was performed.

LANDEN⁷ operated on a patient with hemorrhoids who died a few hours later from collapse.

BOKES³ reports two cases in which death occurred after operation. The first case was carcinoma of the uterus. The patient suffered severely from hemorrhage and shock. The second was a sarcoma of the neck in a woman of 50 years. Heart was sound, pulse good and there was no loss of blood. No autopsy could be obtained.

A. C. WOOD⁸ reports an operation for prostatectomy in a colored man of 94 who died after the operation.

WITZEL⁹ describes a case of prostatectomy in which scopolamin had been administered previous to operation, death being caused by septic infection.

WILD¹⁰ reports a case in which untoward symptoms appeared after operation, but the patient recovered. He operated on an empyema of the antrum of Highmore and collapse with Cheyne-Stokes respiration followed.

These cases in which no autopsy was performed, death can in every instance be explained in some other way than by attributing it to the injection of scopolamin.

In this connection it is of interest to refer to the work of Bevan and Favill,¹¹ who described the occurrence of late poisonous effects after the administration of chloroform, manifested chiefly in a fatty degeneration of the heart, liver and kidneys. This condition may occur without the use of scopolamin.

REVIEW OF EXPERIMENTS ON ANIMALS

Very little animal experimentation has been done with scopolamin and morphin since they have been injected preceding the administration of the general anesthesia. Most of the work with this drug has been done by chemists, consequently little notice of its pathologic effects has crept into medicine.

Whitacre¹² has given dogs, cats and guinea-pigs repeated injections of scopolamin and morphin, and in a preliminary report states that it produces fatty degeneration of the liver and kidneys, and in two cases, probably of the heart also. Kochman¹³ states that he has seen no death resulting from its use in patients, and that as much as thirty grains injected into a rather large dog will not cause the death of the animal.

Because of these meager results I determined to find out the effects of scopolamin and morphin injections on animals.

ANIMAL EXPERIMENTATION WITH SCOPOLAMIN AND MORPHIN

1. *Experiments on Rabbits.*—The injection of a single dose of scopolamin gr. 1/100 and morphin gr. 1/4 simultaneously into rabbits, produces a stupor lasting four or five hours and followed by complete recovery. When such an animal is killed the following day no pathologic change can be found. When rabbits are injected daily for as long as fourteen days and then killed, no lesions are produced. Such animals do not lose in weight and to all appearances remain perfectly normal. The killing of such injected rabbits on successive days shows nothing abnormal. The injection of a larger amount of scopolamin and morphin produces no differ-

1. Deutsch. med. Wchnschr., 1905, 10.

2. Beitrage zur Chirurgie, xxv, 3.

3. Langenbeck's Archiv, xxiv, 4.

4. Lancet-Clinic, v, Nov. 18, 1905.

5. Deutsch. med. Wchnschr., 1905, No. 10.

6. Muenchener med. Wchnschr., 1903, No. 28.

7. Deutsch. med. Wchnschr., 1905, No. 28.

8. American Medicine, No. 11, 1905.

9. Muenchener med. Wchnschr., 1902, No. 48.

10. Berlin klin. Wchnschr., 1903, No. 9.

11. THE JOURNAL, Sept. 2, 1905.

12. New York Med. Jour., 1906, p. 637.

13. Therapie der Gegenwart, May, 1903.

ent results, except that the resulting stupor is prolonged. I have injected daily scopolamin gr. 1/50 and morphin gr. 1/2 for ten days into rabbits, with no change in the physical condition being produced and no lesion on killing such animals after repeated injections. The toxic or fatal dose of scopolamin and morphin for rabbits, when injected in the same proportion as used in patients, previous to the administration of ether, is scopolamin gr. 1/10 and morphin gr. 2 1/2. This amount appears to be the average fatal dose for rabbits with evidence only of morphin poisoning. Any large healthy rabbit dies after a number of hours from such an injection. The postmortem changes in rabbits which have been injected with a fatal dose of scopolamin and morphin are practically those of asphyxia. Examination shows the heart, liver and kidneys of rabbits killed by a toxic dose of scopolamin and morphin to be congested.

2. *Experiments on Guinea-Pigs.*—I have injected guinea-pigs with scopolamin and morphin in the same manner as the above described experiment on rabbits. Single or repeated daily injections for a period of fourteen days produced no pathologic changes. The repeated daily injection of twice the dose given patients by me as a preliminary injection of ether narcosis is well borne. When such animals are killed after successive injections on from one to fourteen days no lesions are produced. The fatal dose is the same as that for rabbits, and the autopsy on a guinea-pig dead of a toxic fatal dose of scopolamin and morphin shows only congestion of viscera.

3. *Experiments on Cats.*—I have injected scopolamin and morphin into a limited number of kittens. The repeated daily injections produce no degeneration of the heart, liver or kidneys. The fatal dose for kittens was found to be scopolamin gr. 1/5, morphin gr. 5, death resulting from morphin. The injection of a single dose of morphin gr. 1/4, scopolamin gr. 1/100 into a kitten is followed not by sleep but by excitement. The animal staggers about and remains aroused for several hours. This action was not produced in other animals. The injections of larger doses, twice or three times the ordinary dose, does not cause a more marked period of excitement. Continued daily injections seem to produce a tolerance for the drug.

4. *Experiments on Dogs.*—I have injected scopolamin gr. 1/5 and morphin gr. 5 into a small dog, causing death. The postmortem findings were those of asphyxia. The effects of injections of scopolamin and morphin into animals are similar to those of morphin when given alone. It was therefore necessary to try the effect of scopolamin without the addition of morphin.

Injection of Scopolamin Alone.—The daily injection of scopolamin gr. 3/100 to gr. 1 1/20 into rabbits, guinea-pigs and kittens produced no pathologic changes even when continued for two weeks. The heart, liver and kidneys of such animals when killed after fourteen injections are normal. The fatal dose of scopolamin for these animals I have not determined. I have given a small cur dog scopolamin gr. 5 without causing death. Small kittens when injected on two successive days with scopolamin gr. 3 did not succumb. When killed, at autopsy, no pathologic changes in the heart, liver and kidneys were present. It is apparent that enormous doses of scopolamin can be given to animals without causing death.

Injection of Morphine Alone.—In order to determine the result of morphin without scopolamin a number of rabbits were injected with morphin 1/2 gr. The onset

of the symptoms was not earlier than half an hour. The rabbit becomes quiet, nose and ears appear cyanotic, the respiration becomes less rapid. These symptoms increase in intensity for about thirty minutes and then the effects begin to wear off. On rough handling the animal is easily aroused and at no time is narcosis so intense that the animal may be cut or operation done as when the morphin is combined with scopolamin. After injections of rabbits for several days the drug does not produce such marked symptoms as with the first injection. They apparently acquire very rapidly a tolerance for morphin. When guinea-pigs are injected with morphin the symptoms which are identical with those of rabbits appear a little earlier. At the end of twenty minutes the animal is in a state of quiet, eyes remain wide open and it is cold. It can be readily aroused and if pain is inflicted will protest. The sleep is of short duration, lasts about half an hour. They do not acquire tolerance so rapidly as rabbits.

Injection of Morphine and Atropine.—When morphin gr. 1/4 with atropin 1/100 are injected into a rabbit the narcosis produced is not so intense as when morphin is injected alone. Atropin inhibits in some degree the effect of morphin. The animal is easily aroused.

Injection of Atropin Alone.—Atropin sulphate injected into rabbits in doses of from 1/100 gr. to 1/200 gr. produces rapid respiration and marked excitability.

SUMMARY

I have killed my animals after injection on successive days, so that I had the opportunity of examining the viscera daily after successive injections—from one to fourteen days. This was done in order to see if any change was produced in the heart, liver or kidneys by the injections, and after what injection it took place.

The result of my experiments show that in death from scopolamin and morphin the findings are those of passive congestion. I can not confirm the observations of those who are able to produce fatty degeneration of the heart, liver or kidneys.

Animals bear hypodermic injections of scopolamin and morphin well. If such injections are given repeatedly at long intervals it does not interfere with the nutrition of animals unless doses are so frequently given that the animals experimented on remain more or less constantly under its influence, that is, in a comatose or semicomatose state.

The study of these results show:

1. The effects of the injection of scopolamin and morphin into animals is similar to that of morphin when given alone, with the exception of the injection into kittens, in which excitement instead of sleep was produced.

2. Continued repeated daily injections produce no degeneration of the heart, liver or kidneys, the physical condition is not impaired so long as the injections are given at such intervals as not to interfere with the animal's nutrition. Daily injections of from one to three times the dose given to patients produces no pathologic changes in animals.

3. The toxic dose of scopolamin and morphin in my experiments corresponds very closely to that of morphin alone for the animals used.

4. The autopsy findings in animals which succumb to a toxic dose are the same as those for morphin, i. e., congestion of the viscera.

5. My animals seemed to acquire a tolerance for the drugs on long-continued daily administrations.

The cause of death in patients who have died after operation and who were previously given scopolamin has been more readily explained as due to great loss of blood during or before operation, to sepsis or to shock. They have been desperate cases and in not a single case could scopolamin be said to have produced death.

Scopolamin by itself is very slightly toxic for animals and certainly does not produce any degeneration of the heart, liver or kidneys.

REPORT OF 650 CASES OF SCOPOLAMIN-MORPHIN ADMINISTERED AS PRELIMINARY TO GENERAL ANESTHESIA

I have injected scopolamin gr. 1/100, morphin gr. 1/4, three-quarters of an hour before administration of ether as a preliminary to general anesthesia in 650 cases. In this series the extremes of life have been avoided. In 6 per cent. of cases there has followed practically no result, but in the remaining 94 per cent. I have noted a quiet state of the nervous system previous to operation that there has rarely been an instance in which the patient became excited or struggled during the administration of the anesthetic, the absence of mucus in the patient's throat, a lessening of 50 per cent. of the amount of ether used, the existence of quiet for some hours following operation, and the absence of postoperative vomiting.

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THE NEED FOR A SCHOOL OF TROPICAL MEDICINE IN THE UNITED STATES

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Now that the time has arrived when the English and German schools of tropical medicine may celebrate their decennial year, it is fitting again to bring up the question of establishing a school of tropical medicine in this country. I say "again," because nearly all of our leading medical journals ten years ago advocated the establishment of a course of tropical medicine in every medical school, and they have kept occasionally reminding us ever since of the importance of such study. Two well-known journals, one in 1898 and the other in 1899, advocated the establishment of a special school for the subject. Let us see what objections have been made to such a school.

The chief arguments used against the establishment of a school of tropical medicine are: 1. The government already has three, the medical schools of the army and navy and the laboratory of the Public Health and Marine-Hospital Service. 2. The subject is of very little importance to general practitioners, except those living in cities. 3. The United States has but little commerce with the tropics. 4. The subject is of vital importance only to government agents abroad. 5. There is already a good laboratory and medical school at Manila where tropical diseases may be studied. 6. The subject is better taught by the several departments, whose fields the subject touches rather than by a special department. 7. There is but little clinical material for teaching purposes in such a place as Boston, for instance.

In answer to the first argument, it is interesting to note that in England when Mr. Chamberlain, then sec-

retary for the colonies, proposed to establish in London a special school of tropical medicine where colonial medical officers and other civil practitioners might receive instruction, the objection was immediately made that the colonial medical men could be better taught by the army at Netley, or by the navy at Haslar. The other civil practitioners were already provided for by the various medical schools and bacteriologic laboratories then in existence. The reply to the first was that the courses given by the army and the navy, however well adapted they might be to officers of these services, were unnecessary and unsuitable for candidates for the colonial medical service.

This answer is equally true for the United States, for the medical schools of our army and navy can hardly be called schools of tropical medicine. They do teach tropical medicine, it is true, but that is but a small part of the instruction. The laboratory of the Public Health and Marine-Hospital Service is another institution where tropical medicine is merely one of the subjects studied, and not the main subject. To confine the work of this laboratory to the study of tropical diseases alone would be to defeat the purpose for which the laboratory was established.

Mr. Chamberlain, despite the criticisms from the army and the navy, established what is now known as the London School of Tropical Medicine. This school has not only served to instruct future British colonial medical officers and civil practitioners, but has taught medical officers of the British army and navy who first objected to it. Among the foreign graduates of this same school from 1905 to 1908 may be noted three surgeons of the United States Army, and two surgeons of the United States Navy. The United States officers evidently took the course because it is not taught in this country with that "particularity needed for success."

The subject of tropical medicine is every day becoming more important to the general practitioner, whether he be in the city or in the country. This is largely due to increase in travel, the return of discharged soldiers and sailors, missionaries, teachers, people connected with our diplomatic and consular services, people of leisure, engineers and merchants. Such people are as likely to return to the country as to the city. It must be remembered that malaria is common in the temperate zones; that filariasis (easy of diagnosis in the later, but often missed in the earlier stages of the disease) has been reported in persons who have never been south of Mason and Dixon's line, and that last summer a case of amebic dysentery was found in a woman who had always lived in Nova Scotia previous to coming to Boston.

The commerce of the United States with the tropics is large. In 1906 our imports from warm countries were two-thirds and our exports one-half that of Great Britain, who owns one-fifth of the earth and governs one-fifth of the people of the world. Our trade with warm countries amounts to hundreds of millions of dollars. During the past year thirty-four ships have come to Boston from India, and at the present time there are three in port from the far east.

It is a mistake to say that tropical medicine is of vital importance only to government agents abroad. Our whole army consists of only 63,000 men, and more than half this number were lost by discharge last year. The total number of men in the navy is 39,000, and of this number 11,000 men were lost in the same manner. The greatest force of men in the tropics is kept

in the Philippines, where there are about 12,000 soldiers. The large number of discharges from these small fighting forces means that the burden of the future treatment of these men is going to fall on the general practitioner of the United States. It is obvious that tropical diseases are of vital importance to civil practitioners in the tropics. The medical schools of Manila recognize this. It must also be remembered that southern United States is semitropical and that civil practitioners there must have a thorough knowledge of the subject.

That there is a good laboratory and medical school at Manila for the study of tropical diseases should not be a reason for failing to establish one in this country. Manila is more than a month distant from us, and few medical men would care to spend the time and money in going there for instruction. Physicians who intend to practice there should be taught before they go.

If tropical medicine is divided among the various departments of a medical school it will lack that thoroughness and completeness which is essential to success. Perhaps few, if any, of the instructors have seen many tropical diseases or have any special interest in them. Most of their time is taken with teaching other branches of their special work or with outside interests. The subject should be put in charge of a man who is willing to devote his entire time to this work; when not teaching he should be engaged in research. Arrangements and funds should be such as to allow him to visit the tropics every few years.

The number of cases of tropical diseases in such a place as Boston is greater than commonly supposed. As soon as the general practitioner gets better instruction he will recognize and report cases more often. Clinical material is not the only essential in studying tropical medicine. Much may be learned without it. Mosquitoes may be studied at home, and various bacteria and many of the animal parasites can be carefully studied in the laboratory. Another method of studying disease is by animal experimentation. By this means the life history of the organism, the symptoms, the methods of diagnosis, the pathologic histology and the treatment may be learned, often with more satisfactory results than in the human being.

Eleven years ago special instruction in tropical medicine was given in twelve British medical schools. Today in the United States there are only five medical schools giving special instruction during term time, and much of this consists of a few optionally-attended lectures. Is it not high time our country waked up and gave instruction in this important branch of learning?

7 Bay State Avenue.

Prophylaxis of Caisson Disease at Amsterdam.—The foundations for the great central depot at Amsterdam have required 800 days of caisson work and yet not a single life has been lost nor permanent incapacity resulted in any case. The laws regulating caisson work are very strict in Holland, and constant medical oversight is required. A number of advanced medical students were employed and physicians were always within easy reach. According to a correspondent of the *Wiener klinische Rundschau* (Jan. 20, 1908), some workman was affected on an average every fourth day. Pains in the muscles or joints were observed in about 100 cases, paresis in 4, the Menière syndrome in 3, vertigo in 4, and ear or other affections in 10 cases, besides numerous cases of intense itching. The symptoms were generally cured by returning into the compressed air and having the pressure gradually reduced.

Clinical Notes

A SATISFACTORY METHOD FOR STAINING BLOOD SMEARS

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THE VALUE OF BLOOD SMEARS

To the practicing physician the most important feature in all blood examinations is the stained blood smear. It is also the most exact of the hematologic findings. It is as important in all abnormal conditions of the blood (the infectious and chronic diseases, as well as the so-called blood diseases) as a stained tissue in the diagnosis of a pathologic growth. It gives the eye a true picture of the conditions present which the mechanical blood findings fail to convey.

It is to be regretted that with many it simply stands for the differential leucocyte count and occasionally a search for parasites or enucleated red cells. On the other hand, it is, indeed, the most comprehensive of all blood findings, for it includes in itself the mechanical as well as the pathologic findings, while it requires the least time, the least technique, is the least subject to errors in technique, and is the only one of the blood findings which can be permanently preserved, verified at a future date, or sent for verification elsewhere. After a little experience an approximate estimation within clinical limits of the number of red cells and leucocytes, the hemoglobin percentage, and the color index is possible. Added to all these advantages of the blood smear is the evidence of the shape, size, color (chemical), and histologic changes in the cells themselves, the appearance of abnormal cells and cells in abnormal members (so often pathognomonic), the phagocytic powers of the leucocytes, and the presence or absence of blood plates with, indeed, something of the relative frequency of the latter (with the corresponding prognostic value in hemorrhage or thrombosis).

INDICATIONS FOR BLOOD SMEARS

Every case which presents fever or pallor in its course presents an indication for a blood smear. Occasionally a blood smear has a negative value as well.

THE METHOD OF STAINING

To obtain the results indicated above, it is clear some very satisfactory method is needed. The method here given is simply the old Romanowski stain (polychrome eosin-methylene blue) as further modified by Jenner (the use of methyl alcohol as the diluent). The Jenner-Romanowski stain has been subjected to many further modifications. Locally, in the schools and hospitals of Chicago at least, the particular modification here recommended has been known for several years as the Skelton stain.¹ It has been my experience, however, to find that many do not have as good success as might be wished with this stain. This is due to the fact that

1. Priority for the so-called Skelton blood stain belongs, I believe, to Dr. William P. Harlow, who first described the principle of the stain (*Am. Jour. Med. Sc.*, April, 1904, p. 662). Peebles and Harlow again call attention to this stain in their recent article (*Clinical Observations on Blood Stains*, *THE JOURNAL A. M. A.*, March 6, 1909, p. 768). My technique for the use of this stain applies the same principles. I believe that, after being given a little more publicity, the Harlow stain will supplant all the common blood stains now in use.

certain simple features in the technic are indispensable. I present here in detail the method of staining blood smears which I have used for the past four years and have demonstrated to medical students during this time, with the result that four out of every five have succeeded in making satisfactory stains on the first attempt, and this within five minutes' time.

The staining solutions are two in number and are made up by the physician himself: 1, About one gram of water-soluble eosin (Grübler) is dissolved in 100 c.c. of absolute methyl (wood) alcohol (Merck or Kahlbaum); 2, one gram of the ordinary Ehrlich's medicinal methylene blue (Grübler) is dissolved in 100 c.c. absolute methyl (wood) alcohol. These two stains are kept separate in ground glass-stopper bottles of 100 c.c. capacity. They are ready for use immediately, though it is preferable to wait a few hours for a more complete solution of the dyes. Both stains as thus made are supersaturated. There is always some insoluble residue as well.

Blood smears are made by the cover-slip method; that is, one cover-slip is touched to the fresh drop of blood and another immediately laid crosswise of this with the corners projecting until the film has spread almost to the edges, when the cover-slips are quickly slipped apart by the fingers or forceps and dried immediately by shaking in the air, one slip in each hand. Thus two dried films are made. These are ready for staining at once, though they may be carried around for several days, care being taken that flies are kept away from the film side, as they rapidly eat up the dried corpuscles.

The staining is done away from the air, this being the secret of success of the whole process. This is to prevent the evaporation of the absolute alcohol, which produces a rapid precipitation of the dyes and so spoils the smear for subsequent examination. To effect this, ordinary watch-crystals may be used, the stain poured in one and another inverted over it to cover it. As these are rather awkward to handle, however, the Syracuse flat-bottomed watch-glasses, which may be piled one on the other, are ideal. In staining a smear made on a glass slide instead of on the cover-slip the slide may be dropped directly into a wide-mouthed bottle containing the staining solution and the bottle stoppered at once.

TECHNIC

A. A little of the eosin solution is poured into a watch-glass, the dried blood smear dropped into it, preparation side downward, and covered immediately with the second watch-glass. This is left from one-half to one minute. A little of the methylene-blue solution is poured into the second watch-glass and this covered with a third. B. At the end of the minute the cover-glass is removed from the eosin solution by means of a blunt-pointed forceps and dropped face downward at once into the methylene-blue solution. Here it remains the same length of time. C. The cover-glass is now picked up by the edge with the forceps and rinsed rapidly three or four times in a small beaker of tap water, provided this water is of the surface variety; otherwise distilled water or rainwater should be used. D. The edge of the cover-slip, still grasped, is touched to a piece of filter paper to drain off the excess of water, after which it is quickly blotted dry between two pieces of filter paper. It is mounted, preferably in cedar oil, and examined either with a sixth, eighth or twelfth ob-

jective. The stains are poured back in their respective bottles immediately after use. None of the stain is ever thrown away.

ADVANTAGES OF METHOD

This method is not a new one, but I wish to emphasize the fact that it is by far more reliable and satisfactory to the busy physician than many of the newer methods, Leishman's, Wright's, Hastings', Nocht's and other modifications of the old Romanowski stain; and, further, it stains the red corpuscles directly in proportion to the amount of hemoglobin they contain.

Among other advantages are these: The physician prepares his own dye solutions, the time required being probably ten minutes. There are no difficulties, such as uncertain titrations, neutralizations, filtrations, etc., to contend with. The stains are used over and over again; the older the stain becomes the clearer, sharper and more rapidly it stains. No previous fixation of any kind is necessary; rinsing and washing between the stains is contraindicated. The apparatus necessary is of the simplest, viz., three Syracuse watch-glasses (recommended, but not necessary), a small beaker and a pair of forceps. The total time required for staining an ordinary blood smear need not exceed three minutes. The staining itself can be accomplished in one minute. Again, the stain is of the polychrome variety, no subsequent counter stains being necessary to bring out eosinophilic, neutrophilic or basophilic granules. As Romanowski says, it is an ideal stain for the malarial parasite. It is also for the commoner organisms. It is an ideal stain for the differential leucocyte count. All nuclear matter takes an intense diffuse blue stain, hemoglobin a red stain, neutrophilic granules a reddish-purple (pepper grains), eosinophilic granules a scarlet (red currants, i. e., the same color as the surrounding red cells), basophilic granules a blue-black (bird shot). Blood plates are seen in clumps in the clear spaces and stain a pale violet. Malarial pigmentations remain unchanged. Ordinary bacteria take the methylene blue. All the above features are contrasted in the field in a very striking way. There is no "washed-out" appearance.

PRECAUTIONS

The only precautions are these: 1. The blood smear should be properly made and rapidly dried (see any text-book on hematology). 2. The dye solutions should be kept at all times under cover. 3. The ingredients used should be reliable. I have rarely found any difficulty with the makes of dyes or alcohol noted above.

It is best never to buy more than a ten-gram sample of each of the dyes. This is a very small expense, and a good sample (tested by its staining abilities) should be set aside and kept for this stain alone. Five hundred cubic centimeters of absolute methyl alcohol will suffice for all time. The sum of \$2.00 will secure enough ingredients to last a lifetime. Any failure in the ingredients is easily detected. If the hemoglobin in the red cells is not stained well in at least two minutes' time the eosin sample is usually worthless. Occasionally such a solution improves on standing for two or three weeks' time. If the methylene-blue solution does not bring out the nuclei of the leucocytes in good sharp contrast to the protoplasm and its contents in two minutes' time, it should be dispensed with for a new sample.

It is to be noted that this stain does not bring out the chromatin network in the nucleus as does Wright's

stain and other similar stains wherein a neutral dye (azure-blue) is produced, but this is of no value to the physician and is apt to be confused by the less experienced with the granules in the cytoplasm.

It is easy to test the purity of the methyl alcohol in regard to water contents. It should be at least 99 per cent. pure. Such a sample shaken up with about a gram of powdered anhydrous copper sulphate in a test-tube and allowed to stand for four hours should show no blue color to the solution and only a bare trace of green in the copper sulphate sediment in the bottom of the test-tube at the end of that time. A more accurate test is to shake equal parts of the alcohol and benzol together when any turbidity of the resulting solution proclaims the presence of water. In case of failure with either of the stains it is usually best to test the alcohol first, as I have more often found this at fault than the dyes themselves. One peculiarity that may be noted is that if an absolute methyl alcohol can not be obtained, but one which is at least 95 per cent., the alcohol-soluble eosin (Grübler) will often make a very satisfactory stain where the water-soluble eosin fails.

It will be noted from the method given above that a little of the eosin is conveyed by the cover-slip each time into the methylene-blue solution. This is no detriment, and is, in fact, I believe, one of the reasons why the latter solution improves "with age." I have had no success, however, with direct admixture of the two dyes either in equal proportions or various proportions. It is to be noted that this is the scheme of the Jenner stain except that the addition of distilled water is made and a new dye substance (neutral dye) is really formed.

In my experience the presence of water in either of the staining solutions accounts for the uncertainty of the stains at various times, their tendency to deteriorate, and for the failure to bring out the nuclei, especially of the large mononuclear forms, and to stain the granules in the myelocytes. Stains made up at various times will vary somewhat in the intensity of their reactions, but the propensities of any given sample are quickly learned, and as the dye is used over and over again the original 100 c.c. solution will last many months if not years. On account of the supersaturation all that is necessary when the dye gets down near the bottom of the bottle is to render more of it soluble by the addition of methyl alcohol. I have some stain at hand which is over four years old and will stain thoroughly in ten seconds. It will not overstain if left several hours.

SUMMARY

1. The stain for blood smears here advocated for busy physicians is a modified Jenner-Romanowski (polychrome eosin-methylene-blue), commonly called Skelton's stain.

2. This stain consists of only three ingredients (methyl alcohol, eosin and methylene blue) and is made up by the physician himself in ten minutes' time.

3. The following directions embody the secret of success with the Skelton stain: 1. Keep the two dye solutions separate. 2. Stain away from the air. 3. Use pure methyl alcohol and keep the stains uncontaminated with water.

4. Advantages of the stain and method are: 1. Rapidity—one to three minutes for the entire process. 2. Simplicity—no special technic, no guess work, no "eye on the watch." 3. Impossibility of overstaining. 4. Polychrome staining—acidophilic, basophilic and neutrophilic properties brilliantly contrasted as well as

pathologic discolorations. 5. Red cells stained in direct proportion to amount of hemoglobin carried—a Tallqvist scale on a microscopic principle. 6. Staining of the blood plates. 7. The ideal parasite and bacterial stain for blood smears. 8. Improvement with age; the stain never deteriorates. 9. Inexpensiveness—the same stain is used repeatedly—one to two dollars will buy enough of the ingredients for a lifetime practice.

5. Indication for blood smears: fever or pallor.

6. The physician is urged to make a blood smear (preferably cover-slip) at least in every case where indicated, whether other blood determinations are made or not; for (1) some idea of the number of erythrocytes and the percentage of hemoglobin (in ordinary anemias) can be readily attained; (2) the color index and the leucocyte count can be estimated well within clinical limits; (3) the differential leucocyte count, poikilocytosis, parasites, etc., in other words, the true pathologic picture can be obtained in no other manner; and (4) a permanent record of all these findings is gained which has been easily obtained, and an indication and stimulation for more blood work where necessary.

A CASE OF TETANY TREATED BY CALCIUM SALTS

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In a recent issue of *THE JOURNAL*¹ attention was editorially called to the relation between calcium metabolism and tetany, and reference was made to a paper by MacCallum and Voegtlin² on the subject. In a preliminary report by these authors, appearing last year,³ I was first made aware of the importance of calcium in tetany, and was prepared to apply clinically the experimental principles evolved by these writers should the occasion arise. Such an opportunity has presented itself, and the purpose of this article is to put on record clinical observations which may be of interest and importance.

I have no intention of venturing on an elaborate discussion of the whole question of tetany in a paper primarily simply a case report; but a brief preliminary summary of the work referred to above is necessary, in order to make evident the bearing of the findings in this case. Tetany is a condition which has been observed to arise in connection with a number of disorders. It may be associated with gastrointestinal disturbances, particularly gastric dilatation, with lactation, with acute infections, and after thyroidectomy. It is characterized by intermittent tonic contractions of the voluntary muscles, which in severe cases may be associated with great disturbances of respiration and a comatose mental state. The most typical contractions are those occurring in the hands and arms, the fingers being firmly pressed together, stiffly extended at the interphalangeal joints, but flexed on the hand at the metacarpal-phalangeal articulations. The thumb is opposed tightly against the palm and the hand flexed on the wrist. This posture has been termed the "obstetric" hand, as the position is much like that assumed in manual dilatation of the cervix. Without detailed dis-

1. *THE JOURNAL A. M. A.*, Jan. 30, 1909, III, 388.

2. *Jour. Exper. Med.*, 1909, xi, 118.

3. *Johns Hopkins Hosp. Bull.*, 1908, xix, No. 204, p. 91.

ension of the theories as to the etiology and pathology of the disease, the facts to which I wish to call attention are the following:

The cases of tetany following thyroid operations have been satisfactorily shown to be due to destruction of the parathyroids. In animals experimentally deprived of the parathyroid glandules tetany develops. In studying the metabolism of such cases MacCallum and Voegtlein discovered that there was a profound disturbance of calcium relation, and that the animals lost this element rapidly by excretion, the calcium contents of the blood and tissues being much reduced. The animals improved on an increase in the ingestion of calcium salts. From these data the two authors referred to have postulated certain hypotheses. They suppose that the internal secretion of the parathyroid presides over calcium metabolism in some manner, and that when this secretion becomes deranged there is a consequent disturbance in the use of calcium by the tissues. The removal of the glands obviously precipitates such derangement. But it may also arise in consequence of the changes associated with lactation, the puerperium, gastric dilatation, etc. This, in brief, is the central idea presented. It has been elaborated considerably by theories as to how the disorder of the parathyroid may occur in various clinical cases, and as to the specific functions of calcium salts, but the elementary conception is as just described.

With this outline of the relation between calcium and tetany, I will proceed with the following case report:

History.—The patient was a white girl, aged 8. She was sent to the University of Virginia Hospital by Dr. F. L. Thurman, of Keswick, Virginia; was admitted Sept. 8, 1908, at about 11 a. m. Her family history was unimportant. For some months the patient was subject to frequent attacks of abdominal pain, most intense in the epigastrium. There was loss of appetite, but no definite nausea and no vomiting. These attacks were relieved by various home remedies. The child was otherwise healthy.

Present Illness.—The patient went to bed the night before admission apparently well. There was no history of indiscretion in diet. In the morning, on arising, she complained of one of the attacks of abdominal pain noted above, and was given a small drink of whisky and put to bed. About an hour afterward the mother's attention was called to the child by hearing her groan. She was found comatose, and seized by one of the convulsive attacks to be described later. Her physician was called, who sent her immediately to the hospital, the patient arriving less than five hours after the onset of the trouble. During this interval she was in the condition now to be noted.

Examination.—The patient was well nourished, of good color, and general healthy appearance. A careful search failed to show any lesion that might have been portal of entry for tetanus. The child was semicomatose, failed to answer questions, and uttered no sound except an occasional groan. There was no fixed attitude of face or body. At intervals of from five to fifteen minutes, however, there was a convulsive seizure lasting several minutes, with marked rigidity of neck and jaw, and opisthotonos. The jaw was sometimes closed and sometimes open, but always rigid during attacks. When the jaw was open the tongue was forcibly protruded. During these seizures the patient groaned with pain, and became cyanosed and dyspneic. The most peculiar feature of these attacks was the behavior of the extremities. The arms were always rigid, sometimes extended, sometimes flexed at the elbows, but the hand and wrist always took the position known as the "obstetrical" hand. The feet were also forcibly extended. The eyes were held half-closed, and rolled far out on either side or upward or downward, but never with strabismus or nystagmus. The knee-jerks and

other reflexes were somewhat exaggerated but there was no clonus anywhere. Temperature was 101 degrees, pulse 135 per minute, the tongue coated, chest clear, the abdomen negative, except for some fulness. Trousseau's phenomenon of induced spasms of the hand by compression over nerves and vessels of the arm was doubtful. A partial contraction was produced, but not a complete reproduction of the typical position. Chvostek's nerve-tapping sign was negative. The child voided involuntarily in small amounts. Swallowing was impossible.

Treatment.—The patient was chloroformed during the convulsion and calcium treatment started at once. A subcutaneous infusion of normal salt solution to which 30 grains of calcium lactate had been added was given, and every four hours 10 grains of the same salt were administered in milk through a nasal tube.

Course of Disease.—The condition of the patient remained about as described for nearly twenty-four hours. At 1 a. m., September 9, convulsions became gradually less, and the last one occurred at 3 a. m. After this the patient fell into a stuporous sleep which lasted until about 7 p. m., the patient only arousing when the nasal feeding of milk and calcium lactate was given. During the evening of September 9, the patient was awake in a drowsy condition. At 1 a. m. of September 10 she responded to her name and spoke a few words for the first time. During September 10 she was apparently much better except for marked mental dulness, and that night she slept well. During this day she could swallow and talk, and the next day seemed practically well. She was discharged from the hospital September 12, 1908, the calcium being kept up to the last.

The report of our case affords no justification for drawing any general conclusions, but it presents several facts of interest. First, as to the diagnosis: Tetanus and hydrophobia can be excluded as possibilities by the history, symptoms and conclusion of the case. Strychnin poisoning, which was suggested by the onset closely following the drink of whisky, is excluded by the dull mental condition, lack of sensory stimulation, and absence of any ill effect following the drinking of the same whisky at approximately the same time by other people. The diagnosis between hysteria and tetany was more difficult. The absence of any previous hysteric condition, the temperature, pulse-rate and general appearance of the patient made against hysteria. On the other hand, the clinical picture was identical in every particular with that of a severe attack of tetany, excepting the equivocal Trousseau's sign and the absence of Chvostek's phenomenon. I did not determine the size of the stomach and so can not say whether it was dilated or not. The incontinence and tossing of the patient made the collection of urine impossible during the first part of the attack. When it was examined, during convalescence, it was found normal. The patient has been followed since her discharge and has remained entirely well. In the event of a second attack the doubtful points just noted will be again investigated.

In conclusion, while not drawing deductions by the formula "Post hoc, ergo propter hoc," the following facts are clear: A case of tetany of unusual severity and intensity cleared up in a remarkably short time, following treatment with calcium salts, and in the absence of any other treatment save chloroform for the actual convulsions. The case certainly seems to lend clinical support to the experimental work of MacCallum and Voegtlein.

Disseminated Telangiectasis of the Liver.—Hedrén concludes that the primary condition is a degeneration and disintegration of liver cells and the telangiectasis a secondary and purely mechanical sequence. The same condition occurs in cattle as in human beings.—*Hygiea Festband.*

AN UNUSUAL CASE OF MENTAL DEFECT OF
TRAUMATIC ORIGIN

OPERATION, FOLLOWED BY MARKED IMPROVEMENT *

H. H. DRYSDALE, M.D.

CLEVELAND, OHIO

The case which I have the opportunity of reporting was referred to me Feb. 5, 1908, by Mr. G. W. Ehler, former supervisor of physical training in the Cleveland schools. His attention was called to the boy's mental peculiarities by the teacher in charge of the department for defectives. The presentation of this unusual condition is, I believe, fully justified by the rarity of the phenomena, as nowhere in the literature can I find a similar syndrome.

Patient.—Carl R., aged 7, male, height 4 feet, born in Cleveland. The father and mother of this boy are sturdy and industrious Germans. They both enjoy excellent health and are of rugged constitutions. There is no history of neuropathic or psychopathic taint. Their family consists of ten children, seven of whom are older than the patient. The parents are not and never have been addicted to alcoholic beverages or narcotics of any kind. Both deny having had venereal or specific disease. All the children except Carl are of vigorous mentation.

History.—This lad was born at the full period of gestation. During pregnancy the mother was not subject to bodily injury or disease or to any extraordinary emotion. The delivery, however, was instrumental. At birth no peculiarity was noticed and the patient was considered normal in every respect. In early infancy he suffered an attack of measles but escaped whooping cough, scarlet fever, diphtheria and acute brain disease. At no time has there been any suspicion of chorea, paralysis, spasms, convulsions or loss of consciousness. The boy began to walk at the age of 14 months and to talk at the age of 15 months. During this period he was bright, active and affectionate and entered gleefully into the natural gaiety of childhood. When 2½ years old he was playing on the foundation of a building which was being erected in the neighborhood and accidentally fell about six feet, striking his head on a brick, inflicting a wound one and three-quarter inches over the right frontal area, one inch above the middle of the superciliary ridge. The family physician sutured and dressed the injury. No complications ensued and a rapid recovery resulted. Within the year following this incident a gradual change in the psychic personality of the boy was observed. At times he would appear listless and distracted. He also seemed to suffer from an exaggerated sense of fear. It was difficult to make him understand and he could not be trusted to run errands. He was partially amnesic. It was further noticed that he persisted in doing many things in a reversed manner. For instance, he invariably would lace his shoes from the top down and dress himself contrary to the usual order of modern custom. The family looked on these oddities in a mirthful manner and no significance was attached to them until the boy began to go to school. He was then six years old. It did not take the teachers long to decide that the boy was deficient. He lacked spontaneous attention, his perceptive power was feeble and he could not learn. In due time it was necessary to transfer him to the department for defectives, in charge of Miss Mahoney, who made a careful study of the case and discovered that the lad copied all letters and figures in an inverted manner.

General Examination.—The subject was a well-nourished, right-handed boy, weighing sixty pounds. His heart and lungs were apparently normal. There was nothing of interest in the abdominal organs. Examination of the urine was negative. The patellar, tendo-Achilles, mandibular, cremasteric, abdominal and sphincter reflexes were alive and brisk; the Babinski phenomena absent. There was no muscular atrophy or hypertrophy anywhere, and in general the muscles

were well developed. The gait and station were unaffected. No evidence of ataxia, tremors, ties, or twitchings could be determined and no anomaly of sensibility.

Eyes: (Dr. Leo Wolfenstein.) Exterior appearance of both eyes normal. Binocular fixation. No limitation of motion in either eye. Good convergence. Pupils medium size, equal and both reacted promptly to light and distance. Vision of both eyes 6/6. Field of vision roughly tested did not appear to be contracted, at any rate no hemianopsia. Field of vision for colors could not be determined on account of lack of intelligence of patient. Fundus of both eyes: media clear, disc round, clearly outlined, good color, small physiologic cupping. No pathologic findings anywhere in fundus. Low hypermetropia.

Stigmata Hereditatis: Inspection showed no developmental abnormalities of head, trunk or extremities. The ears were somewhat large but not disproportionate in size. The setting of the teeth and their general conformation was good. A pronounced high arched palate was evident, but this was the only sign that might be considered degenerative.

Cranial measurements:

Circumference	45.5 cm.	Binauricular arc.....	27.5 cm.
Volume	1180	Binauricular diam.	11.2 cm.
Naso-occipital arc.....	28. cm.	Antr. post. diam.....	16.3 cm.
Naso-bregmatic arc.....	9.8 cm.	Length breadth index....	75. cm.
Bregmatolambdoid arc..	10. cm.	Facial length	9. cm.

Lumbar puncture was not made.

Psychic Condition: The expression was vacuous and only occasionally did the patient smile. He recognized a few of the objects in common use but did not seem to understand the purpose they served. There was absolutely no spontaneity of thought and the boy uttered not a word unless interrogated. Almost nothing was capable of arousing his interest except money or something spectacular in appearance. His attention was defective and the slightest mental effort seemed to exhaust him greatly. He was easily distracted. His ideative content was most meager and there was poverty of the memory. He was unable to differentiate between different coins but could count correctly 'up to ten. When requested to copy letters he persisted in making them inverted. At the same time he was fully aware that his reproductions were wrong and tried repeatedly to correct them, only to fail utterly in the attempt. All figures he made on the order of mirror-writing.

Habits: The lad was cleanly to a degree and thoroughly obedient. He had acquired no bad habits; was not given to cruelty and had never been quarrelsome or irritable. His table deportment was satisfactory.

Diagnosis.—When this patient was first presented an attempt was made to determine whether the brain was tangibly injured at the site of the external wound or at some remote and inaccessible location or whether the case was one of phrenasthenia (feeble-mindedness) precipitated by the injury. A conclusion was made still more difficult by the assertion of Phelps' and others that a lesion of the right prefrontal lobe was unattended by mental decadence. It may safely be assumed that prior to the accident this boy was bright and mentally alert. His condition when examined two and a half years after the injury was that of a weak-minded youth. It must, of course, be admitted that phrenastheniaes frequently make figures in an inverted manner; but why should this patient display such a pronounced disturbance in writing (dysgraphia) when the motor area of written speech or register of the kinesthetic images of writing occupy the base of the second left frontal convolution and the letter-seeing zone the angular gyrus in right-handed persons? A few exceptions to this rule, however, have been reported, based on absolute necropsy findings. It might be argued that inasmuch as the center of writing and its association tracts are the last portions of the linguistic cerebral basis to be developed in normal brains and as this boy had barely a year's schooling it is quite probable that his writing functions were but slightly organized, and if such was the case the condition could not be termed a dysgraphia. On the other hand, if the contention of Phelps and

* Read before the Clinical and Pathologic Section of the Academy of Medicine of Cleveland, Dec. 4, 1908.

others is correct, the brain in this instance must have been disordered on the left side. A lesion involving the left prefrontal lobe would readily account for the boy's psychic enfeeblement. The graphic symptoms, however, would indicate that the disturbance was more general. As I mentioned before, the patient was aware that his reproductions were incorrect but was unable to copy accurately what he saw, so it is evident that there was some interruption in the tracts connecting the visual center and the graphic motor apparatus. It does not seem possible that the definite localization of the lesion in this unusual case can positively be determined. At any rate an attempt to do so on my part would be mere conjecture.

That the underlying causal element was an excess of fluid within the cerebral vault I am inclined to believe, as the symptoms gradually subsided when the tension was relieved. While no thought of a cure was even anticipated from surgical intervention it was deemed advisable to resort to some such measure as there was tenderness, headache and marked depression of bone (at least of the outer table) at the site of the external wound.

Operation.—The patient was referred to Dr. F. E. Bunts, whose operation at Charity Hospital, March 24, 1908, was as follows: "The head being entirely shaven and a tourniquet placed around the skull just above the eyebrows, an osteoplastic resection of the skull was made in the right frontal region, including the area of apparent depression of the outer table, the base of the flap being toward the face. After throwing back the bone flap and scalp together the inner surface of the bone was examined but no evidence of an old fracture presented. The dura was then carefully examined and it was thought that at one point it was somewhat more tense than normal and a small incision in the dura was made. Cerebrospinal fluid escaped in a very small quantity but apparently not enough to account in any way for cerebral disturbances. No other lesion having been discovered, the bone flap was replaced and the scalp stitched in place.

Postoperative History.—Primary union occurred and the patient left the hospital April 7, 1908, two weeks after admission, with no apparent change in his mental condition." As was the case before, the patient was listless, indifferent and distracted.

Several physicians at this time examined him in regard to his ability to copy and found his copies still inverted. On the assumption that the operation had signally failed, as we had reasonably expected, and that the future of the boy would be clouded in imbecility, it was considered best to have him return to the school for defectives. On May 9, 1908, report came to us that the patient was gradually improving, was now able to copy correctly, and that he displayed considerable interest in his studies.

Another examination was made the following week, and the examiners were amazed to find that there was a decided change for the better; that the patient could now reproduce letters and figures accurately and that his memory and perceptive power were very much more keen. From the time of his discharge from the hospital to date of writing, Dec. 4, 1908, he has regularly attended school and through the summer months his teacher has given him private lessons of one-half hour's duration at her home. The result has been, to say the least, most gratifying to all concerned. The boy is now a responsive child, well adapted to his environment and able and willing to learn. From my close observation of the case I am firmly convinced that the improvement will be continuous and permanent.

It is not my desire to report this condition as a cure, because the boy is not as well endowed intellectually as a normal boy of the same age, but I do assert that the operation has been the means of clearing up some very troublesome symptoms, has given the patient a richer mentalization, and has unquestionably spared him a life of mental inertia.

Carnegie Avenue and Eighty-eighth Street, S. E.

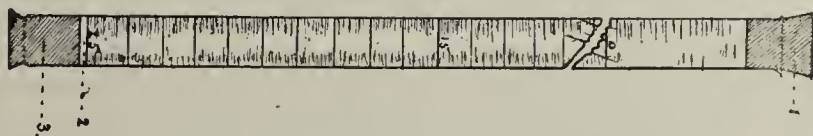
AN APPARATUS AND SIMPLIFIED METHOD OF DETERMINING GASTRIC AND OTHER ACIDITIES QUANTITATIVELY

EDWARD P. FICK, M.D.

SEATTLE, WASH.

The usual method of determining the amount of the various acids in stomach contents after a test trial necessitates numerous and more or less troublesome apparatus, viz., burette-holder and stand, burette with attachments, one or more glass beakers and a second burette or pipette in which to measure the stomach contents. By the method about to be described many of these instruments are done away with and only a single burette, properly fitted, is made use of, together with an eye-dropper, preferably with a long shank to reach down in the bottle containing decinormal alkali.

The burette is made in the following manner: An accurately graduated tube whose inside diameter is from six-sixteenths to seven-sixteenths of an inch, and which holds 25 c.c., should be marked off in tenths of a cubic centimeter. The lower end of such burettes have a space below the 25 c.c. mark not etched: this should be removed to within about 2 cm. of the 25 c.c. mark by the aid of a triangular file. Then the end should be fused and made slightly narrower with a Bunsen flame. A soft rubber cork, a trifle larger than the inside diameter of the tube, should then be inserted in the lower end, so that it reaches a point nearly opposite the 25 c.c. mark. This point is determined by placing three, or whatever number of drops of the al-



Burette for stomach analysis: 1. Rubber cork for purposes of shaking. 2. Space occupied by indicator. 3. Rubber cork to act as plug.

coholic indicator is individually used, in the bottom, and then pushing up the cork so that the meniscus is on a level with the 25 c.c. mark. I have also used a thick paste of calcium sulphate and forced this up from the bottom and carefully smeared the surface of the plaster with paraffin so that the indicator would not stain this permanent plug. It has the disadvantage, however, of being more difficult to do, and if the tube becomes badly soiled, the lower end is beyond the reach of the average cleaner. The preparation of such a tube requires but a few moments.

The technic of the analysis is as follows: Drop the desired amount of indicator in the burette and then add 10 c.c. of clear stomach contents (up to the 15 c.c. mark), agitate to distribute the color, and drop in carefully the decinormal alkali, inverting the tube from time to time, corking the upper end with a rubber similar to that inserted in the bottom of the tube. When the neutralization is complete: read off on the burette the number of cubic centimeters found necessary, and multiply by ten, which will give the amount of free acid present, expressed in terms of the alkali, which is the most desirable way. Now, add the indicator to express the total acidity, directly to the contents (about three drops of an alcoholic solution of phenolphthalein), and again add the alkali to the end reaction, and again read off the amount on the burette and record as before.

It is unnecessary to determine the free acid and the total acidity by separate quantities of stomach contents,

and it is therefore justifiable to add the phenolphthalein directly to the contents already containing the alcoholic solution of "dimethyl." The amount of error in adding the few drops of the alcoholic solutions to the aqueous stomach contents is negligible for clinical purposes, as may readily be proved by adding the same number of drops of alcohol to a tube almost full of water.

It is well to have two control tubes, or one control tube with a paraffin "partition" in the middle, with the end reaction of the "dimethyl" below and the end reaction of the phenolphthalein above the partition. This tube should be of the same diameter as the burette; the liquid may be made of about the same opacity as the stomach contents with dilute starch paste and the tube finally sealed to prevent the access of air. This, of course, is a valuable standard for comparison and will not change, with proper precautions, as the appreciation of the eye for colors will.

I claim for this modified method the following advantages: Simplicity, economy, greater accuracy than the usual method, saving of time, and cleanliness.

716 Alaska Building.

CASE OF POISONING BY FORMALDEHYD

A. J. BOWER, A.B., M.D.

GREENVILLE, MICH.

Owing to its intensely irritant properties, formaldehyd is rarely used for suicidal purposes, and few cases of poisoning with this substance have been recorded. In the literature at my disposal I find two fatal cases reported, one of which is described by L. A. Levison¹ in 1904. In that case the patient swallowed between two and three ounces of commercial formaldehyd and died in collapse about twenty minutes later. Autopsy showed the mucosa of the lower part of the esophagus, stomach and first portion of the duodenum to be dark, chocolate brown in color, and of the consistency of leather. There was an excessive amount of mucus in the bronchi.

On account of the small number of cases of poisoning with formaldehyd I have thought it advisable to report this case in detail:

Patient.—Miss M. S., aged 20, swallowed about a half an ounce of formalin. I saw her about twenty minutes later; she was sitting up, not complaining of any pain; pulse was 106 and of good quality.

Treatment and Result.—Lavage of the stomach was done, there being a strong odor of formaldehyd to the first washings. Immediately after the removal of the tube the patient fell to the floor in a condition of collapse, with loss of consciousness, pallor, irregular pulse, and coldness of the body and extremities. Strychnin was administered, and after several minutes consciousness was partially regained, and she complained for the first time of pain in the throat and stomach, the latter being paroxysmal in nature. The patient vomited twice, the vomitus being small in amount and containing blood. Demulcents, such as milk and the whites of eggs, were administered; an ounce of castor oil was given, by the tube, for both its demulcent and cathartic effects. The patient was stimulated with strychnin, gr. 1/30 being given hypodermatically, three doses in the first hour, then continued every three hours for twenty-four hours. About six ounces of lime-water was given every two hours alternating with a glassful of water containing a dram of sodium bicarbonate. A diuretic mixture was given every two to four hours containing ten grains each of the acetate and citrate of potassium to the dose.

Subsequent History.—The patient lay in this stuporous, semi-conscious condition for about thirty hours, showing a slight gradual clearing up of her physical and mental condition. During this time she was entirely unable to speak; she could understand conversation, but was unable to reply, the muscles of her mouth making labored, but fruitless movements. The tongue could not be protruded beyond the teeth, but could be seen to be reddened and swollen. The eyes could be opened only with great difficulty. After about thirty-six hours she regained the power of speech, talking at first slowly, and with difficulty. When questioned regarding pain, she said there had been no constant pain, except in the throat, and it was not severe there; there was pain in the esophagus and stomach at varying intervals, not of long duration, nor severe except at first. She could not describe the nature of the pain definitely, but considered it more as a heavy, dull, aching than as a smarting or burning. The further recovery of the patient was rather rapid. She was able to be out of bed in about four days, and in a week she went to her home forty miles away.

A surprising feature was the slight amount of kidney disturbance. A specimen obtained thirty hours after taking the poison showed a turbid, grayish-yellow urine, with a specific gravity of 1.019, amphoteric reaction, with no albumin (or sugar); there was a heavy sediment consisting mainly of triple and amorphous phosphates, with but few epithelial cells or leucocytes. Two days later the urine was nearly normal, except for an alkaline reaction, probably due to diuretics given, the presence of phosphates and many epithelial cells.

MALIGNANT ENDOCARDITIS FOLLOWING CHANCROID

I. FRANKLIN COHN, M.D.

Assistant Surgeon, U. S. Navy
MARE ISLAND, CAL.

The following case is considered to be of interest as it illustrates a somewhat unusual method of the development of malignant endocarditis, the micro-organisms gaining access to the circulation through the ulceration of a chancre:

Patient.—O. W. W., fireman second class, U. S. Navy, was admitted to the U. S. Naval Hospital, Mare Island, Cal., on Dec. 19, 1908, as affected with "chancre." There was no co-existing gonorrhea.

History.—The patient was 29 years old, single, had had about ten months' naval service, and had never been on the sick list since enlisting. He was formerly employed as a railroad brakeman. He used alcoholic drinks excessively some years previously; tobacco, moderately. He stated that he had an attack of "typhoid-pneumonia" three years ago and that he had always enjoyed excellent health since that time. He denied any previous venereal history or ever having had rheumatism.

Course of Disease.—On admission he presented an annular ulcerating chancreoid surrounding the meatus. The inguinal glands were not involved. Healing was fairly rapid under treatment by applications of crystals of copper sulphate. On December 24 he suddenly developed severe cardiac symptoms; temperature, 101.2; pulse, 136; respirations, 52. The heart was found to be enlarged downward and toward the right and left sides. Auscultation revealed a diastolic murmur at the second right costal cartilage, transmitted toward the apex. The pulse was distinctly of the Corrigan type. The diagnosis was then changed to *cordis valvularum morbus (cardiac valvular disease—aortic regurgitation)*. The septic condition gradually became worse, the temperature ranging from 100 to 103; pulse, 120 to 140; respirations, 40 to 60. A large area of impaired resonance, approaching dullness, was noticed over the lower lobe of the left lung, anteriorly and laterally. The usual measures used in the treatment of acute endocarditis failed to give any relief. The white blood count ranged from 20,000 to 40,000. A purulent pericarditis was

1. THE JOURNAL, JUNE 4, 1904, xlii, 1492.

suspected and on Jan. 5, 1909, a paracentesis of the pericardium was performed under local anesthesia (ethyl chlorid) but no fluid was obtained. The patient's condition rapidly grew worse, all symptoms increasing in severity and the dyspnea became intense (respirations, 60). The leucocyte count reached 89,000. The septic condition was then believed to be due only to a pyogenic infection of the aortic valves. Death occurred on the evening of January 7.

Autopsy.—This revealed a large mass of fleshy, vegetative excrescences on the aortic valves, about the size of the end of the thumb. When these were removed for the purpose of making sections, a considerable amount of thick, yellow pus exuded from beneath the leaflets. Both pleural cavities were almost entirely obliterated by dense adhesions, undoubtedly the result of a pleuritis following the previous attack of "typhoid-pneumonia." The liver and spleen were both enlarged and congested, the latter organ showing evidences of amyloid degeneration. Cultures were made from the pus obtained from the aortic lesion and from the chaneroid, and the same organism (*Staphylococcus pyogenes aureus*) was isolated in pure culture from both localities. Stained sections of the diseased valves showed numerous purulent foci.

The fact that the chaneroid was the only perceptible abrasion on the body surface, the isolation of the same organism in pure culture from both places, and the sudden onset of the septic condition following the chaneroidal infection, all seem to indicate that the malignant endocarditis was the sequel of the venereal infection.

U. S. Naval Hospital.

INTESTINAL RESECTION WITH END-TO-END ANASTOMOSIS BY PARKER-KERR METHOD: RECOVERY

SCOTT D. BRECKINRIDGE, M.D.

WASHINGTON, D. C.

Patient.—A colored man, aged 31, was brought into Providence Hospital by Dr. Scott, of Anacostia, Dec. 5, 1908, for immediate operation for a strangulated left inguinal hernia, the strangulation being of about twelve hours' duration.

Operation.—The hernia was exposed and the sac incised in the usual manner, the contents consisting of twelve inches of gangrenous small intestine and a small portion of the omentum which was adherent to the bottom of the sac. The intestine failing to react to the application of hot saline solution, the narrow clamps adopted by Parker and Kerr¹ in their work were applied transversely to the axis of the intestine, one inch outside of the gangrenous portion, and resection performed. A Cushing continuous right-angled suture (the "basting-stitch" of Parker and Kerr) was then applied over the clamps; the clamps were withdrawn, and the "basting-stitches" drawn taut, perfect invagination resulting. End-to-end anastomosis was then performed by means of a silk continuous Lembert suture, reinforced by two or three interrupted Lembert stitches of the same material. The "basting-stitches" were then cut short and withdrawn without the slightest difficulty. The line of anastomosis was rolled between the thumb and finger to open the lumen and a portion of the intestinal wall invaginated through the anastomosis to test its patency. The intestine was then returned to the abdominal cavity and the wound closed.

Postoperative History.—The patient vomited once after the anesthetic and at no time suffered from distention or from any disturbing symptom. His temperature and pulse reached normal on the third day and he made an uneventful recovery, being discharged well a little over three weeks after the operation.

I place particular emphasis on the perfect invaginating action of the "basting-stitches" and the perfect ease

with which they were withdrawn after the completion of the anastomosis. This "closed" method is undoubtedly cleaner and, in my opinion, simpler than the ordinary methods by use of clamp and suture, or Murphy button.

A PERMANENT APPENDICULAR VESICO-CECAL FISTULA

R. CADWALLADER, M.D.

SAN FRANCISCO

The following case report shows one result of appendicitis:

History.—A girl, aged 20, was brought to me with the following history: She was the child of healthy parents, a normal baby with a normal history. She had had the usual diseases of childhood. When she was about eight I treated her for persistent bed-wetting. The usual remedies gave little benefit, and, while my records are now lost, I remember telling her mother that I thought it would end at puberty. There was no congenital malformation of any kind. Menstruation began when she was eleven in a perfectly normal manner and, as expected, the enuresis ceased. Soon after this, when about 12 years old, she noticed that a considerable quantity of mucus and pus was passing in the urine at times, with soreness of the bladder. This was more marked when the bowels were loose. With this there was for years a history of colicky pain in the abdomen, but at no time did it confine her to bed or simulate an acute attack of appendicitis. About three years ago this extraneous matter was found to be fecal in nature and is thought by her to have been occasionally passed for the greater part of her life. It was never constant and was usually the seeds of fruit, husks of grain, mucous and brown colored debris. It was not always of fecal odor. At times there was the passage of gas with the urine, of decidedly fecal odor and considerable noise, and she feels sure that several times there was urination from the bowel. With this history she was sent to me for operation.

Diagnosis.—I will pass quickly over the many tests by which I tried to establish all this as true. Inflation of the intestine and bladder were without success. Iron by mouth could not be found in the urine nor did methylene blue escape by the rectum. For days nothing would appear and then the catheter would bring blackberry seeds, pearl barley, or striped muscle fibers in accord with her diet. I used the Kelly cystoscope and made out the ureteral openings and most of the bladder wall to be normal and uninflamed. Dr. John C. Spencer was called in and we used the Nitze instrument and satisfied ourselves that there was nothing abnormal in base or walls except a spot on the fundus that might be an opening. Here was a dark patch or crater at one spot of the border of which was some inflammatory tissue. It was not conclusive but I decided to clear up the mystery by a laparotomy and even open the bladder if nothing was found in the abdomen to account for the symptoms.

Operation.—On January 3, with the assistance of Dr. Campbell Ford, I opened the abdomen and found first a large adhesion of the ileum to the fundus which was carefully separated but which did not communicate with the bladder. Under this we found the tip of the appendix adherent to the bladder at about the peritoneal reflexion over the uterus in the median line. The tip was embedded in the wall and seemed to form a part of it. It was about 7 cm. long and uniform in diameter. The succeeding steps were simple. A cuff of peritoneum and muscle was turned from either end and the median part cut away; the stumps were disinfected, the cuffs were ligated over the stumps and the abdomen was closed with the Ford stitch. Recovery was absolutely without interest and the patient left the bed a week later.

Were it not for the adhesion found I should be inclined to consider the condition congenital, but in the only other case like this, that of Keen's, I find that he

1. Parker, Edward Mason, and Kerr, Harry Hyland: Intestinal Anastomosis without Open Incision, by Means of Basting-Stitches, Johns Hopkins Hosp. Bull., May, 1908

mentioned the fact that the appendix seemed to be embedded in the wall—"soldered" is the term he uses. It is certainly remarkable that there should be no history of any pain in the right lower quadrant.

There have been many cases of perforation into the bladder, but these are the only two I can find in which the fistula was permanent. When such is the case there must be a history of gas escaping from the bladder. I have waded through the weary lists of pneumaturia, perisymphilitis and its complications and rupture of appendicular abscesses into the bladder, made more difficult by the various headings authors have reported them under, but find all spontaneously closed. The following articles are of interest in connection with the subject:

BRISTOW, A. T.:¹ This patient had not been operated on when the case was reported. The fistula has persisted for years and may be due to rupture of an abscess. The following letter has just been received:

BROOKLYN, N. Y., Feb. 3, 1909.

The patient whose case I narrated at the last meeting of the American Surgical Association still refuses operation, but the local symptoms still continue much the same, that is to say, there is the same evidence of communication between the bowel and the urinary tract. He has had one attack of fever since the first of the year * * * but is unwilling to submit to treatment which would cure him. I can not, therefore, say anything about the origin of the fecal fistula in this most puzzling case.

A. T. BRISTOW.

KEEN, W. W.:² "A case of appendicitis in which the appendix became soldered to the bladder, producing a urinary-fecal fistula." This patient was a man who at twenty-four passed seeds, pus and intestinal debris. The tip of the appendix was incorporated into the bladder wall, as was mine, and the treatment was by turning down a cuff of the peritoneum and excision in much the same way. This fistula was a permanent one as in my case for some years prior to operation.

KELLY, H. A., and MACCALLUM, W. C.:³ "Pneumaturia." This is an exhaustive list to that date of all cases of pneumaturia, and no doubt many of the early ones are vesico-intestinal, but I can find none of them due to adherence of the unbroken appendix by its tip to the bladder.

STONE, I. S.:⁴ "Perforation of the Urinary Bladder by an Appendiceal Abscess." In this valuable article Stone reports a case in which the tip was adherent and perforated. He also collates some thirty similar cases, but the fistulas, as in his own case, closed spontaneously. Therig's two, reported by him, were not permanent.

APPUHN, MAXIMILIAN HENRY:⁵ "Contribution à l'étude des complications de l'appendicite." This was a case reported by Jewell, Sept. 25, 1895, before the Surgical Society of Christiania. The patient was a girl of 17, who for three years passed fecal matter.

Rupture of an appendiceal abscess into the bladder is common. Rupture of the appendix after adherence is not infrequently reported. But adherence, rupture and a persistence of the vesicocoeal fistula by the appendix is so uncommon that Keen's case alone, and Bristow's possibly, are all I can find in literature besides my own, with the reservation that some old cases in Kelly's list under pneumaturia may be similar ones.

240 Stockton Street.

1. Tr. Am. Surg. Assn., 1908, xxvi, 360.

2. THE JOURNAL A. M. A., May 7, 1898, xxx, 1108.

3. THE JOURNAL A. M. A., Aug. 20, 1891, xvi, 375.

4. Annals of Surgery, 1904, xxxix, 265.

5. Thesis, Nancy, 1903.

Correct Language.—Correctness of onomatology is even more an index of character in science than in daily speech. In medical onomatology, as in ordinary speech, wanton incorrectness is an offence against both truth and good manners. The uncultured mind revels in uncount expressions. Incorrect medical onomatology is on a par with slang in ordinary speech: the use of either betrays ignorance or a mind devoid of fine feeling.—A. Rose, in *Med. Rev. of Rev.*

Therapeutics

VERATRUM VIRIDE

While a cardiac depressant seems less and less frequently needed in this age of high tension and heart tire, still there is occasionally a positive indication for lowering the blood pressure. It is acutely indicated in puerperal eclampsia, and is sometimes continuously indicated in arteriosclerosis and chronic interstitial nephritis, or Bright's disease.

We have passed through the various stages of beginning the treatment of acute inflammations or infections (as typified by pneumonia) with first severe, and then gradually less and less severe, depleting measures. Venesection, tartar emetic, calomel, aconite, veratrum viride and, finally, coal-tar products have all had their acme of use for this purpose. The physician now hesitates to do anything, however apparently advisable, toward aborting or diminishing the intensity of the first symptoms of an acute inflammation, lest the sooner or later cardiac depression may be hastened or developed by the treatment used. It is quite possible, however, that a judicious lowering of the blood pressure is often advisable, and it becomes a question which is the safest way to reduce this pressure: by profuse catharsis, by judicious venesection, by one or two doses of a coal-tar product, or by aconite. The activities of veratrum viride have been forgotten, and have been repudiated by many pharmacologists, perhaps unjustifiably so.

The selection of a drug to lower blood pressure in acute inflammations, when the type of the disease is sthenic, is certainly a subject for careful consideration, and that method should be used which will cause the least cardiac debility or weakness. There can be no question of the advantage and necessity of a complete emptying and cleansing, so to speak, of the alimentary canal. It is quite another question whether it is advisable to cause a series of profuse watery stools. There also can be no question that a dose or two of a coal-tar antipyretic, when the temperature is very high, to cause its diminution and to promote perspiration, is advisable. Later in the disease cold water treatment is, of course, the proper method to use. While the most active and temporarily efficient vasodilators are the nitrites, their action is short-lived and oftentimes unsatisfactory in acute inflammations. The lowering of the blood pressure with aconite of necessity carries with it some weakening of the cardiac muscle, and while a few doses may be advisable, a longer action of this drug is generally inadvisable. Consequently, it may be well to review clinical observations, the value of which is sometimes greater than laboratory research on healthy animals.

Such a review of the clinical findings from the action of Norwood's tincture of veratrum viride is presented to us by Dr. J. S. Todd, Atlanta, Ga., in the *Therapeutic Gazette*, Feb. 15, 1909.

He deplors the present lack of use of this drug, which he considers very useful, and states that it is largely a vasodilator and does not severely depress the heart. If a small dose of morphin, 1/20 of a grain, or half a teaspoonful of paregoric, is given with each dose of veratrum, he states that nausea, vomiting, diarrhea, profuse sweating, giddiness or collapse will rarely take place. "The pulse can be kept soft and at about 65 or 70," and the temperature kept low with the proper administration of veratrum viride. He advises the use of

0.10 c.c. (1½ minims, or 3 ordinary drops) of Norwood's tincture of veratrum viride, and he would administer this not oftener than once in three hours. He says that the dose of veratrum viride is often too large, and, unless it is administered in puerperal convulsions, the dose should be kept as above. In the latter condition he would give 0.30 c.c. (5 minims, or 10 drops) hypodermatically.

As opium will prevent the unpleasant symptoms from veratrum, so, says Todd, "is veratrum a valuable antidote in opium poisoning."

Many times in aortic insufficiency or regurgitation, in arteriosclerosis, and in Bright's disease (cardiovascular-renal disease) digitalis may be indicated, but, as it causes increased blood pressure, it is either deemed inadvisable or must be combined with some vasodilator. To meet this indication Todd advises the use of a combination of digitalis and veratrum viride as follows:

R.	gm. or c.c.	
Strychninæ nitratis	03	gr. ss
Pulveris digitalis	2	
Pulveris scillæ	2	or āā, 3ss
Pulveris zingiberis	4	3i
Tincturæ veratri (Norwood)	3	m. xlv
M. et fac capsulas, 30.		
Sig.: A capsule as directed.		

Todd advises the administration of one of the above capsules every four, six, eight or twelve hours, as needed.

The editorial department of the *Therapeutic Gazette*, Feb. 15, 1909, calls attention to the value of veratrum viride in puerperal eclampsia, and quotes the results of Mangiagalli, of Milan, in the use of this drug in this disease. Mangiagalli's percentage of mortality since he has used veratrum viride in eclampsia is most satisfactory, the mortality having been reduced from 23 per cent. to 7 per cent.

He uses the best fluid extract of veratrum viride, and administers it hypodermatically in doses of from 0.30 c.c. to 0.60 c.c. (5 to 10 minims), and repeats the dose as often as the blood pressure becomes too high, the blood pressure being accurately determined by the sphygmomanometer. He considers another dose indicated when the pressure exceeds 160 millimeters. The pulse should, if possible, be kept below eighty beats a minute, but if the pulse becomes rapid and small and arterial tension low, veratrum viride is contraindicated.

It is not considered that veratrum viride has any antagonistic action on the toxins of eclampsia, but the benefit derived seems to be entirely due to a lowering of the arterial pressure, and this is evidently an important factor in causing death in puerperal eclampsia. In other words, the high blood pressure may be the cause of cerebral edema and exudate, and thus the cause of convulsions and coma.

USES OF CALCIUM SALTS

Dr. Arthur P. Luff, in the *British Medical Journal*, Jan. 30, 1909, considers Sir Almroth Wright's suggestion, that a deficient blood coagulability may not lead to actual hemorrhages, but to "serous hemorrhages" or exudates, to be founded on fact. Examples of such serous transudates "are urticaria, chillblains, edema of the feet and hands not due to circulatory or kidney lesions and some forms of headache." All of these conditions may be improved by the administration of a calcium salt.

The lymphatic type of headache due to diminished coagulability of the blood "occurs more frequently in

women than in men, and is manifested by a dull, heavy ache in the frontal region, and sometimes by a throbbing in the frontal and temporal regions." This kind of headache is most frequently present on the patient's awakening in the morning and diminishes or disappears after the patient has been up and about a shorter or longer time. Such patients are likely to show mental and physical lassitude, and a tendency during the day to slight edemas in pendent portions of the body.

The administration of calcium salts to patients who suffer from this kind of headache is generally followed by amelioration, while it has been shown that the administration of potassium citrate to such patients, by diminishing the coagulability of the blood, increases the headache.

Patients who are subject to chillblains and more or less constantly have cold hands and feet, with perhaps some slight edema, Luff shows are benefited by calcium. The same he has found true of patients who suffer with boils, urticaria and flushing of the face, provided that such patients concomitantly have cold hands and feet, which he evidently considers an indication for the calcium treatment.

He has had some success in the treatment of hemoglobinuria, and has caused some benefit in aneurism by the administration of calcium.

He has also benefited patients with edema of the feet which was not of circulatory or renal origin, and this after various other treatments had failed.

Luff always uses calcium lactate, and says it is important that it should be fresh, as it decomposes after long keeping. "The indication of its good condition is that it should form a clear, or nearly clear, solution in water. A definite white precipitate in its solution is an indication that the salt has undergone some change and should not be used." He administers it as follows:

R.	gm. or c.c.	
Calcii lactatis	10i	3iiss
Tincturæ capsici	30	or m. v
Aquæ chloroformi, ad	150i	ii. 3v
M. et Sig.: A tablespoonful in water, three times a day, one hour before meals.		

Luff considers it important to give the medicine about an hour before meals, "as this allows absorption of the salt to take place prior to the introduction of food into the stmoach, and thus prevents the precipitation of the calcium by the phosphates and possibly other constituents of the food." He gives the calcium lactate continuously for six weeks. If constipation is caused by it, he uses senna as a laxative, and thinks saline purgatives should not be administered on account of "their precipitant action on calcium salts." Occasionally some months after the cessation of the treatment slight relapses occur, but these are quickly overcome by the re-administration of calcium lactate for a period of one or two weeks.

Luff reports the results of giving the above calcium treatment to 121 patients, and without seeing any undesired symptoms except in three instances. One of these patients showed a slight venous thrombosis in the right calf; the second a slight numbness of the arms and legs, associated with tingling, and the third complained of noises in the ear and deafness. In each of these instances the unpleasant symptoms rapidly subsided after the administration of the calcium salts ceased.

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SOME NEWER IDEAS CONCERNING GOUT

When Garrod in 1848 demonstrated that the blood of the gouty contained an abnormally high quantity of uric acid, he accomplished one of the greatest advances that has yet been made in our understanding of the pathology of this disease. Although the analytic methods available at that time were far from faultless, yet the main point of his research has been completely verified, especially by Magnus-Levy, who found from three to six milligrams of uric acid per hundred cubic centimeters of blood in gout, while normal blood contains, at the most, doubtful traces of uric acid except in a few special conditions. Within recent years improved analytic methods have helped greatly in the study of uric acid metabolism in health and disease, and we have learned in particular that the several stages in the production of uric acid from its original source, the nucleoproteins, are accomplished only through the successive actions of several distinct intracellular enzymes.

Among the most successful investigators in this field are Schittenhelm and Brugsch,¹ who have worked not only with normal animal and human material, but have also applied their results and methods to the study of gout. They have found that the blood of patients with typical gout contains always a demonstrable quantity of uric acid, even when the food has been free from purins for weeks and months, while blood from normal individuals on purin-free diet contains no uric acid whatever. This indicates that in gout there is a deep-seated disturbance in metabolism so that even the endogenous purins, arising from the nucleoproteins of the tissues themselves, can not be destroyed or removed from the blood in the normal way. This accumulation of uric acid in the blood might depend on either defective uric acid lysis in the individual's tissues, or on failure of elimination by the kidneys. As to the latter possibility, it is found that in interstitial nephritis there is also demonstrable endogenous uric acid in the blood, but the amount varies according to the condition of functional activity of the kidneys, while in gout the endogenous uric acid never exceeds a certain maximum amount (about 0.003 per cent.). Furthermore, if retention by defective kidneys were the cause of the uric-

acidemia of gout, then the amount of uric acid in the blood might be expected to show a steady rise rather than maintaining a constant level.

Ebstein recognizes two forms of gout, one a primary arthritic gout and the other a primary renal gout, and Brugsch and Schittenhelm² consider that their studies clear up the relationship of these two forms. They would limit the term "gouty diathesis" to the condition of uricacidemia persisting with a purin-free diet, which must always be present in order that the typical gouty attacks may occur, but which may exist for an indefinite period without typical acute attacks. It is not necessary that the blood be oversaturated with uric acid in order to have the deposition of uric acid in the cartilage of the joints, as has been almost universally assumed, for it has been found by Almagia, and confirmed by Brugsch and Schittenhelm, that cartilage has a peculiar affinity for uric acid and urates and can extract these substances from dilute solutions by some physical adsorption process and cause their precipitation within the tissues. The long-continued presence of free uric acid in the blood in gout furnishes just the necessary conditions for its accumulation and precipitation in the cartilage. In the retention of uric acid which results from nephritis the periods during which uric acid is present in the blood are generally too brief to lead to precipitation in the cartilage, as this process requires much time for development before it reaches a serious degree. But in those occasional cases of contracted kidney in which there is a protracted retention of uric acid the anatomic results are quite the same as when the uricacidemia is due to metabolic deficiency, for in either case uric acid will accumulate and precipitate in the same tissues with exactly the same effects, namely, acute attacks of gout.

Clinically, however, the renal gout is usually distinguished by the predominance of renal and cardiovascular symptoms; but it is, of course, possible to have cases in which the two forms coexist, or, more frequently, in which a simple metabolic gout becomes complicated by interstitial nephritis. Ebstein's division of gout into renal and arthritic gout is, therefore, not exactly correct, in that we may have arthritic attacks which are due to retention of uric acid by diseased kidneys, and it would be better to distinguish between renal gout and metabolic gout as indicated by Brugsch and Schittenhelm. The formation of uric acid calculi in the urinary passages should not be included among the manifestations of the uric acid diathesis, for the precipitation of uric acid here depends chiefly on chemical and physical conditions in the urine rather than on the amount of uric acid in the blood; indeed, the retention of uric acid characteristic of the gouty would rather hinder than favor its precipitation in the urine.

1. Ztsch. exper. Path. u. Pharmakol., 1907, iv, 438.

2. Zentralbl. f. d. ges. Physiol. u. Path. d. Stoffwechs., 1907, ii, 850.

A LAY VIEW OF MEDICAL QUACKERY

Probably no lay publication in Europe has done more to expose quackery and fraud than has *London Truth*. Henry Labouehere, its editor, by his aggressive attitude toward frauds and humbugs, medical and otherwise, has been involved in numerous libel actions, from which, in spite of the rigid libel laws of Great Britain, he has almost invariably come off victor.

He took occasion recently to commend the new Quackery Prevention Act¹ of New Zealand, and in his article expresses some opinions on the subject of medical quackery that will meet with the approval of every physician. Clause 5 of the act deals with the relation of the publisher to quack advertisements:

If any person causes any statement to be inserted in breach of this act in a newspaper printed and published in New Zealand, the printer, publisher and proprietor of that newspaper shall severally (and without excluding the liability of any other person) be deemed to have published that statement in breach of this act, and shall be liable for an offence against this act accordingly.

In discussing this admirable clause the editor of *Truth* says: "Here we have a recognition of the principle, for which I have always contended, that if an offence against the law is perpetrated by means of a newspaper advertisement, the nature of which is evident, or reasonably open to suspicion, on the face of it, the publisher should be held equally guilty with the advertiser, and that the proprietor—the real principal in the publication—should be deemed a publisher for this purpose."

Such a law, and especially such an interpretation of it, would find small favor, we fear, among the newspapers of this country. In fact, the strict enforcement of such a law would put a large number of periodicals out of business. In explaining what he means by the word "quackery" as applied to medicine, Mr. Labouehere says: "What I mean is fraud carried out by downright lies or deceitful misrepresentations. This is evidently what the New Zealand legislature means, and I take it that this is what most people mean when they denounce the evils of medical quackery. The root of most of these evils is this: that misrepresentations or exaggerations, which the law, acting on the *caveat emptor* principle, refuses to regard seriously when made in connection with an ordinary purchase and sale of goods, become productive of most serious mischief when applied by unscrupulous traders to the sale of remedies for the treatment of disease. In this case the trade is mainly carried on at the expense of ignorant and credulous people, and carried on with results which may be highly dangerous to life and health. It has always been

the policy of the law to curb the activities of those who prey on the ignorance and credulity of their fellow-creatures, and there is a special reason for doing so when the victims are not only robbed of their money but exposed to the risk of grievous bodily harm. This, and this alone, is the ground for strengthening the criminal law against the advertising quack. There can be no reasonable doubt as to the extent of the evils that result from the free hand which these harpies at present enjoy. . . . That these people, and all others of the same class, do infinite harm, extending far beyond the mere picking of the pockets of fools, is not open to question. They help materially to fill our hospitals and cemeteries, and they would do still more in this direction if it were not that a large proportion of the people who waste their money over quack remedies have either nothing at all the matter with them, or nothing which will not be speedily cured by a dose of aloes or calomel. This matter ought really to be regarded primarily from the point of view of public health."

The clear-cut principles here expressed can not be gainsaid; the credulous and ignorant sick have a right to be protected against themselves. There exists, however, a condition as well as a theory, and while acquiescence to abstract principle is obtained with comparative ease, to get a concrete change of conduct based on such principles is a much more difficult proposition. It is to be hoped that public opinion will in time be sufficiently aroused to the evils of medical quackery to make possible in the various states the passage of laws similar to that of this admirable New Zealand act. Whatever the newspapers may sacrifice financially by such a law they will more than make up in respectability; as for the quack's loss, it will be the public's greatest gain.

THE RELIEF OF DR. CARROLL'S WIDOW

In Dr. Goldberger's excellent monograph on yellow fever the work of the Army board in Cuba, headed by Major Walter Reed, is summarized in a single pithy sentence. Referring to the demonstration of the transmission of yellow fever infection by mosquitoes, he says that it "converted a discredited hypothesis into an established doctrine." The positive demonstration of this fact has opened up a wide field of sanitary accomplishment. The epoch-making victory over yellow fever of Gorgas in Havana, his sanitary regeneration of the Isthmus of Panama, White's brilliant results in the New Orleans epidemic of 1905, and Kean's recent extensive campaign in Cuba are all the direct results of the confirmation of Finlay's theory by the work of Reed, Lazear, Carroll and Agramonte in 1900. With a single exception, the members of this gallant band have all perished in the prime of their vigor and usefulness. Dr. Agramonte, the sole survivor, is a distinguished member of the faculty of the ancient University of Havana and a valued adviser of the sanitary department of Cuba.

1. Section 2 of the act provides: "Every person commits an offence who publishes or causes to be published any statement which is intended by the defendant or other person to promote the sale of any article as a medicine, preparation, or appliance for the prevention, alleviation, or cure of any human ailment or physical defect, and which is false in any material particular relating to the ingredients, composition, structure, nature, or operation of that article, or to the effects which have followed or may follow the use thereof"

The rewards which these soldiers of science received for their work during their lives amounted to little or nothing. The value of their work to humanity and civilization is beyond estimate. Yet all of them, owing to the meager pay of the army officer, left their families without adequate means of support, although their widows are now in receipt of pensions which keep the wolf from the door, but which leave no margin even for Spartan luxuries. On one family in particular the burden has been heavy. Major James Carroll was the first volunteer to submit to an experimental inoculation from an infected mosquito and to suffer an attack of yellow fever. This illness was so severe as to endanger his life. As a result of it he developed a dilated heart, which was the ultimate cause of his death. He died a martyr to science for the benefit of humanity, leaving a widow, an aged mother and seven small children practically unprovided for. His widow is now threatened with the loss of her home by the foreclosure of a mortgage and is in need of immediate assistance. Attention is called to an appeal on page 1122 of this number of *THE JOURNAL* setting forth the facts in detail and asking for contributions for the relief of this deserving family.

The experimental work of Carroll and his associates has forever banished yellow fever epidemics from civilized countries. The saving in lives and treasure for present and future generations is beyond all calculations, yet the widow and children of one of the men who made this possible are in danger of losing their home. Surely, if the American public does not realize its enormous debt to this man and his offspring, the medical profession will not turn a deaf ear to the plea for assistance made in behalf of his helpless and dependent family.

ANIMAL EXPERIMENTATION AND TUBERCULOSIS

The present general movement against tuberculosis, one of the most hopeful if not indeed the most promising of all the modern efforts for the temporal salvation of the human race, owes much to animal experimentation. This is ably set forth by Dr. E. L. Trudeau,¹ who says, without any qualifications or reservations whatever, that "everything that has a direct bearing on the prevention of tuberculosis, everything that has changed mankind's attitude toward it from one of apathy and hopelessness when the infectious agent which produces tuberculosis was unknown and the disease was thought to be inherited and always fatal, to the growing hope of its ultimate conquest . . . we owe to animal experimentation." We quote his exact words because he speaks with authority and his words carry greater weight than those of almost any one else in this country on this subject.

It was animal experimentation that first showed that the disease was an infectious one, that it was commun-

icable and therefore preventable, and which paved the way for Koch's discovery in 1882 of the tubercle bacillus. The outcome of this discovery has been all that we now know and are constantly learning in regard to the tubercle bacillus, its virulence and toxins, its routes of invasion of the human system, and the methods of defense we possess in the complex processes of actual and artificial immunity, and all our hope of applying them to the protection of human beings and the cure of the disease is in the knowledge obtained in this way. In his own experience, Trudeau says, animal experimentation has given him the basis for all the practical results he has obtained. In 1886 he was able to demonstrate on animals the influence of a favorable environment on the disease, and this increased his confidence in the influence of the same conditions on the human subject and led to the establishment of the Adirondack Cottage Sanitarium, the practical results of which are before the world. In 1893 animal experimentation also led him to the conviction that the production of artificial immunity against tuberculosis, which had been looked on as impossible, was not as unattainable as had been supposed, and since that time the experience of experimenters in other lands has only strengthened and confirmed this belief, and this is not the end. Even former sceptics are now admitting that the conquest of tuberculosis, like that of smallpox, diphtheria, rabies, anthrax, etc., by some safe process of artificial immunity, is no longer a visionary goal, but that, with more knowledge of the infecting agent, its poisons and methods of attack, and of the methods of calling into action the defensive resources of the human organism, this conquest may in time be attained, but only through scientifically directed animal experimentation.

Dr. Trudeau points out a fact well known to physiologists, that inoculation experiments entail no greater suffering to the animal than the prick of a hypodermic needle and then a painless death, if it be killed, or death from tuberculosis, to which it is always liable, if it be allowed to live. The shortsighted unwisdom of the objectors to this work is self-evident. They would trust their families' welfare and comfort to medical science unguided by this great means of saving life, experiments on the lower animals, and yet object to the slightest apparent suffering of rabbits and guinea-pigs. Those who are trying by legislation to prevent animal pain, or what they think is pain, do not appreciate the possible sufferings to mankind that have been saved by these methods, or are blinded by fanatical zoophilism or are wilfully in ignorance. If we can save future generations from the curse of the great white plague, even partially, would the sacrifice of the lives of hundreds or thousands or any number of experimental animals be too high a price to pay? As Ex-President Andrew D. White has said, one would sacrifice thousands of fleas for the mere comfort of one faithful dog, and would it

1. *The Jour. of the Outdoor Life*, March.

not be equally proper to sacrifice any number of dogs for the life and comfort of the human race? Dr. Trudeau's words should carry the more weight since no one can question his philanthropy, and his arguments should be convincing to the common sense of unprejudiced men.

Even if the absolute conquest of tuberculosis is beyond our reach, if there will always be here and there in the animal kingdom some sources of infection, and even if it is to a certain extent inheritable, as some authorities claim, it can be robbed of its terrors and occur only as an unfortunate exceptional accident in the human species. This can only be brought about through a continuation of the same methods of experimentation and research that have been so fruitful in the past.

RECENT MODIFICATIONS OF THE WASSERMANN REACTION

The enormous amount of work that has been done on the Wassermann reaction appears to have established conclusively its value as a diagnostic means in syphilis. For, while the reaction can not be considered as specific in the bacteriologic sense of the word, as was first believed on theoretical grounds to be the case, it is apparently characteristic; and the few other diseases, principally the other spirochete and the trypanosome infections, that give the reaction, are of such rare occurrence in the temperate zones as to be practically negligible in this connection.

Unfortunately, the test as at present used is altogether too complicated to be available for the general practitioner, and considerable simplification will be necessary before it can be placed on the plane of, for instance, the agglutination reaction in typhoid.

Studies of the reaction have recently been made from an analytical viewpoint, and the results would seem to indicate that the required simplification is quite likely to be attained.

In the reaction, as used at present, five constituents are required, namely: (1) antibody—the serum to be tested, previously heated to destroy its complement; (2) antigen, so-called—usually extract of syphilitic liver or of guinea-pig heart; (3) complement—normal guinea-pig serum; (4) hemolytic amboceptor—the serum of a rabbit previously sensitized to sheep corpuscles, the complement being destroyed by heating; (5) a suspension of sheep corpuscles.

Schatiloff and Isabolinsky,¹ working on the antigenic constituent of the reaction, have compared extracts of luetic livers with those of various normal organs of different animals. They find that alcoholic extracts of guinea-pig heart are only slightly less efficient than are those of luetic liver, and, that, therefore, this substitution is apparently without effect on the diagnostic value of the reaction.

Stern,² investigating the complement constituent, has obtained results that apparently surpass the accuracy of the usual method, by utilizing the complement already present in the (human) serum serving as antibody. Stern has failed to substantiate the claim previously made that the complement of human serum is too variable to admit of its use.

Finally Noguchi,³ who has had wide experience with the test and all its modifications, suggests a simplification so sweeping that it does away with practically all the technical difficulties and puts the test within reach of any well-trained clinician. Briefly stated, Noguchi's modification consists in having the antihuman hemolytic amboceptor, the guinea-pig complement, and the antigen in dry form so that they can be kept almost indefinitely. This is accomplished by saturating filter paper with these substances when in solution, drying it, and furnishing it in small slips each representing a standardized amount of reagent. This means that the suspension of sheep's blood corpuscles and the patient's serum are all that the physician himself needs to furnish. The test by this dry method seems quite as reliable as the original more complicated one. We refer to Noguchi's article for details.

GRANULATION OF THE ERYTHROCYTES

Of the recent contributions to hematology some of the most interesting and suggestive work has been done by a group of French observers—in particular Drs. Widal, Chauffard, Brulé, Fiessinger and Abrami—concerning certain staining reactions of the red cells. This work is reviewed by Fiessinger and Abrami⁴ and deals largely with a new variety of granules occurring in the erythrocytes, which appear to be entirely distinct from the "basophilic granules" first described by Askanazy.

These granules can not be stained in the fixed preparation but are brought out by staining the dried and unfixed blood film with Pappenheim's reagent (pyronin and methylene green) or by allowing a drop of one of the basic blue stains⁵ to work its way under a cover glass preparation of fresh blood. Stained in this manner, certain of the erythrocytes present distinct minute granulations which in some instances are connected by a very fine reticulum. Free granules are sometimes found in the blood, when they are connected by faint basophilic strands and form little chains or a fine network. In normal individuals these granules are sometimes found in as many as 3 per cent. of the erythrocytes, while for the first few days of life they are rather abundant.

An excess of red cells showing this peculiar formation is found in certain pathologic conditions, particularly in some of the intoxications and in the anemias. It has

2. *Ztschr. f. Immunitätsf.*, 1909, 1, 422.

3. *Jour. Exp. Med.*, March, 1909.

4. *Rev. de Méd.*, 1909, No. 1.

5. Unna blue in four times its volume, or azure blue in ten times its volume of physiologic salt solution, is recommended.

1. *Ztschr. f. Immunitätsf. etc.*, 1909, 1, 316.

been observed in a marked degree in hemolytic icterus and its presence is said to offer a valuable differential sign in distinguishing this condition from jaundice of obstructive origin. In anemia there seems to be no absolute relation between the occurrence of these granules and the degree of the anemia. Experimental evidence tends to show that it may be regarded as an evidence of regeneration. The phenomenon bears some relation to polychromatophilia, though all cells showing this peculiar staining reaction are not granulated. Fiessinger and Abrami suggest that polychromatophilic cells, "stippled cells" (*erythrocytes ponctués*), and cells showing this newly described variety of granules (*hématies granuleuses*) may represent different stages of one and the same regenerative process. Until more conclusive evidence is offered as to the nature of the ordinary basophilic granules this hypothesis will not be accepted by many hematologists who look on these granules as an evidence of degeneration.

FOR NATIONAL HEALTH BUREAU

The newspapers announce that the President has requested Surgeon-General Wyman, of the U. S. P. H. & M.-H. Service, to draw up a tentative plan for the consolidation under one bureau of all the agencies exercised by the federal government for the preservation of the public health, and that on the recommendations of Dr. Wyman and those of other eminent physicians the President will base his recommendations to Congress in his message next fall. That Mr. Taft has been deeply interested in public health problems and that he favors the consolidation of existing health agencies in a single bureau has been shown by his utterances in the past. In his speech of acceptance he plainly announced his views on this subject. His speech at the University of Pennsylvania on Washington's birthday, just before his inauguration, emphasized his deep interest in public health problems. His instructions to General Wyman constitute the first practical step toward the consummation of a definite plan and show that the question is being given consideration by the President commensurate with its importance. It is gratifying to know that measures for the preservation of the public health and the conservation of the lives of the people are being carefully considered by our chief executive as one of the important duties of the administration, and we may reasonably anticipate that in his annual message next fall the need of adequate legislation along this line will be properly placed before Congress and the nation.

VASECTOMY FOR CONFIRMED CRIMINALS AND DEFECTIVES

The sterilization of criminals and defectives by vasectomy is becoming a live question in many directions. This method of combating the transmission of criminality and other mental defects—a peril that has assumed such proportions as to arouse the attention of most civ-

ilized countries—has now been in use in Indiana for two years, and recently has been legalized in Oregon. The matter has been taken up by the Chicago Society of Social Hygiene, with a view to public education thereon and the introduction of some similar measure in the state of Illinois. There is a bill (No. 249) now in committee of the Illinois senate which appears to cover the ground, though the words "or castration" might with advantage be omitted, as tending to arouse needless opposition. The state's concern in the matter is limited to the prevention of procreation of hereditarily defective offspring, and this appears to be perfectly effected by the safe, harmless, non-mutilating operation of vasectomy. There are doubtless many who realize the necessity for some measure that will limit the output of ready-made potential criminals and defectives, who, nevertheless, are strongly opposed to what they consider the barbarous practice of compulsory mutilation, and these will have little fault to find with vasectomy.

Medical News

ARIZONA

Ask Appropriation for Laboratory.—The physicians of Arizona are making a concerted effort for an appropriation for \$1,200 by the legislature for a bacteriologic and chemical laboratory at the University of Arizona, especially equipped for tests of milk, water and food.

Hospital to be Enlarged.—General plans have been completed for the new Whitwell Hospital, Tucson, which was recently destroyed by fire. The new building will be a fireproof structure throughout; will be two stories in height, and will contain rooms for thirty-two patients, in addition to two large wards. The accommodation of the hospital will be more than double that of the old building.

Society Meetings.—The annual meeting of Santa Cruz County Medical Society was held in Nogales, March 8, when the following officers were elected: President, Dr. Albert L. Gustetter, Nogales; vice-president, Dr. Paul R. Doran, Patagonia; censor, Dr. William F. Chenoweth, Nogales; secretary-treasurer, Dr. Alfred C. Kingsley, Nogales; and committee on public health legislation, Drs. Adolphus H. Noon and Harry W. Purdy, Nogales.—At the annual meeting of Pima County Medical Association, held in Tucson, Dr. Joseph W. Lennox, Helvetia, was elected president; Dr. Hiram W. Fenner, Tucson, vice-president, and Dr. A. Garfield Sehnabel, Tucson, secretary.

CALIFORNIA

Red Cross Chapter Established.—The Los Angeles County Chapter of the California Branch of the American National Red Cross was organized February 18 in Los Angeles. Dr. Rose Bureham was elected president and Rev. Robert J. Burdette, vice-president.

Gift to University.—The University of California has been given \$20,000 by Jackson A. Graves of Los Angeles, to be applied to paying off the mortgage on the medical department. In commemoration of this gift the dispensary will be known as the Selwyn Emmett Graves Memorial.

Society Organized.—On March 4, at the invitation of Dr. Osea Perrone, the Italian-American Medical Society of San Francisco was organized. Drs. A. Stephens Musante, Osea Perrone and E. Taussig were appointed to draft a constitution and by-laws. The society is intended for the social, professional and economic improvement of the Italian-American practitioners of San Francisco.

Gifts to Hospitals.—Mrs. R. A. Boyd has given the city of Richmond, Contra Costa county, \$17,500, which, with the addition of \$7,500 which has already been subscribed, will be used to build the Boyd Memorial Hospital, in memory of her late husband.—The Settlement, Redlands Sanatorium for

the Treatment of Tuberculosis, has just received a bequest of \$2,000 from the estate of the late David Cotcher.

Hospital Notes.—Plans have been accepted, and contracts will be let, for the construction of the new St. Francis Hospital, San Francisco, to be a four-story modern building, to cost \$150,000.—The board of directors of the Peninsula Hospital, Palo Alto, reported at its recent meeting that there was sufficient money in the treasury to carry on the erection of the hospital and construction work will begin as soon as the weather permits.

GEORGIA

Liquor Prescriptions Issued by Physicians.—During February sixteen physicians of Athens issued 56 prescriptions for alcohol, a marked decrease over the preceding month.

Found Not Guilty.—The jury in the case of Dr. Samuel P. Smith, Younker, charged with the murder of W. J. Nicholson on July 4, 1907, returned a verdict of not guilty, March 11.

District Society Meetings.—At the annual meeting of the Fourth District Medical Society, held in Columbus, February 16, Dr. M. M. Hallum, Carrollton, was elected president, and Dr. T. Neal Kitchens, Columbus, vice-president, the secretary-treasurer, Dr. Charles A. Dexter, Columbus, holding over for another year.—At the annual meeting of the Seventh District Medical Society, held in Marietta, March 10, Dr. Charles T. Nolan, Marietta, was elected president; Dr. Joseph J. P. Bowdoin, Adairsville, vice-president, and Dr. Harlan L. Erwin, Dalton, secretary. Rome was selected as the next place of meeting.—At the first meeting of the Atlanta Medical Library Association, held in its new quarters, Dr. Michael Hoke was elected president; Dr. Lewis M. Gaines, vice-president, and Dr. George M. Niles, secretary-treasurer. The association has fitted up a reading room in the basement of the Carnegie Library, where members may consult the latest medical books and periodicals. The room is open during the regular hours of the library.

ILLINOIS

Personal.—Dr. George M. Peairs, Joliet, will sail for Vienna May 1.—Dr. Robert F. Hayes, Freeport, one of the oldest members of the local fraternity, fell March 21, fracturing his left femur.

General Vaccination.—On March 17, 2,400 patients, attendants, members of the administrative staff, nurses and physicians at the Illinois General Hospital for the Insane, South Bartonville, were vaccinated by order of the superintendent. Two cases of smallpox had developed at the institution.

Widespread Areas of Smallpox.—According to reports to the state board of health, there is a widespread epidemic of smallpox areas including northeast Fulton and southwest Peoria counties. The disease first made its appearance in Canton, Pekin and Glasford, and spread from there to adjoining localities.

Chicago

Name School for Master-Surgeon.—The Board of Education has decided to name the new high school to be erected on the north side, "The Nicholas Senn High School."

Provisional Donation to Hospital.—William Deering has announced that he will give \$55,000 to Wesley Hospital, provided a similar amount is raised by the institution.

Personal.—Dr. and Mrs. E. Fletcher Ingals have returned from Florida.—Dr. Joseph C. Beck has been elected professor of otology, rhinology and laryngology in the Chicago Eye, Ear, Nose and Throat College.—Dr. Alexander H. Ferguson has been elected president of the Senn Club.

Tuberculosis Notes.—A building permit has been secured for the Cook County Tuberculosis Hospital, to adjoin the County Hospital, Harrison and Wood streets, and work on the building, which will cost \$1,000,000, will soon be commenced.—The Chicago Tuberculosis Institute has issued 3,000 posters appealing for an affirmative vote on the referendum ballot for the municipal tuberculosis sanatorium, and 100,000 pamphlets setting forth the essential features of the Glackin law.—The Chicago Tuberculosis Institute reports that the net proceeds from sales of Red Cross Christmas stamps were \$7,378.78. This sum is to be used by the society for such special purposes as preparation of a traveling tuberculosis exhibit, the preparation of small exhibits for schools, a relief fund for dispensary patients, and a special food fund for dispensary patients.

INDIANA

Found Guilty.—Orland C. Brown, charged on complaint of the Cass County Medical Society with peddling medicine in Logansport without a license, is said to have been found guilty, March 3, and fined \$100 and costs.

Society Expels Member.—Huntington County Medical Society met March 9, at Huntington, and is said by a unanimous vote to have expelled Dr. John R. Hunter from membership because he had advertised in newspapers and had announced his intention of continuing so to do.

Vital Statistics for February.—During February tonsillitis was the most prevalent disease, followed in the order named by bronchitis, pneumonia, influenza, rheumatism, scarlet fever, pleurisy, diphtheria, measles, whooping-cough, chickenpox, typhoid fever, diarrhea, smallpox, erysipelas, cerebrospinal meningitis, dysentery, cholera morbus, puerperal fever and cholera infantum. During the month there were 130 cases of smallpox in 22 counties with no deaths, 93 cases of diphtheria in 33 counties, with 25 deaths; and 68 cases of typhoid fever in 30 counties, with 19 deaths. There were 2,955 deaths during the month, equivalent to an annual rate of 14 per 1,000. Pneumonia, tuberculosis, violence and cancer in the order named were the chief causes of death.

KANSAS

Asks Appropriation for State Sanatorium.—By a bill introduced by Senator C. F. Huffman of Cherokee county, an appropriation of \$50,000 is provided to build and equip a free state hospital on Mount Oread, Lawrence.

Medical School Notes.—At a meeting of the faculty of the Kansas Medical College of Topeka, it was decided to add a course in pharmacy, beginning next year.—A new chapter of the Nu Sigma Nu fraternity has been installed at the University of Kansas School of Medicine, Lawrence.

Society Meeting.—At the annual meeting and banquet of the Franklin County Medical Society, held in Ottawa, Dr. Robert S. Black presided as toastmaster. Dr. Vilas E. Lawrence was elected president; Dr. John M. McWharf, vice-president, and Dr. James Ball, secretary-treasurer, all of Ottawa.

Personal.—Dr. Mordecai D. Elder, Piqua, has returned from a three months' trip in Mexico.—Dr. Edwin J. Kanavel, physician at the State Penitentiary, Lansing, has resigned, and will be succeeded by Dr. D. L. Axford, Burlingame.—Dr. Jacob W. Graybill, Newton, has been re-elected state medical examiner of the A. O. U. W.—Dr. Frank C. Stewart, Eskridge, has been made health officer of Wabaunsee county.

State Board Appointments.—The following appointments of members of state boards have been made by the governor: State Board of Health—Drs. Clay E. Coburn, Kansas City; James A. Milligan, Garnett, and James S. Scott, Independence, to fill unexpired terms, and Drs. Victor C. Eddy, Colby; Charles H. Lerrigo, Topeka, and Harry L. Aldrich, Caney, for full terms; State Board of Medical Examination and Registration—Drs. Charles J. Simmons, Lawrence, and Henry A. Dykes, Lebanon, to fill unexpired terms, and John Outland, Kansas City, for full term.

MARYLAND

Personal.—Dr. Benjamin F. Lansdale, Boyds, formerly a member of the board of house delegates from Montgomery county, is seriously ill in Johns Hopkins Hospital, Baltimore.—Dr. Edward P. Irons, Windsor Hills, is reported to be seriously ill at the Baltimore City Hospital.

Ask Relief from Purely Municipal Work.—An appeal is being made to Baltimore by the Maryland Association for the Prevention of Tuberculosis, and other city organizations for aid in controlling tuberculosis. There are now four special nurses employed by the association to visit and supervise patients in their homes, and they have 1,500 patients under their care. Last year 16,406 visits were made in addition to the inspection of 1,800 houses. The association now asks for relief from this work, which is properly a municipal function and should be performed by the health department. The health commissioner is willing to take charge of the work, providing the city supplies funds amounting to \$13,500 for the annual salaries of fifteen nurses. At present the department only fumigates houses after the death or removal of consumptives.

Baltimore

Library Closed.—The library of the Medical and Chirurgical Faculty of Maryland was closed March 15, on account of the removal to the new building. It will be opened in its new quarters on April 19.

Personal.—Dr. Claude Van Bibber has gone to St. Agnes Sanitarium for treatment of a sprain of the back, due to a fall on the ice.—Dr. J. Whitridge Williams sailed for Europe March 25.—Dr. Hugh H. Young has returned from Jamaica.

Nurses for Tuberculosis.—The board of estimates has appropriated \$1,500 for the employment of two nurses to be appointed by the health commissioner, for tuberculosis work in the city. They will assist the fumigating officers of the health department in disinfecting the homes vacated by death or removal of consumptives.

Money for Hospital.—By a decision of the Court of Appeals, the Church Home and Infirmary receives a reversionary bequest of \$40,000.—The Ladies' Auxiliary of St. Joseph's Hospital realized about \$7,000 at a recent fair for the new operating room of the hospital, to be dedicated to the memory of the late Dr. Isaac Ridgeway Trimble.

Child Labor and Factory Inspection.—In the seventeenth annual report of the Maryland Bureau of Statistics and Information, C. J. Fox, chief of the bureau, said that under the child labor and factory inspection laws the sweatshop has almost disappeared from Baltimore, and garments are now made in clean well-ventilated and well-lighted factories, and that many children have been rescued who were physically unfit for work. He recommends a law authorizing the bureau to remove from factories individuals suffering from consumption.

MASSACHUSETTS

New Hospital.—The Melrose Hospital Association has voted to build a new hospital on a site owned by the association, the building to cost about \$55,000.

Sent to House of Correction.—Dr. Alfred J. Boyle, Boston, is said to have been arraigned in the police court on the charge of vagrancy, and sentenced to four months in the house of correction.

Society Changes Name.—At the recent meeting of the Society of Examining Physicians and Surgeons, held in Boston, it was voted to change the name of the organization to the Massachusetts Society of Physicians and Surgeons, and a committee was appointed to incorporate the association under the new name.

Gives Land for Experimental Work in Tuberculosis.—James M. Prendergast has donated nineteen acres of land near the Hyde Park line to the Boston Association for the Relief and Control of Tuberculosis, to be used for the carrying on of experiments. The association decided to utilize this land by establishing night camps for men and day camps for women and children suffering from tuberculosis.

Personal.—Dr. Henry T. Mansfield has been appointed town physician at Needham.—Dr. Charles A. Drew, Bridgewater, has been elected superintendent of the Worcester City Hospital, vice Dr. Thomas Howell, resigned, to become superintendent of the New York Hospital and Hudson Street House of Relief.—Dr. Merrill E. Champion has been appointed town physician of Arlington.—Dr. Edward E. Bancroft, Wellesley, has been appointed a trustee of the Wellesley hospital fund.—Dr. Edwin C. Farnham, medical advisor to the Cambridge board of health, has resigned.

MINNESOTA

Elections.—The Minnesota Wiener Medicalverein held its annual banquet February 13, which was attended by more than 100 physicians, former students in Europe. Dr. William D. Kelly was elected president, Dr. Eduard Boeckmann, treasurer, and Dr. Charles Freeman, secretary.

Tuberculosis Dispensary.—The Board of Charities and Corrections of Minneapolis has decided to establish a free dispensary for those afflicted with tuberculosis, which will be operated in connection with the City Hospital, and the city board of health will cooperate in the enterprise.

Physician Pardoned.—Dr. Jacob Force, former president of the Northwestern National Life Insurance Company, Minneapolis, who was sentenced to three years' imprisonment in the state penitentiary for misuse of the funds of the company, and was paroled some months ago, was pardoned March 13.

State Aid for Consumptives.—Senator S. A. Nelson has presented a bill providing for a tax of one-tenth of a mill, the proceeds to be used for giving aid to sanatoria for the treatment of tuberculosis. With the sanction of the State Board of Health, aid is to be granted to patients who are unable to pay the \$10 a week required at the sanatoria.

Medical Advertising Bill Passed.—The House of Representatives has passed a bill prohibiting the advertising or distribution of printed matter relating to the so-called "Medical Institutes," and prohibiting also the distribution of advertising matter in the form of pamphlets or circulars regarding the treatment of venereal diseases.

MISSISSIPPI

Meeting of Health Officers.—The secretary of the State Board of Health announces that there will be a meeting of the county and municipal health officers of the state in Jackson, April 12, to discuss sanitary measures.

State Association Meeting.—The annual meeting of the Mississippi State Medical Association will be held in Jackson April 12 to 14, and one of the important subjects of discussion will be the launching of a campaign of hygiene and sanitation throughout the state.

Personal.—Drs. Walter R. McKinley and Walter C. Brewer have been appointed members of the board of health of Columbus, and Dr. McKinley has been selected as president of the board.—Dr. Jones has been elected second assistant physician at the Eastern State Hospital, Williamsburg, Va., vice Dr. Irene Bullard, resigned.

New Society Organized.—The East Mississippi Four County Medical Society was organized at Tupelo February 9. Dr. Robert M. Sadler, Okolona, was temporary chairman, and Dr. F. J. Underwood, Central Grove, temporary secretary. Representatives were present from Lee, Monroe, Chickasaw and Itawamba counties. Organization was effected and the following officers were chosen: President, Dr. Lucien C. Feemster, Nettleton; vice-presidents, Drs. T. A. Boggan, Tupelo; J. C. Gatchings, Prairie, and Robert M. Sadler, Okolona, and Woody N. Reed, Tilden, and secretary-treasurer, Dr. F. J. Underwood, Central Grove.

NEW YORK

Personal.—Dr. James A. Lyon, who has been connected with the Loomis Sanitarium at Liberty, has resigned his position and accepted a position at the Massachusetts State Sanatorium, Rutland.—Dr. Herman J. Boldt, New York City, delivered an address before the Medical Society of the Missouri Valley at St. Joseph, March 18, and was the guest of honor at a luncheon March 16.

Conference of Alienists.—An important conference of alienists from the various state hospitals was held at the Middletown Hospital, March 25 and 26. The institutions at Poughkeepsie, Manhattan, Central Islip, King's Park, Binghamton and the Pathological Institute of New York were represented. The time was devoted to a discussion of the medical problems arising in these institutions.

For Ambulance Service.—Homer Folks, secretary of the State Charities Aid Association, has been instrumental in having two bills introduced into the legislature in relation to ambulance service and contagious diseases in New York City. One provides for the establishment of an ambulance system in Manhattan and the Bronx by the trustees of Bellevue and the Allied Hospitals, and in Brooklyn, Queens and Richmond by the commissioner of public charities. The other bill provides an automatic and flexible scheme by which the department of health will be charged from time to time with the actual control of such contagious diseases as are of a readily communicable and dangerous character, leaving to public and private hospital authorities the care of the milder contagious diseases.

Workingmen and Industrial Accidents.—In a recent lecture on "Out of Health and Out of Doors," Dr. Edward T. Devine, general secretary of the Charity Organization Society, stated that during 1908 there were 251 persons killed by accidents in factories, quarries and tunnel construction in the State of New York; that at least 1,663 were permanently disabled, 1,541 probably permanently injured, and 10,474 temporarily disabled. There were 444 persons killed in accidents on the steam, subway, elevated and surface roads subject to the jurisdiction of the Public Service Commission of New York City. In addition, 2,147 were seriously injured and 32,469 injured to a lesser degree. The employers' liability laws in

this state and in Pennsylvania are said to be worse than no laws at all. The wages of the workingman are not sufficient to provide for him in case of these accidents and there was no other protection against such accidents.

New York City

The Lincoln Hospital and Home.—During the past four months more than \$96,000 has been subscribed by the people of this city toward a half-million-dollar endowment fund for the Lincoln Hospital and Home at Southern Boulevard and 141st Street. It is proposed to make this institution New York's monument to Lincoln, which medical and surgical leaders believe would not only be a most fitting tribute, but would be of great benefit to the sick and poor of the city.

NORTH DAKOTA

Physician Found Guilty.—Dr. Thor O. Moeller, Minot, formerly a practitioner of Devil's Lake, is said to have been found guilty of criminal malpractice, and to have been sentenced to imprisonment for ten years in the state penitentiary.

Tell Legislators About Tuberculosis.—February 5, Drs. Gustav F. Ruediger and James Grassick, Grand Forks, delivered addresses before a joint assembly of the house and senate at Bismarek, in which they advocated legislation to provide for the care of victims of tuberculosis.

Society Meeting.—At the annual meeting of the Missouri Slope Medical Association, held in Bismarek, Dr. William H. Bodenshtab, New Salem, was elected president; Dr. Percy F. Kearney, Glen Ullin, vice-president, and Dr. A. M. Brandt, Bismarek, secretary-treasurer. A resolution was adopted endorsing the bill providing for a state sanatorium for tuberculosis.

Antituberculosis Association Organized.—The Antituberculosis Association of North Dakota was organized February 25, at Bismarek, and the following officers were elected: President, Dr. James Grassick, Grand Forks; vice-presidents, Mrs. Bolley, Fargo; and Drs. Victor J. LaRose, Mandan; Victor H. Stickney, Dickinson, and Andrew Carr, Minot; secretary, Mrs. J. E. Stevens, Northwood, and treasurer, Dr. Fannie D. Quain, Bismarek.

OHIO

Hospital Dedicated.—The new Union Hospital, located between Philadelphia and Canal Dover, was formally dedicated March 17. The building is a three-story brick structure with accommodation for 150 patients, and has been erected at a cost of \$17,000.

Personal.—Dr. Charles E. Sawyer, Marion, was seriously injured March 23, in a collision between a street car and his carriage.—Dr. Torald Sollmann has been elected professor of materia medica in the school of pharmacy of Western Reserve University, Cleveland, vice Prof. W. H. Haake, resigned.—Dr. James W. McMurray has succeeded Dr. Horatio C. Chisholm as superintendent of the Central Emergency Hospital, Marion.

Cincinnati

Postgraduate Course.—Preliminary to the merging of the Medical College of Ohio and the Miami Medical College, a postgraduate course of six weeks will be given conjointly by the two schools, beginning April 16.

Honor for Dr. Withrow.—In recognition of his work in behalf of the Cincinnati public school, the Business Men's Club gave a dinner in honor of Dr. John M. Withrow March 27, in conformity with the rule of the club, that each year it shall express its appreciation of conspicuous public services for the welfare of the city.

Death of Dr. Conner.—Dr. Phineas Sanborn Conner, a surgeon of unusual attainment, and a writer and lecturer on surgery of more than national reputation, died suddenly from heart disease, March 26, at the home of his son-in-law in Norwood, a suburb of Cincinnati. A memorial meeting for Dr. Conner was held at the University of Cincinnati, April 1. A more extended notice will appear in THE JOURNAL, April 10.

Memorials to Dr. Reamy.—At the meeting of the Cincinnati Academy of Medicine, March 22, the evening was devoted to memorial addresses in honor of the late Dr. Thaddeus Asbury Reamy. The academy adopted resolutions of regret at the death of Dr. Reamy. Dr. Phineas S. Conner spoke on "Dr. Reamy as a Colleague"; Dr. William H. Wenning on "Dr. Reamy as a Member of the Academy"; Dr. William H. Taylor on "Dr. Reamy as an Obstetrician"; Dr. John M. Withrow on

"Dr. Reamy as a Gynecologist"; and Dr. Louis Schwab on "Dr. Reamy as a Consultant."—The faculty of the Medical College of Ohio at its meeting March 22, passed resolutions of respect and regret regarding Dr. Reamy.

PENNSYLVANIA

Pathological Society Organized.—The Pathological Society of Pittsburg was organized February 22, with sixteen members. The following officers were elected: President, Dr. Joseph H. Barach; vice-president, Dr. Ernest W. Willetts, and secretary, Dr. S. George.

Milk Bill Becomes Law.—Governor Stuart, on March 24, approved the milk adulteration bill, which imposes a fine of from \$20 to \$50 on persons who sell milk adulterated with water or with fat removed. The same bill imposes a similar fine on persons selling ice cream containing less than 6 per cent. of butter fat, or preserved by chemicals.

Appropriations.—The senate committee has reported favorably the following appropriations: Elwin School for Feeble-minded Children, \$270,000; Austin General Hospital, \$17,000; Uniontown Hospital, \$60,000; Clearfield Hospital, \$16,000; Booker T. Washington Hospital, Pittsburg, \$10,000; and State Hospital, Shamokin, \$5,000.—The total requests for state aid for hospitals and charitable institutions and for other purposes not including departmental demands, aggregate this year \$54,927,590.

Philadelphia

Hospital Nears Completion.—The new building of the Frederick Douglas Hospital and Training School, designed for colored people, is nearing completion and it is arranged to dedicate the institution on April 22.

Smallpox on Steamer.—Two cases of smallpox were discovered on the steamship *Merion* at the quarantine station at Marcus Hook, March 26. The ship was held at quarantine and fumigated and all the passengers were vaccinated.

Anticontagion Gowns for Physicians.—Anticontagion gowns for physicians treating patients suffering from scarlet fever, diphtheria, measles and other contagious diseases, have been provided for free distribution by Dr. Joseph S. Neff, director of health and charities.

Personal.—Dr. John Steinwandel has been appointed outdoor physician in the 29th, 32d and 47th wards to succeed Dr. Herbert B. Coy.—Dr. W. W. Cadbury sailed for Canton, China, March 22, to become an instructor in the University Medical School of that city.

To Aid Epileptics.—A society to provide suitable employment for many of the city's 3,000 epileptics was recently organized and the following officers were elected: President, Dr. Matthew Woods; and directors, Drs. J. Madison Taylor, John H. W. Rhein, W. N. Trapp, Thomas J. Mays and P. Brook Bland.

Appropriations to City Institutions.—The senate appropriation committee has reported favorably appropriations to the following institutions: Midnight Mission, \$3,000; Penn Asylum, \$6,000; Academy of Natural Sciences, \$100,000; St. Vincent's Home, \$10,000; and Philadelphia Home for Incurables, \$30,000.

Bequests.—By the will of the late Samuel Parker, the Frederick Douglas Hospital and Training School receives \$1,000 and the Home for Aged and Infirm Colored People \$500.—The will of the late Henry L. Fell bequeaths \$500 to the Philadelphia Home for Incurables.—The will of the late Dr. Martin H. Boye bequeaths \$12,000 to the Polyclinic Hospital and \$24,000 to the University of Pennsylvania.—The will of the late William Y. Mescheter contains bequests to the Medico-Chirurgical Hospital, \$5,000; Methodist Hospital, \$500; German Hospital, \$500; Pennsylvania Society for the Prevention of Tuberculosis, \$300, and Pennsylvania Society to Protect Children from Cruelty, \$1,000.

GENERAL NEWS AND COMMENT

New Assistant Surgeons in the Navy.—At the graduation exercises of the Naval Medical School, Washington, March 25, diplomas were presented by the Secretary of the Navy to a class of 39.

Change in Editor.—Major Charles Lynch, Medical Corps U. S. Army, has succeeded Major James Evelyn Pileher, U. S. Army, retired, as editor of the *Military Surgeon*, the organ of the Association of Military Surgeons of the United States.

Major Pilcher, who has been secretary of the association and editor of its journal for many years, has resigned on account of ill health. At the meeting of the executive council of the association held February 4, in Washington, resolutions of regret at the retirement of Major Pilcher, and of appreciation of his services, were adopted.

Death Rate in the Canal Zone.—The chief sanitary officer of the Canal Zone, in his report for January, especially calls attention to the low death rate of the total population under his jurisdiction, 22.86 per 1,000. The rate for the years preceding are as follows: January, 1908, 26.60; January, 1907, 35.12; January, 1906, 47.26; and January, 1905, 40.20. There has been a commensurate reduction of the deaths among employes as follows: January, 1905, 20.26; January, 1906, 40.36; January, 1907, 25.62; January, 1908, 12.72, and January, 1909, 10.98 per 1,000. No case of yellow fever, plague or smallpox occurred during the month.

Consumptives Unwelcome in Texas.—Dr. W. M. Brumby, state health officer of Texas, has issued an official notice stating that the people of the state are no longer able to cope with the tuberculosis situation. So many consumptives have been sent to Texas that the death rate from that disease has risen from almost nothing to over 10 per cent., and that the natives are now suffering from the disease because the population is unable to assimilate the added consumptives. The local charitable associations are said to be impoverished by hospitality extended to indigent consumptives and are unable to look after those now in Texas. Rest, good food, and fresh air are all the more important in the cure of tuberculosis than change of climate, but in spite of this many invalids are sent west without sufficient means and therefore encounter hardships which far more than counterbalance the favorable effect of the climate. Almost all Texas hotels and private boarding houses refuse to accommodate consumptives, and under these circumstances, Brumby makes the following appeal to physicians of the country: 1. Never send a patient in an advanced or hopeless stage of the disease to Texas. 2. Never send any one to Texas without making arrangements for board, etc., before the individual leaves home. Keep the pauper at home. The patient in the incipient stage, if he has means, can benefit himself without endangering the public health.

Sanitation in Cuba.—In the report of the provisional administration of Cuba from Dec. 1, 1907, to Dec. 1, 1908, the most important sanitary effects of the year are said to have been the control and final extermination of yellow fever from the territory of the republic, and the steady progress which has been made to nationalize the sanitary department in municipal sanitation throughout the island. Of the 79 cases of yellow fever reported during the year, 53 occurred between Nov. 1, 1907, and Feb. 18, 1908, and since that date a local epidemic occurred in the department in Oriente, which was promptly brought under control, and a sporadic case in Havana, September 7, which did not create a focus of infection, and which was not followed by any secondary case. Havana is divided into 52 districts, each in charge of an inspector, who makes a house-to-house inspection and is held to a strict responsibility that no insanitary conditions exist, and that no breeding places for mosquitoes are overlooked. During the year, 584,222 house inspections were made. The steady progress which has developed in the municipal sanitary service now conducted, by the national sanitary department, is noteworthy. All the towns of the island of more than 1,000 inhabitants have this sanitary service, and in addition individual services have been conducted in some of the more important villages. A sanatorium for tuberculosis has been established with accommodation for sixty patients, and a new building in Havana has been completed, which is occupied by the dispensary for tuberculosis and the Tamago Dispensary for General Diseases. Two additional sanatoria are needed, one in Santa Clara province and the other in Oriente, and a dispensary for tuberculosis should be created in each large city of the island.

FOREIGN

An American Physician Honored in Germany.—Dr. James H. Honan, who has practiced medicine in Berlin for a number of years, has been the recipient of a marked honor from the German government, which has conferred on him through the *Kultusminister* an honorary certificate in recognition of his scientific medical attainments. Dr. Honan is a graduate of Rush Medical College and of the University of Berlin. He is founder and president of the Anglo-American Medical Association in Berlin.

Vital Statistics in Italy.—With a population estimated at 33,640,710, the death rate in 1877 was 28 per thousand inhabitants, but this has been reduced to 20 per thousand (1906). The deaths from tuberculosis have dropped from 20 to 16.77 per ten thousand inhabitants. The mortality from malaria has been reduced from 14,000 to 4,800, the maximum being in Sardinia, with, next in order, Sicily, Calabria and the Abruzzi. The number of suicides has increased from 1,429 in 1887 to 2,316 in 1908, including in the latter the suicides of 564 women and 11 school children. The fewest suicides occurred in Abruzzo and Calabria. Chronic alcoholism is assigned as the cause of 702 deaths, none in wine-growing districts. Industrial accidents were responsible further for 10,890 deaths, about the average for the last twenty years, according to the summary in the *Policlinico*, February 21.

The Zambaco Prize for Dermatology.—The sum of \$160 is offered by the French *Société de Dermatologie et Syphiligraphie* every two years for the best work on dermatology or venereal diseases offered in competition for the prize. The works must be sent anonymously, written in French, but competition is open to the world. Previous publication of the work anywhere bars it from the competition. The next prize is to be awarded in April, 1911, and competing articles must be in the hands of the secretary, 93, rue Jouffroy, Paris, before Nov. 30, 1910. The foreign corresponding members of the society from this country are Hyde of Chicago, Ravogli of Cincinnati, Dühring and Stelwagon of Philadelphia, Bulkley, Elliott, Fordyce, Lustgarten, Morrow, Piffard, Robinson and Taylor of New York and White of Boston, with Brodeur and Latreille of Montreal, Lebel of Quebec and Gonzalez of Mexico.

Fatal Morphin Poisoning Ascribed to a Prescription.—The courts at Kempten, Germany, recently acquitted a physician who had been sued under the following circumstances: Called in the night to relieve gallstone colic in a young woman, he wrote an order for a solution of morphin; intending to prescribe 0.06 gm. morphin to 5 gm. water, he inadvertently wrote 0.6 gm. and made an injection of the fluid when it arrived. The patient collapsed soon after and died. In his defense he stated that she must have succumbed to some fatal idiosyncrasy to morphin, as it was impossible for the injection to have contained more than the ordinary dose. The concentration was so high that the morphin must have crystallized out as the fluid cooled. The supernatant fluid could not have contained more than 4 per cent. of morphin, and he used only this fluid. The weather at the time ensured the cooling of the fluid. His assertions were sustained by the experts summoned, and he was acquitted as not being responsible for the fatality.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, March 20, 1909.

Epidemic of Influenza in London

London is suffering from the ravages of influenza, but though the disease is widespread, the number of fatal cases is not large. Last week there were 66 deaths from the disease, as compared with 36, 12, 71 and 25, respectively, in the preceding four weeks. Of the 66 deaths, 33 occurred in persons over the age of 60. Though the number of cases appears to be greater than in previous years, the type of disease does not seem to be more severe.

Bombay Medical Congress

This congress, which opened February 22, has been a success in every way. Much attention, naturally, was devoted to malaria. Major Ronald Ross delivered an address and made suggestions of the greatest value for the prevention of malaria in India. Professor Kitasato of Japan sent a paper on plague, which was read by Professor Shiga. Captain Liston of the Indian medical service read a paper on prophylactic measures against the plague. He said that there could be no question as to the efficacy of inoculation; by means of it six times as many lives would be saved. Sir Lauder Brunton contributed a paper on snake bites. He insists that "permanganate of potash is a complete antidote to snake venom if quickly applied in sufficient quantity and in the proper way." A bandage should be tied tightly around the limb above the bite, the bite should be converted into a clean cut with a lancet and the potassium permanganate, moistened with water, rubbed in. Much doubt was expressed, however, as to the value of this method. Serum treatment was also discussed, but it appears that no serum had been produced

which is useful in bites of all species of snakes. The serum which is now used in India is issued from the Central Research Institute, Kasauli. It is prepared with a mixture of cobra and daboia venom, and is therefore useful only in bites from snakes of these species. As there are 39 species of terrestrial poisonous snakes in India and about 30 species of aquatic snakes, the limited value of the serum is evident. In a paper on beriberi, Mr. Leonard Braddon maintained that the disease was due to intoxication from a specific poison contained in rice which had been exposed for some time after decortication so as to become stale. Professor Deycke sent a communication on his Nastin treatment of leprosy—a substance which he claimed acts directly on the bacilli. A report by Captain Williams, residency surgeon in the Persian Gulf, appeared to confirm this claim. Professor Musgrave of Manila read an important paper on mycetoma. Major Smith's paper on the extraction of cataract in the capsule attracted great attention. He has now performed this operation in 20,000 cases.

Smallpox Traced to Egyptian Cotton

Three cases of smallpox have occurred at Stockport and have been traced by the health officer to infected Egyptian cotton. The patients are "piecers" in the local cotton mills, and it is believed that they were infected by moistening the ends of the cotton with saliva in order to make them run in the machines. The health officer says that there is no need for alarm, as the origin has been traced, but he suggests that the operatives should be supplied with some solution so that they need not put the ends of the cotton in their mouths.

The Eugenics Review

A new quarterly periodical entitled the *Eugenics Review* will appear in April under the auspices of the Eugenics Education Society. Its object is to give expression to the eugenic movement for improvement of the race and to place eugenic thought on a scientific basis and to impress on all classes the dignities, privileges and duties of parenthood. The honorary president of the society is Mr. Francis Galton, the cousin of Charles Darwin, and the founder of the science of eugenics. He has founded and endowed the eugenics laboratory of the University of London. The *Eugenics Review* will comprise: 1. Articles by responsible writers. 2. Editorial notes on topics of the day which illustrate eugenic teaching. Notices of recent books on eugenics. 4. Official records of the work of the society. The range of the review will include biology, in so far as it is concerned with heredity and selections; anthropology, in so far as it throws light on questions of race and the institution of marriage; politics, in so far as it bears on parenthood in its relation to civic worth; ethics, in so far as it promotes ideals that lead to improvement of racial quality; religion, in so far as it sanctifies and strengthens eugenic duty.

Actions Under the Workmen's Compensation Act

The Workmen's Compensation Act, which was drawn up by the government in the widest possible manner for the benefit of workmen, is constantly furnishing new and extraordinary claims. One man claimed damages for a flea-bite on the grounds that it was an accident within the meaning of the act, but this claim was scouted by the judge. Some wisdom still lingers on the judicial bench, whatever may be said of our legislators. A case has just been tried at Belfast in which a woman claimed compensation for the death of her husband, the chief engineer of a steamer, from dysentery, which occurred on a voyage to Calcutta. The judge dismissed the case, holding that dysentery was not an accident within the meaning of the act. In another case a ship's cook claimed compensation for rupture caused by the heavy seas. While his ship was in the Gulf of Bothnia the sea was so rough that rods were put on the stove to keep the pans in their places. When the ship pitched he was thrown on the point of one of the rods which caught him in the stomach. He subsequently discovered that he was ruptured. He contended that he would never again be fit to do his work, which involved the lifting of heavy weights. Medical evidence was given on behalf of the shipping company of the fitness of men suffering from rupture to go to sea. The medical adviser of the Shipping Federation showed that out of 476 men who were ruptured 279 were passed as fit for sea. The main point at issue was whether the claimant was or was not fit to go to sea. The judge awarded full compensation for one week, the claimant's wages being \$5 a week, but ordered the pay-

ment to be made at the rate of 2 cents a week in order to keep the case open.

The Radium Institute

A site for the proposed Radium Institute has been acquired in Riding House Street, Portland Place. The institute will be conducted on the lines of the Paris Radium Institute, to which the newly appointed superintendent, Capt. A. E. Pinch, F.R.C.S., has gone to study the methods in use. The building will be divided into two parts, with separate entrances. One part will be devoted to poor patients, the other to those who can pay for treatment. Patients for gratuitous treatment must bring a certificate from a physician stating the nature of the case and the fact that they are unable to pay. Paying patients should, if possible, be accompanied by their physician. Failing this, they must bring a letter from him stating the particulars of the case. Demonstrations on the use of radium will be given to physicians, who will be advised as to its mode of use and as to the radio-activity of their own specimens. Building operations are being pushed, and it is expected that the institute will be opened at the end of September.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, March 16, 1909.

Cerebrospinal Meningitis

Dr. Netter, physician to the Hôpital Trousseau, has made to the Academy of Medicine and the Société médicale des Hôpitaux de Paris, two communications on the epidemic of cerebrospinal meningitis, which is at present raging at Paris. Netter particularly insists on the good results of intraspinal injections of antimeningococcic serum. In his personal statistics the mortality has been only 20 per cent. with the use of the serum. The injections should be made in large doses (from 20 to 30 c.c. in the child and 30 to 45 c.c. in the adult), repeated on several consecutive days, even though the first injection has been followed by a distinct amelioration, and they should be begun as soon as possible. The efficacy of the serum was confirmed by Dr. Vaillard, who spoke of cerebrospinal meningitis in the army, and particularly of the epidemic at Evreux, referred to in preceding letters. At Evreux the first five patients attacked did not receive injections of serum. They all died; while out of 18 other patients, who were treated with antimeningococcic serum, only 2 succumbed.

The Income Tax and the Medical Profession

The Chamber of Deputies has recently passed a measure for the adoption of an income tax. The following are the provisions—with the exception of modifications which may be voted by the senate—which concern the liberal professions, including that of medicine. The income tax in the liberal professions is fixed annually on the basis of the net income realized during the preceding year; in regard to those who have exercised their profession only for some months of a year, the net revenue is to be calculated on the results obtained since the date at which practice was begun. Out of the income thus determined, a deduction of a sum varying from 1,500 to 3,000 francs is made, according as the taxpayer is domiciled in a commune of 10,000 inhabitants or fewer, of 10,000 to 100,000 inhabitants, of more than 100,000 inhabitants, or finally in the department of the Seine. Moreover, out of his taxed income each taxpayer has the right to the following deductions:

Five-sixths of that portion of his income which does not exceed 3,000 francs, four-sixths of that comprised between 3,000 and 3,500 francs, and so on up to one-sixth on that comprised between 4,500 and 5,000 francs.

Every physician, yearly, during the month of January, is to send to the comptroller of direct taxation a declaration of his income. A ruling will determine, taking into consideration the obligation of the professional secret, the statements that the declaration must contain. If the comptroller accepts the declaration as true, he assesses the tax on it. If he considers it inaccurate he is to request the contributor to modify it within twenty days. If, when this period has expired, an agreement has not been come to, the comptroller will make an official valuation of the revenue. Before the administrative tribunals, the comptroller will sustain his valuation by the help of the sources of information at his disposition. The taxpayer can protest against the valuation submitted by the administration, by all means, documentary and otherwise, in his power. In any case, even if an expert investigation is

ordered, the tribunal will not be able to require the production of the physician's account-books.

In default of any declaration the comptroller will make an official valuation and communicate it to the interested party, who will have twenty days in which to contest it. If an agreement can not be arrived at during this period, the party interested may address himself to the administrative tribunals, submitting the legally prescribed declaration as the basis of his plea.

Death of Drs. Motet and Boursier

Dr. Motet, a member of the Academy of Medicine, died recently at the age of 76 years. An eminent alienist, he had a special predilection for the medicolegal side of mental alienation. Since 1865 he had been inscribed on the list of experts in the courts and tribunals of the department of the Seine. He was a member of the medicolegal society of France from the early months of its foundation, was general secretary in 1887, and president in 1904. He was also vice-president of the Association of Physicians of France.

The Faculty of Medicine of Bordeaux has recently lost its professor of clinical gynecology, Dr. Andre Boursier, author of a "Précis de Gynécologie" that is widely appreciated.

Prophylaxis of Epidemic Diseases and Compulsory Notification

The government has notified all the local health authorities to have in readiness all the measures of sanitary defense to prevent the diffusion of cholera which continues to flourish at St. Petersburg in spite of the severe cold. After detailing the measures of isolation and disinfection which must be immediately put into practice if the cholera should penetrate into France, the notice refers to the conduct of the physicians. It is recalled that in most places physicians have refrained from making the notifications required by the law of 1902, and have excused themselves by the fact that the disinfecting services were not as yet organized. While not approving of this conduct, the premier, M. Clemenceau, who sends out the notice, remarks that disinfection in the course of the disease and complete disinfection after death being essential measures, "one can understand, up to a certain point, that the physicians should await the time when the municipalities and departments should themselves have conformed to the obligations which the law imposes on them." But as soon as in a town or province the disinfecting service is organized, this excuse for abstaining from notification no longer exists. The premier relates that both the representatives of the body medical and Academy of Medicine have requested a slight modification of the law of 1902, which would consist in associating the father of the family with the physician in charge of the case as regards the notification (see THE JOURNAL, Dec. 5, 1908, p. 1985). M. Clemenceau has declared himself ready to enter on this course, and will present shortly to parliament a modification of the law in this direction. But this step will be taken only on condition that, from now on, physicians will abandon their attitude of general abstention. The premier also urges on the prefects to address to physicians a "pressing and cordial appeal," and to point out to them the particular interest which attaches to the fact that, from now on to next summer, the different disinfection services organized by the towns and departments should be brought into working efficiency by due notification of transmissible diseases. In regard to the work of the disinfection service, the prefects are to gather with care the observations and the criticisms of physicians, with a view to introducing improvements into the service. On the other hand, if certain physicians still hold aloof in uncompromising abstention, in systematic ignoring of the law, it will be the duty of the prefects to apply the legal penalties to these physicians and to exclude them rigorously from the various offices to which candidates are named by the prefects.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, March 11, 1909.

Results of the Social Insurance Legislation

By the invalid and age insurance law of 1889, invalid insurance societies were permitted to invest one-fourth of their resources in philanthropic enterprises, and by an amendment in 1899 this proportion was raised to one-half. Up to the end of 1908 these societies whose assets at that time amounted to \$357,600,000 (1,490 million marks), had invested in loans for philanthropic purposes, about \$162,000,000. Of this amount one-third had been devoted to building homes for working men, one-sixth to agriculture and one-half to building hos-

pitals and convalescent homes and for other philanthropic purposes. As compensation for accidents, there were paid in 1908 \$37,680,000, nearly \$2,000,000 more than in 1907. In 1886 the amount paid as compensation for accidents was about \$500,000.

Central Institute for Balneology

The German committee formed some time ago for the establishment of health institutes at the watering places and health resorts is planning the foundation of a central institute for balneology. This institution is to investigate the climatic, physical, chemical and therapeutic conditions at the various springs and study the technic of balneology as well as the business aspects of the health resort enterprises, and to conduct courses of lectures and practical exercises covering the entire ground of balneology.

Insurance of Students Against Accidents and Disability

In Charlottenburg since last October all students in the city schools of higher grade (*Ober-Realschule*) have been insured against accidents and invalidism, and in eight cases money has already been paid for sick benefits and for the expense of treatment. The insurance applies to all accidents which befall students either at the institution or on excursions which they undertake under the direction of the instructors. The annual premium amounts to 33 cents, for which the student is entitled to receive 72 cents a day as long as he is confined to his room by an injury which he has received at school, either in gymnastics or in any other way. In case of complete invalidism, the injured student receives a sum which is fixed according to the especial circumstances, with a maximum of \$720 (3,000 marks).

Illness of Nurses at the Rudolph-Virchow Hospital

A small epidemic among the nurses in the Virchow Hospital is attributed to the eating of mushrooms. Although of less moment than the previous epidemic of meat poisoning, the affair has created some stir. In so large an establishment accidents will naturally happen without any blame to be attached to the management, but such instances are to be regretted, since they increase the aversion felt among the lower classes against a stay in a hospital. The supervision of the preparation of food should be more strict, although such occurrences are no more to be completely avoided than railroad accidents.

Tuberculosis Stations Established by Life Insurance Company

The *Landesversicherungsanstalt Berlin*, which has already achieved considerable success in the campaign against tuberculosis under the management of its able president, Dr. Freund, has instituted a new measure by the establishment of special tuberculosis stations for the care of the sick who must be treated at home. These tuberculosis stations are to provide sanitary dwellings for advanced cases of tuberculosis which will be under the care of nurses, to furnish the patients beds and sputum cups and to secure the regular disinfection by specially instructed disinfectors of the apartments occupied by consumptives. In addition the other members of the family are to be examined in order to detect the first signs of the disease as early as possible with a view to instituting a course of treatment, and patients discharged from sanatoria are to be examined at definite intervals and given treatment to ensure permanent results. Cases in which the diagnosis is doubtful are referred to a tuberculin institute lately established by the same insurance company.

In addition to the care of tuberculous families, the tuberculosis stations are to secure lists as complete as possible of all the tuberculosis cases in the respective districts of the city. In this task they will be aided by the central committee of the *Krankenkassen* which has concluded to report all cases of tuberculosis of the lungs and larynx. The police department has also agreed to report all deaths from pulmonary and laryngeal tuberculosis. In this way it will be possible gradually to construct an exact picture of the extent and spread of tuberculosis in Berlin.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, March 13, 1909.

Jewish Mortality in Vienna and Jewish Health

A report of the bureau of health on morbidity and mortality in various communities and localities gives special attention to the sanitary condition of the large Jewish colony

in Vienna (120,000 persons). The Jews have their own burial-ground and their own hospital, and often select their doctors on religious grounds. Exact statistics, at least in regard to mortality, are therefore obtainable.

The most striking fact is that the health of the Jews is unusually good—much better than that of the gentiles among whom they live. For instance, while there are yearly 300 cases of disease each among gentile clubs of 1,000 members, only 207 cases apiece have been found in similar Jewish clubs. The mortality figures furnish an even better standard of comparison. The mortality for the city of Vienna has come down from 21 per thousand sixteen years ago to 16.7 per thousand in 1908. In the Jewish community it is only 13 per thousand, and it has not been much higher within the last twenty years. This indicates that the preventive measures adopted by modern sanitation—cleanliness, fresh air and proper food—have been practiced by the Jewish citizens for many years in obedience to religious precepts. A comparison of the figures of infant mortality among the two races is also striking. For Vienna, the figure is 127 per thousand children under 1 year of age; among the Jews of Vienna it is only 88 per thousand. The proverbial fertility of this people is due in no small degree to the great care given to infants. Breast feeding is encouraged by religious precept. Soberness of the men, cleanliness in sexual intercourse and careful attention to the pregnant and lying-in woman are not only demanded by the religious code but observed. The increase of insanity among the Jews is a serious fact. While there was an increase of cases of insanity among the gentiles from 16 per ten thousand in 1890 to 48 per ten thousand in 1908, the insane among the Jews have increased from 16 per ten thousand in 1890 to 102 per ten thousand in 1908. The average life expectation among Jews and gentiles does not differ much, but there are relatively more octogenarians among the former.

The distribution of the sexes is nearly equal in the two groups of the population: 1,062 boys to 1,000 girls among the new-born, 1,040 girls to 1,000 youths at the age of eighteen, and 1,040 women to 1,000 men in the forties. The figures for the Jews are a little more favorable to the men. A marked difference between the two races is observed in respect to marriages. Only 8 per cent. of the Jewish girls do not marry; more than 12 per cent. of the gentile girls remain spinsters; and, while only 10 per cent. of the Jewish men are bachelors, 14 per cent. of the gentile men remain unmarried up to their fiftieth year.

Pharmacology

A TOXIC HAIR DYE AND ITS ANALYSIS

Two More Cases of Poisoning with Mrs. Potter's Walnut Juice Hair Stain

To the Editor:—A woman came to me for treatment a short time before Dr. Schalek's and Dr. Baker's reports of cases of dermatitis venenata due to "Mrs. Potter's Walnut Juice Hair Stain" appeared in THE JOURNAL (Feb. 13, 1909, p. 557, and March 6, 1909, p. 787). The patient, who had used the same preparation, presented a picture identical to that which they described.

W. W. HARRINGTON, M.D., Spokane, Wash.

To the Editor:—I have recently treated a case of dermatitis venenata resulting from the use of "Mrs. Potter's Walnut Juice Hair Stain." One application of the dye resulted in such a severe inflammation that I feel confident the patient will never use the preparation again. The dermatitis extended from the scalp over the face, neck and shoulders, and ran its usual course of about ten days. Following this acute attack, a subacute eczema resulted, involving the scalp, face, neck, trunk and arms. This persisted for six weeks, resisting treatment in the most stubborn manner.

JAMES DOUGLAS GOLD, M.D., Bridgeport, Conn.

COMMENT: "Mrs. Potter's Walnut Juice Hair Stain," manufactured by the Mrs. Potter Hygienic Supply Co., Cincinnati, has been analyzed by the chemists of the North Dakota Agricultural Experiment Station. The advertisements state that the preparation contains "no sulphur, lead or silver," and is

"especially recommended for hair that has been bleached or discolored with peroxid or other powerful chemicals." The samples examined consisted of two bottles of liquid, called No. 1 and No. 2, respectively, the contents of which, the directions say, should be mixed before the dye is applied to the hair. Bottle No. 1 was found to contain 1.86 per cent. absolute hydrogen peroxid. Bottle No. 2 contained a "strongly alcoholic liquid of a light brown color, contents 54.45 per cent. absolute alcohol by volume." No lead, bismuth or mercury compounds were detected. Says the report: "The active principle or dye appears to be a phenolic compound and conforms to the tests, etc., for para-phenylene diamine, an aniline derivative which, on oxidation, becomes black or brown." The report goes on to quote from an article published in the *Revue Scientifique*, April, 1908, in which Schuller discusses very fully "those hair dyes prepared with para-phenylene diamine." Says Schuller: "Under the influence of oxidizing agents, para-phenylene diamine forms a black pigment, quinone diimid,* a very poisonous substance which is capable of much mischief under certain circumstances. The hair dye is prepared by treating the tincture of para-phenylene diamine with hydrogen dioxide. The toxicity of quinone diimid does not manifest itself with equal intensity in all persons. The symptoms of poisoning consist in a cutaneous eruption, with intolerable itching, and more or less violent headache. It has been known to produce swelling of the limbs and bloating of the face. These symptoms are quite variable in their severity and in many instances are so slight that their significance remains unrecognized." The North Dakota report closes with the statement: "This preparation does not show the percentage of alcohol present and is mislabeled, inasmuch as the principal ingredient is not 'walnut juice,' but a synthetic compound."

Para-phenylene diamine is a coal-tar product used as a dye. It is very toxic and in its manufacture great care is required on the part of the workmen to prevent poisoning. In the *Pharmazeutische Centralhalle*, March 4, 1909, p. 190, a warning appears, issued by the government of Saxony, against two hair dyes containing this chemical. In spite of these facts, this substance is sold indiscriminately as a "harmless" hair dye, with no warning as to its dangerously toxic effects.

Revision of the National Formulary

At the meeting of the American Pharmaceutical Association, last September, provisions were made for revising the National Formulary, a book adopted with the Pharmacopeia as determining the standards of purity and strength for drugs and medicines under the provisions of the Food and Drugs Act. That many of the features of this book are in need of careful revision is evident. The matter of nomenclature of official preparations is one of serious importance and physicians could do much to improve the National Formulary, and for that matter also the Pharmacopeia, if they would take an interest in the subject. It should be insisted that meaningless or misleading names be replaced by titles that will comply with the requirements of the law. Then those entrusted with the enforcement of that law will not continue to be hampered by the shortcomings of the standards adopted by its provisions.

When the National Formulary was discussed recently at the City of Washington Branch of the American Pharmaceutical Association, Dr. Wiley said: "The harmonizing of the nomenclature with the letter and spirit of the law, so far as the committee on revision of the National Formulary is concerned, is clearly a case of 'noblesse oblige.' Nothing in the National Formulary should conflict with the requirements of the Food and Drugs Act. It is advisable to call a spade a spade and to insist that the national standards contain nothing but 'pure-bred' nomenclature, that this nomenclature be based on a principle and that that principle be honesty."

* According to Erdmann (Ber. d. deutsch. chem. Gesellsch., 1904, p. 2906), the coloring matter is not quinone diimid, but a substance formed by the condensation of three molecules of the quinone diimid formed in the course of the reaction. Erdmann also calls attention to the toxicity of quinone diimid.

Now that physicians have been aroused to take cognizance of conditions that prevail, or have prevailed, regarding proprietary medicines, it seems reasonable to suppose that they will seek to remedy the glaring defects of the National Formulary—one of the two official standards for the quality and strength of drugs.

Correspondence

Training for Public Health Officers

To the Editor:—In THE JOURNAL, Feb. 20, 1909, appears an excellent and timely article by Dr. J. W. Kerr of the U. S. Public Health and Marine-Hospital Service, on "The Municipality and Its Relations to Transmissible Diseases." In that article (page 610) the author deplores the fact that the systematic, practical teaching of hygiene, sanitation or preventive medicine, as it may be called, has been and is conspicuous by its absence from the curricula of American schools.

He states: "There is now practically no provision for such advanced study, and no institution in our country offers a course leading to the granting of the degree of doctor of public health." It was that statement that called forth this communication.

For a number of years the University of Pennsylvania has recognized the need for trained men in public-health work. Just how to meet the requirements could not, *a priori*, be said. Systematic lectures on the subject to the senior medical classes with obligatory attendance and final examination proved to be only in part a solution.

There are phases of the subject that can not be grasped without practical work, and a good deal of it. The manifold demands of a modern course, leading to the degree of doctor of medicine, makes it inadvisable, if not impracticable, to assign a sufficient number of hours in course properly to equip the individual for the many-sided responsibilities of a health officer.

The education of a person who is to direct the public-health affairs of a community deserves the same careful consideration accorded to the other specialties in medicine. The University of Pennsylvania, being conscious of this, offered in 1906 a course leading to the diploma of public health, and in so far as I am aware, that course, projected along the lines followed by the English and Scottish universities, is the first of its kind offered in this country.

Since the announcement of that course, a number of praiseworthy efforts by other universities have been made to excite public interest in this important subject. These efforts in the main, however, have been in the way of didactic lectures, in some cases to medical students, in others, as more or less semi-popular lectures designed for the busy practitioner and the intelligent layman. None of them contemplates a formal reward on the part of the university to those who take the lectures, except in one or two instances where credit is given to students attending them. In a few cases, attendance on such lectures, given in medical courses, is compulsory; in others, the lectures are voluntary or elective.

In 1908 the University of Toronto announced an excellent course of instruction very similar in its essential details to that offered by the University of Pennsylvania.

Though opportunities for instruction in public health are offered, it can not be said that they lead to a degree; that they are general on the part of the universities; or that many students avail themselves of them. There is a reason for the latter statement. At present, scientific equipment and practical familiarity with the needs of the work are not everywhere demanded as the prime qualifications for the health officer; there are too frequently other considerations, but these need not be discussed here. However, the strenuous effort toward the betterment of things exhibited in our daily and weekly newspapers, our popular magazines and our professional journals, must in the end bring the public to realize that of all the branches of municipal, state or federal

governments, none is of more importance, and none requires a higher order of broadly trained men, than those having to do with the safeguarding of the public health.

When demand for such men is generally made, when trained men can see an opportunity to utilize their special equipment in public-health work, then and not till then will universities and other educational institutions provide the opportunities for training.

A. C. ABBOTT, M.D., Philadelphia.

The Relief of Dr. Carroll's Widow

WASHINGTON, D. C., March 29, 1909.

To the Medical Profession:—The following resolution was adopted by the Legislative Council of the American Medical Association at its meeting in Washington, D. C., in January, 1909:

Resolved: That a committee composed of one member of the Medical Department of the Army, one of the Medical Department of the Navy, one of the Public Health and Marine-Hospital Service, one member of the District of Columbia Medical Society, and one member to represent the profession at large, members of the council, be named by the chairman, and instructed to present to the different medical services of the government, the District of Columbia, and the profession at large the conditions of distress under which the widow of our hero brother, Major James Carroll, is placed, and suggest or help to devise such plan and action as may speedily bring relief.

The chairman appointed the following committee: Major M. W. Ireland, U. S. Army; Surgeon W. H. Bell, U. S. Navy; Surgeon John F. Anderson, U. S. P. H. and M.-H. S.; Dr. John D. Thomas, District of Columbia; Dr. A. S. von Munsfelde, Nebraska.

At the death of Major Carroll, Sept. 16, 1907, his family was left practically unprovided for. There was a small insurance policy, and a short time prior to his death Major Carroll had begun making payments toward the purchase of a home in Washington. A mortgage of \$5,000 remains unpaid on the house and a further debt of \$2,300 secured by notes payable at the rate of \$50 a month. Congress allowed Mrs. Carroll \$125 a month, and on this amount depends the support of herself, the aged mother of Major Carroll and seven minor children. It is utterly impossible for her to make the payments on the house, and unless assistance is speedily forthcoming she will lose it.

It is certainly needless to repeat to the members of the medical profession of this country the distinguished service of Major Carroll as a member of the yellow-fever board in Havana when he submitted to an experiment to prove that the disease was transmitted by a mosquito. He suffered a severe attack of yellow fever and for a time his life was despaired of. This illness left him with a disabled heart, which eventually cost him his life. It is believed that every physician is willing to contribute toward saving the home of the widow and orphans of this hero.

In response to this resolution, your assistance is invited toward the attainment of the worthy object expressed in the above resolution.

The following contributions to the Carroll fund have been received:

Officers of the Medical Corps, U. S. Army.....	\$1,500.00
Officers of the Medical Department, U. S. Navy.....	400.00
Officers of the U. S. P. H. and M.-H. S.	300.00
Officers of the District of Columbia.....	210.00
Mrs. Frances E. Hand, New York City.....	50.00
Dr. Eugene A. Crockett, 298 Marlborough St., Boston.....	5.00
Dr. Edmund A. Christian, Supt., Eastern Michigan Asylum, Pontiac, Mich.....	1.00
Dr. W. E. Clark, Frederick, S. D.....	5.00
Dr. George W. Gay, 665 Boylston St., Boston.....	10.00
Dr. L. Hektoen, Memorial Institute for Infectious Diseases, Chicago.....	5.00
Dr. Emil King, Fulda, Minn.....	1.00
Dr. John A. Koch, Quincy, Ill.....	5.00
Fountain and Warren Medical Society, Attica, Ind.....	12.95
	\$2,504.95

M. W. IRELAND, Chairman.

[Contributions for this fund are earnestly requested from physicians. Make checks, drafts, etc., payable to Major M. W. Ireland and send them to him at the office of the Surgeon-General, War Department, Washington, D. C. Acknowledgment of subscriptions will be made in THE JOURNAL.]

The Newer Neurology

To the Editor:—In THE JOURNAL, March 20, 1909, p. 982, Dr. Blackburn still classifies acute anterior poliomyelitis as a "system disease"—a disease of the lower motor segment—in his scheme for a "postgraduate course for county societies." This is unfortunate, for it represents an old and discarded conception and helps to keep alive the confusion and pessimism among general practitioners in regard to neurology.

The idea that acute anterior poliomyelitis is a disease of the lower segment had its origin with Charcot, who based his pathology and classification on cases examined only in the late and chronic stages.

It is recognized to-day that acute anterior poliomyelitis is merely a form of myelitis; primarily a vascular or inflammatory trouble, which, for anatomical reasons, is more or less confined to the anterior horns of the cord. The chromatolytic changes in the ganglion cells are consecutive or associated phenomena. The latter, however, do not classify the disease as a primary "systemic" trouble of the lower motor segment any more than the degeneration observed in the pyramidal cortical neurones; after a cerebral apoplexy or inflammation, make of the former a primary systemic disease of the upper motor segment. Without referring to my work and the emphasis laid therein on this modern conception of the disease, I will quote the words of Starr in the last edition (1907) of his "Nervous Diseases": "The majority of recent pathologists believe that in anterior poliomyelitis there is an acute inflammatory process limited to the domain of the anterior spinal arteries, involving both the neuroglia and the ganglion cells and resulting in degeneration and atrophy both of the interstitial tissue and of the ganglion cells. . . . In a number of cases, the explanation of the origin of the process is found in a thrombosis of one of the branches of the spinal artery or in a hemorrhage into the anterior horn."

In a word, then, acute anterior poliomyelitis is a myelitis, a vascular trouble primarily. The chromatolytic changes in the ganglion cells whereon the old Charcot conception of the disease was based, and whereby it is to-day classified by beated students of neurology as a "system" disease of the lower motor segment, are of the nature of mere consecutive or associated phenomena.

The distinction between the two conceptions has a most important bearing on the etiology, prognosis and treatment of the disease, as I have shown elsewhere.

L. HARRISON METTLER, Chicago.

Accident Insurance

To the Editor:—The case reported by Dr. Robert T. Morris in THE JOURNAL, March 13, under the title, "Appendicitis and Accident Insurance," induces me to report a case now going through the courts in Iowa.

A traveling passenger agent, aged 62, in perfect health and an unusual specimen of physical manhood, who had never previously had a severe illness, found one morning that his regular defecation was impossible in consequence of agonizing pain in the rectum on the slightest attempt. After several ineffective efforts, at his wife's suggestion and in her presence he lubricated his finger with vaselin, and with difficulty removed from the rectum a piece of fish bone which had been caught there transversely. He recognized from the blood at the time that he had injured himself. This happened in Chicago on Monday morning. On Tuesday afternoon I saw him at my office, received the above history, and examined him without any instrumentation. Just within the sphincter was a tear of the mucous membrane about three-quarters of an inch long. This was cleansed and touched with solution of tincture of iodine, carbolic acid and chloral hydrate. From this slight lesion a most severe case of septic infection developed. The whole cellular tissue of penis, scrotum and ischio-rectal fossæ, and of the intermuscular abdominal planes, was successively invaded, became gangrenous, and death ensued.

The patient held accident insurance in several companies. On the third day I assisted him to make out the necessary reports required by the policies. All the companies but one immediately paid the insurance. The one company declined

payment on the ground that the terms of the contract had not been complied with, inasmuch as the deceased had not notified the company of the date and nature of the accident, which it contended, within the meaning of the law and the contract, occurred when the insured swallowed the bone! The widow brought suit, plaintiff's attorney arguing that not the swallowing of the bone, but the laceration of the mucous membrane and consequent infection, constituted the accident. The presiding judge sustained the plaintiff. The case was appealed by the accident company, and is now before the higher court.

The absurdity of the company's contention, which would require a policy holder to "keep tab" on all the foreign and toxic substances present in his daily food, and, whether conscious at the time of the fact or not, to report to the company that he had "swallowed something" by accident that might eventually prove injurious, is obvious.

J. H. GREENE, M.D., Dubuque, Ia.

Benzoate of Soda in Foods

MARCH 20, 1909.

To the Editor:—I must request you to correct a misrepresentation of the position relative to sodium benzoate in my letter published March 13. If your correspondent of the current issue had read the letter with sufficient care, he would have learned that what I "put perfectly clear" was that the argument against sodium benzoate produces the impression of an effort to mislead the public rather than to give due regard to the facts. Considering that we have not yet seen the report of the referee board, and, moreover, since it has not yet been made public, that the board is not in a position where it can defend its conclusions, we must realize that, especially in view of the eminence of those composing the board, any criticism of their conclusions at this time is premature and ill advised. If we recall that ripe rot is the normal method by which vegetable matter tends to return to the earth from which it has grown in plant construction, we should know that decay is not due to the careless handling of raw material, but is the inevitable result of exposure to the air of all succulent vegetable products that do not contain preservative.

We need only consult our materia medica to note that acetic acid, all of the many spices, salt, sugar, onions, garlic, in fact, all of the ingredients catchup excepting tomato itself are drugs, as well as sodium benzoate; yet these are all allowed in food without regard to the possibility that they may not be harmless when indiscriminately used by "infants, children and those wavering between life and death." We must avoid confusing an essentially injurious quality with the possibility of an injurious effect from unusual conditions, such as the ingestion of inordinate quantities. Anything and everything, including the most nutritious food, may be deleterious under exceptional circumstances. What we have to determine with a given substance is whether it is essentially injurious or whether it resembles other food ingredients in becoming so only under some unusual conditions.

E. E. SMITH, M.D., New York City.

Compound Comminuted Fracture of the Hip Followed by Bony Union and Movable Joint

To the Editor:—In THE JOURNAL, Aug. 4, 1906, I reported a case of gunshot wound through the great trochanter and hip joint, from which shot pieces of clothing, gun wads and fragments of bone were removed. The patient, a farmer, recently presented himself for examination and the findings are such that I am sure that they will be of interest to the profession generally. The man is able to do his work as well as ever. There is three-quarters of an inch shortening, for which he wears a slight elevation of the heel of his shoe. Every motion in the joint is almost perfect. I believe that the excellent results in this case are due to the facts that the wound was filled with Moorhof's bone wax, and that the two-way extension of Maxwell was applied.

JAMES E. MOORE, Minneapolis.

Miscellany

Transmission of Disease by Insects.—F. C. Wellman (*Proceedings of the Pathological Society of Philadelphia*, February, 1909) illustrates the value of a knowledge of entomology to the physician by a consideration of the relation of a number of insects to disease. The ticks are of especial importance in Africa where Wellman has made his investigations. The disease-bearing species is known to communicate African relapsing or tick fever. Half the force engaged in building railroads are sometimes sick with exacerbations of this fever. On investigation, Wellman found that the ravages of the disease could be checked by having the men sleep in hammocks suspended by ropes. A knowledge of the character and habits of the insects enabled him to protect the patients. Wellman has also made the discovery that this tick conveys a filaria. Wellman believes that the tick fever of Persia is also caused by a spirochete and suggests that this whole genus of ticks should be investigated. The interesting fact that the habitat of the tsetse flies is confined within belts of territory is of great importance in preventing sleeping sickness. If one is ten feet outside of a fly belt he runs little chance of being bitten. This is illustrated by several incidents. The caravans crossing a river in the midst of a fly belt in a certain city used to carry cases of sleeping sickness down to the coast. By changing the route a few yards upstream, this source of infection was avoided. One village, situated in a fly belt, was also decimated. Wellman advised the removal of the village to a location about a quarter of a mile away, which was done, and to this day there has not been a single case of sleeping sickness in that village. But a man who subsequently insisted on placing some of his bungalows in one corner of the belt paid the penalty of his rashness by becoming infected with sleeping sickness, which necessitated his return to London. While beetles are not usually regarded as sources of disease, there are some which are parasitic on animals and which should be more carefully studied. A species of hymenoptera seems to be responsible for the dissemination of anthrax in Cyprus, as large numbers of them were found on the bodies of sheep dead of anthrax. Children are fond of playing with these insects. In conclusion, Dr. Wellman lays stress on the third factor in tropical diseases, the first two being the patient and the insect that transmits to him the disease. The third factor is constituted by the members of the dark-skinned race, who act as a culture medium, carrying the infective organisms without visible harm to themselves, but transmitting them to the white men.

Reagent for Sugar.—Benedict, in the *Journal of Biological Chemistry*, February, 1909, proposes the following formula as a substitute for Fehling's reagent:

	C.L. or Gms.
Copper sulphate (pure crystallized)	17
Sodium citrate	173
Sodium carbonate (anhydrous)	100
Distilled water	to 1000

With the aid of heat dissolve the sodium citrate and carbonate in about 600 c.c. of water. Pour (through a folded filter if necessary) into a graduate and make up to 850 c.c. Dissolve the copper sulphate in about 100 c.c. of water and make up to 150 c.c. Pour the carbonate-citrate solution into a large beaker or casserole and add the copper sulphate solution slowly, with constant stirring. The mixture is ready for use. The following is the procedure for the detection of dextrose in the urine: To about 5 c.c. of the reagent in a test tube 8 drops (not more) of the urine to be examined are added. The fluid is then heated to boiling, kept at this temperature for from one to two minutes and allowed to cool spontaneously. In the presence of dextrose the entire body of the solution will be filled with a precipitate which may be red, yellow or green. Urine containing 0.08 per cent. of dextrose gives a very positive reaction with this test.

Scopolamin-Morphin for Chronic Painful Affections.—Schlesinger and Flesch reported separately at a meeting of the Vienna *Gesellschaft für innere Medizin und Kinderheilkunde*, Feb. 11, 1909, on the use of scopolamin-morphin in chronic

affections accompanied by such incessant or spasmodic pain or suffocation that morphin otherwise has to be given as a routine measure. Extremely small doses suffice, and no inconveniences were observed even when this combination was given daily for weeks and months. One of Plesch's patients was a tabetic with crises of pain in the extremities so severe that 0.02 gm. (0.3 grain) morphin was regularly required, but a single dose, representing 0.0008 scopolamin and 0.0075 gm. morphin, proved even more effectual, and since then he has found half this dosage sufficient. The same dose promptly relieves another patient with asthma and he wakes from the refreshing sleep induced without vomiting or the headache that used to follow the large doses of morphin required to relieve the suffocation. Schlesinger uses a 0.0004 per cent. solution of scopolamin, injecting subcutaneously one or two Pravaz syringefuls, accompanied by a little morphin. The relief from pain is almost immediate, and the patients say they feel better than when they used to have an injection of 0.2 or 0.3 gm. of morphin a day. The customary dose of morphin can be reduced to one-tenth when accompanied by the scopolamin, without the patient's suffering from the lack of the accustomed drug. He warns, however, that the mixtures must be freshly made, rejecting those with a turbid aspect. His experience suggests that this combination may prove useful in treating morphin addiction.

Ionic Potential a Factor in Toxicity.—That a relation exists between the toxic action of any ion and the ease with which it parts with its electric charge, has been shown by Mathews (*Jour. Biological Chemistry*, February, 1909), who proved that the amount of action any ion can exert on protoplasm depends primarily on the amount of available potential energy it contains. The fact of a direct relationship between the toxicity of any ion and its content of available potential energy (*i. e.*, its valence, its ionic potential), is now well established by experiments. Pond, however, threw doubt on this hypothesis in consequence of certain experiments to determine the power of various salts to inhibit the action of lipase on ethyl butyrate. Nicoll has reviewed the work of Pond and shows that his conclusions were incorrect because he did not take into consideration the solubility of the salts in ethyl butyrate. Unless the salts were soluble in ethyl butyrate they could not interfere with the action of the lipase which must enter into solution in the fat before it can decompose it. Nicoll concludes that the power of the nitrate salts of various metals to inhibit the action of lipase on ethyl butyrate is a function chiefly of the energy content or ionic potential of the cations (metals). Zinc alone occupies a markedly abnormal position. It is suggested that some of the exceptions noted by various observers in the toxic order of the salt toward various cells, may be due in part to the fact that only the concentration of the salts in water, not that in protoplasm, has been considered, whereas the concentration in the protoplasm is the effectual concentration.

Tissue Antisepsis with Reference to Animal Infection.—At a recent meeting of the Therapeutic and Pharmacologic Section of the Royal Society of Medicine (*Proceedings of the Royal Society of Medicine*, February, 1909), Dr. A. R. Cushny pointed out the failure to realize the hopes of a successful internal bactericidal treatment of infections aroused by the success of surgical antisepsis. Bacteria are more resistant to chemical germicides than are the tissues, so that efficient bactericides cannot be introduced into the blood without killing the patient and their activity *in vitro* is much reduced in the presence of the colloids of the blood and tissues. Even in the alimentary canal evacuation has proved more satisfactory than antisepsis. The attempt to disinfect the lungs by inhalation is frustrated by danger of injury to those delicate tissues and by the respiratory reflexes which restrict the entrance of irritant vapors. Cushny, therefore, discredits the ozone, creosote and similar treatments. In contradistinction to the failure of specific treatment in diseases in which vegetable organisms (bacteria) are the infectious agents, real specifics have been found in malaria and syphilis, the causes of which are animal organisms. Of late sleeping sickness, also due to an animal organism, has been shown to be susceptible to

specific treatment. Trypanosomes are especially sensitive to the members of the arsenic group, and, as Cushman's experiments prove, are more easily killed by these agents than are ordinary protozoa. Since the protozoa rapidly become immune to toxic agents, prompt use of efficient doses and the coincident use of several agents rather than a single drug are indicated.

Crocodiles and Sleeping Sickness.—In *Nature*, February 18, appears a communication from Dr. E. A. Minchin, whose researches on tropical diseases are well known, concerning the connection of crocodiles with sleeping sickness. His attention was especially directed to the subject by a statement in a paper by Mr. James Cantlie that the crocodile is believed to be the alternative host of the organism causing sleeping disease of Africa. He says also that there seems to be a general impression that Professor Koch either observed or believed that the crocodile is a "reservoir" host for the *Trypanosoma gambiense*, and while Dr. Minchin does not know where Mr. Cantlie got the basis for his statement, he quotes from Prof. Koch's last work, "*Ueber meine Schlafkrankheits Expedition*" (Berlin: Dietrich Reimer, 1908), to show that Koch never made such a statement. On the contrary he expressly states that while the blood of the crocodile contains trypanosomes it is not the form that produces sleeping sickness, a fact which had been made known before by British observers. The bare fact that the crocodile may be thus infected is not any evidence for connecting this reptile with the disease, and it is inherently improbable, Minchin says, that any reptile should play such a part. It is possible and probable that a "reservoir" host for *T. gambiense* exists, but as yet none has been discovered. Only the human species has so far been found to be naturally infected with this organism, though many other mammals can be inoculated with it in the laboratory. Minchin publishes this communication in order to have the scientific facts in regard to the disease, so far as ascertained, correctly stated, which was not done by Cantlie.

Resection of the Utero-ovarian Plexus in Treatment of Hysteria.—G. Cavazzani of Venice since 1899 has done this operation in 22 cases, mainly for the hysteriform syndrome that follows the natural or artificial menopause, or for pure hysteria. The benefit was always prompt and constant. He gives the details of the 22 cases in a communication to the *Riforma Medica*, Dec. 7, 1908, page 1354. In one case there was evidently regeneration of some of the fibers of the plexus later, as the disturbances recurred after an intercurrent typhoid fever, with symptoms of inflammation in the left hip joint, abscesses and furuncles on the same leg. The segment of the sympathetic involved was resected anew and the ovary, found much degenerated, was also removed. This was followed by subsidence of the false coxitis and restoration to normal in every respect. His patients were between 20 and 35. Another patient presented the syndrome of hystero-traumatic kyphosis, a scoliotic sciatica on a base of hysteria, with intolerable pain until cured by resection of the plexus. Ruggi would restrict the operation to morbid conditions in the internal genitals in women inclined to neuroses and hysteria; but Cavazzani operates on hysterics irrespective of the condition of the internal genitals, and his constant success has confirmed him in this principle. He gives the bibliography of the subject from Jaboulay and Ruggi in 1899 to Lasanna and Ginevra in 1907.

Tardy Fatal Complications of Plague.—De Leon writes to the *Semana Medica* to relate two cases in which the patients had improved under serotherapy and were apparently far on the road to recovery when brain and spinal cord symptoms developed and rapidly proved fatal. He is inclined to believe that the effect of the serotherapy had worn off by this time, thus allowing the plague bacilli still present in the organism to produce these fatal complications even although the bacilli were notably attenuated. Such cases as these suggest the necessity for continuing the serum treatment longer or else increasing the dosage beyond that which is usually deemed sufficient.

Association News

OFFICIAL CALL

Sixtieth Annual Session of the American Medical Association, Atlantic City, N. J., June 8-11, 1909

The sixtieth annual session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June 8, 9, 10 and 11, 1909, at Atlantic City, N. J.

The House of Delegates will convene at 10 a. m., Monday, June 7. In the House, the representation of the various constituent associations for the years 1907, 1908 and 1909 is as follows:

Alabama	3	Nebraska	2
Arizona	1	New Hampshire	1
Arkansas	2	New Jersey	3
California	3	New Mexico	1
Colorado	2	New York	11
Connecticut	2	Nevada	1
Delaware	1	North Carolina	1
Dist. Columbia	1	North Dakota	3
Florida	1	Ohio	6
Georgia	2	Oklahoma	2
Hawaii	1	Oregon	1
Idaho	1	Pennsylvania	8
Illinois	7	Rhode Island	1
Indiana	4	South Carolina	2
Iowa	3	South Dakota	1
Kansas	3	Tennessee	2
Kentucky	3	Texas	5
Louisiana	2	Utah	1
Maine	1	Vermont	1
Maryland	2	Virginia	3
Massachusetts	6	Washington	1
Michigan	4	West Virginia	1
Minnesota	2	Wisconsin	3
Mississippi	2	Wyoming	1
Missouri	4	Philippine Islands	1
Montana	1		

The twelve sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health and Marine-Hospital Service are entitled to one delegate each.

The General Meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10:30 a. m., Tuesday, June 8.

The Registration Department will be open from 8:30 a. m. until 5 p. m., on Monday, Tuesday, Wednesday and Thursday, June 7, 8, 9 and 10, and from 9 to 10 a. m., on Friday, June 11.

HERBERT L. BURRELL, President.

GEORGE H. SIMMONS, General Secretary.

ATLANTIC CITY SESSION

Announcement of Local Committees and Section Headquarters for the Approaching Convention

The Trustees' Committee of the American Medical Association makes the following announcement as to the local committees, and of the section headquarters. As yet they are not prepared to make the report with reference to the meeting places; this, however, will be done at an early date.

LOCAL ENTERTAINMENT COMMITTEE

Dr. J. A. Joy	Chairman
Dr. E. H. Harvey	Treasurer
Dr. E. J. Porteous	Secretary

SUBCOMMITTEES

Special entertainments	Dr. Emery Marvel, chairman
Ladies' entertainments	Dr. Clara Bartlett, chairman
Alumni reunion	Dr. Francis Burnett, chairman
Section dinners	Dr. A. L. Atherton, chairman
Hotels	Dr. W. E. Jonah, chairman
Badges	Dr. E. C. Chew, chairman
Halls and meeting places	Dr. T. G. Dunlap, chairman
A. M. A. Bureau of Information	Dr. M. S. Ireland, chairman
Postoffice, telephone, telegraph	Dr. S. Barbash, chairman
Registration	Dr. J. C. Mevay, chairman
Scientific exhibit	Dr. I. E. Leonard, chairman
Commercial exhibit	Will C. Braun (Chicago) chairman
Program	Dr. George Scott, chairman
Printing	Dr. B. R. Lee, chairman
Section meetings	Dr. W. P. Conaway, chairman
Finance	Dr. W. B. Stewart, chairman
Atlantic City Publicity Bureau	Mr. George S. Lenhart, secretary
A. M. A. Daily Bulletin	Dr. E. Gniou, Asst. Editor

HEADQUARTERS

General Headquarters	Marlborough-Blenheim
Practice of Medicine	Hotel Dennis
Surgery and Anatomy	Hotel Chalfonte
Obstetrics and Diseases of Women	Haddon Hall
Diseases of Children	Hotel Traymore
Nervous and Mental Diseases	Hotel Brighton
Hygiene and Sanitary Science	Hotel Seaside
Pharmacology and Therapeutics	Hotel Chelsea

OphthalmologyHotel Rudolf
Laryngology and Otology.Hotel St. Charles
Cutaneous Medicine and Surgery.....Hotel Shelburne
Pathology and Physiology.Hotel Windsor
Stomatology.....Hotel Royal Palace

PHILIP MILLS JONES, San Francisco.

WISNER R. TOWNSEND, New York City.

PHILIP MARVEL, Chairman, Atlantic City, N. J.

Trustees' Committee of Arrangements.

THE SCIENTIFIC EXHIBIT

Notice of Awards of Prizes and Plans for Atlantic City Display

The prospects of the Scientific Exhibit for the Atlantic City Session are most flattering. Generous contributions are already assured from Philadelphia, New York and Boston. To prospective exhibitors it may be said that as a rule serial exhibits in illumination of some phase of pathology or experimental investigation, prove most instructive. To be sure, very rare specimens of whatever sort are acceptable.

To stimulate wholesome competition the plan of a year ago will be followed, of granting awards of honor to a few exhibitors presenting unusually meritorious work.

Diplomas of Honor.—To a very limited number of institutions or individuals presenting exhibits of very superior merit, the committee on awards will grant illuminated diplomas bearing engravings of Harvey, Pasteur, Koch and Davis, formally signed by officials of the Association.

Gold Medals.—For the best exhibit of Research Work, and for the best tuberculosis exhibit.

The latter, however, must comply with the following requirements: (a) The exhibit must be comprehensive and complete in elucidating the whole tuberculosis problem, in a manner plain and convincing to the lay mind; covering the causation, nature, prevention and cure of the disease. (b) Stability, compactness and adaptability for installation in railway stations, postoffice buildings and public libraries.

The usual tuberculosis exhibits are cumbersome and expensive to maintain. Necessarily they have only been presented in large cities, and then at long intervals and for brief periods. It is hoped to develop a model exhibit, which will occupy small space and can be maintained constantly at small expense by public health authorities in the public buildings of smaller cities.

FRANK B. WYNN, Director, Indianapolis.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

CAUSES AND CHARACTERISTICS OF PETECHIÆ

To the Editor:—1. Would any of the exanthemata cause ulceration on external surfaces or hemorrhages from the mucous membrane? 2. Are such ulcerations liable to occur in purpura? 3. Are petechial spots and ecchymoses finally developing into ulcers characteristic of purpura? X. Y. Z.

ANSWER.—1. The exanthemata, with the exception of variola and varicella, are rarely followed by ulceration. In malignant cases petechiæ and ecchymoses as well as hemorrhages from the mucous membrane may occur, but such cases are usually fatal before ulceration has taken place.

2. Ulceration is not a complication of purpura. If there is swelling and ulceration scorbutus should be suspected rather than purpura.

3. Petechiæ and ecchymoses are the characteristic skin lesions of purpura, but seldom or never ulcerate.

TRANSACTIONS OF CONGRESS ON TUBERCULOSIS

Several readers ask when the "Transactions of the International Congress on Tuberculosis" will be issued. Dr. John S. Fulton, (Colorado Bldg., Washington, D. C.), secretary-general of the congress, writes that the transactions will be ready early in May. They will appear in six volumes of approximately four thousand pages. Active members of the congress will receive them without cost. The price to non-members will be fifteen dollars per set.

SCARLET RED IN MEDICINE

To the Editor:—Please give me information regarding the dye called scarlet red. B. K. ELLIS, Greeley, Colo.

ANSWER.—Scarlet red is said to be amido-azo-touol-azo-beta-naphthol. It is a reddish-brown powder, insoluble in water, sparingly in benzol and acetone and cold alcohol, more readily soluble in hot alcohol, easily soluble in chloroform, fats and phenols, sparingly soluble in cold paraffin but readily in warm. Fischer found that this substance exerted a chemotactic influence on epithelial tissue, causing it to proliferate in an atypical way, suggesting carcinoma. (See editorial in THE JOURNAL A. M. A., Nov. 10, 1906, p. 1566.) Recently this power of causing proliferation of the epithelium has led to its application in the treatment of burns and injuries complicated by loss of considerable areas of skin. The dye can be made into an ointment by rubbing up with the ointment base or with oil with gentle heat. The following formula is given (*Vierteljahrsschrift für praktische Pharmazie*, 1908, No. 4).

R.
Rubri scarlatini 1—2 gr. xv—gr. xxx
Petrolati.
Adipis lanæ hydrosi aa ad..... 20 3v
M. et f. ung. Sig.: For external use.

(The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending March 27, 1909:

Lewis, W. F., major, relieved from duty at Fort Thomas, Ky.; will sail from San Francisco, June 5, 1909, for Philippine service.

Pierson, R. H., captain, granted leave of absence for 30 days.

Siler, J. F., capt., relieved from duty at Fort Jay, N. Y., and ordered to duty at the Medical Supply Depot, New York.

Stone, J. H., major, relieved from duty at the U. S. Military Prison, Fort Leavenworth, Kan., and ordered to Fort Sam Houston, Texas, for duty.

Woodson, R. S., major, ordered, on arrival at San Francisco, to proceed to Fort DuPont, Del., for duty.

Rand, I. W., major, when relieved at Fort DuPont, Del., ordered to Fort Hancock, N. J., for duty.

Roberts, W. M., capt., when relieved at Fort Hancock, N. J., ordered to Fort Thomas, Ky., for duty.

Shillock, Paul, major, granted leave of absence for 10 days.

Porter, R. S., capt., relieved from duty at Fort Huachuca, Ariz., and ordered to Fort Bayard, N. M., for duty at the Army General Hospital.

Reasoner, M. A., lieutenant, granted leave of absence for one month.

Marrow, C. E., major, granted leave of absence for three months, with permission to apply for an extension of one month, when relieved from duty on the *McClellan*.

Rhoads, T. L., major, relieved from duty in the Philippines Division; will proceed to San Francisco for orders.

Willeox, Chas., major, ordered to duty at Fort Totten, N. Y., on return from Cuba.

Patterson, R. U., capt., ordered to duty with Co. C, H. C., at the Army General Hospital, Washington, D. C., on return from Cuba.

Richards, R. L., capt., ordered to duty at Fort Wayne, Mich., on return from Cuba.

Field, P. C., capt., when relieved at Fort Wayne, Mich., ordered to Fort Slocum, N. Y., for duty.

Woodruff, C. E., Shillock, Paul, and Mason, C. F., majors, ordered to report at Washington, D. C., for examination for promotion.

Dean E. A., and Usher, F. M. C., majors, relieved from duty in Philippines Division; will sail June 15 from Manila, P. I., for San Francisco, for orders.

Lord, L. W., M. R. C., relieved from duty at Fort Riley, Kan., April 13, 1909; ordered to his home and relieved from active duty in the M. R. C.

Wren, R. J., M. R. C., honorably discharged March 23, 1909; his services being no longer required.

Kennedy, J. S., M. R. C., when relieved at Fort Omaha, Neb., ordered to Ft. Sam Houston, Texas, for duty.

Parkman, W. E., M. R. C., honorably discharged from the service of the United States, his services being no longer required.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for week ending March 27, 1909:

The following assistant surgeons have been detached from instructions at Naval Medical School, Washington, D. C., and ordered as follows:

Clifton, A. L., to Naval Hospital, Philadelphia.

Brown, E. W., to Naval Medical School, Washington, D. C.

Thomas, G. C., to Naval Recruiting Station, Omaha.

Mann, W. L., to temporary duty on *Independence*, thence to the *Tennessee*.

Cottle, G. F., to Naval Hospital, Annapolis, Md.

Sutton, D. G., to Naval Academy.

Giltner, H. A., to Naval Training Station, San Francisco.

Cuthbertson, R., to Naval Hospital, Mare Island, Cal.

Phelps, J. R., to the *Yankton*.

Sinclair, J. A. B., to Naval Proving Ground, Indian Head, Md.

Moran, C. L., to Navy Yard, Boston.

Turner, H. W. B., to Naval Medical School Hospital for treatment.

The following officers have been detached from places opposite their names and ordered to instruction at Naval Medical School, Washington, D. C., April 15:

Cohn, I. F., asst.-surg., from Naval Hospital, Mare Island.

Reed, E. U., asst.-surg., from Naval Training Station, San Francisco.

Robnett, A. H., asst.-surg., from Recruiting Station, Omaha.

Eytlinge, E. O. J., asst.-surg., from Naval Hospital, New York.
Blackwood, N. J., surg., from the *New Jersey*.
Smith, C. G., P. A. surg., from Naval Hospital, Portsmouth.
Grayson, C. T., P. A. surg., from Naval Dispensary, Washington.
Woods, E. L., asst.-surg., from the *Kearsarge*.
Brooks, F. H., asst.-surg., from Naval Recruiting Station, Baltimore.
Richards, T. W., surgeon, detached from the *Kansas* and ordered to temporary duty in the bureau of medicine and surgery, Navy Department.
Grunwell, A. G., surgeon, detached from the *Kentucky* and ordered to the *Kansas*.
Rennie, W. H., P. A. surgeon, detached from the *Illinois* and ordered to the *Rhode Island*.
Stalnaker, P. R., P. A. surgeon, detached from duty at the Naval Hospital, Annapolis, Md., and ordered to Navy Yard, Washington, D. C.
Kaufman, J. B., asst.-surg., detached from the *Tennessee* and ordered to the Naval Training Station, San Francisco.
Biello, J. A., asst.-surg., detached from the Naval Hospital, Mare Island, Cal., and ordered to the *Maryland*.
Phillips, E. W., acting asst.-surgeon, ordered to duty at the Naval Hospital, New York.
Stuart, A. P. A. surgeon, detached from the *Yankton*, ordered to *New Jersey*.
Jones, E. L., asst.-surgeon, detached from *Maryland*, to duty *Independence*.
De Valin, C. M., surgeon, detached from *Washington*, home to await orders.
Field, J. G., surgeon, detached Naval Training Station, San Francisco, and ordered to the *Washington*.
Richardson, R. R., P. A. surgeon, to duty at Naval Hospital, Portsmouth, N. H.
Stepp, J., P. A. surgeon, ordered to Naval Training Station, Newport, R. I.
Whitmore, G. B., asst.-surgeon, orders of March 17 modified; ordered to Naval Recruiting Station, Baltimore.
Holloway, J. H., P. A. Surgeon, detached from the *Franklin*, to duty on the *Connecticut*.
Pickrell, G., surgeon, ordered to temporary duty in the Bureau of Medicine and Surgery, Navy Department, in connection with the *Solace*.
Old, E. H. H., P. A. surgeon, detached from Naval Training Station, Newport, R. I., to duty at Naval Dispensary, Washington, D. C.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended March 24, 1909:

Wasdin, Eugene, surgeon, granted 1 month's leave of absence from March 22, 1909, on account of sickness.
White, J. H., surgeon, directed to proceed to Gulf Quarantine, Biloxi, Miss., on special temporary duty.
Gardner, Charles H., P. A. surgeon, directed to proceed to Washington, D. C., and report to chairman of board of medical examiners to determine fitness for promotion to the grade of surgeon.
Blue, Rupert, P. A. surgeon, directed to report to chairman of board of medical examiners to determine fitness for promotion to the grade of surgeon.
Oakley, J. H., P. A. surgeon, directed to proceed to San Francisco, and report to chairman of board of medical examiners to determine fitness for promotion to the grade of surgeon.
Sprague, Ezra K., P. A. surgeon, directed to proceed to Washington, D. C., and report to chairman of board of medical examiners to determine fitness for promotion to the grade of surgeon.
Heiser, Victor G., P. A. surgeon, leave of absence, granted Oct. 12, 1908, for 30 days, amended to read 17 days en route to station.
Amesse, J. W., P. A. surgeon, granted 7 days' leave of absence from March 23, 1909.
Bogges, J. S., P. A. surgeon, granted 7 days' leave of absence from March 21, 1909.
Roberts, Norman, P. A. surgeon, granted 3 days' leave of absence from March 18, 1909, under paragraph 191, Service Regulations.
Roberts, Norman, P. A. surgeon, granted 7 days' leave of absence from March 21, 1909.
Collins, G. L., P. A. surgeon, granted 3 days' leave of absence from March 18, 1909, under paragraph 189, Service Regulations.
Wightman, W. M., P. A. surgeon, granted 25 days' leave of absence from Jan. 23, 1909, on account of sickness.
Wollenberg, R. A. C., asst.-surgeon, granted 2 days' leave of absence from Feb. 26, 1909, on account of sickness.
Krush, Emil, asst.-surgeon, granted 5 days' leave of absence from March 19, 1909.
Stiles, Charles Wardell, chief division of zoology, Hygienic Laboratory, granted 2 days' leave of absence in January, 1909, and 1 day's leave of absence, Feb. 1, 1909, under paragraph 211, Service Regulations.
Porter, J. Y., quarantine inspector, directed to proceed to Mayport, Fla., on special temporary duty.
Frissell, C. M., acting asst.-surgeon, granted 21 days' leave of absence from Feb. 8, 1909.
Reifel, J. W., acting asst.-surgeon, granted 7 days' leave of absence from March 2, 1909, under paragraph 191, Service Regulations.
Tarbell, B. C., acting asst.-surgeon, granted 1 day's leave of absence, March 28, 1909.

BOARDS CONVENED

Board of medical officers convened to meet at the Marine Hospital, San Francisco, April 5, 1909, for the examination of certain passed assistant surgeons to determine their fitness for promotion to the grade of surgeon. Detail for the board: Surgeon H. W. Austin, chairman; Surgeon S. D. Brooks; P. A. Surgeon W. C. Hobdy, recorder. March 20, 1909.
Board of medical officers convened to meet at the bureau, Washington, D. C., April 5, 1909, for the examination of certain passed assistant surgeons to determine their fitness for promotion to the grade of surgeon. Detail for the board: Asst. Surgeon-General W. J. Pettus, chairman; Asst. Surgeon-General J. M. Eager; Asst. Surgeon-General J. W. Kerr, recorder. March 24, 1909.
Boards of medical officers were convened to meet on April 5, 1909, for the purpose of making physical examination of applicants for the position of cadet in the Revenue-Cutter Service, as follows:

Boston: Surgeon L. L. Williams, chairman; P. A. Surgeon T. W. Salmon, recorder.
New York: P. A. Surgeon, C. W. Vogel, chairman; Asst.-Surgeon Lasher Hart, recorder.
Philadelphia: Surgeon J. M. Gassaway, chairman; Acting Asst.-Surgeon H. Horning, recorder.
Baltimore: Surgeon W. P. McIntosh, chairman; P. A. Surgeon M. K. Gwyn, recorder.
Washington, D. C.: Asst. Surgeon-General H. D. Geddings, chairman; P. A. Surgeon J. W. Trask, recorder.
Norfolk, Va.: Surgeon C. P. Wertenbaker, chairman; Acting Asst.-Surgeon R. W. Browne, recorder.
Savannah, Ga.: Surgeon F. W. Mead, chairman; Acting Asst.-Surgeon A. B. Cleborne, recorder.
Mobile, Ala.: Surgeon G. M. Guiteras, chairman; Acting Asst.-Surgeon J. O. Rnsh, recorder.
New Orleans: Surgeon J. H. White, chairman; P. A. Surgeon H. W. Wickes, recorder.
Galveston, Tex.: P. A. Surgeon G. M. Corput, chairman; Acting Asst.-Surgeon W. H. Gammon, recorder.
Detroit: Surgeon R. M. Woodward, chairman; P. A. Surgeon M. J. White, recorder.
Chicago: Surgeon G. B. Young, chairman; P. A. Surgeon R. H. Creel, recorder.
Seattle, Wash.: P. A. Surgeon M. W. Glover, chairman; Asst.-Surgeon C. W. Chapin, recorder.
San Francisco: P. A. Surgeon W. W. Kling, chairman; P. A. Surgeon J. D. Long, recorder.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended March 26, 1909:

SMALLPOX—UNITED STATES

Alabama: Montgomery, March 5-12, 1 death.
California: San Francisco, Feb. 27-March 6, 1 case.
Kansas: Topeka, Feb. 27-March 13, 18 cases.
Kentucky: Covington, March 6-13, 2 cases.
Massachusetts: New Bedford, March 6-17, 1 case.
Missouri: Liberty, Jan. 15-March 11, 20 cases.
Montana: Butte, Jan. 2-9, 2 cases; March 2-9, 1 case.
Nebraska: South Omaha, Feb. 20-27, 5 cases.
Tennessee: Memphis, Feb. 27-March 13, 33 cases, 1 death; Nashville, March 6-13, 2 cases.
Texas: El Paso, March 2-9, 2 cases; San Antonio, March 6-13, 2 cases.
Utah: Salt Lake City, Feb. 1-28, 85 cases.
Washington: Camas, Dec. 29-March 8, 18 cases.
Wisconsin: Appleton, March 1-13, 1 case.

SMALLPOX—INSULAR

Philippine Islands. Manila, Jan. 16-Feb. 3, 10 cases, 5 deaths.

SMALLPOX—FOREIGN

Africa: Tripoli, Feb. 13-March 6, 11 cases, 3 deaths.
Arabia: Aden, Feb. 1-15, 7 deaths.
Brazil: Bahia, Jan. 16-Feb. 13, 53 cases, 5 deaths; Para, Feb. 13-27, 2 cases, 1 death; Pernambuco, Jan. 1-31, 35 deaths; Rio de Janeiro, Jan. 18-Feb. 14, 121 cases, 82 deaths.
Canada: Halifax, Feb. 26-March, 6 cases; Vancouver, Feb. 1-28, 3 cases; Yarmouth, March 7-20, 28 cases.
China: Hongkong, Jan. 2-23, 3 cases, 2 deaths.
Cuba: Cienfuegos, Feb. 28-March 6, 1 case.
Ecuador: Gnamonte, Feb. 15, present.
France: Nice, Jan. 1-31, 1 case; Paris, Feb. 13-20, 3 cases.
Great Britain: Bristol, Feb. 20-27, 1 case, 1 death.
India: Bombay, Feb. 9-16, 14 deaths; Calcutta, Jan. 30-Feb. 6, 202 deaths; Madras, Feb. 6-12, 3 deaths.
Indo-China: Saigon, Jan. 23-30, 2 cases, 1 death.
Italy: Catania, Feb. 21-March 7, 5 cases; Naples, Feb. 21-28, 20 cases, 3 deaths; Palermo, Jan. 20-27, 8 cases, 2 deaths.
Japan: Kobe, Feb. 6-13, 4 cases, 1 death.
Java: Batavia, Jan. 23-Feb. 6, 7 cases.
Mexico: Guadalajara, Feb. 18-25, 2 deaths; Monterey, Feb. 28-March 7, 1 death.
Russia: Odessa, Oct. 31-Feb. 13, 37 cases, 8 deaths; Reval, Jan. 1-31, 1 case; Riga, Feb. 13-20, 1 case; St. Petersburg, Feb. 6-13, 5 cases, 1 death; Warsaw, Jan. 9-16, 6 deaths.

YELLOW FEVER

Barbados: General, Feb. 25-March 5, 2 cases; Bridgetown, 1 case; Spightstown, 1 case.
Brazil: Bahia, Jan. 16-Feb. 13, 51 cases, 16 deaths; Manaus, Jan. 30-Feb. 20, 5 deaths; Para, Feb. 6-27, 11 deaths.
Ecuador: Guayaquil, Jan. 8-Feb. 6, 10 deaths.
Mexico: Merida, vicinity, March 6-13, 1 case, 1 death.

CHOLERA—INSULAR

Philippine Islands: Provinces, Jan. 16-Feb. 6, 361 cases, 214 deaths.

CHOLERA—FOREIGN

China: Hongkong, Dec. 26-Jan. 16, 2 cases, 2 deaths.
India: Bombay, Feb. 9-16, 2 deaths; Calcutta, Jan. 31-Feb. 6, 12 deaths; Madras, Feb. 6-12, 1 death; Rangoon, Jan. 31-Feb. 6, 13 cases.
Russia: Jaroslav, March 1, present; St. Petersburg, March 1-5, 50 cases, 19 deaths.

PLAGUE

Brazil: Bahia, Jan. 16-Feb. 13, 22 cases, 13 deaths; Rio de Janeiro, Jan. 17-Feb. 14, 13 cases, 5 deaths.
China: Hongkong, Dec. 26-Jan. 2, 1 case, 1 death.
Chile: Iquique, Feb. 1, 12 cases.
Ecuador: Babahoye, Feb. 15, 3 cases; Guayaquil, Jan. 8-Feb. 6, 17 deaths; Milagro, Jan. 18, 1 case; Nisag, Feb. 15, 7 cases.
India: Bombay, Feb. 9-16, 45 deaths; Calcutta, Jan. 31-Feb. 6, 10 cases; Rangoon, 14 deaths.
Indo-China: Saigon, Jan. 23-30, 2 cases, 2 deaths.
Peru: General, Jan. 29-Feb. 6, 66 cases, 18 deaths; Callao, 4 cases, 2 deaths; Lima, 5 cases, 3 deaths.
Turkey in Asia: Jiddah, Feb. 22-28, 24 cases, 22 deaths.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Results of Dr. McCormack's Work in Minnesota

A personal letter from a prominent St. Paul physician contains a program of the Ramsey County Medical Society for March, showing five meetings for the month, all of them devoted to the consideration and study of obstetric questions. The letter says: "Here is the result of his visit. The mid-week meetings for postgraduate work are even more largely attended than the regular society meeting. He has done us much good, more than I thought possible and I want you to know that we appreciate it."

Public Instruction in Pittsburg

The Allegheny County (Pa.) Medical Society has organized a board of public instruction for the county along the lines of the plan followed by the Board of Public Instruction of the American Medical Association. The circular issued by the committee states the object of the board to be to offer instruction to laymen or organizations of laymen on subjects pertaining to hygienic science, prevention of diseases, etc. The board also proposes to issue circulars of information and arrange for public meetings for the discussion of matters pertaining to the public health.

A regular lecture course has been arranged consisting of free public lectures to be held in different sections of the county, in schoolhouses, churches, halls, etc. Lectures for special occasions or on special subjects will be provided on the request of responsible laymen or of responsible lay organizations. Large public meetings are to be held from time to time for the discussion of questions of general interest, in which both medical and lay speakers of prominence will participate. Announcements of all lectures in the regular course are sent to ministers, parish priests and school teachers. Cards announcing the lectures are placed in drug-stores, public buildings, and other conspicuous places. The county has been divided into districts and a subcommittee for each district appointed to have charge of the lectures in the district.

This active, dignified and effective manner of disseminating modern knowledge on diseases and methods of prevention can not fail to accomplish marked results in Pittsburg and the surrounding country. Similar work, differing somewhat in detail, is being done in other large counties and should be taken up not only in cities but in counties having societies large enough to carry on the work. The educational instruction of the intelligent portion of the public in modern sanitation and hygiene is the most important work devolving on the medical profession of to-day.

Legislative Notes

MISSOURI

Three bills now before the Missouri legislature are being supported by the state association. They are amendments to the medical practice act, strengthening it at points where experience has shown the existing law to be weak. The first amendment will give the State Board of Health the power to subpoena witnesses and to require that books and papers are produced. As the law stands, the board, in revoking the license of a physician for misdemeanors, has no power to compel the attendance of witnesses or the production of evidence. The second amendment will authorize the State Board of Health to maintain a suit for injunction against any person whose license has been revoked or who is not a legally qualified physician. It will also authorize the State Board to bring an action in the circuit court of the county in which the individual lives or practices, enjoining him from performing any action in violation of the law. The third amendment

will so modify the sections of the existing law as to give the Board of Health jurisdiction over physicians licensed under a previous act, also amending the existing provisions regarding county registration.

NORTH DAKOTA

Report received from North Dakota states that the osteopathic bill, S. B. 131, has passed both the house and senate and will probably be signed by the governor. This bill confers no additional rights on osteopaths, but gives them a separate board of examiners.

WISCONSIN

The antivivisection bill, restricting animal experimentation, which was referred to the Committee on Public Health, has been indefinitely postponed.

County Secretaries' Meeting

Following the lead of Pennsylvania, Ohio, Illinois and a number of other states, the county secretaries of Missouri have formed an organization known as the Missouri Society of Medical Secretaries, which will hold a meeting for conference and mutual helpfulness in connection with the coming meeting of the state association. The program for the meeting appears in a recent number of the *Missouri State Medical Journal*. Papers on the various activities of the county society, including its scientific and social aspects; discussions of the various important duties of the county secretary, of the state journal and its value to the organization, as well as the legal duties of county societies, make up an interesting program.

Some of our larger and more progressive states are realizing that, as the county society is the basis and foundation of modern medical organization and as the county secretary is the executive officer of his society, the best way to insure satisfactory results is by stimulating and aiding the secretary in the performance of his important but often difficult and thankless duties. The movement inaugurated along this line should be taken up by all of the states until annual or semi-annual meetings of all county secretaries have become a recognized part of the society program.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month

General Subject for the Month: Mental Diseases

First Weekly Meeting

GENERAL ETIOLOGY OF INSANITY

SEX.—Forms affecting each sex.

AGE.—Influence of age, puberty, climacteric.

HEREDITY.—Frequency and forms of psychoses in progenitors. Variations in inherited taint. Reversion, latency, hereditary degeneracy.

Stigmata of Degeneration.—1. Anatomic: Facial asymmetry, dental and palatal deformities, anomalies of cranium, tongue and lips, nose, eyes, ears, limbs, genital organs, skin, body in general.

2. Physiologic: Anomalies of motor function, sensory function, speech, genitourinary function, instinct or appetite; retardation of puberty, weakened physiologic resistance.

3. Psychic: Insanity, idiocy, imbecility, feeble-mindedness, pavor nocturnus, precocity, eccentricity, moral delinquency, sexual perversion.

STRAIN.—Importance of strain in conjunction with heredity; physical and mental strain.

Causes of Strain.—1. Physical: (a) Toxic (auto-intoxication, alcohol, morphin, cocain, etc., metallic poisons). (b) Bodily diseases (syphilis, typhoid, influenza, pneumonia, ma-

laria, etc.; tuberculous, carcinoma, etc.; cardiovascular disease, disease of genital organs, organic nervous diseases, hysteria and epilepsy). (e) Trauma to head, "commotion insanity." (d) Nervous exhaustion.

2. Physiologic: Puberty, puerperal state, menopause, senility.
3. Moral: (a) Emotional strain; worry, grief, anger, domestic troubles, etc. (b) Imitation; hereditary predisposition usually present.

Influence of profession, occupation, climate, race.

GENERAL SYMPTOMATOLOGY OF INSANITY

DISORDERS OF SENSATION.—1. Qualitative Disorders: (a) Hallucinations, definition, of sight, of hearing, of taste, of smell, of cutaneous sensibility, of movement of body; due to what causes, occur in what psychoses, how influence patient? (b) Illusions, definition, describe varieties. 2. Disorders of Intensity: Hypesthesias, anesthetics, hyperesthesias. 3. Disorders of Sensory Tone: Hypalgesia, hyperalgesia, hyphedonia, hyperhedonia.

DISORDERS OF IDEAS OR MEMORY PICTURES.—1. Defective evolution of ideas, in idiots and imbeciles. 2. Disorders in durability of memory pictures. 3. Affective Disorders: (a) Depression, secondary or primary, in melancholy state; (b) exaltation, (c) irritability, (d) apathy, (e) mutability.

DISORDERS OF IDEA ASSOCIATIONS.—1. Disorders of memory. 2. Disorders of attention. 3. Accelerated or diminished flow of ideas. 4. Incoherence. 5. (a) Delusions; of exaltation or depression, grandeur, persecution, negation, etc. (d) Imperative ideas. 6. Weakness of judgment.

DISORDERS OF ACTIONS.—1. Induced by sensory disorders, hallucinations and illusions. 2. Induced by defects of memory. 3. Induced by disorders of emotions, depression, anger, rage, apathy, etc. 4. Induced by disorders of idea associations.

ACCOMPANYING PHYSICAL DISORDERS IN INSANITY.—1, Motor; 2, sensory; 3, reflex; 4, trophic; 5, secretory and excretory; 6, vascular; 7, temperature disorders.

REFERENCE BOOKS FOR THE NINTH MONTH: Church and Peterson, Nervous and Mental Diseases; Brower and Bannister, Manual of Insanity; Berkley, Mental Diseases; Clarke, Manual of Mental Diseases; Lewis (Bevan), Mental Diseases; Spitzka, Manual of Insanity; Savage and Goodall, Insanity and Allied Disorders; Dana, Nervous Diseases and Psychiatry.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

- ARIZONA: Phoenix, April 5-6. Sec., Dr. Ancil Martin.
- ARKANSAS: Three boards, each at Little Rock, April 13. Regular Sec., Dr. F. T. Murphy, Brinkley; Homeopathic Sec., Dr. P. C. Williams, Texarkana; Eclectic Sec., Dr. A. J. Widener, Little Rock.
- CALIFORNIA: San Francisco, April 6. Sec., Dr. Charles L. Tisdale, Butler Bldg.
- COLORADO: Denver, April 6. Sec., Dr. S. D. VanMeter, 1723 Tremont St.
- DISTRICT OF COLUMBIA: Washington, April 13-16. Sec., Dr. George C. Ober, 210 B St., S. E.
- IDAHO: Boise, April 6-7. Sec., Dr. W. F. Howard, Pocatello.
- ILLINOIS: Northwestern University Bldg., Chicago, April 15-17. Sec., Dr. J. A. Egan, Springfield.
- MINNESOTA: Old Capitol, St. Paul, April 6-9. Sec., Dr. W. S. Fullerton, 214 Am. National Bank Bldg.
- MONTANA: The Capitol, Helena, April 6. Sec., Dr. W. C. Riddell.
- NEW MEXICO: Santa Fe, April 12. Sec., Dr. J. A. Massie.
- NORTH DAKOTA: Grand Forks, April 6-8. Sec., Dr. H. M. Wheeler.
- OKLAHOMA: Guthrie, April 13. Sec., Dr. Frank P. Davis, Enid.
- UTAH: Salt Lake City, April 5-6. Sec., Dr. R. W. Fisher.
- WEST VIRGINIA: Huntington, April 13-15. Sec., Dr. H. A. Barbee, Point Pleasant.

Minnesota January Report

Dr. W. S. Fullerton, secretary of the Minnesota State Board of Medical Examiners, reports the written examination held at St. Paul, January 5-8, 1909. The number of subjects examined in was 10; total number of questions asked, 115; percentage required to pass, 75. The total number of candidates examined was 14, of whom 12 passed and 2 failed.

Fourteen reciprocal licenses were issued at this examination. The following colleges were represented:

College	PASSED.	Year Grad.	Per Cent.
Northwestern University Medical School.....	(1908)		76.3
Rush Medical College.....	(1906)		81.4
Johns Hopkins University Medical School.....	(1907)		79.
Hamline University.....	(1908)		75.8
University of Minnesota,.....	(1906) 82.	(1908) 78,	79.82.
University of Michigan.....	(1908)		82.
St. Louis University.....	(1908)		82.
McGill University, Quebec.....	(1908)		82.
Alexanders University, Helsingfors, Finland.....	(1902)		75.4

College	Year Grad.	Per Cent.
Louisville and Hospital Medical College.....	(1908)	64.5
Hamline University.....	(1907)	63.5

College	Year Grad.	Reciprocity with
Bennett College of Eclectic Medicine and Surgery (1891) Iowa.....	(1908)	Illinois
Hahnemann Medical College, Chicago (1903) Indiana.....	(1908)	Illinois
Northwestern University Medical School.....	(1906)	Illinois
Rush Medical College.....	(1892)	Wisconsin
University of Iowa.....	(1905)	Iowa
Louisville Medical College.....	(1899)	Texas
University of Michigan.....	(1906)	Michigan
Kansas City Hahnemann Medical College.....	(1906)	Kansas
New York University Medical College.....	(1888)	Ohio
University Medical College, Kansas City.....	(1908)	Missouri
Medical College of Ohio.....	(1907)	Ohio
Toledo Medical College.....	(1905)	Illinois

South Dakota January Report

Dr. H. E. McNutt, secretary of the South Dakota Board of Medical Examiners, reports the written examination held at Sioux Falls, January 13-14, 1909. The number of subjects examined in was 12; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 35, of whom 26 passed and 9 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Rush Medical College, (1901) 76; (1904) 84.1; (1906) 80.3, 85; (1908) 82.6.			
Northwestern University Medical School, (1905) 80.5; (1906) 81.7; 85; (1907) 78.8, 83.4.			
College of Physicians and Surgeons, Chicago, (1903) 77.1; (1905) 90.4; (1907) 76.7.			
Hahnemann Medical College, Chicago.....	(1908)		77.1
University of Iowa.....	(1908)	75.9, 80.3,	84.7
University of Iowa, Homeopathic Dept.....	(1905)		82.1
Keokuk Medical College, College of Phys. and Surg.....	(1908)		76.8
Louisville and Hospital Medical College.....	(1908)		80.6
University of Minnesota, (1905) 79.4; (1906) 77.2, 83; (1907) 76.2			
Creighton Medical College.....	(1908)	75.6, 80.8	

College	Year Grad.	Per Cent.
Howard University.....	(1893)	59.
Rush Medical College.....	(1907)	71.5
Northwestern University Medical School.....	(1908)	73.
College of Physicians and Surgeons, Chicago.....	(1908)	50.
Keokuk Medical College, College of Phys. and Surg.....	(1908)	70.1
Sioux City College of Medicine.....	(1906)	58.8
University of Michigan.....	(1900)	74.
St. Louis Medical College.....	(1887)	73.
St. Louis College of Physicians and Surgeons.....	(1906)	60.

Utah January Report

Dr. R. W. Fisher, secretary of the Utah State Board of Medical Examiners, reports the written examination held at Salt Lake City, January 4-5, 1909. The number of subjects examined in was 20; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 11, of whom 9 passed and 2 failed. Five reciprocal licenses were issued at this examination. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Denver and Gross College of Medicine.....	(1907)		76.7
Northwestern University Medical School, (1904) 78.4; (1908) 79.1, 85.4.			
Rush Medical College.....	(1908)	81.2, 82.2, 86.9	
Jefferson Medical College.....	(1908)	79.4, 88.4	

College	Year Grad.	Per Cent.
University of Louisville.....	(1907)	64.7
Northwestern University Medical School.....	(1908)	73.

College	Year Grad.	Reciprocity with
Denver and Gross College of Medicine.....	(1904)	Colorado
Rush Medical College.....	(1899)	Maine
University of Iowa.....	(1908)	Iowa
Omaha Medical College.....	(1902)	Colorado
Western Reserve University.....	(1888)	Iowa

Vermont January Report

Dr. W. Scott Nay, secretary of the Vermont State Board of Medical Registration, reports the written and oral examination held at Montpelier, January 12-14, 1909. The number of subjects examined in was 12; total number of questions asked, 95; percentage required to pass, 75. The total number of candidates examined was 12, of whom 10 passed and 2 failed. One candidate was licensed through reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Maryland Medical College.....	(1906)		86.6
Harvard Medical School.....	(1907)		81.9
College of Physicians and Surgeons, Boston.....	(1904)		81.6
Jefferson Medical College.....	(1907)		86.5
Hahnemann Medical College, Philadelphia.....	(1871)		75.
University of the South.....	(1901)		88.1
University of Vermont, (1880) 75; (1902) 75; (1908) 75, 85.1			

College	FAILED	Year Grad.	Per Cent.
College of Physicians and Surgeons, Boston.....	(1899)		71.4
Laval University, Quebec.....	(1905)		70.1

College	LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
Tufts College Medical School.....	(1907)		New Hamp.

Wisconsin January Report

Dr. J. V. Stevens, secretary of the Wisconsin Board of Medical Examiners, reports the written examination held at Milwaukee, Jan. 12-14, 1909. The number of subjects examined in was 22; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 17, of whom 12 passed, 1 failed and 4 were conditioned. Twenty reciprocal licenses were issued at this examination. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Hahnemann Medical College, Chicago.....	(1908)		81.2
Northwestern University Medical School.....	(1908)		88.5
Johns Hopkins University Medical School, (1902) 86.1; (1907) 88.6; (1908) 82.7, 91.			
New York University Medical College.....	(1886)		91.4
Milwaukee Medical College.....	(1908)		78.6, 82.5, 95.6
Wisconsin College of Physicians and Surgeons.....	(1907)		81.2
Royal Frederiks University, Christiania, Norway..	(1900)		82.

College	FAILED	Year Grad.	Per Cent.
Milwaukee Medical College.....	(1908)		62.4

College	CONDITIONED	Year Grad.	Per Cent.
Milwaukee Medical College.....	(3, 1908)		
Western University, London, Ontario.....	(1907)		

College	LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
Northwestern University Medical School, (3, 1906) (1907) (1908)			Illinois
Rush Medical College.....	(1900) (2, 1906) (1907)		Illinois
College of Physicians and Surgeons, Chicago....	(1907)		Illinois
Chicago College of Medicine and Surgery.....	(1904) (1908)		Illinois
Bennett Coll. of Eclectic Medicine and Surgery..	(1908)		Illinois
Kentucky School of Medicine.....	(1898)		Kentucky
Harvard Medical School.....	(1895)		New Jersey
University of Michigan.....	(1906)		Michigan
Hamline University	(1899)		Minnesota
University of Minnesota.....	(1904)		Minnesota
Ohio Medical University.....	(1906)		Ohio
Milwaukee Medical College.....	(1907)		N. Dakota

North Dakota January Report

Dr. H. M. Wheeler, secretary of the North Dakota State Medical Examining Board, reports the written examination held at Grand Forks, January 5-7, 1909. The number of subjects examined in was 14; percentage required to pass, 75. The total number of candidates examined was 10, of whom 7 passed and 3 failed. Five reciprocal licenses were issued at this examination. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Iowa.....	(1905) 79; (1908)		82.
University of Michigan.....	(1906)		88.
University of Minnesota.....	(1903)		81.
Bellevue Hospital Medical College.....	(1887)		76.
University of Toronto, Canada.....	(1880)		75.
Laval University, Quebec.....	(1905)		76.

College	FAILED	Year Grad.	Per Cent.
Hamline University	(1904)* (1907)*		
American Medical College, St. Louis.....	(1897)*		

College	LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
Northwestern University Medical School.....	(1907)		Illinois
College of Physicians and Surgeons, Chicago....	(1905)		Illinois
Detroit College of Medicine.....	(1907)		Michigan
University of Minnesota.....	(1907)		Minnesota
University of Toronto, Canada.....	(1907)		Minnesota

* Percentage not given.

Marriages

G. C. BLACK, M.D., Table Grove, Ill., to Miss Blanche Harris of St. Louis, March 16.

CHARLES F. STERNE, M.D., U. S. Navy, to Miss Irene Orndorff, of Washington, D. C., March 25.

JOHN MAULFAIR KEICHLIN, M.D., to Miss Martha Jane Thompson, both of Petersburg, Pa., March 24.

HARRY A. GILTNER, M.D., U. S. Navy, to Miss Virginia Bartlett Sullivan, of Washington, D. C., March 24.

J. THOMAS WRIGHT, M.D., to Mrs. Lillian Frontis, both of Winston-Salem, N. C., at Gastonia, N. C., February 26.

JOHN KYLE GORDON, M.D., Chambersburg, Pa., to Miss Eleanor Wharton Wood of Bryn Mawr, Pa., March 20.

Deaths

William N. Burwell, M.D. Jefferson Medical College, Philadelphia, 1881; a member and councilor of the West Virginia State Medical Association; and a member of the Ohio Valley and Little Kanawha Medical Society; chairman of the health committee of the Parkersburg, W. Va., city council; at one time health officer of the city; for several terms a member of the Wood County Board of Health, and during the last term its president; died at his home in Parkersburg, March 23, from influenza, aged 50.

William Adams Olmstead, M.D. Howard University, Washington, D. C., 1883; a veteran of the Civil War, in which he attained the rank of brigadier general; for several years thereafter a disbursing officer in one of the bureaus of the War Department, Washington; later physician at Indian agencies in Colorado and Wyoming; who took holy orders in 1897, and afterward acted as chaplain at St. Elizabeth's Hospital, New York City; died March 9, from paralysis, aged 74.

William Ray, M.D. Missouri Medical College, St. Louis, 1868; formerly a member of the American Medical and Minnesota State medical associations; a surgeon in the Confederate service during the Civil War; surgeon to the Hope Mining Company; and chairman of the Board of Health of Philipsburg, Mont.; was thrown from his carriage in a collision with a railway crossing gate at Flint Station, March 17, and died a day later from his injuries, aged 66.

Alonzo Andrews, M.D. Jefferson Medical College, Philadelphia, 1894; of Martinsburg, W. Va.; a member of the American Medical Association; and formerly treasurer of the West Virginia State Medical Association; a member of the State Examining Board for Nurses, and surgeon in the West Virginia National Guard with the rank of major; died at a sanatorium in Asheville, N. C., March 19, from tubercular meningitis, aged 37.

Matthew Addison Taylor, M.D. Starling Medical College, Columbus, Ohio, 1849; a member of the State Medical Association of Texas and of the board of regents of the University of Texas; formerly physician in charge of the State School for the Blind; vice-president of the Austin and Northwestern Railroad; and president of the First National Bank of Austin; died at his home in that city, March 18, from heart disease, aged 82.

Wilbert Eugene Harriman, M.D. Jefferson Medical College, Philadelphia, 1895; professor of ophthalmology in the veterinary section and lecturer on pollution of waters in the sanitary engineering section of the Iowa State College, Ames, and physician to the institution; a member of the American Medical Association; died at the home of his father in Hampton, Iowa, from nephritis, March 17, aged 36.

Joseph Rutter Owens, M.D. University of Maryland, Baltimore, 1859; chief clerk of the claims division of the Treasury Department, Washington, from 1885 to 1890, and after that time treasurer of the Maryland Agricultural College, Hyattsville; for several years collector of taxes for Anne Arundel county; councilor and for three terms mayor of Hyattsville; died at his home, March 15, aged 70.

Ira Augustus Shimer, M.D. University of Pennsylvania, Philadelphia, 1897; a member of the American Medical Association; who entered the Army as lieutenant and assistant surgeon in 1898; was promoted to captain in the medical corps in 1903, and to major in 1908; died in Camp Overton, Mindanao, P. I., March 13, from acute septicemia, aged 38.

George Randolph Patton, M.D. Miami Medical College, Cincinnati, 1855; M.D. ad eundem, Medical College of Ohio, Cincinnati, 1858; for many years a member of the Wabasha county (Minn.) Medical Society; a prominent and esteemed practitioner of Minnesota; died at his home in Lake City, March 23, aged 74.

George A. Biddle, M.D. Bellevue Hospital Medical College, New York City, 1870; of Emporia, Kan.; a member of the Kansas Medical Society; and a member of the local board of U. S. Pension Examiners; a veteran of the Civil War; died in the Topeka State Hospital, March 13, from disease of the kidney, aged 63.

Roger Atkinson, M.D. Charity Hospital Medical College, New Orleans, 1876; once president of the Hays County (Texas) Medical Society; and for many years local surgeon for the Missouri, Kansas and Texas Railroad at San Marcos; died suddenly from heart disease at his home, March 16, aged 59.

William L. Pinkerton, M.D. Starling Medical College, Columbus, Ohio, 1871; a member of the American Medical Association and Columbus Academy of Medicine, and once president of the Central Ohio Medical Society; died at his home in Galloway, Ohio, Dec. 6, 1908, from capillary bronchitis, aged 68.

Frank J. Latshaw, M.D. Toledo (Ohio) Medical College, 1902; a member of the Ohio State Medical Association; a member of the staff of the Toledo State Hospital, and in charge of the tubercular colony of that institution; died from tuberculosis at a sanatorium in Monrovia, Cal., March 11, aged 31.

Charles Dean Hews, M.D. University of Michigan, Ann Arbor, 1870; surgeon to the Calumet Street Railway Company; a veteran of the Civil War; died at his home in Kensington, Chicago, March 24, from the effect of a gunshot wound of the head, believed to have been self-inflicted with suicidal intent, aged 62.

Cyril Fulton, M.D. Queen's University, Kingston, Ont., 1894; a member of the American Medical Association and a fellow of the Rochester (N. Y.) Academy of Medicine; local surgeon for the New York Central Railroad at Lyons; died in his apartments in that city, March 22, from pneumonia, aged 40.

Henry P. Dietrick, M.D. Medico-Chirurgical College of Philadelphia, 1903; a member of the Medical Society of the State of Pennsylvania and surgeon to the American Steel and Wire Company of Williamsburg, Pa.; died at a hospital in Philadelphia, February 5, from rheumatic endocarditis, aged 29.

Tappane Eustis Francis, M.D. Harvard Medical School, Boston, 1847; a member of the Massachusetts Medical Society; for fifty-five years a practitioner of Brookline; for several years a member of the local school committee, and a trustee of the public library; died at his home March 20, aged 85.

John Orlando White, M.D. University of Pennsylvania, Philadelphia, 1868; president of the Camden County (N. J.) Medical Society in 1870; and for several years visiting physician to the Camden City Dispensary; died suddenly at his home in Camden, March 23, from angina pectoris, aged 61.

Edwin G. Burlingame, M.D. Kentucky School of Medicine, Louisville, 1895; a member of the Indiana State Medical Association; contract surgeon U. S. Army during the Spanish-American War; died suddenly at his home in Oakland City, March 20, from acute nephritis, aged 41.

Albert J. Best, M.D. College of Physicians and Surgeons, Keokuk, 1876; Missouri Medical College, St. Louis, 1880; a member of the Kansas Medical Society; died at his home in Centralia, Kan., March 12, from erosion of the stomach, complicated by mastoid abscess, aged 61.

George Lorimer Baker, M.D. Harvard Medical School, Boston, 1902; of Dorchester, Boston; instructor in bacteriology at Harvard Medical School and engaged in tuberculosis research work; died at the East Bridgewater Sanatorium, March 19, from tuberculosis, aged 35.

Alfred Corbett Smith, M.D. Harvard Medical School, Boston, 1864; University of the Victoria College, Coburg, Ont., 1884; since 1865 at the head of the medical department of the government retreat for lepers, Tracadie, N. B.; died in Bathurst, N. B., March 12, aged 68.

Jerome Oliver Everett, M.D. Northwestern University, Chicago, 1881; a member of the Nebraska State Medical Association; secretary and treasurer of the Lincoln (Neb.) Sanatorium; died at his home in Lincoln, March 14, from valvular heart disease, aged 59.

Asa Peaslee Tenney, M.D. Harvard Medical College, Boston, 1859; for several years superintendent of the Osawatimic and Topeka state hospitals; local surgeon for the Missouri Pacific Railroad; died at his home in Kansas City, Kan., March 20, from pneumonia, aged 75.

Bradley Selleck McCabe, M.D. Albany (N. Y.) Medical College, 1850; a member of the New York state legislature in 1883; and a supervisor of Greene county for four terms; twice serving as chairman of the board; died March 16, at his home in Greenville, aged 84.

Thomas Sterling Barclay, M.D. Faculty of Physicians and Surgeons of Glasgow, Scotland, 1865; University of the Victoria College, Coburg, Ont., 1872; a member of the American Medical Association; died at his home in Detroit, March 14, from dropsy, aged 67.

Wilford L. Baker, M.D. University Medical College, Kansas City, 1903; a member of the American Medical Association; died at his home in Salisbury, Mo., January 9, from influenza, complicated with acute parenchymatous tonsillitis, aged 34.

John H. Davidson, M.D. Western Reserve University, Cleveland, 1870; a member of the Medical Society of the State of Pennsylvania; vice-president of the First National Bank of Perryopolis; died at his home in that city, March 18, aged 63.

Theodore Longshore Willetts, M.D. Jefferson Medical College, Philadelphia, 1874; a member of the American Medical Association and Harrisburg Academy of Medicine, and for 34 years a practitioner of Harrisburg; died March 25, aged 75.

Theodore Orson Gates, M.D. University of Wooster, Cleveland, 1867; for more than 30 years a practitioner of East Tawas, Mich.; died at his home in that place, February 15, from pyemia, following necrosis of the fibula, aged 65.

Abraham Forest, M.D. University of Louisville (Ky.), 1879, and Yandell medalist of his year; formerly physician for the western district of Louisville; died in his room in Pittsburg, March 17, from tuberculosis of the lungs, aged 52.

William Hyser, M.D. University of Buffalo (N. Y.) 1850; a veteran of the Civil War; a member of the Michigan State Medical Society and a pioneer practitioner of Kent county; died at his home in Plainfield, March 20, aged 82.

Albert Clark Winn, M.D. University of Missouri, Columbia, 1882; Bellevue Hospital Medical College, New York City, 1883; a member of the Medical Society of the State of California; died at his home in Tomales, March 13.

Solon Wilder Peters, M.D. Tufts College, Boston, 1906; of Colorado Springs, Colo.; a member of the American Medical Association; died at the home of his parents in Boston, from tuberculosis, March 17, aged 26.

William H. Hooper, M.D. Starling Medical College, Columbus, 1888; of Waverly, Ohio; a veteran of the Civil War; died at the home of his daughter in Bainbridge, Ohio, March 11, from heart disease, aged 69.

Adoniram Judson Dalby, for a short time a practitioner of North Carolina in the late sixties, and a Confederate veteran; died at his home in Oxford, N. C., in December, 1908, from cerebral hemorrhage, aged 66.

Thomas J. Beatty, M.D. Jefferson Medical College, Philadelphia, 1880; assistant chief medical inspector and chief diagnostician of the bureau of health of Philadelphia; died at his home in that city, March 22, from nephritis, aged 51.

Albert Reichard, M.D. Eclectic Medical Institute, Cincinnati, 1881; a member of the local board of U. S. Pension Examining Surgeons; died at his home in Paola, Kan., March 16, from heart disease, aged 57.

Marion Hudson Marmaduke (license, Mo., 1883); an eclectic practitioner of Vernon county, Mo., and a Confederate veteran; died at his home in Nevada, Sept. 1, 1908, from pneumonia, aged 73.

Freeman Evans Small, M.D. Medical School of Maine, Brunswick, 1879; of Portland; a member of the staff of the Maine General Hospital in that city, died in that institution, March 19, aged 54.

Adelbert Edmond Pettingill, M.D. Eclectic Medical Institute, Cincinnati, 1878; formerly treasurer of Superior, Wis.; died at his home in Gentry, Ark., February 27, from pneumonia, aged 67.

James Daniel Erwin, M.D. Medical College of the State of South Carolina, Charleston, 1850; a clergyman of the Christian church; died at his home in Erwinton, S. C., March 17, aged 80.

E. C. Cochran, M.D. Jefferson Medical College, Philadelphia, 1860; surgeon in the Confederate Service throughout the Civil War; died at his home in Tunnel Hill, Ga., February 24, aged 84.

George Justice Ewing, M. D. University of Pennsylvania, Philadelphia, 1901; formerly of North Wales, Pa.; died from tuberculosis at his home in Lunenburg, Mass., March 18, aged 33.

B. B. Andrews, M.D. University of Nashville, Tenn., 1859; a Confederate veteran; and for several years mayor of Russellville, Ky.; died suddenly March 16, at his home, from acute gastritis.

Henry Hale Pease, M.D. Syracuse (N. Y.) University. 1886; a practitioner of Syracuse and of Tucson, Ariz.; died in St. Joseph's Hospital, Syracuse, March 15, from paralysis, aged 48.

Fred Peaslee Taft, M.D. New York Homeopathic Medical College, New York City, 1892; died at his home in Longmont, Colo., from tuberculosis of the intestines, March 6, aged 37.

Simeon Orison Pilling, M.D. Boston (Mass.) University, 1891; for twelve years a practitioner of Newburyport, Mass.; died at his home in Hartford, Conn., March 17, aged 44.

J. Walton Pennock, M.D. Hahnemann Medical College, Chicago, 1880; a veteran of the Civil War; died at his home in Gladstone, Mich., March 12, from paralysis, aged 69.

Denison DeL. Carder, M.D. Philadelphia University of Medicine and Surgery, 1868; died at his home in Blyth, Ont., February 18, from fatty degeneration of the heart.

Morris J. Hawkins (license, Ohio, 1896); for 43 years a practitioner of Brunswick; died at his home in that place, from cancer of the stomach, March 11, aged 74.

Henry De Lacey Sherwood, M.D. College of Physicians and Surgeons, New York City, 1882; died at his home in Jersey City, N. J., March 16, from nephritis, aged 48.

Francis Wroatte Marshall, M.D. Tulane University, New Orleans, 1849; of New Orleans; died at the home of his daughter in Alexandria, La., Nov. 7, 1908, aged 81.

Samuel Taylor Emmons, for more than sixty years a practitioner of Indiana; died at the home of his son near Decker, Aug. 13, 1908, from heart disease, aged 87.

William F. Stouder, M.D. Physio-Medical College of Indiana, Indianapolis, 1889; died at his home in Newton, Iowa, Nov. 9, 1908, from heart disease, aged 58.

Thomas Dunbar, M.D. Jefferson Medical College, Philadelphia, 1888; formerly state quarantine physician; died at his home in Philadelphia, March 18, aged 50.

Amos York, M.D. Eclectic Medical Institute, Cincinnati, 1878; a veteran of the Civil War; died at his home in Strasburg, Ill., from lung disease, March 12.

William B. Hollis, M.D. Winchester (Va.) Medical College, 1853; of Cross Junction, Va.; died at the home of his sister in Strasburg, Va., March 20, aged 74.

James Barton Harvey, M.D. Penn Medical University. Philadelphia, 1867; died at his home in Atkinson, N. H., January 12, from heart disease, aged 64.

George Wilson Bell, M.D. College of Physicians and Surgeons, New York City, 1869; died at his home in Kingston Station, N. S., recently, aged 66.

Daniel T. Starkey, M.D. Hahnemann Medical College, Philadelphia, 1863; died at his home in Newtonville, Mass., March 3, from arteriosclerosis, aged 83.

Oscar North Tindall, M.D. University of Michigan, Ann Arbor, 1869; a veteran of the Civil War; died at his home in Toledo, March 22, aged 66.

Mortimer Lucas Dixon, M.D. Queens University, Kingston, Ont., 1886; died at his home in Frankville, Ont., March 17, from peritonitis, aged 45.

James Harvey Brown, M.D. University of Louisville (Ky.) 1856; died at his home in Bardstown, Ky., Sept. 2, 1908, from diabetes, aged 76.

James Aylen, M.D. McGill University, Montreal, 1863; died at his home in Aylmer, Que., from epithelioma of the throat, March 6, aged 70.

Charles Langdon Kingsbury, M.D. New York Homeopathic Medical College, 1874; of Boston; died in San Diego, Cal., March 14.

David S. Byers (license, Iowa, 1886); of New Hampton, Iowa; died in the Independence State Hospital, March 17, aged 76.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

Alabama, Medical Assn. of State of, Birmingham, April 20-23.
Amer. Assn. Pathologists and Bacteriologists, Boston, April 9-10.
California, Medical Soc. of State of, San Jose, April 20.
Florida Medical Association, Pensacola, April 7-9.
Georgia, Medical Association of, Macon, April 21.
Mississippi State Medical Association, Jackson, April 13.
South Carolina Medical Association, Summerville, April 21.
Tennessee State Medical Association, Nashville, April 13-15.
Tropical Medicine, American Society of, Washington, April 10.

AMERICAN ACADEMY OF MEDICINE

Second Mid-Year Meeting, Held in Chicago, March 25, 1909

DR. CHARLES S. SHELDON, Madison, Wis., First Vice-President, in the Chair

Entrance Requirements and the Didactic and Laboratory Portions of the Medical Course

DR. N. P. COLWELL, secretary of the Council on Medical Education of the American Medical Association, Chicago: Fourteen medical colleges are requiring the equivalent of one or more years in a college of liberal arts. Thirty-eight other colleges have voted to require additional work for admission by 1910, and the large majority of them mean what they say. Many have already outlined in their announcements the proposed courses of preliminary college work. The growing demand for better trained medical students is most encouraging, and all organizations interested in these higher standards should work hand in hand to help the movement along. The majority of the schools have specified that certain subjects must be included in the one or more years of college work. The subjects specifically mentioned were physics, chemistry, biology and modern languages. All are agreed regarding the requirement of physics, chemistry and biology (botany or zoology); six require French or German, while five require both; three specify Latin as a requirement, one specifies English, one trigonometry, and one recommends psychology. From each of the colleges named a complete statement has been received showing the hours of didactic and laboratory work devoted to each of the fundamental medical branches. This report has included only the fourteen medical colleges of the United States which actually required one or more years of liberal arts college work for admission last year, in addition to a four-year high school education. It is interesting to note that the list numbered only 6 in 1906, 3 being added in 1907, and 5 being added in 1908. In the future, the increase is to be even more rapid. Next year will see an increase of at least 5, these including medical departments of Yale, Kansas, Pennsylvania, Michigan and St. Louis universities. The year following will see the list increased by at least 20 or 25 colleges.

There is one danger connected with the advance in requirements, and that is, that the inferior colleges will benefit by this effort and continue to turn out even larger numbers of ill-prepared physicians. This behooves the various organizations interested in the advance movement to do all they can to support the better class of schools. It is encouraging to note that state examining boards are beginning to do their part in this support of the high standard schools. As has been shown in previous reports of the Council on Medical Education, six state boards are requiring one or two years of preliminary college education in addition to the four-year high school course. These are Minnesota and North Dakota, each two years, and Connecticut, South Dakota, Colorado and Kansas, each one year. It is to be hoped that other state examining boards will take a similar stand and thus support this movement for higher standards which means so much to the future medical education in this country.

Can the Third and Fourth Years of the Literary College Give Any of the Medical Course?

DR. WALTER McNAB MILLER, Columbia, Mo.: The tendency is to lengthen the course in medicine, or what amounts to the same, to increase the requirements for admission.

When one considers the average age at which the physician dies and the long interval required for the establishment of a practice, there remains but little time for productive, remunerative work. To extend this course another year would certainly require more time and expense than the remuneration of country practice and the conditions of life prevailing there would justify or could reward. Such lengthening and intensification of the course in medicine would carry a good thing too far, and the question arises: How is this difficulty to be avoided without sacrifice to professional training, to the productiveness of the individual, or to the welfare of the sparsely settled rural communities or overcrowded quarters of the cities? Close our eyes to these facts as we may, it is from these populous districts that the average physician who constitutes the rank and file of the profession will draw his patronage. To the last question, does not the custom prevailing in Great Britain and her colonies suggest an answer?

Let the technical course which follows that of the fourth year premedical course be extended from two years to four years, making the total course equivalent to an eight-year combined course. On completion of the first two years of this combined course let the degree of M.B. be conferred, and with it the privilege of practicing after passing the examination set by a state or national board of examiners. Let the degree of M.D. be conferred on completion of the last two of the four years of technical instruction and let go with that the privilege of practicing a specialty or of becoming an independent teacher of the sciences that are fundamental to medicine, or are applied in the art of its practice. The consideration of this plan by members of the academy would doubtless lead to fruitful results.

Taking the various restrictions and suggestions into consideration, I believe that not only can the third and fourth years of the college give some subjects of the medical course, but they can give all the subjects that pertain fundamentally to medicine.

Medical Elective Work in the Literary College

DR. JOHN L. HEFFRON, Syracuse, N. Y.: In examining the replies to a circular letter which I sent to representatives of colleges and by referring to the courses as outlined in the various catalogues, I am impressed with the fact that the courses do not fully correspond with those carried out in medical colleges. More attention is paid to cytology and to the histology of tissues and considerably less to the microscopic anatomy of organs. In embryology, much more attention is given to technique and to laboratory work with the lower forms of life, and less to mammalian development and fetal membranes. However, the difference is so slight that it would be easy to modify these courses to correspond with the needs of the medical student. In the main, it is evident that the work in the better colleges in histology and embryology is as good as in the better schools of medicine, but that gross anatomy is not adequate to the demands of a college of medicine and can not be without human dissection. Students of colleges who give the work of the first year of the medical course in full should be made eligible to enter the second year of the course in a college of medicine. But this provision should be safeguarded by regulations that would insure the accomplishment of that year's work under conditions of equipment in teachers and laboratories fully equal to those in colleges of medicine. The proper place for teaching all medical branches is the well-organized medical college with the hospital. The best teachers of it are men who have had medical training; the best learners are those definitely consecrated to their lifework as medical students. This subject can not be better summarized than in the conclusions of the Council on Medical Education of the American Medical Association as follows:

1. The first two years of the medical course should be taught with the same degree of thoroughness as they are being taught in our best class of medical schools to-day. This is the chief consideration.

2. If universities have sufficient endowment to provide the laboratories, the extensive and special laboratory equipment, and the five or more salaried expert instructors in the laboratory branches, these instructors to be largely, if not entirely, men who have had

a complete medical training, then, and then only, should they undertake to teach the branches included in the first two years of the medical course.

3. If the university has the funds necessary to provide for the work in the manner outlined above, then it should secure a special charter or some other legal authority to teach medicine, since several states persistently refuse to recognize any work toward the M.D. degree which has not been taught in a legally chartered medical school.

4. If the university has thus provided for the subjects of the first two years in medicine, and has arranged to teach them with the same high degree of excellence as is done in our high grade university medical schools, then the university would be fully justified in allowing the first two medical courses to be elected as the last two courses for the B.S. degree, if it chose to do so.

5. Such action would not lower the value of the baccalaureate degree, but would be an acknowledgment of the thoroughly scientific character of the subjects included in the first two years of the medical course, which formerly were not sufficiently developed nor taught with sufficient thoroughness to warrant their being thus accepted.

To these views as to the conditions under which the scientific work of the first and second years of the medical course must be given, I give full and unhesitating approval. But I believe it is the function of the fully developed college to give its students an opportunity to pursue every branch of human knowledge.

Discussion on Preliminary Education

DR. WINFIELD S. HALL, Chicago: I thoroughly agree with Dr. Miller that it would be desirable for the development of medical education in America to continue along the lines already blocked out by the various forces that are stimulating medical education until we finally come to the ideal set forth by him. I believe, however, that it will be a long time before we reach that ideal. I also agree that literary colleges should not attempt to give the first two years in medicine until they are properly and fully equipped and able to man the various laboratories required to give these courses in the first two years. All the colleges with which I am acquainted have introduced in the last two decades well-equipped laboratories for teaching chemistry, biology and physics. The medical school should require of a man who presents himself for admission evidence of having devoted one year to college chemistry, one year to college physics, and one year to college biology. He should also have a reading knowledge of German and French. In the second class, he should have organic chemistry, physiologic chemistry. In the biologic department of these institutions a moderate addition to the requirements or equipment would enable them to give histology, embryology, mammalian anatomy and human osteology in an acceptable way. Such a course should cover physiology of muscles and nerve tissue. The special physiology of nutrition, including the physiology of digestion, metabolism, and animal heat, respiration and circulation, physiology of the central nervous system, etc., are given in the second year in the medical course. These can be taught in a literary college with a moderate addition to its equipment in materials and men. Strictly medical subjects, as human anatomy, special physiology, bacteriology, pharmacology, pathology, principles of hygiene and sanitary science, can only be given in an institution having elaborate and extensive equipment in both laboratories and men. Such courses should only be given by medical men, and I do not see how literary and scientific colleges can feel justified in extending their courses to cover those branches. I can see how the larger universities can easily take the step that Wisconsin or the University of Chicago has taken. It is a legitimate, natural and logical growth, but whether Wisconsin will eventually affiliate with the clinical school is a problem for the future.

PROF. JOHN H. T. MAIN, Grinnell, Iowa: If a literary college gives a good course in histology or embryology, and does it in a way to meet the requirements of the case, there is no reason why it should not receive credit in any medical college for that work. But much depends on the character of the institution, on the teachers and their training, and on the laboratory equipment. I believe, however, that a first-class literary college can teach any of the pure sciences required in medicine.

PROF. H. B. DENSMORE, Beloit, Wis.: The general policy of Beloit with reference to medical education is about what it is

with regard to all special branches of professional work, namely, we feel that our college subserves its best function in giving what is usually called a general education which furnishes a good foundation for all professions.

MR. C. A. BLANCHARD, President of Wheaton College: Twenty-five years ago about the only thing we heard in educational conventions was the necessity of increasing the requirements for admission to college. We were told they were shamefully low and ought to be raised. They were pushed up from two years to three years, and then four years. Now, in the Philadelphia Central High School there are six years of study. I speak of this six years' course to show the general trend of matters pertaining to education. Our preparatory courses have been considered too short and must be made longer. The courses in medicine, in law, in theology, have been lengthened, and now the proposition is to exact greater preliminary preparation and requirements for entrance to medical colleges, and I hope you will all exert your efforts to bring this about, for we know the preliminary requirements of men entering the legal and medical professions in the past were not what we expect them to be to-day. The standard, therefore, should be raised.

DR. JOHN M. DODSON, Chicago: Only five years ago the proposition was made to make a partial increase in the preliminary requirements and require two years of college work. What has been the result? Dr. Colwell, Secretary of the Council on Medical Education, states that thirty medical schools have announced their intention of requiring in the immediate future two years of college work, and that thirty more will require at least one year of college work for admission to medical colleges. This means that this is going to be universal in the United States within the next decade.

PROF. W. F. MERCER, Ohio: Not a single student of mine who enters a medical college has to take embryology or histology over. If we do our work satisfactorily in teaching these branches, we like to have it recognized by medical colleges. According to the laws of Ohio, a man must spend four years in a medical college, no matter how much he knows, before he can begin to practice. That is absurd, but it is the legal side of the matter; it is not the matter of how much one knows. I think we are getting away from that.

PROF. ARTHUR W. MEYER, California: No one can question the value of a baccalaureate degree, yet at the same time I heartily sympathize with those who claim that we can not require this degree as an entrance requirement to medical schools. Most college graduates who enter on the medical course do not, after graduating from medical schools, practice medicine in the country. They stay in the big cities and there is great need on the part of the medical profession for a class of men well-trained to practice medicine in the country. I think the position taken by Professor Main is correct. I believe courses in general pathology and kindred subjects can be given just as well by a literary college or university as by the medical school, provided the former meets the requirements and has the proper equipment.

(To be continued)

NEW YORK ACADEMY OF MEDICINE

SECTION ON ORTHOPEDIC SURGERY

Regular Meeting, held March 18, 1909

The President, DR. JOHN A. WYETH, in the Chair

SYMPOSIUM, WHAT SHALL WE DO WITH OUR CRIPPLES?

Widener Memorial Industrial School for Crippled Children, Philadelphia

DR. DE FOREST WILLARD, Philadelphia, surgeon-in-chief of the Widener Memorial Industrial School: I am glad that the New York Academy of Medicine has taken up this question. Rosenfeld estimates that one-sixth of the inhabitants of Germany are more or less crippled, and that the economic gain

to the empire if this great company could be made self-sustaining, would be \$30,000,000 annually. Instead of this, each is an actual cost to the State or to his friends of several hundred dollars yearly. It would be of great advantage if this society could induce the Commissioner of Census next year (1910), to secure statistics as to the number of cripples in this country. About forty years ago I became deeply interested in the problem of assisting crippled and deformed children; at that time Sayre was making his stubborn fight for recognition of the fact that these cases were not hopeless. I determined, if possible: 1. To secure a hospital where these children could either be cured or greatly benefited by surgical, mechanical and hygienic measures. 2. To secure a fund for the supplying of these poor patients with the braces and apparatus, which were so essential to their locomotion. 3. To educate and train each crippled child along lines best suited to its physical deformities, its mental condition and its power for self-support. 4. To endeavor to educate medical students in the diagnosis and treatment of these cases and to open the eyes of surgeons to the fact that while they were helpless, they were not hopeless; that it was a sin and a crime to pass carelessly over these afflicted and handicapped individuals with the condition undiagnosed and the case dismissed, simply because time, care and patience were required for their relief. The hospital has been secured, and a sum has been raised for supplying patients with apparatus. About ten years ago I presented to Mr. P. A. B. Widener, a millionaire philanthropist of Philadelphia, the needs of this class, and showed him a field largely unoccupied by any institution. As a result, there stands to-day in Philadelphia, a school for the mental education and manual training of these cripples, admitting only children under 10 years of age. Mr. Widener has purchased thirty acres of ground in the outskirts of the city and within easy reach from the center. He has already spent \$1,000,000, and has endowed the institution with \$3,000,000.

The institution is to be devoted to crippled and deformed minors, without distinction as to creed, nationality or sex; to supplement the work of hospitals; to strengthen and renew the weak ones, and then to educate them into habits of industry, order, cleanliness, self-respect and self-reliance; to apply such mental, moral and religious training as shall render them true, honorable, useful and self-sustaining members of the community. Feeble-minded children are not eligible; the children must be permanent cripples, but improvable. In the manual training department, the choice of a trade is determined in part by the desire and inclination of the pupil himself, in part by the mental and physical abilities he has manifested, and in part by the financial remuneration to be secured. It is the object to select for each pupil that trade which will develop and employ his greatest earning capacity, provided it be not contrary to his taste and abilities. Classes have been organized in sloyd work, reed and raphia, bead work, caning and chair repair in the elemental manual department, but the advanced departments are yet to be established, since the school has been in operation less than three years, and since the oldest pupils are but fourteen years of age. Trades may be selected from the following: Farming, gardening, floriculture, care of poultry and stock, dairying, carpentry and woodwork, use and care of machines and engines, operation of elevators, leather work and making of shoes, braces and crutches, tailoring, dress-making, millinery, printing, cooking, housekeeping and laundering. Wages will be paid to advanced students, who will then be charged for board. A saving fund has been established to cultivate habits of thrift and economy. Students will be graduated at the age of 21, when it is believed they shall have become wholly or partly capable of self-maintenance. They may, however, remain longer. The children are taught the use of good language and polite manners, respect for elders and obedience to those in authority, orderliness of conduct and care of property, and a spirit of unselfishness and of helpfulness toward each other. The principles of the Christian religion are taught, apart from any sectarianism. Every measure is employed to make the children happy, and to afford them pleasure and recreation.

The first patient was admitted to the school in March, 1906; to-day there are 91 children, ranging from 4 to 14 years of age, 61 boys and 30 girls. At present there are accommodations for not more than 120. Already such progress can be observed in the physical, mental and moral development of the children of the school that the founder and those in charge are encouraged to continue and advance the work, believing that the ultimate results will fully justify the great labor and the great cost of the undertaking.

Opportunities for Employment of Cripples

W. FRANK PERSONS, Superintendent of the Charity Organization Society: There is no provision in New York City for the industrial training of crippled adults. Special training for crippled children has not been provided until recently and is now woefully inadequate both in kind and amount. There has been little wisely directed effort to provide suitable employment and thus to save to self-support and to self-respect those who are obviously unfitted to engage, on equal terms, in the struggle for existence. The result has been great waste of character and of charitable funds. For ages public begging has been condoned as a recognized means of livelihood for cripples. The relative ease of this means of support constitutes an almost irresistible temptation to mendicancy for the cripple who had not special fitness for some occupation. During one period of fifteen months there were 1,863 arrests of confirmed mendicants by the mendicancy officers under the direction of the Charity Organization Society. Of these men and women, 701 were physically defective, and 447, or 24 per cent. of the entire number, were crippled. This, of course, is vastly higher than the percentage of cripples in the population. These figures are noteworthy as illustrating the result of the lack of industrial opportunity which must be encountered by each crippled person who is equipped with nothing but limited physical strength and diminished capacity. The mendicant cripples constitute a small proportion of the cripples who are not self-supporting and yet a smaller proportion of the entire number of cripples in the community. Charity is caring for thousands of cripples who could have been rendered wholly or partially self-supporting by special attention to their needs and latent abilities. It is not easy to place in employment a cripple who is without training related to his disability. Special and continuous study is required to discover a sufficient variety of opportunities for the employment of persons suffering every variety of partial disability and representing every degree of diminished capacity. But more necessary still is the individual and personal consideration which each person so disabled must receive in order to determine precisely his capacity for work and the surroundings in which he must be placed to safeguard his health and to enable him most fully to realize his possibilities.

During the fiscal year ending Sept. 30, 1908, applications from 264 cripples were registered in the special employment bureau for the handicapped. Of this number, 57 had been disabled by accident or injury to health due to the nature of their previous employment, the remainder, or 207, had become incapacitated through causes not connected with their previous employment. During the twelve months to which these statistics relate the whole number of applications registered in this bureau was 1,217. Of these applicants 477 were placed in steady employment at wages averaging \$6.98 a week; temporary work was found for 234 others making a total of 711 handicapped persons who were helped during a year of great industrial depression. The experience gained in the special employment bureau thus far has made evident the imperative need for adequate and suitable specialized education and industrial training for crippled children who must start life under the heavy handicap of ill health and physical disability. The present opportunity for appropriate education for crippled children in New York City is admittedly insufficient. The best available census shows that there are 2,700 cripples of school age, and this is known to be incomplete. Some estimates place the number as high as 7,000. In all the schools and classes for such children there are registered 932 pupils. This indicates that there are at least 1,500 children

in New York who are unable because of physical disabilities to attend regular classes in the public schools and who are without proper educational advantages.

The Care of the Injured and Crippled in Germany

DR. CHARLES H. JAEGER: During the past twenty years 1,500,000,000 marks, or \$750,000,000 have been paid to injured workmen in Germany. This is the result of compulsory insurance laws passed in 1883. Similar laws have been adopted since in France and Great Britain. The insurance against sickness provides the workman in case of sickness with funds and medical attendance for twenty-six weeks, of which the employé pays two-thirds and the employer one-third of the premium. The rules are similar regulating accident, invalidism, old age pensions, provision for dependents in case of death, and are carefully graded in reference to degree of risk, occupation, age and other data. In any case of disability to work, the workman receives immediate attention and care, by the most efficient specialists, either by medicines or operation. In the former case he is sent during convalescence to such health resorts, as his condition requires. In the latter case he is thoroughly restored to his former efficiency by the aid of mechanotherapy. This system of therapeutics consisting of machines, scientifically constructed and capable of such delicate adjustment that the most tender joint or weakened muscle can be placed in the machines to be moved in exact psychologic line. The purpose of this is to strengthen the muscles, to loosen up the joints which have become stiffened by long wearing of splints, a condition accompanying all fractures of the bone. The importance of this after-treatment after illness is obvious when an accident patient has become crippled and unable to carry on his former occupation. Stations for this purpose are distributed all over Germany, 350,000 individuals receiving the benefit of mechanotherapy yearly. In New York there are two, one in the German Hospital and one at the Vanderbilt Clinic.

The magnitude and beneficence of this compulsory insurance can be estimated when one knows that from 11,000,000 to 12,000,000 are insured against sickness, 18,000,000 against accident, and 14,000,000 against old age. In case of accident, the compensation must be given even though there be negligence on the workman's part, unless the accident was caused purposely. The compensation begins 13 weeks after the accident, the sick fund or the employer being responsible meanwhile. The manner of receiving the compensation is simple. There is no lawsuit. There are no legal expenses or delay whatsoever. The employer's accident insurance corporation pays out the money through the nearest postoffice. The economy of this system is apparent, when one learns that the cost of administration in the compulsory insurance is only 13 per cent., while in the competitive companies in this country 68 per cent. of the premiums are eaten up in expenses and profits. When we take into consideration that the number killed in the army of labor is 500,000, which is 50 per cent. more than all killed in the late war between Japan and Russia, it will not be difficult to imagine how many are disabled by accident. It immediately assumes a sociologic aspect when we consider a crippled person unable to work, as most susceptible to be dragged down with his family to pauperism and criminality. The necessity can not be emphasized sufficiently of adopting such measures in our country of meeting the workman half way during the time of disability, and of establishing the most exemplary opportunities for his rehabilitation. Every right-thinking individual will agree that it is unjust that the workman should bear the brunt unaided, in the face of a hazardous career. Let us form as soon as possible a national association for the study and promotion of the compulsory insurance system in this country.

Discussion on Employment for Cripples

MR. SHERMAN, formerly Commissioner of Labor: All who have studied this subject agree with the opinions expressed and the conclusions drawn. The number of accidents reported in factories for 1907 was 19,000. Over 4,000 persons were either permanently injured or so seriously injured as to be permanently crippled. In about 90 per cent of all accidents

occurring in factories the victims were men; this means over 4,000 efficient industrious people thrown suddenly out of work. The law makes no provision for their care or support, and they are turned over to charity. The law in this state is the old common law in England. It provides that the employer shall provide a proper place for the employé to work in, but the employé assumes all ordinary risks and the employer is only liable when accidents occur through negligence on his part. Many accidents occur which are not the direct result of the negligence of either party. Frequently the accident is due to the negligence of neither the employer nor the one injured, but to some other party. The question frequently arises as to what negligence means and in this case the decision of the jury rests largely on the degree to which their sympathies are involved and not on facts. The courts are filled with these cases and even if a decision is rendered in favor of the employé the litigation usually covers a number of years and the employé gets only about 20 per cent. of the amount of damages, the remainder going to pay the legal machinery. The system is unjust. The industries of Europe have practically abandoned all such laws, the fundamental principle being that the industry must pay the costs of the injured. We might have an adaptation of the law as it exists in Europe. Then all classes of cripples would be provided for and that by money that was not wasted on litigation.

DR. VIRGIL P. GIBNEY: In New York City, hospitals and institutions for crippled children have grown up and are well supported, without being dependent on the city. I have seen former inmates of the Hospital for the Ruptured and Crippled begging on the street corners. They seem to tire of the hospital life and make a better living begging. The best way to prepare the cripples for usefulness in life is to endeavor to secure for them proper and useful limbs. That is what the Hospital for the Ruptured and Crippled does. The patients are kept long enough to give them the best possible use of their limbs. There are schools in connection with the hospital and it may be a surprise to many to know that the physicians have to get around early in the morning to get through with the hospital work so that the patients can go to school at 9 o'clock. There are singing classes as well as a good public school; and an industrial branch is also maintained. Many of the patients who were in the institution in the 70's and 80's are now useful members of society.

DR. THEODORE C. JANEWAY: Here, as in all philanthropic work to-day, the object should be prevention; the curative measures should be a secondary consideration. Crippled conditions arise in two different ways, as the result of accident and as the result of disease. Preventive measures applicable to the one class are not applicable to the other. In the case of accident prompt and efficient surgical treatment would often do away with a large amount of disability; this would not always apply to those crippled as a result of disease, but much could be done by prompt action in the treatment of tuberculous bone and joint diseases. The borderline cases, individuals only partially disabled, especially need looking after in order that they do not become public or private charges. Industrial training requires a primary basis of scientific research into the industrial possibilities of cripples of particular types. The real field of charity in this work is the extension of this field of research. It should be pointed out to those persons who are responsible for the education of crippled children that if training is to be of value to the individual or the community certain lines must be taken up in which opportunities are numerous in order to assure these unfortunates of self-support when they leave the institution.

MISS PERRY, Boston, told of the school for cripples which was started fifteen years ago and which during the past five years had made more progress than during the previous ten years. At present there were 75 children in the wards and the mental work corresponded to that in the public schools. There were thirty pupils in the industrial workshops. Instruction was given in the wards and the children were receiving manual training. Some worked two hours a day in the printing office, some at braiding, sewing, caning chairs, making boxes, etc.

DR. THORNDIKE, Boston: The problem of how the cripple can support himself is still unsolved. In the institution with which I am connected they are taught cobbling, boating and various other trades but it still remains to be seen whether or not they will be successful in their efforts. Just outside of Boston there is another school for cripples which is under state government. There are now 100 children there, many of whom are tuberculous. Before going to bed their clothing is warmed and then their shafts are thrown wide open; the schoolrooms are wide open all day and the improvement under this régime is phenomenal. They are taught outdoor employments, farming, gardening, etc.

DR. WALLACE, New York: Few realize how many crippled children there are in New York City. The annual report of the Hospital for the Ruptured and Crippled states that 6,082 new patients were treated in the outdoor department in one year. There are at least 7,000 crippled children in New York City. Last year 571 children were discharged from the Hospital for the Ruptured and Crippled and what became of them is not known. There are 564 crippled children in the various schools of the city. Among the things to be considered in the care of these children are transportation, food, manual training and mental training.

PHILADELPHIA NEUROLOGICAL SOCIETY

Regular Meeting, held Feb. 26, 1909

The President, DR. T. H. WEISENBURG, in the Chair

Chorea of Emotion

DR. S. WEIR MITCHELL: The affection which I call emotional chorea is perhaps more interesting than important. The terms emotional temporary ataxia would equally describe it. The patient whose case I report is a busy man of 45, whose general physical condition is excellent. He has always been healthy but inclined to be nervous. He worked hard for many years without holidays, with few pleasures, but no excess of alcohol or tobacco. His memory was so good that in his business of real estate transactions and building, he, for some years, trusted alone to his memory and kept no books. This seems to have involved a continual and unnecessary mental strain. His muscular power is good; he has no ataxia, sensation is perfect, knee-jerks are absent until reinforced, which has been the case with him at least for twenty years. Gait, station and eyes are good. His writing is distinct, clear and without tremor, while he is untroubled, but for the last twelve years he finds himself unable to write when people are overlooking him, as in a hotel register, for example; the first letters of his name are correctly penned, then there is abruptness and irregularity of the signature and his hand flies off, at times across the page. On the other occasions the effort to sign his name results in wild immediate movements of an ataxic character and in a signature which is practically unreadable. At times he is compelled to leave the dinner table since, when with strangers, it is almost impossible for him to feed himself, as he then becomes almost helpless, requiring both hands to get a cup of coffee or glass of water to his mouth. When alone this rarely occurs unless something strikingly reminds him of his failure. Under extreme excitement he is quite steady, and a single glass of whisky or a glass or two of wine puts an end to his choreic difficulty. A careful examination of the psychic conditions brings out certain interesting conditions. He confesses that at times he has a feeling of fear that if any one comes on him he would not be able to defend himself under attack, or be competent under circumstances of peculiar difficulty, but he doesn't suggest or imagine any special difficulty. Also, he has that other form of nervousness which we occasionally see and experience when sudden noises affect him more than they should do. Strenuous efforts to overcome his choreic trouble usually end in making him "nervous." I would here call attention to the nervousness of soldiers about to go into battle and in those who have undergone protracted physical suffering; also to the general nervousness of some people in which

self-consciousness plays an important part and which brings about difficulties in regard to habitual acts done under attention. It is but an illustration of what is seen in old age when a man aware of his tremulous hand becomes disturbed and shows increase of tremor or something of the more ataxic condition delineated. I have known persons whom no one would have described as nervous, who always disliked to be under observation while signing their name. A man, twice mayor of Philadelphia, who had to write hundreds of signatures, sedulously avoided having any one near while writing, lest the effect on distinctness of his sign manual would be such that some one would say: "He is failing." A glass or two of wine entirely abolished it and it always does so. Failing powers bring self-consciousness so that what has been almost automatic becomes a distinctly impaired act by being the subject of attentive volition. A short time ago four out of six men, two of them scientific, confessed that they did not like to be watched while making a signature. Recently a physician who has this infirmity told me that, if in a letter he had to express himself as being annoyed, his handwriting at once became so ataxic that he had to stop and determine to wait, and then he would take up the pen again quietly.

Discussion

DR. F. X. DERCUM: Dr. Mitchell's patient had been subjected to considerable strain of memory and possibly this was a factor in the diminished emotional inhibition, or emotional control. Of course, we can only speculate in regard to affections of this kind; we have nothing tangible from which to judge. When I first began to practice medicine I was annoyed very much if any one watched me write a prescription; I wrote much more illegibly than I otherwise would have done. I think that if we analyze ourselves we will be able to detect peculiarities that otherwise we would not have noticed.

DR. A. R. ALLEN: Possibly the most illegible writing that can be found anywhere is the usual hotel directory. I have seen a man of 33 or 34 who is of a very phlegmatic temperament, but who can not perform the act of micturition in public. I have known him to suffer from serious retention when it was impossible for him to get away from a crowd.

DR. W. G. SPILLER: We are apt to overlook little things and I am certain that I as well as others have seen many times the condition Dr. Mitchell has described as chorea of emotion, but never recognized it as such.

DR. J. HENDRIE LLOYD: Is the condition spoken of by Dr. Mitchell allied to the condition of psychasthenia, a condition of self-consciousness, the inability to control excitement? Any little nervous tension may then result in an inhibition.

DR. HORACE CARNCROSS: I have a patient, a young woman, who plays the piano perfectly when alone, but as soon as she is conscious of strangers in the room she can not play. If she is to play before others she is conscious beforehand that she is going to forget the pieces that she is thoroughly familiar with. When alone or in the presence of her family, to whom she is used, she does not forget her music.

DR. S. WEIR MITCHELL: It is well-known that the knee-jerk can be increased by causing emotion. There is but little doubt that it is the overflow from whatever part of the brain is excited emotionally and such overflow may be responsible for these irregular movements, just as they are in the activities of the knee-jerks.

The Relation of Tabes and Aortic Aneurism

DR. PAUL H. BIKLE: The frequent occurrence of tabes dorsalis and aortic aneurism in the same patient suggests the possibility of tabes being in some way a causative factor in aneurism. Syphilis is one of the chief causes of arteriosclerosis and also of aneurism. The Wassermann test has proved the pre-existence of syphilis in cases of aneurism and aneurism has at times proved a syphilitic affection. Syphilis is the chief etiologic factor of tabes. Blood pressure is raised and the pulse is accelerated in crises and lightning pains of tabes, but not to an extent sufficient to aid to any

appreciable extent in the formation of aneurisms. The conclusion is that the occurrence of the two conditions in the same patient is a coincidence of cause, both being dependent on syphilis, in practically every instance.

Other Papers

The following cases were presented and papers read: "Cardiac Crises in Tabes," by Dr. S. D. Ludlum; "A Possible Case of Landry's Paralysis," by Dr. John H. W. Rhein; "A Case of Cerebellar Meningocele," by Dr. T. H. Weisenburg; (A) "Meralgia Paresthetica Recurring with Repeated Pregnancies," (B) "Myopathy of Unusual Distribution," by Dr. George E. Price; "Tuberculoma of the Brain," by Dr. M. D. Bloomfield.

Book Notices

VACCINE THERAPY AND THE OPSONIC METHOD OF TREATMENT. By R. W. Allen, M.D., B.S., Late Pathologist to Royal Eye Hospital. Second Edition. Cloth. Pp. 242, with illustrations. Price, \$2.00. Philadelphia: P. Blakiston's Son & Co., 1908.

This volume incorporates a concise exposition of the theory and principles of bacterial vaccination and of Wright's method of estimating the opsonic value of serums. Chapters are devoted to the "Determination of the Opsonic Index," "Preparation of the Vaccine," "The Opsonic Index in Health and Disease; Its Value in Diagnosis, Prognosis and Treatment," followed by a series of chapters on certain of the infectious diseases.

The whole work suffers greatly in authority from the consideration which Dr. Allen gives to the *Bacillus paratyphicus* as the cause of general paralysis of the insane, and to the *Micrococcus neoformans* as a cause of malignant tumors. In regard to the latter the humor of the situation is shown by the following paragraph (p. 209): "Successful treatment by means of a vaccine was recorded by Wright in a case of cancer of the larynx. Death, however, ensued in about six months, and was found postmortem to be due to cancer."

The work is of value in so far as it gives a fairly satisfactory summary of the main facts of the subject.

That Dr. Allen is an enthusiast on the subject of bacterial vaccination and opsonins, is shown by the closing words of the introduction: "It would appear that to the genesis of a new, of a scientific, system of medicine the impulse has now been given. The medicine of the future is the medicine of vaccines and sera. The empiricism of the past will give way to methods based on scientific knowledge, and the public will no longer look on medicine with a sceptical eye, and dose themselves with ineffective nostrums. The surgeon will triumph where he now fails, and, armed with additional power, he will not fear the inroads of bacterial invasion."

This is very good rhetorically, and may it all come to pass! Dr. Allen, of course, is speaking only of infectious diseases, a point which, in his enthusiasm, he neglected to specify.

ERGEBNISSE DER INNEREN MEDIZIN UND KINDERHEILKUNDE. Redigiert von Th. Brugsch, L. Langstein, Erich Meyer and A. Schittenhelm. Vol. II. Paper. Pp. 708, with illustrations. Price, 24 marks. Berlin: Verlag von Julius Springer, 1908.

The second volume of this new publication amply fulfills the promises both of the first volume and of the general plan of its editors. It will be recalled that the purpose of this work is to give in two large volumes a year exhaustive treatises on various subjects in internal medicine and pediatrics, by men whose authority is recognized in the particular subjects they discuss. This volume contains papers by Mayer, Göppert, Falta, Edens, Méry, Lewin, Rudinger, Uffenheimer, Müller, Gerhardt, Frankenhäuser, Orgler, Bloch, O. Heubner, and Reyher.

The scope of these papers can be seen, for example, in that of Göppert, who contributes 44 pages on purulent urinary infections in childhood, citing 104 of his own cases; that of Uffenheimer on the physiology of the gastrointestinal tract of the nursing and older child (96 pages), with a literary index covering 595 publications; that of Falta on the therapy of diabetes mellitus (70 pages); that of Gerhardt on irregu-

larities of the heart-beat (24 pages), etc. The editorial staff, composed of Kraus, Minkowski, Fr. Müller, Sahli, A. Czerny, O. Heubner, is alone a guarantee of the nature of this work, which represents the highest type of German medical scholarship.

AMERICAN NATIONAL RED CROSS TEXT-BOOK ON FIRST AID AND RELIEF COLUMNS. By Major Charles Lynch, Medical Corps, United States Army. Cloth. Pp. 247, with illustrations. Price, \$1.00. Philadelphia: P. Blakiston's Son & Co., 1908.

This is the first of a series of text-books prepared for and indorsed by the American National Red Cross. The book is compact, concise and clearly written, and in addition to the subjects ordinarily considered in first-aid text-books, contains, as a special section under each head, suggestions for the prevention of accidents, injuries and illness. In addition to individual first aid, the book treats of first aid as rendered by relief columns, bodies designed to administer first aid as organization. Well-illustrated instructions are given for the transportation of the wounded, sick and injured, based on the drill regulations of the Hospital Corps of the Army. The book first gives a brief description of the anatomy and physiology of the body; next considers the matter of germs or micro-organisms, describes and illustrates first-aid materials, and gives general directions for rendering first aid, and then takes up specialties as regards shock, common accidents and injuries, common emergencies, occupation accidents and injuries, and injuries and emergencies of indoor and outdoor sports. Suggestions are given for first-aid contests between classes or associations or columns for the purpose of stimulating the study of first aid, and to arouse public interest in the subject. Major Lynch's publication is a most valuable contribution to first-aid literature, and it should be widely circulated, not only among first-aid organizations, but in schools, factories and other places where large numbers of individuals are employed. It will prove a great aid in the movement for the prevention and relief of human suffering.

MINOR MALADIES AND THEIR TREATMENT. By Leonard Williams, M.D., M.R.C.P., Physician to the French Hospital; Assistant-Physician to the Metropolitan Hospital; and Late Assistant-Physician to the German Hospital. Second Edition, Revised and Enlarged. Cloth. Pp. 404. Price, \$2.50. New York: William Wood & Co., 1908.

The material utilized in this volume is taken from lectures delivered by Dr. Williams under various titles at the Medical Graduates' College and Polyclinic. While the matter has been revised and amplified, the general style of the original form has been adhered to, the object being to present in convenient and desirable form detailed information on questions which the ordinary text-book deals with in an unsatisfactory manner or ignores entirely. The author says: "The newly qualified medical man, while usually admirably equipped in the diagnosis and treatment of what may be called the classical diseases, is nevertheless but very partially informed on many subjects concerning which he will be expected to speak and act with authority as soon as he enters practice." Accordingly, he has collected a large amount of valuable and practical advice on such topics as colds, coughs, sore throats, indigestion, rheumatism, neuralgia and headache, change of air, etc.

TEXT-BOOK OF HUMAN PHYSIOLOGY, including a Section on Physiologic Apparatus. By Albert P. Brubaker, A.M., M.D., Professor of Physiology and Hygiene in the Jefferson Medical College. Third Edition, revised and enlarged. Pp. 752, with illustrations. Price, \$3.00. Philadelphia: P. Blakiston's Son & Co., 1908.

In addition to having the entire text revised, the third edition of this work has had about fifty pages of new material added. This new matter is found in those chapters which deal with the physiology of muscle tissue and of the heart and vascular system, with the chemistry of the proteins and with the nervous system and vision. The illustrations, which are numerous, have been made more valuable by the addition of some new diagrams. While the book is in no sense exhaustive, its freedom from discussions of matter having a purely academic interest makes it that much more valuable for the student. The arrangement of the subject matter is good and the amount of space devoted to various departments is well balanced. Possibly too much space is devoted to the

study of optics, though the weakness of the average medical student in physics may justify any apparent over-emphasis given this particular subject.

APPLIED SURGICAL ANATOMY. By George Woolsey, A.B., M.D., Professor of Anatomy and Clinical Surgery in Cornell University Medical College. Second Edition. Cloth. Pp. 601, with illustrations. Price, \$4.50. Philadelphia: Lea & Febiger, 1908.

This work is the result of eighteen years' experience in the teaching of anatomy. As the author modestly says "the number of excellent works on applied anatomy is large enough to render the exhaustion of an edition of any one a fair presumption of its fitness to survive." The work has been carefully revised, a number of sections having been rewritten or amplified, and about seventy-five additional illustrations introduced. It is a book to be commended, not only to students and teachers of anatomy and surgery, but also to practitioners.

PRACTICAL DIETETICS With Reference to Diet in Disease. By Alida Frances Pattee, Graduate Department of Household Arts, State Normal School, Framingham, Mass. Fifth Edition. Cloth. Pp. 358. Price, \$1. Mount Vernon, N. Y.: A. F. Pattee.

This is a practical book which should be invaluable not only to nurses, but to physicians. The recipes are simple, and any household could furnish the ingredients. The articles on diet in special diseases are taken principally from the recognized text-books on dietetics. One part of the book is devoted to dietaries of various hospitals. Diet in infancy is given considerable space, various formulas being given. The appendix, "Practical Suggestions for the Nurse in the Sick-Room," is especially commendable.

INJURIES OF NERVES AND THEIR TREATMENT. By James Sherren, F.R.C.S. Eng., Assistant Surgeon to the London Hospital. Cloth. Pp. 310, with illustrations. Price, \$2.00. New York: William Wood & Co., 1908.

This manual contains material used in papers previously published in medical journals. After considering the classification and method of production of nerve injuries, the symptoms resulting from incomplete and complete injury of the nerve and the method of examination in such cases, Sherren discusses the differential diagnosis and treatment of nerve injuries in general. Injuries of special nerves as the cranial nerves and cervical sympathetic nerves, the brachial plexus, the nerves of the lower and upper limbs and the cauda equina, are also considered. The illustrations, which are numerous and clear, are in most cases original.

GLIMPSES OF MEDICAL EUROPE. By Ralph L. Thompson, M.D., Professor of Pathology, St. Louis University School of Medicine. Cloth. Pp. 235, with illustrations. Price, \$2.00. Philadelphia and London: J. B. Lippincott Co., 1908.

This is a reprint of a series of letters which originally appeared in the *St. Louis Medical Review*. The author touches lightly on the clinics and purely medical subjects and writes entertainingly of life in the various European capitals as seen by a casual visitor. His accounts of the little-written-of Scandinavian and Russian hospitals and universities are of special interest.

HYGIENE FOR NURSES. By Isabel McIsaac, Formerly Superintendent of the Illinois Training School for Nurses. Cloth. Pp. 208. Price, \$1.25. New York: Macmillan Company, 1908.

This book is unusually practical in all its details, which might be expected from the fact that Miss McIsaac was for many years superintendent of the Illinois Training School for Nurses. She emphasizes the importance to nurses of a knowledge of hygiene and sanitation as applied to daily life: "Pure water and good drainage will not ensure against epidemics a household or hospital which harbors dirty ice-boxes, cellars stored with decaying fruit and vegetables, dirty kitchen sinks, drains, bath tubs and water closets, unclean beds, unwashed bodies and clothing, bad ventilation and food, and rooms crowded with useless decorations covered with dust."

THE DOCTOR IN ART. A Volume of Twenty-five Reproductions of World-Famous Masterpieces. Edited by Charles Wells Moulton. Cloth. Buffalo: The Douglas Publishing Co.

This consists of reproductions of twenty-five world-famous pictures dealing with medicine. Each illustration is accompanied by text describing the picture and giving the name of the painter.

Medicolegal

Rights in Licenses and Powers with Reference to Revocation of Same

The Supreme Court of Nebraska had, in the appeal of *J. T. Mathews vs. Hedlund* and the State of Nebraska, a case that was originally brought to revoke the license of Mathews as a physician. The State Board of Health revoked the license, and the District Court of Lancaster County affirmed its action. Then this appeal was taken, wherein the Supreme Court affirms the judgment of the district court, sustaining the revocation of the license.

The Supreme Court holds that an order made by the State Board of Health, under Section 9800 and following sections of *Cobbey's Statutes of 1907*, revoking for cause the license of a physician to practice medicine, surgery and obstetrics in Nebraska, may be reviewed in the district court by error proceeding under Section 580 of the Code of Civil Procedure, which provides that a judgment rendered, or final order made, by any tribunal, board or officer exercising judicial functions, and inferior in jurisdiction to the district court, may be reversed, vacated or modified by the district court. Said sections do not contravene Section 15, Article 3, of the Constitution of the State of Nebraska, nor are they repugnant to the fourteenth amendment to the Constitution of the United States.

In a hearing before the State Board of Health for committing a criminal abortion on a pregnant woman it is not necessary to allege or prove that she was in any stage of uterogestation, but simply that she was pregnant of a vitalized embryo or fetus. A trial and conviction in a competent court is not a condition precedent to the institution and prosecution of said proceedings.

In case the secretaries of the board refuse to issue subpoenas for witnesses for the defendant, or to compel witnesses to answer material questions propounded by him, or refuse to hear argument, that conduct will not be considered in the district court, unless the defendant requested the board to direct its secretaries to comply with the defendant's requests, and said board improperly refused so to do. In case the secretaries and the board find against the defendant, but by mistake or oversight the record does not evidence their said action, said board has power to correct its record so that it will speak the truth, even though error proceedings are then pending in the district court.

In contested proceedings for the revocation of a physician's license to practice medicine, it is within the discretion of the State Board of Health, and of its secretaries, to receive affidavits relating to relevant facts at issue in said hearing. In said proceedings, if it appears that the State Board of Health has acted within its jurisdiction, and that all of the jurisdictional facts essential to uphold its final order are sustained by some evidence competent for that board to consider, its orders will be upheld in error proceedings to the district court, and on appeal to the Supreme Court.

The Supreme Court bases its decision on reasons stated therefor by the Supreme Court Commissioners. In the opinion prepared by the latter they say, among other things, that the State Board of Health filed a motion to dismiss this case for want of jurisdiction of the court to review the board's order in error proceedings. The argument of counsel, although forceful and learned, urged no better reasons in favor of his client's contention than were presented in *Munk vs. Frink*, 75 Neb., 172, wherein the identical point was considered and decided against said board. The court was asked to overrule *Munk vs. Frink* for the alleged reasons that the board is not inferior in jurisdiction to the district court; that in said proceedings it exercises administrative functions only, and that its orders may not be reviewed by petition in error. But in the instant case the legislature selected three state officers and vested them with power to subpoena and examine witnesses, to take depositions according to the Code and to determine certain facts. While sitting as that special board, their functions approximate the judicial, and they are as

well within the scope of Section 580 of the Code as were any of the officers referred to in the Nebraska cases cited.

It was urged that one can not have a property right in a license to practice medicine; that it is within the police power to name the conditions on which such a permit shall issue and may be enjoined, and that the holder thereof takes the privilege with the conditions annexed that his license may be revoked at any time by the power that gave it. There is much force in the argument, and many authorities may be cited to sustain it, but the commissioners are of opinion that after a license has been issued, the right thereunder to practice medicine is a valuable right, and one that may not be taken away without good cause; that if such license is canceled by a board of health, it must be on proper charges, with opportunity to appear and defend by the introducing of evidence and the cross-examination of those witnesses who testify against him at the hearing. The hearing in the present case did not involve the determination of the learning or professional skill of the defendant, but whether he had performed a criminal operation on the person of a patient. Under the circumstances of this case the revocation of the defendant's license was analogous to a forfeiture, and involved the exercise of judicial or quasi judicial power, within the meaning of Section 580 of the Code.

It has been uniformly decided in numberless cases that the legislature may regulate the practice of medicine, and require practitioners to conform to those requirements, or in default thereof cease their practice; that subsequent legislation may impose greater burdens on a practicing physician, and that thereby he is not deprived of any privilege or immunity guaranteed by the Constitution.

Any One May Testify to Own Ribs Being Broken—Careless Omission to Use Crutches

The St. Louis Court of Appeals says that it was assigned for error in the personal injury case of *Wise vs. Wabash Railroad Co.* that the plaintiff was permitted to testify her ribs were broken, the argument being that no one but an expert physician was competent so to testify. But what the plaintiff testified regarding this matter was admissible, for she said she positively knew her ribs were broken, and felt the ends of them rubbing against each other. The weight of her testimony was for the jury, and it was the privilege of counsel for the defendant to cross-examine her for the purpose of discrediting either her knowledge or truthfulness. A party to an action might testify corruptly or mistakenly about a rib or other bone in his body being broken, as he might about any other fact; but such an injury is not so obscure as to lie beyond the pale of common testimony and depend entirely on the opinion of experts.

With regard to a sprain or rupture of the ligaments of the foot, the plaintiff was not entitled to recover damages for any aggravation of the injury to her foot due to careless non-observance of the advice of her physician about keeping her weight off it. Her statement that she used crutches for 18 months in the house, but not when she went outside, that she sometimes walked around a block of the town, went to church on Sunday, visited her friends in a carriage, walking to the carriage from the house and back without crutches, showed beyond question that she fell short of substantial compliance with the physician's direction. From the entire testimony it obviously was necessary for her to use crutches until her foot was well. The omission to use crutches to the extent she did was a disobedience of the physician's order, and one the jury might find was careless; for her excuse for her conduct was not the compulsion of some necessity, but that the crutches were awkward.

County Not Liable for Goods Destroyed by Local Board of Health

The Supreme Court of Appeals of Virginia holds, in *Louisa County vs. Yancey's Trustee*, that the county was not liable for goods destroyed by the local board of health after small-pox had broken out in a building in one room of which there was a general store and the building had been used as a place

of quarantine. The court says that by section 1713d of the Virginia Code of 1887 (page 885 of Code of 1904), the local board of health was authorized, among other things, to see to the abatement of nuisances. But there is no provision in that section, or elsewhere in the Virginia statute law, which makes the county liable for the value of property destroyed as a nuisance by the local board of health. Without such a statute, it seems to be well settled that there can be no recovery against a city, and still less against a county. It is also well settled that destroying property because it is a dangerous nuisance is not, as seemed to be contended in this case, an appropriation of it to a public use, but is to prevent any use of it by the owner and end its existence, because it could not be used consistently with the maxim, "So use your own as not to injure another's," and that in abating nuisances the public does not exercise the power of eminent domain, but the police power.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Erratum.—In THE JOURNAL, March 20, 1909, p. 993, the article in *Annals of Surgery*, February, on the "Cambridge Reaction in Pancreatic Disease," by E. H. Goodman, is referred to as having been published in the *American Journal of Medical Sciences*, January, 1909. The error was due to a misreading of a footnote in the latter journal. The articles are distinct. That in the *American Journal of Medical Sciences* was a preliminary report of work on experimental pancreatitis; that in the *Annals of Surgery* was a report on clinical investigations.

Medical Record, New York

March 20

- 1 *Nephrectomy, with a Report of Fifty-Three Personal Operations. G. E. Brewer, New York.
- 2 Cases Illustrating the Results of the So-Called Heath Operation. S. M. Smith, Philadelphia.
- 3 Hygienic and Climatic Prophylaxis of Tuberculosis in Childhood. F. L. Wachenheim, New York.
- 4 Blocking Stones in the Lower End of the Ureter. J. J. Buchanan, Pittsburg.
- 5 Roentgen Diagnosis of Calculi. R. H. Boggs, Pittsburg.
- 6 Medical and Sanitary Inspection of Schools. R. C. Newton, Montclair, N. J.
- 7 *Purpura Hemorrhagica; Is It Caused by the Colon Bacillus? S. J. Maher, New Haven, Conn.

1. **Nephrectomy.**—Brewer discusses a series of cases, including every case of nephrectomy in which he has personally operated, without any effort being made to select favorable cases, to demonstrate that the old ideas regarding the danger of nephrectomy *per se* are exaggerated; and that with our modern methods of examination the kidney can be removed in suitable cases with comparatively little risk to life.

7. **Purpura Hemorrhagica.**—Maher reports a case of acute and fatal purpura hemorrhagica in which the blood was examined, with the following results:

1. The recently extravasated blood of this case of malignant purpura hemorrhagica contained clumped in its leucocytes bacilli having the cultural and other characters usually ascribed to the colon bacillus.
2. The bacilli isolated either from the fresh or from the old blood had the power on intraperitoneal injection into guinea-pigs, not only to kill the animals in a few hours, but to produce on the wall of the animal's intestines and stomach purpuric patches identical in appearance with those that characterized the disease in the human body.
3. This power to produce purpuric patches on the walls of the intestines of the injected animal was striking and constant, even after the bacillus had passed through four series of guinea-pigs.
4. This power was diminished in the cultures that had been kept for eight days or more in the incubator, although the keeping of the cultures fourteen days in the incubator did not lessen the pathogenicity of the bacillus.
5. The white rat, though more resistant to the first cultures of this bacillus, succumbed in exactly the same way as the guinea-pig when injected with the bacillus that had been through four guinea-pigs.
6. The colon bacillus, although usually fatal to injected guinea-pigs, does not kill so quickly and does not cause the appearance of purpuric patches on the intestinal and stomach walls of the injected animals.

New York Medical Journal

March 20

- 8 *Pathologic Discovery and Its Bearing on Preventive Medicine. J. G. Adami, Montreal, Can.
- 9 *Angina Pectoris and Overfeeding. J. Daland, Philadelphia.
- 10 *An Aid to the Diagnosis of Tuberculosis in Infancy and Childhood. L. Fischer, New York.
- 11 Excision of Chancre. G. F. Lydston, Chicago.
- 12 The Prostate, with Reference to the Curability of Gonorrhea. A. L. Wolbarst, New York.
- 13 Gonorrheal Urethritis in the Female. A. Samuels, Baltimore.
- 14 *Unusual Cases of Bromid Eruption in Childhood. F. C. Knowles, Philadelphia.
- 15 Metabolism of Certain Skin Disorders. J. C. Johnston and H. J. Schwartz, New York.
- 16 Improved Method for Fixation of Tissues and Staining of Sections. J. V. May, Blingtonton, N. Y.

8. **Pathologic Discovery and Preventive Medicine.**—Adami combats the false conception of pathology that would limit it to morbid anatomy and histology—the study of the gross and microscopic changes in diseased tissues. Pathology is more than this. It includes the study of disease in all its aspects. It is the science of medicine or all save the not unimportant part that deals with treatment. It is the exact study of the causes, the processes and the results of disease. In regard to preventive medicine it is in the infectious diseases that pathologic research has effected the greatest revolution. Adami discusses the general decrease in the death rate in the last three centuries, taking London as an example, because it is the city which combines greatest population with best hygienic conditions and lowest mortality during the greater part of the last 100 years. Since the discoveries of the causative agents of disease and the utilization of this knowledge the diminution of the death rate in London has been accelerated more than twofold. Had New York been taken, the figures would have yet been more striking, but not so accurate, because there was not in New York to anything like the same extent that preparatory method of progressive reduction in mortality due to an enlightened enforcement of legislation. Adami illustrates his general principles by means of a specific consideration of tuberculosis, malaria and yellow fever. He points out the unsatisfactory conditions under which preventive medicine is carried out in many places. Those who are engaged in this work should do so under conditions that would enable them to devote their life's energy to it. They should receive adequate salary to place them beyond need without the necessity of augmenting their income by private practice or other means, and permanence of position should be assured to them. The author foresees the time approaching rapidly when the good of the community will demand that an important section of the members of our profession shall be servants of the state, their work devoted not to the cure, but to the prevention of disease. He urges the importance of the development of a common health service for the whole Union.

9. **Angina Pectoris.**—Daland reports a case presenting the sensory symptom-complex known as angina pectoris, which showed no signs of the ordinary causes, namely, syphilis, alcoholism, nicotinism or excessive exertion. In addition to excessive mental toil and excitement due to the patient's occupation and the occurrence of rheumatism nearly half a century ago, the only factor of importance was the habitual bolting of large quantities of food, rich in proteids and carbohydrates, producing a marked disturbance of metabolism, as evidenced by the occurrence of indicanuria, acetomuria and intercurrent glycosuria in quantities as great as 8 per cent.

10. Abstracted in THE JOURNAL, Nov. 7, 1908, p. 1627.

14. **Bromid Eruption.**—Knowles summarizes his article as follows:

1. Bromid eruption may occur in those who are susceptible, independent of the dose of the drug or the length of the administration. The larger the dosage, and the longer the ingestion, the greater is the chance of an outbreak.
2. There are practically no constitutional or subjective symptoms in most cases.
3. Because of the slow elimination, the eruption may continue to appear for some weeks after the drug has been discontinued.
4. Almost any type of eruption may be present; in childhood the lesions are usually larger and more persistent than in adult life. The extremities and the face are the parts most frequently attacked; the most extensive eruption, in the majority of the cases, occurs on the legs.
5. Lesions have a great tendency to occur at points of previous inflammation, such as on vaccination scars or injuries.

Boston Medical and Surgical Journal

March 18

- 17 *Arteriosclerosis. G. S. C. Badger, Boston.
- 18 *Some New Applications of Electricity and Light in Medicine. H. W. Van Allen, Springfield, Mass.
- 19 *Hand Sterilization (continued). C. G. Cumston, Boston.

17 **Arteriosclerosis.**—Badger discusses this subject and says among other things that the presence of arteriosclerosis does not always call for treatment. There may be no symptoms attributable to it, and the damage already done to the vessel walls can not be cured; at best, the process may be stayed or hindered. Etiologic factors must be corrected. The presence of high blood pressure does not always demand treatment, as in some cases it is protective against disaster; a falling pressure is often an ominous sign. The main reliance in treatment must be placed on the ability properly to regulate the life of the individual.

18. **Electricity and Light in Medicine.**—Van Allen describes some of the later applications of electricity and light in medicine, and says that one of the most valuable additions to diagnosis by Roentgen ray is the stativ, which makes the study of the movable organs in motion possible, and, together with the use of bismuth, opens up new fields of investigation in stomach and sinus work. Kidney conditions, beside stone, are many times shown. The Morton wave current reduces congestion and chronic inflammation. Autocondensation modifies the high blood pressure so frequently observed in American life. Light combined with heat is useful in superficial skin conditions and in local chronic inflammation of joints and muscles.

19. Published in the *Dublin Journal of Medical Science*, January and February, 1909.

Lancet-Clinic, Cincinnati

March 20

- 20 *Gastric and Duodenal Ulcer. W. D. Haines, Cincinnati.
- 21 *Duty of the Physician in Raising the Standard of Rural Life. B. Holmes, Chicago.
- 22 Factors in the Development of Acute Pulmonary Edema. J. L. Miller, Chicago.

20. A practically identical paper by the same author was abstracted in THE JOURNAL, Jan. 30, 1909, p. 414.

21. **The Physician and Rural Life.**—Holmes points out the duty of the physician in raising the standard of rural life. He remarks on the numbers of young men and women who, having good country homes and considerable financial resources, yet have a distaste for farm and country life, and rush into the cities. He discusses the causes of this, and says that both from a social and artistic standpoint the farmhouse is woefully below the standard of the city. Our people do not seem to know what a garden is. This is due not to lack of resources, but to lack of taste. The causes of this distaste to country life, notwithstanding the improved conditions of farming operations and the introduction of means of culture, must be looked for in uncongenial neighbors or faulty education. The standard of life, to effect anything, must be communal rather than family or individual. Rural life must be idealized, farming must be not a trade but a life vocation. The farm must be looked at, not as "a plant," but as "a home." The country school education assists the exodus by being a stepping stone to the town school as that is to the city school. Not a single hour in a year's schooling is devoted to idealizing farm life; on the contrary it tends to disparage the farm. Association and excitement are requisite. Good roads, the trolley and the automobile will encourage the former; the latter should be furnished at home. Sports should be encouraged in the country as they are in the city. Festivals, fêtes, etc., should be encouraged. By example the physician may show what may be done to make the home convenient, comfortable and inviting, and to demonstrate the labor-saving and life-saving decencies of the city house, applied under rural surroundings. He may help the school and the uplifting of the merchant class. Holmes thinks it possible that an active part in such a social movement would restore the doctor to that leading place in the community which, it must be admitted, he has failed to inherit from his ancestors.

Northwestern Lancet, Minneapolis

March 15

- 23 Obstetric Observations Based Chiefly on Fifty Recent Confinements. F. Leavitt, St. Paul.
- 24 Exophthalmic Goiter. F. A. Dunsmoor, Minneapolis.
- 25 Eye, Ear, Nose, and Throat Conditions in Children. E. D. Putnam, Sioux Falls, S. D.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

February

- 26 Treatment of Typhoid with a Solution of Calcium Creosote. L. Kolipinski, Washington, D. C.
- 27 *Ocular Traumatism, A Cause of the Neuroses. H. F. Hansell, Philadelphia.
- 28 Tuberculosis of the Uterus, Cervix, and Vagina, with Pyometra. E. A. Schumann, Philadelphia.
- 29 Thyroid Preparations in Practice. C. E. de M. Sajous, Philadelphia.
- 30 Diabetes Mellitus and Catarrhal Jaundice. J. V. Shoemaker, Philadelphia.
- 31 The *Spirochæta Pallida*. W. C. Batroff, Philadelphia.
- 32 Baldness. M. L. Ravitch, Louisville, Ky.

27. **Ocular Traumatism.**—Hansell insists that ocular traumas, like traumas to other parts of the body, may be the cause of hysteria, and he discusses the value of expert medical testimony in trials for damages resulting from ocular injuries and their effects on the nervous system. He contends that medical testimony has come to mean nothing. The evidence of one expert is balanced by that of another. As a remedy he would advocate the exclusion of medical experts selected by interested parties from all cases.

Journal of Missouri State Medical Association, St. Louis

February

- 33 *Treatment of Fracture of the Shaft of the Femur by Combined Plaster-of-Paris and Light Iron Splints. W. B. Deffenbaugh, St. Joseph.
- 34 Fibroid Tumors of the Uterus Complicated with Pregnancy. W. B. Dorsett, St. Louis.
- 35 Prophylaxis of Insanity. W. Robinson, Nevada.
- 36 National Public Health Movement. M. P. Overholser, Harrisonville.
- 37 Misleading Conceptions in Treatment of Appendicitis. H. C. Crowell, Kansas City.
- 38 Inversion of the Uterus, with Expulsion of Large Necrotic Myoma. F. Hinchey, St. Louis.
- 39 The Physician's Relation to the Pharmacist, Practically Considered. J. L. Ormsbee, Springfield.
- 40 Therapeutics. W. A. McKelvey, Minden Mines.
- 41 Tuberculous Adenitis of Mesenteric Lymph Nodes. L. Ras-sieur, St. Louis.

33. **Combined Plaster and Iron Splints.**—Deffenbaugh describes the treatment of fracture of the shaft of the femur by long flexible galvanized iron splints, one inch and a half wide, and sufficiently long to reach from the waist to a little below the external malleolus. This splint is attached to the outer side of the leg, and plaster bandages are applied over it. Deffenbaugh claims for this method that it is easily procurable, cheap, affords the best form of immobilization by plaster-of-paris, together with extension and counterextension by means of the splint, lightness, promptness, shorter stay in bed, ease of application and comfort.

American Medicine, Burlington, Vt.

February

- 42 Symptoms and Diagnosis of Incipient Tuberculosis. J. B. Huber, New York.
- 43 Influenza Affecting the Upper Respiratory Tract. H. Jarecky, New York.
- 44 *Surgical Treatment of the Tuberculous Larynx. L. J. Hammond, Philadelphia.
- 45 Diet and Elimination of Chlorids. J. C. Warbrick, Chicago.
- 46 Ulcus Carcinomatosum Diagnosed During Life. Partial Autopsy. A. Bassler, New York City.
- 47 Diet in Chronic Diseases of the Adult. W. Stevens, New York.
- 48 *Prophylaxis and Treatment of Diarrheas of Children and of Gastric Disturbances. H. Johnston, Birmingham, Ala.
- 49 Short Biography of Dr. J. J. Elwell. T. H. Shastid, Marion, Ill.
- 50 Prostatectomy and Bladder Surgery. C. Goodman, New York.

44. **Laryngeal Tuberculosis.**—Hammond discusses the symptoms, prognosis and treatment, and says that the indications for surgical treatment of the larynx are: (1) To relieve dyspnea and dysphagia; (2) to encourage healing of the ulcers by forced rest of the larynx; (3) to put the larynx in a condition to derive the greatest benefit from local treatment. The results of tracheotomy in his hands have been very encouraging, and he considers that this procedure should be recommended as a cure for laryngeal tuberculosis early in the disease, as soon as the classic symptoms are demonstrated, and for the relief of those in whom the disease is advanced beyond possible recovery.

48. **Gastric Disturbances of Children.**—Johnston urges that the first indication in the treatment of bile trouble in infants is dietary. Food must be stopped for a longer or shorter interval, but the nursing baby returns to it earlier than the older child. The food should be weak and small in quantity. After stopping the food, the stomach and bowels must be emptied, the first by a stomach pump, the second by castor oil or calomel. When the intestinal tract is empty we may resort to astringent medicaments, of which Johnston prefers bismuth subnitrate. Children early show shock, wherefore stimulants are soon demanded, and Johnston regards whisky in small doses as the best nerve stimulant for a child. The nervous system must never be forgotten, and there must be as little friction as possible. Irrigation of the bowels with normal salt solution is useful. Quiet, plenty of water and fresh air and carriage driving if possible, in the early morning or evening, are called for. Hydrotherapy should be resorted to for fever. He sums up as follows: "Treat the individual—treat him as a corporate whole and not as a mere inflamed or irritated bowel—and do not forget his nervous system."

Woman's Medical Journal, Toledo, Ohio

February

- 51 Psychotherapy, Its Use and Abuse. L. V. G. Mackie, Attleboro, Mass.
- 52 Cesarean Section for Disproportion Between Pelvis and Fetus and Accidental Hemorrhage. M. K. Formad, Philadelphia.

Journal Abnormal Psychology, Boston

February-March

- 53 *An Interpretation of the Psychoanalytic Method in Psychotherapy, with Report of a Case so Treated. W. D. Scott, Chicago.
- 54 Emotional Expression in Dementia Præcox. J. W. De Bruyn, Ann Arbor, Mich.
- 55 Mental Causes in Bodily Disease. T. A. Williams, Washington, D. C.
- 56 *The Unconscious (concluded). M. Prince, Boston.

53. **Psychotherapy.**—Scott discusses the psychoanalytic method, and says that it seems a matter of indifference which means of applying the method is used, whether hypnosis, hypnoidization or free association. He holds that the psychoanalytic method is nothing more than an unusually skillful application of the method of suggestion, and that it offers no proof of the existence of subconscious complexes of suppressed emotional ideas.

56. **The Unconscious.**—Prince closes his consideration of the unconscious with a consideration of the influence of the unconscious on the psycho-physiologic organism: the psychogalvanic reflex; visceral disturbances and mental disturbances; the excitation of psychopathic states; and the influences of psychoanalysis on the mental processes of every-day life. He describes and illustrates the splitting of complexes, and says that the great mass of our ideas involve associations of the origin of which we are unaware, because the memories of the original experience have become split, and a large portion thus has become forgotten, even if ever fully appreciated. There is every reason to believe that much of this forgotten history can be recovered by appropriate psychoanalytic methods.

American Journal of Medical Sciences, Philadelphia

March

- 57 *The Dietetic Treatment of Diabetes. T. C. Janeway, New York.
- 58 *Cardiac Dangers in High Altitudes. J. N. Hall, Denver, Colo.
- 59 Thrombosis of the Inferior Vena Cava. E. R. Stillman and L. W. Carey, New York.
- 60 *Complete Auriculoventricular Dissociation Without Syncopal or Epileptiform Attacks. G. Bachmann, Philadelphia.
- 61 *Origin of the "New-Leather" and "Dry-Friction" Sounds Heard on Auscultation. H. Sewall, Denver, Colo.
- 62 Habitual or Recurrent Anterior Dislocation of the Shoulder. T. T. Thomas, Philadelphia.
- 63 Roentgenographic Study of Peristalsis: Relation of Wave Form to Functional Activity. C. L. Leonard, Philadelphia.
- 64 *Intestinal Sand: The Banana One of its Sources. J. S. Myer and J. E. Cook, St. Louis, Mo.
- 65 General and Specific Resistance to Tuberculous Infection. K. von Ruck, Asheville, N. C.
- 66 The Effect of Tuberculin Treatment on the Serum Agglutination of Tubercle Bacilli. H. M. Kinghorn and D. C. Twichell, Saranac Lake, N. Y.
- 67 *Value of Roentgen-Ray Examination in Diagnosis of Pulmonary Tuberculosis, Especially Early Tuberculosis. P. Krause, Jena, Germany.
- 68 Treatment of Tinea Tonsurans. R. L. Sutton, Kansas City, Mo.

57. **Diabetes.**—Janeway says that we are powerless to influence carbohydrate metabolism directly. Extracts have done no good; drugs nothing more than relieve symptoms; diabetic treatment is our main stay. Diabetes is primarily a disturbance of nutrition in which the power of utilizing carbohydrates is more or less completely impaired. Because the diabetic can use little, if any, of the carbohydrate of his food, he loses this amount of potential energy through the urine; hence loss of flesh and strength. The problem of the management of the diabetic, therefore, is to nourish the organism with little or no carbohydrate, and at the same time to avoid the danger of acid intoxication, which arises when no carbohydrate is being consumed. Treatment must be based on correct diagnosis, which means more than the discovery of sugar in the urine. It means the determination of (1) the degree of impairment of carbohydrate metabolism or its index, the severity of glycosuria; and (2) the presence or the degree of secondary disturbance of the metabolism, that is, the severity of the acidosis. After describing the mode of estimation of the carbohydrate tolerance and the determination of the degree of acidosis, and discussing the general examination of the patient and the mode of classifying cases, Janeway states that the normal adult provides from 1,500 to 2,000 calories of his daily energy requirement in the form of carbohydrates. For the diabetic almost all of this is lost; he must, therefore, be nourished on protein and fat. The test diets given by Janeway contain about 2,000 calories in fat (1 gram = 9.3 calories); butter, thick cream, bacon, oil and cheese figure in them largely. The first three are foods of the utmost importance for the diabetic. Some difficulty may arise in having it eaten. Fat is not agreeable to many, and in some cases causes digestive disturbances. As a help in fat digestion alcohol is of distinct value, and it is next to impossible to give the large amounts of fat necessary in diabetes without wine or spirits being taken at the same meal; sweet wines are prohibited. The amount should not exceed an alcohol content of 40 grams in the day. An instructive example of the need for alcohol in the diabetic dietary is that of a Methodist clergyman, who objected seriously to taking whisky, and abandoned its use every few months. Each time he did so, an attack of fatty diarrhea made him speedily resume it.

In every case of diabetes the aim should be to free the urine from sugar. The two chief obstacles are psychic, not physical. They are laziness or ignorance in the physician, and self-indulgence in the patient. Sugar and sweets in every form must be permanently interdicted. Patients should be taught to avoid unsuspected sources of starch, such as sauces, gravies and soups thickened with flour. They should be provided with a list of the foods allowed and of those forbidden, and should be quizzed on these until sure of their ground. Excessive water drinking is unwise. Von Noorden's plan of arranging the diet in periods is immensely helpful, and Janeway advises physicians to familiarize themselves with its details, which may be found in his Herter lectures on diabetes. He gives tables of standard strict diet, standard diet with restricted protein, general diet list, dietary equivalents, for mild cases, and for "green days." Acidosis, which occurs during carbohydrate starvation in the normal individual, assumes much more serious proportions in the diabetic. When present it should be watched during treatment as carefully as the glycosuria. Janeway insists that the attempt to overcome the acidosis by allowing much carbohydrate, almost always fails of its purpose. In such cases permanent restriction of the protein is of the greatest value, and occasional "green" or "hunger" days are essential. Janeway considers gluten bread the diabetic's worst enemy.

58. **Cardiac Dangers in High Altitudes.**—Hall discusses the effects of high altitudes in Colorado, and concludes that patients with valvular disease, but with well-nourished heart muscle and fair arteries, almost regardless of age, may go to reasonably high altitudes with safety, if only they follow the rule of making no exertion which causes any considerable dyspnea.

60. **Auriculoventricular Dissociation.**—Bachmann discusses the history of our knowledge of this condition and describes the case of a woman 35 years of age, single, who suffered from it without any complicating syncope or epileptiform attacks. The article is accompanied by many tracings showing, among other things, the effect of strophanthus and atropin. From published cases, together with the one here reported, Bachmann considers it indubitable that heart block, with its usual bradycardia, can occur independently of any nervous disturbance, which latter, as before stated, is part of the Adams-Stokes syndrome. He calls attention to this because of a tendency to use the two terms, Adams-Stokes syndrome and heart block, as synonyms. Why attacks of vertigo, syncope, etc., should occur with certain cases of heart block and not with others can not yet be satisfactorily answered. In nearly all cases of heart block with the Adams-Stokes syndrome, it has been observed that the attacks were immediately preceded by stoppage of the ventricles, the auricles continuing to beat regularly. The vertigo, loss of consciousness and epileptiform convulsions are therefore thought to be secondary to the arrest of the ventricles and due to anemia of the nerve centers. The cause of ventricular stoppage we do not know.

61. **"New-Leather" and "Dry-Friction" Sounds.**—Sewall reports a case in which positive proof was afforded that "new-leather sounds," as well as the "dry-friction rub," may be perceived in the chest wall when there can be no suspicion of pleural friction. In the case reported he holds that they must have been due to the rubbing together of tissue elements during respiratory movement.

64. **Intestinal Sand.**—Myer and Cook report an interesting case of intestinal sand which they trace unmistakably to resin balls found in the milk tubes of the banana. These resin balls, the contents of the cells, suspended in a fluid rich in tannin, are affected by the secretions of the stomach and intestine in a manner similar to the action of the ferrie chlorid, hardening the resin and producing an insoluble tannate. The cell wall is digested or destroyed, and the resin-tannin-containing mass is liberated as a grain of sand. The extreme hardness of the grain found in the feces is due evidently to the prolonged influence of the secretions and salts in the intestinal canal, and the color to a tannate formed, influenced perhaps by other coloring matters in the intestines.

67. Abstracted in *THE JOURNAL*, Nov. 28, 1908, p. 1897.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

March

69 *Blood Pressure, Leucocyte Count and Ophthalmoscopic Examination in Diagnosis of Pre-eclamptic Toxemia. A. J. Skeel, Cleveland, O.

70 *Decidual Change in the Endometrium Due to Causes Other Than Pregnancy. J. R. Goodall, Montreal, Canada.

71 A Variety of Chronic Endometritis, Characterized Clinically by Profuse Hemorrhages. C. C. Norris, Philadelphia.

72 The Sarcomatous Metaplasia of Certain Uterine Fibromata. E. A. Schumann, Philadelphia.

73 Ligation of Pelvic Veins for Puerperal Pyemia. H. N. Vineberg, New York.

74 Protection of the Accoucheur and his Patient. D. H. Stewart, New York.

75 *Surgery of the Spleen with Special Reference to Trauma, A Method of Encapsulation, and Reports of Cases. W. C. G. Kirchner, St. Louis.

76 Fibroid Tumors Complicating Pregnancy. J. H. Carstens, Detroit, Mich.

77 A Month at Bumm's Clinic, Berlin. C. MacFarlane, Philadelphia.

78 Fibroid Tumor of the Uterus Simulating Pregnancy. R. B. Hall, Cincinnati.

79 Hemorrhage at Time of Delivery an Important Factor in Prevention of a Full Secretion of Milk. J. G. Drennan, St. Thomas, Ont.

80 *Acute Gastric and Duodenal Dilatation Treated by Gastro-Jejunostomy with Recovery. G. Torrance, Birmingham, Ala.

81 *Care of the Rheumatic Child. Le G. Kerr, Brooklyn, N. Y.

69. **Pre-eclamptic Toxemia.**—Skeel reviews extensively the literature of this subject with reference to urine, blood pressure, eclampsia, pre-eclamptic toxemia, leucocytosis, ocular changes, etc., and draws the following general conclusions:

Albumin as a trace in the urine is of no value. It is present in a large proportion of cases of normal pregnancy.

Albumin in considerable quantity, especially if increasing, is a strong indication of mischief. The entire absence of albumin is no

proof that the woman is not toxic. Casts and diminished 24-hour quantity add to the value of the urinary findings. Specific gravity is of aid if the 24-hour quantity is known.

Blood-pressure findings taken by the fingers are of little or no value. The instrumental method must be used.

The blood-pressure of pregnancy is normal until the last two months, when a slight rise occurs. This rise should not give a reading in excess of 150 mm. The presence, over any period, of a greater pressure than this should be considered a serious matter. During labor the pressure is somewhat elevated and quite variable, and is consequently not to be depended on. After labor blood-pressure should quickly drop to normal. In eclampsia, the blood pressure is uniformly elevated, often to an extreme degree. In pre-eclamptic toxemia blood pressure is probably always elevated, and is of diagnostic and prognostic importance.

The fact that albumin and casts, with rise of blood pressure, may also be present in nephritis in no way detracts from their value here, because we know that with increasing albumin and increasing blood pressure in pregnancy, convulsions are imminent, regardless of whether or not we are able to distinguish the immediate cause of the patient's condition.

The leucocyte count in eclampsia and pre-eclamptic toxemia is increased 50 per cent. and upward over the normal at the given period.

When using the leucocyte count in these patients care must be taken to exclude the leucocytosis of digestion, inflammation, hemorrhage, drugs, etc., and to remember the normal marked increase during and immediately following labor. One must also bear in mind the greater count normally present in primiparae as compared with multiparae, throughout pregnancy, labor, and the puerperium.

In demonstrable ocular disturbances of early pregnancy, especially when accompanied by ophthalmoscopic lesions, evacuation of the uterus is indicated. In the latter two months of pregnancy these same lesions indicate a high grade of toxemia, but should be compared with the other findings to decide the treatment.

The whole symptom-complex should be carefully studied day by day, and as all the methods described are readily available in nearly every community, the general practitioner should have no difficulty in making use of them.

70. **Decidual Change Not Due to Pregnancy.**—Goodall reports four cases which he looks on as conclusive proof that decidual change, typical in every detail, can occur without pregnancy; and, moreover, the change in pseudodecidua is similar, not to fresh living and functioning decidual tissue, but to tissue that has undergone some degree of morbid retrogressive change, such as one finds in the endometrium of incomplete abortions and in casts of ectopic gestation. This fact makes the findings of greater interest medicolegally, and is just the condition which one usually finds in sections of uterine casts from cases of ectopic gestation. He draws the following conclusions:

1. Typical decidual tissue, involving the whole endometrium and indistinguishable from that associated with pregnancy can occur without the presence of a fertilized ovum.

2. The agents concerned in the present cases in producing this change seem to be a combination of chronic pelvic inflammatory changes acting on a susceptible patient.

75. Abstracted in *THE JOURNAL*, Oct. 24, 1908, p. 1458.

77. **Bumm's Clinic.**—MacFarlane describes the aseptic technique. Bumm's method of saving the perineum, of dealing with perineal tears, eclampsia and labor in contracted pelvis. She further describes his operative methods.

80. Published in the *Alabama Medical Journal*, November, 1908, and in the *New York Medical Journal*, Jan. 9, 1909.

81. **The Rheumatic Child.**—Kerr points out that even the discovery of a micro-organism of rheumatism would not necessarily exclude the existence of a favoring diathesis. Recognition of a diathesis presupposes that appropriate methods will be instituted to prevent the disease which such a diathesis favors. The child of a rheumatic parent is liable to develop the disease, almost certainly if both parents are rheumatic. It is important to put the defensive arrangements into the best possible condition. These are (1) the resistant power of epithelium; (2) healthy endothelium; (3) perfect elimination; (4) healthy condition of those organs that invite infection or favor growth of organisms, especially the tonsils; (5) that "indefinite something" known as the "recuperative power." The first three depend on co-ordination and cooperation of all parts; in other words, good general health. The fourth demands removal of diseased tonsils and adenoids. The fifth depends on temperament and health. We can influence the latter, though not the former. There are certain initial manifestations of rheumatism. The most common is tonsillitis. Others are pain in the chest and exertional dyspnea irrespective of heart disease, chorea, so-called growing pains or myalgia, torticollis and subcutaneous nodules, pleurisy and frequent attacks of bronchitis, epistaxis and emesis, and erythema. It is not wise or necessary to wait for articular

developments. The time to treat rheumatism successfully in children is when any clinical manifestation, backed up by a positive family history, makes the physician suspicious of the tendency to the disease. The indications for treatment are etiologic, pathologic and clinical: 1. The Etiologic Indications are: (a) Absolute rest, both mental and physical; (b) avoidance of solid foods for a few days, abstinence from meat and meat extractives, restriction of sugar, rich proteid foods, whole milk, ripe fruits being allowed, also dextrinized cereals. 2. Pathologic indications are: (a) Combat inflammation of joints; (b) limit or prevent extension to heart, lungs, pleura, or meninges. 3. Clinical indications are: (a) Hyperpyrexia calls for ice bag and tepid sponges; (b) pain in joints calls for rest and local applications; (c) to limit damage to joints use gentle flexion when temperature is subsiding; (d) for tachycardia use a cold compress over heart, fifteen minutes out of every hour; (e) profuse perspiration should be wiped dry at first, but not checked; later it may be stopped by tepid baths; (f) anemia and debility call for tonics, etc. The author considers salicylates of value, but only as palliatives. They tend to disturb the digestion in children and can not be continued long; sodium bicarbonate should be given with them or immediately following their discontinuance. There is this chief difference between the adult and child types of rheumatism. In the former it is expressed as an acute polyarthritides, with the symptoms all massed. In the latter, its common occurrence is in the non-arthritic forms, with cardiac changes as a common manifestation and the symptoms spread over a long period, so that often the history of the disease is the history of the child's life.

Journal of Experimental Medicine, New York

March

- 82 *Active Immunity Produced by So-Called Balanced or Neutral Mixtures of Diphtheria Toxin and Antitoxin. T. Smith, Boston.
- 83 Histologic Changes in Nerve Cells Due to Total Temporary Anemia of the Central Nervous System. L. Gomez and F. H. Pike, Chicago.
- 84 *Pathologic Anatomy of the Pancreas in Ninety Cases of Diabetes Mellitus. R. L. Cecil, New York.
- 85 Studies in Edema. M. S. Fleisher, D. M. Hoyt, and L. Loeb, Philadelphia.
- 86 Postmortem Rigor of Mammalian Heart and the Influence of An Antemortem Stimulation of the Pneumogastric Nerves on Its Development. D. R. Joseph and S. J. Meltzer, New York.
- 87 Action of Glandular Extracts on the Contractions of the Uterus. I. Ott and J. C. Scott, Philadelphia.
- 88 *Presence of a Weak Hemolysin in the Hook Worm and Its Relation to the Anemia of Uncinariasis. G. H. Whipple, Baltimore.
- 89 *Experimental Study of the Metabolism and Pathology of Delayed Chloroform Poisoning. J. Howland, New York, and A. N. Richards, Chicago.
- 90 Partial Progressive and Complete Occlusion of the Aorta and Other Large Arteries in the Dog by Means of the Metal Band. W. S. Halsted, Baltimore.
- 91 *New and Simple Method for Serodiagnosis of Syphilis. H. Noguchi, New York.

82. **Active Immunity.**—Smith finds that in guinea-pigs an active immunity lasting for several years can be produced by the injection of toxin-antitoxin (diphtheria) mixtures which have no harmful effect. Mixtures that contain an excess of toxin produce more immunity, however, than the neutral mixture. The method invites tests in regard to its applicability to human beings, especially for the purpose of general protection.

84. **The Pancreas in Diabetes Mellitus.**—Cecil says that lesions of the pancreas occur in more than seven-eighths of all cases of diabetes mellitus, and in such cases the islands of Langerhans constantly appear changed, the lesions in some cases being limited to these structures. In half of those cases of diabetes in which the pancreas shows no changes, the size of the pancreas or the number of islands is less than normal.

88. **Hemolysin in the Hook Worm.**—Whipple finds that the hook worm contains a weak hemolytic agent, soluble in salt solution and present in all parts of the worm. This hemolysin is not specific, and Whipple regards it as unlikely that it has any relation to the anemia of uncinariasis.

89. **Delayed Chloroform Poisoning.**—Howland and Richards find that in dogs chloroform anesthesia lasting more than half

an hour causes demonstrable fatty changes in the liver, first appearing in the intermediary zone. More prolonged and especially repeated anesthesia gives rise to necrosis, also beginning in the center and sometimes extending so that all the cells of the liver may become necrotic. There may be a more or less hemorrhagic extravasation. Calcium deposits surrounded by giant cells were observed in necrotic areas and constitute a new observation. Fat necrosis also occurred in one case in the omentum and mesentery. Congestion and areas of hemorrhage in the gastrointestinal tract and serous membranes are frequent. There is, then, great similarity between the experimental chloroform and those reported in fatal cases. The authors regard death as due to the presence of toxic substances of an unknown nature, which result from either abnormal metabolic processes or failure of the organism to neutralize toxic substances normally formed.

91. This paper will be discussed editorially.

Progressive Medicine, Philadelphia

March

- 92 Surgery of the Head, Neck and Thorax. C. H. Frazier, Philadelphia.
- 93 Infectious Diseases, Including Acute Rheumatism, Influenza, and Croupous Pneumonia. R. B. Preble, Chicago.
- 94 Diseases of Children. F. M. Crandall, New York.
- 95 Rhinology and Laryngology. D. B. Kyle, Philadelphia.
- 96 Otology. A. B. Dnel, New York.

Maryland Medical Journal, Baltimore

March

- 97 "Hippocrates." (460-370 B. C.) H. M. Cohen, Baltimore.
- 98 Diseases of the Rectum. J. D. Reeder, Baltimore.
- 99 "How the Public Can Help the Medical Profession to Fight Disease." G. M. Linthicum, Baltimore.

Buffalo Medical Journal

March

- 100 The Tuberculosis Problem in Buffalo. J. H. Pryor, Buffalo, N. Y.
- 101 Retroversions of the Uterus. H. E. Hayd, Buffalo, N. Y.
- 102 The Surgical Idea in Obstetrics. W. M. Brown, Rochester, N. Y.
- 103 Gonorrheal Arthritis Treated with Antigonococcus Serum. T. W. Parsche, Chicago.

Louisville Journal of Medicine and Surgery

March

- 104 Significance of Precordial Pain. S. J. Meyers, Louisville.
- 105 *Surgical Treatment of Pruritus Ani. J. M. Mathews, Louisville.
- 106 Phlebitis Following Abdominal Operations (concluded). L. S. McMurtry, Louisville.

105. **Pruritus Ani.**—Mathews asserts that any long continued irritation will produce in the terminal nerves a pathologic condition that will resist all local treatment, and surgery is the only agent that can be used, looking to a radical cure. He describes a plastic operation suggested by Dr. Hamilton of Omaha, and quotes the opinion of Hanes that the nerve irritation incident to this disease is confined to the lower inch of rectum, and does not extend to the skin surrounding the anus. Hanes has operated on this theory in several cases, confining his operation to the inside of the gut and leaving the surrounding skin of the anus intact. To date the patients report absolute relief. Mathews describes the operation in one of Hanes' cases. Finally he shows the serious mental effects that occasionally follow on unrelieved pruritus ani.

Denver Medical Times and Utah Medical Journal

March

- 107 Venereal Diseases. W. H. Davis, Denver, Colo.
- 108 Addison's Disease of Sixteen Years' Duration. N. B. and E. Newcomer, Moorcroft, Wyo.
- 109 *Cysticercus Cellulose* and *Distoma Pulmonale* in Brain. E. W. Lazell, Denver, Colo.
- 110 Diffuse Cavernous Angioma of Upper Extremity, Complicated by Tuberculosis and Pulmonary Hemorrhage. H. S. Shafer, Denver.
- 111 The Hospital Idea. W. J. Fairfield, Delta, Colo.
- 112 Classification of Active Principles. J. Burke, Manitowoc, Wis.
- 113 Alcohol as a Diet or Medicine. F. Clift, Provo, Utah.
- 114 Rheumatism in Children—Its Effects on After-Life and Usefulness: Prophylaxis and Treatment. E. H. Smith, Ogden, Utah.
- 115 *Manifestations of Rheumatism in Children. E. H. Smith, Ogden, Utah.

115. **Rheumatism in Children.**—Smith says that in the clinical study of rheumatism in children every general practitioner

has open before him an opportunity for original research. Mild and severe cases should be studied together. Statistics from hospitals are usually based on the study of severe and well-developed cases. Among the problems needing further investigation may be mentioned: The early symptoms of the rheumatic process, preceding the development of definite organic changes; the relation of digestive disorders to the development of rheumatism in the young; and the occurrence of acute exacerbations of the disease, rather than muscular exertion, as a cause of broken compensation. The importance of interrogating closely the functional capacity of the heart muscle, and of assigning to it its proper share of blame when symptoms referable to the heart occur, should not be lost sight of in the presence of more evident valvular defects. It is important to bear in mind that typical joint symptoms are infrequent in rheumatism as it occurs in children and that a heart lesion may be the first and for a time the only manifestation of rheumatism.

Medical Herald, St. Joseph, Mo.

March

- 116 Ambulatory Treatment of Fractures of the Thigh: A New Traction Apparatus for Applying Spica Casts and Various Orthopedic Manipulations. C. M. Echols, Milwaukee, Wis.
- 117 Recognition of Acute Intestinal Obstruction and the Importance of Immediate Operation. J. E. Summers, Omaha, Neb.
- 118 Leukemia, with Report of a Case. O. P. and H. P. Mills, Grant City, Mo.
- 119 Anesthesia in the Field. W. C. Abbott, Chicago.
- 120 A Test of Drug Action. J. Burke, Manitowoc, Wis.

New Orleans Medical and Surgical Journal

March

- 121 *Excision of the External Organs of Generation for Intractable Pruritus. E. S. Lewis, New Orleans.
- 122 Cutaneous Tuberculin Reaction and von Pirquet's Doctrine of Allergy. G. Dock, New Orleans.
- 123 *Plague from the Standpoint of the Sanitarian. J. H. White, U. S. Public Health and Marine-Hospital Service.
- 124 Final Results in 181 Operations for Inguinal and Femoral Hernia. Necessity for Resection of the Cremaster Muscle When Hypertrophied. J. M. Batchelor, New Orleans.
- 125 *A Radiologic Frame. A. Granger, New Orleans.
- 126 Jacksonian Epilepsy: Operation: Removal of Bone Spiculum from Fissure of Rolando. H. B. Gessner, New Orleans.
- 127 Intussusception, its Diagnosis and Treatment with Report of Two Cases. C. J. Gremillion, Alexandria, La.
- 128 Delayed Union, Non-Union, and Vicious Union in Fractures of the Leg, with Special Reference to the Volkmann Step Operation. C. W. Allen, New Orleans.
- 129 Why Louisiana Should Have a Free Sanitarium for the Treatment of the Poor Consumptive. L. Lazaro, St. Joseph.
- 130 Gleet—Its Causes. F. K. Chalaron, New Orleans.

121. **Intractable Pruritus.**—Lewis refers to the martyrdom caused by this disease, and the varied measures that have been introduced in the attempt to relieve it. He reports the case of a married woman of 35 in whom pruritus followed accidental abortion seven years ago. It grew more intense and with shorter intervals between paroxysms. She had been ennetted four times, had used innumerable ointments, etc., dieted and taken medicated baths, and had had x-ray, galvanic and faradic treatment, and had been cauterized with silver nitrate and nitric acid. The labia were swollen, edematous, excoriated and cicatrized. The mere touch of the vulva provoked the itching. After three weeks of unavailing medical treatment, an operation was performed for removal of part of the mons veneris, the labia majora and minora, the clitoris and vestibule. He describes the operation. The patient recovered without any untoward symptoms and is now a happy woman.

123. **Plague.**—White summarizes his paper by urging the immediate killing of rats and the examination of specimens from many sections; the training of the people to uphold the health officers in time of danger; the critical watching of all glandular cases and pneumonia cases, as well as many non-descript or indeterminate fevers of severe type. A pathologist should be consulted in such cases.

125. **A Radiologic Frame.**—Granger describes, in an illustrated article, a radiologic frame, for which he claims the following advantages: Adaptation to fluoroscopic work; all kinds of skiagraphic work and radiotherapy; provision of a means for finding the normal ray and centering that ray; protection of patient and operator from unnecessary exposure to ray; a means to make all parts rigid, so that no ordinary

movement of the patient can disturb the tube when once in position; fewness and simplicity of construction and controlling devices and adaptability to any size office and any make of operating table.

International Clinics, Philadelphia

Vol. I, Nineteenth Series, 1909

- 131 Hospital for Advanced Cases of Tuberculosis. L. F. Flick, Philadelphia.
- 132 Occupations and So-Called Rheumatic Pains. J. J. Walsh, New York.
- 133 Mikulicz's Disease and Allied Conditions. C. P. Howard, Baltimore.
- 134 Acute Tuberculous Rheumatism. A. Poncet and Dr. Leriche, Lyons, France.
- 135 Diagnosis of Gastric Dilatation. D. Sommerville, London, Eng.
- 136 Typhobacillosis. L. Landouzy, Paris, France.
- 137 Nerve Grafting in Facial Paralysis. L. Freeman, Denver.
- 138 Suppuration in Appendicitis. E. M. Corner, London, Eng.
- 139 Excision of the Hip Joint in Arthritis Deformans. F. A. Richardson, Boston.
- 140 Conditions Modifying Operative Work. A. D. Willmoth, Louisville.
- 141 Case of Acute Yellow Atrophy of the Liver and Pernicious Vomiting of Pregnancy. R. Jardine, Glasgow, Scotland.
- 142 Intestinal Obstruction During Pregnancy and the Puerperium. C. G. Cumston, Boston.
- 143 Rupture of Urethra: Acute Urinary Retention: Secondary Syphilis. O. H. Kelsall, Louisville, Ky.
- 144 Tuberculous Stricture of the Rectum, with Excision. S. T. Earle, Baltimore.
- 145 Etiology and Treatment of the Neurovascular Disturbances of the Nose: Hay Fever, Paroxysmal Sneezing and Recurrent Rhinorrhea. C. P. Grayson, Philadelphia.
- 146 Sporotrichosis. Drs. Duval and Vinard, Paris, France.
- 147 Absorption from the Peritoneal Cavity. W. G. MacCallum, Baltimore.

Journal Michigan State Medical Society, Detroit

February

- 148 Dr. William Pepper: An Appreciation. H. M. Rich, Detroit.
- 149 The Parathyroids. A. McLean, Detroit.
- 150 Tuberculosis in the United States Based on the Returns of the Twelfth Census—with Special Applications to the State of Michigan. J. W. Glover, Ann Arbor.
- 151 Needs of Michigan in the Fight Against Tuberculosis. A. S. Warthin, Ann Arbor.

Mississippi Medical Monthly, Vicksburg

March

- 152 Diphtheria. A. J. Jagoe, Clarksdale.
- 153 The Opsonic Index. W. Krauss, Memphis, Tenn.

West Virginia Medical Journal, Wheeling

March

- 154 Surgical Treatment of Gallstones. J. E. Cannaday, Charleston.
- 155 Hyperchlorhydria. J. E. Rader, Huntington.
- 156 Experiences of a Mine Physician. T. L. Nutter, Clarksburg.
- 157 Pneumonia. A. Bee, Cairo.
- 158 Toxic Amblyopia. J. M. Sites, Martinsburg.
- 159 New Method of Treating the Accessory Sinuses of the Nose. R. H. Powell, Grafton.

St. Paul Medical Journal

March

- 160 Medical History of Edgar Allan Poe. C. G. Cumston, Boston, Mass.
- 161 Cooperative Medical Defense—Its Present Status. F. Leavitt, St. Paul.
- 162 Treatment of Cancer of the Face, Head, and Neck. E. S. Judd, Rochester, Minn.
- 163 Does the Subject of Medical Ethics Receive Sufficient Attention in the Training of Our Medical Students? A. Henderson, Scanlon, Minn.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

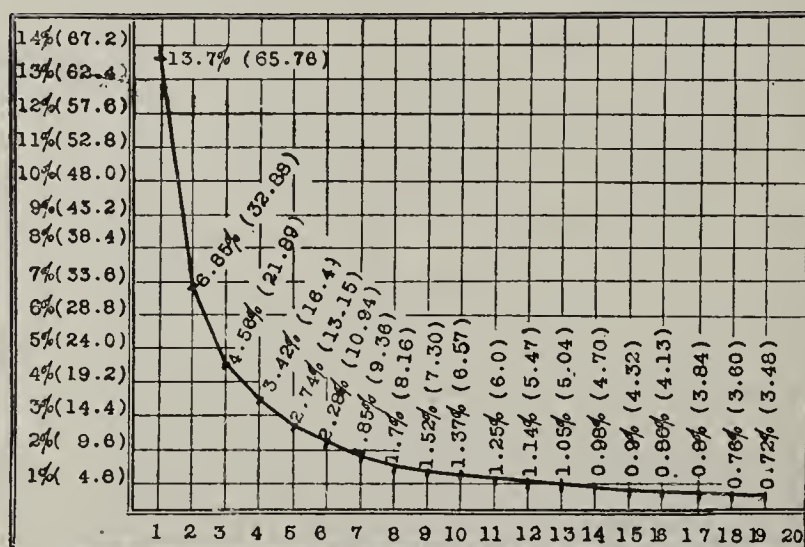
Lancet, London

March 6

- 1 Morphology and Variations of the Skull. W. Wright.
- 2 Four Cases of Volvulus Associated with Hernia. R. L. Knaggs.
- 3 Volvulus of the Entire Small Intestine, Cecum, and Ascending Colon; Operation and Recovery. W. Billington.
- 4 Two Cases of Volvulus Associated with Hernia. J. F. Dobson.
- 5 *Simple Method of Estimating Amount of Sugar in Glycosuric Urine. T. J. Walker.
- 6 *Investigation into the Clinical Significance of Albumosuria and Its Value in Diagnosis and Prognosis. J. Henderson.
- 7 Operations for Rectal Cancer. W. I. de C. Wheeler.
- 8 Advisability of Removing the Appendix at the Time of Opening the Appendicular Abscess. H. S. Clogg.

5. **Sugar Estimation.**—Walker describes a simple technic for using Fehling's method which he has long employed, and which enables him to determine in from three to six minutes

the quantity of sugar in the urine of a glycosuric patient. The apparatus consists of an ordinary test tube, a pipette—one drop measuring a minim—spirit lamp and minim measure. Walker had noted that the copper suboxid in testing with Fehling's solution is occasionally thrown down as a pure red, scarlet or crimson deposit, instead of the yellow, drab or orange precipitate that ordinarily occurs in the usual method of qualitative testing. Experiments showed him that by adding the urine drop by drop to boiling Fehling's solution, and boiling for a few seconds as each drop of urine was added, it was possible to obtain this scarlet precipitate constantly, and not occasionally; and further, that the blood-red precipitate indicated the complete reduction of the whole of the copper oxid to suboxid. By using a measured quantity of Fehling's solution, and calculating by the rule that "10 c.c. of the solution requires 50 mg. of glucose" to complete the suboxidation and to discharge the blue color, he was enabled to evolve the following quantitative test: Draw up into a graduated minim pipette any quantity of the urine to be tested. Boil 30 minims of Fehling's solution in a test tube and into it deliver the urine from the pipette minim by minim (boiling momentarily after each drop) until the blue color is discharged from the Fehling's solution, as indicated by the formation of a blood-red precipitate of copper suboxid. Note the number of minims of urine consumed, and, having found the corresponding figure below the chart, trace



The figures opposite the horizontal lines, as well as those on the curved line, indicate the percentage of sugar, and the corresponding number (figures in parentheses) of grains of sugar per fluid ounce. By "percentage" is understood "weight in volume"—i. e., grains per 100 minims. The figures below the vertical lines indicate the number of minims of urine consumed in discharging the blue color from 30 minims of Fehling's solution.

the vertical line upward until it meets the curve—the figures, there found, indicate the percentage of sugar and the number of grains to the fluid ounce in the urine. Inasmuch as, with a high percentage of sugar, the minim is too coarse a measure to indicate with sufficient precision the exact amount of sugar in the specimen examined, it is necessary, when the test with the natural undiluted urine indicates more than 2 per cent. of sugar, to repeat the test with one fluid dram of urine diluted with water to half a fluid ounce (a solution of 1 in 4)—test as directed above—multiply by 4 the number of grains per ounce indicated in the diluted urine, and the answer gives the amount in each ounce of the original specimen.

6. **Albumosuria.**—Henderson describes the history of the discovery of albumoses in urine. He says that permanent and abundant albumosuria of the Bence-Jones type may be regarded as almost pathognomonic of diffuse sarcomatous degeneration of bone marrow. It has been found chiefly in suppurative processes, acute infectious diseases, acute inflammations—especially pneumonia, empyema or large abscess; it has also been found in some cases of nephritis. For testing, he uses the biuret method, which he has found useful and satisfactory. He has records of observations in seventy-eight cases of pneumonia from which he concludes that the presence of albumosuria be regarded as unfavorable. It does

not, however, furnish a reliable index of the extent of lung tissue involved. In bronchopneumonia his results were negative, and also in pneumothorax and bronchitis. In pleurisy with effusion only 1 patient out of 6 presented traces at intervals. Out of 3 patients with empyema, 2 showed albumosuria, which disappeared on the evacuation of the pus. A third case of undoubted empyema showed no albumose, which Anderson attributes to a thickened membrane impeding absorption. Two cases of phthisis out of 6 showed albumose. Both were fatal. As regards nephritis, Henderson draws the following deductions from observations on 80 cases:

1. In acute and subacute nephritis albumose is rarely present. When present it may be associated with uremia, and may herald its onset.
2. Albumosuria seems to indicate the presence of a chronic condition and it is most constantly present in the chronic parenchymatous variety.
3. The presence of albumosuria is often in such cases associated with, though it does not necessarily indicate, an early fatal issue.

In cardiac disease albumose was found in only 5 cases out of 50; 2 were ulcerative endocarditis, both fatal; the third, a fatal case of purulent pericarditis. In appendicitis albumose was found in those cases associated with abscess formation. It was not found in three cases of diabetes mellitus, but was present in one case in which, however, there was extensive excavation in both lungs, of which Henderson considers the albumose an indication. In the majority of cases with which he has dealt, the origin of the albumoses is probably pus, or at least inflammatory exudation. He considers albumosuria a more frequent condition than is generally supposed, and suggests testing for it as an ordinary routine measure, especially in pneumonia, in cases in which suppuration is suspected, or wherever excessive tissue waste is thought to be present.

British Medical Journal, London March 6

- 9 *Clinical Facts Regarding Mammary Cancer. Sir H. C. Cameron.
- 10 *Natural Cure of Cancer. W. S. Handley.
- 11 *Treatment of Cancer by Potassium Bichromate. J. Fenwick.
- 12 Physiology of the Female Genital Organs: II. Menstruation. W. B. Bell and P. Hick.
- 13 Pleural Pains and Adhesions. J. T. MacLachlan.

9. **Mammary Cancer.**—Cameron says that the present clinical teaching in regard to cancer of the breast may be fairly summarized thus: The disease probably invades the body from without, and is at first strictly of local character and consequence. If removed at a very early stage—when the tumor is recent and still small—by an extensive operation definitely planned and carried out, cure may follow. Should no return of the disease occur within a period of a few years—say from three to five—this result may be considered as fairly assured. Cameron quotes from personal experience cases suggesting important lessons, notably that we do occasionally meet with cancer arising a second time in the same individual, the later manifestation having clearly no relation with the early one. He therefore insists on the unwisdom of regarding patients who have been operated on for mammary cancer as permanently cured because they remain free of any indication of recurrence for three, four or five years. He cites two cases in which the patients survived, respectively, for 22 and 33 years after a limited operation, not even the axilla being touched, in contradiction to the belief that no good is possible without extensive procedures. Many cases have convinced Cameron that a mammary cancer may produce extensive involvement of the lymphatics, even before it is of a size which renders it demonstrable. He also insists that besides operating early and widely in mammary tumor the surgeon's duty is equally to remove the entire mamma when operating on the axillary tumor which appears to be cancerous, or is subsequently proved to be cancerous by histologic examination, even though he can discover no tumor in the breast.

10. **Natural Cure of Cancer.**—Handley states as follows an unrecognized law of cancerous growth: Every aggregation of carcinoma cells has a definite life-cycle, and, after increasing in size for a varying period and at a varying rate, tends spontaneously to undergo degenerative and fibrotic changes. These changes extend from the center of the mass centrif-

ngally to its periphery, lead to its shrinking, and terminate in the replacement of the aggregation of cancer cells by a fibrous scar. In other words, the natural history of a cancer is one of centrifugal growth, followed by centrifugal death. He discusses the microscopic and the macroscopic evidence for the constancy of repair in carcinoma, the life cycle of a typical carcinoma (in six stages), and criticizes the subject of cancer therapeutics as commonly expressed. The literature of cancer therapeutics does not contain the record of a single fact which can not be paralleled in the histories of untreated patients. A study of the processes of natural cure in cancer absolutely destroys the clinical evidence in favor of trypsin, and all other internal medicaments at present known, except Coley's fluid in sarcoma, which seems to possess distinct value. The x-rays in accessible growths would promote the tendency to fibrosis, but a very thin layer of normal tissue is sufficient to protect cancer cells from their action. He discusses the secondary effects of the process of natural cure under the three heads: Contraction of the tissues around the carcinoma, cancer *en cuirasse*, and the "brawny arm" of breast cancer. For this latter condition he has devised the operation of lymphangioplasty (see the *Lancet*, March 14, 1908; abstracted in THE JOURNAL, April 11, 1908, p. 1224).

11. **Potassium Bichromate in Cancer.**—In a preliminary communication, Fenwick reports 19 cases of his own, and 3 of Dr. Pilkington of Philadelphia, successfully treated by the use of injections of potassium bichromate into the substance of the tumor.

Medical Press and Circular, London

March 3

- 14 Present Position of Intravenous Treatment. F. Mendel.
- 15 Medical Inspection of School Children. H. O. Pilkington.
- 16 Boots, and the Treatment of Corns and Plantar Warts. A. Eddowes.
- 17 The Spirillum of Vincent in Certain Pathologic Conditions of the Mouth and Throat. M. B. Arnold.
- 18 Use of Digitalis in Disorders of the Peripheral Circulation. J. T. MacLachlan.

Clinical Journal, London

March 3

- 19 Occurrence of Pulmonary Complications after Operation. C. M. Moullin.
- 20 *Cardiopathies of the Menopause. L. Williams.
- 21 Fatal Lymphocythemia (Lymphatic Leukemia) in a Boy of Six. L. Guthrie and W. D. E. Emery.

20. **Cardiopathies of the Menopause.**—Williams points out that menstruation is to be regarded, first as a hemorrhage, secondly as an excretion, and thirdly as the result of an internal secretion, one of whose effects is a partial vasodilatation, which is normally compensated for by a vasoconstriction elsewhere. At the menopause these activities cease, and the cardiovascular system is called on to adjust itself to the profound change which is thus effected. During the reproductive years, the systemic blood pressure is lowest (about 110 mm. Hg.) immediately after a period, gradually rising until immediately before the next period, when it reaches from 130 to 150 mm. Hg. With the establishment of the flow, the pressure gradually subsides. This process we know to be effected by the internal secretion of the ovary, supplemented and balanced by some other internal secretions, among them probably that of the thyroid. If, now, the vasodilating ovarian secretion gradually diminishes to the point of disappearance, while the balancing vasoconstrictor secretion, instead of diminishing, remains constant, it is obvious that a decided increase of general blood pressure must ensue. Add to this the absence of the pressure-relieving monthly hemorrhage and the retention of the vasoconstrictor toxins, and we have the conditions eminently favorable to a prolonged and threatening increase of pressure within the arteries. A large proportion of the troublesome symptoms of the menopause are accompanied by a decided rise in blood pressure. Manometric readings of 180 mm. are by no means rare, especially in obese women and when there is no relief by occasional flooding, but they are not invariable, and in some cases normal readings are found where a supernormal pressure is expected. In such cases, Henderson says, careful examination of the heart itself has never failed to reveal evi-

dence of dilatation, so that the explanation of these cases would seem to be that the retained toxins had concentrated, so to speak, on the myocardium, which was consequently bending behind a more or less normal blood pressure. In other patients, the blood-pressure readings have been rather definitely subnormal. This is difficult to account for, except on the analogy of goutiness, in which the two extremes of blood pressure are also found. He concludes that in the manometer we have a method of distinguishing between two very similar classes of cases, and a means, therefore, of approaching their treatment with some degree of intelligence.

British Journal of Children's Diseases, London

February

- 22 *Myxedema in Childhood. R. Hutchinson.
- 23 Forms of Chronic Lung Disease in Childhood. W. H. M. Telling.
- 24 *Food of Elementary School Children. A. H. Gerrard.
- 25 Spermatic Cords in Children. E. M. Corner.
- 26 Distribution of Hernias in Children. E. M. Corner.
- 27 Angiolipoma. F. V. Milward.
- 28 Congenital Absence of the Sternal Portion of the Right Pectoralis Major Muscle. J. E. H. Sawyer.

22. **Myxedema in Childhood.**—Hutchinson reports cases, with illustrations, showing the remarkable improvement in children the subjects of juvenile or adolescent myxedema, under thyroid administration. He considers that the lesser degrees of thyroid insufficiency in childhood are apt to be overlooked.

24. This article appeared in the *Lancet*, Feb. 13, 1909.

Australasian Medical Gazette, Sydney

January

- 29 Lunacy Administration in Australia. E. Sinclair.
- 30 Hospital Abuse. J. L. Gibson.
- 31 Renal Surgery. A. Watson.
- 32 Gangrene of Breast in a Diabetic Patient. H. Swift.
- 33 Appendicitis (Suppurative), Operation, Subphrenic Abscess, Gangrenous Pneumonia. C. E. Corlette.
- 34 Poisoning by Inhalation of Fumes from Nitric Acid. P. M. Wood.
- 35 Pyosalpinx, with Unusual Position of Tube. G. H. Skinner.
- 36 Chorioepithelioma. R. H. Marten.
- 37 Acute Lymphatic Leukemia. G. A. Buchanan.

Journal of Tropical Medicine and Hygiene, London

February 15

- 38 A New Locality for the Congo Floor Maggot. A. Balfour.
- 39 Eelampsia, with Thirty Fits, extending over Three Days. A. L. Hoops.
- 40 The Hemogregarines of Snakes (continued). L. W. Sambou.
- 41 Plague Disinfection in India. F. E. Taylor.

Bulletin de l'Académie de Médecine, Paris

February 23, LXXIII, No. 8, pp. 235-260

- 42 *Index of Serum Refraction in Surgical Affections. (Indice de réfraction du sérum sanguin dans les affections chirurgicales.) Tuffier, Mauté and F-Franck.
- 43 *Progressive Myopathic Atrophy. (Histoire d'un myopathique atrophique—du type-scapulo-huméral—suivi pendant près de trente ans.) L. Landouzy and L. Lortat-Jacob.

42. **Refraction Index of Serum in Surgical Affections.**—Tuffier and Mauté have been using this index as a means of diagnosis and prognosis in surgical affections. The index is low in all the surgical affections, suppuration, traumatism or cancer, and the method consequently has not much value in the diagnosis, but from the standpoint of the prognosis it is extremely important. As the blood serum keeps to a constant proportion of albumin with great tenacity, any change in the refraction index shows profound disturbance in the general condition. They consequently refuse to operate on patients with index lower than the normal if there is no edema, and they avoid general anesthesia as much as possible, reducing the trauma of the operation if emergency intervention is required. The index is always lower in bilateral kidney trouble, while it may be high in cachectic conditions when there is much vomiting or if diarrhea is draining the body of fluids.

43. **Progressive Myopathic Atrophy.**—Landouzy describes the final outcome of a case under observation from the age of 8 to 45, and gives illustrations of the early course and post-mortem findings. The patient's brother was affected in the same way, and these cases were the basis on which the scapulo-humeral, better known as the Landouzy-Dejerine, type was differentiated. The integrity of the peripheral and

central nervous system distinguishes this form of myopathic atrophy generally familial, without neuropathy, from the neuritic and myelopathic varieties of muscular atrophy. The flexor muscles were affected in the case described much less than the extensors. The case confirms anew the slow but inexorable evolution of the atrophy. The last stage was characterized by numerous retractions of muscles and tendons at different points, causing great deformity. One of the early, warning symptoms of this type is the atrophy of the muscles of the eyelids, the patient being unable to close his eyes.

Lyon Chirurgical, Lyons

March 1, No. 5, pp. 553-584

- 44 *Operations on the Stomach. (Six ans de chirurgie gastrique.) L. Tixier.
- 45 Duodenal Cancer. (la forme vatrienne du cancer duodénal.) E. Devic and P. Savy.
- 46 *Hysterectomy by Wertheim's Technic. (Réflexions sur 211 opérations pour cancer utérin.) A. Pollosson.
- 47 Errors Imputed to Radiography. T. Nogier.

44. 138 Operative Cases of Stenosis of the Pylorus.—Tixier reviews six years of gastric surgery, comparing the clinical history, the details of the operation, the results at the time and during the years since, histologic examination of the parts removed and the postmortem reports. His experience includes 145 cases of stenosis, but in only 138 were all the above known. Among the conclusions from this experience are that the greater the stenosis the less the patients' resisting vitality, and that pylorotomy at one sitting is peculiarly deadly in such cases. On the other hand cancer of the prepyloric antrum, even when large, can be safely operated on at one sitting, if it has not yet given rise to much disturbance from stenosis. He always prefers to operate in two sittings when the cancer is primarily located at the pylorus. In 55 cases gastroenterostomy was the only operation that could be considered, and the survivals ranged from 15 days to 30 months. In 24 cases of cicatricial stenosis one patient was treated by an emergency jejunostomy for uncontrollable hemorrhage from the stomach. Eight months later he implanted the jejunostomy fistula in the posterior wall of the stomach, and the results were excellent. The gastroenterostomy opening healed in only one of the 98 cases in which it was done, this experience confirming the advantages of making the anastomosis as close as possible to the pylorus to benefit by the natural course of the peristaltic waves. In 12 patients with pyloric stenosis from gall-bladder disturbance, the stomach symptoms vanished at once after gastroenterostomy and a supplementary operation on the gall bladder.

46. 211 Operations for Uterine Cancer.—Pollosson states that in 4 of the 211 cases the cancer of the cervix was associated with pregnancy. He accepts the indications as the same with and without pregnancy; it does not seem to enhance the gravity of the operation. In 6 cases, the cancer was primary in the vagina; 2 of these patients have been cured to date, one for two years. He advocates the abdominal route in such cases and also for cancer of the cervix in pregnant women. The details of the 211 cases are summarized. In several cases the lymph glands extirpated as a routine measure by the Wertheim technic were found already affected with cancerous degeneration, but there has been no recurrence since the operation.

Semaine Médicale, Paris

February 24, XXIX, No. 8, pp. 85-96

- 48 *Treatment of Postpartum Hemorrhage in Case of Placenta Prævia. R. de Bovis.

48. Treatment of Postpartum Hemorrhage from Placenta Prævia.—de Bovis reviews what has been written on this subject in various countries and the results of the various procedures proposed. The only measure, he declares, which is universally applicable and which does not expose to danger of infection is systematic compression of the aorta. Physicians should not shrink from applying it and midwives should be trained to do it properly. In order to be truly effective, the pulse in the femoral arteries must be arrested. In order to render the procedure less fatiguing, he advises getting up on a chair, unless the bed is very low, and thus

applying the compression with the weight of the body rather than with the muscles of the forearm alone. By this means the compression can be kept up a long time without exhaustion. It has frequently been kept up for an hour, and one case is on record in which it was maintained for five hours. The compression should be applied near the umbilicus, generally a little above it, pressure being exerted with the slanting fingers, according to Sentin or Suber, or with the side of the closed fist, according to Le Page. The other hand bears down on the first with the weight of the body; the force of the compression is applied a little to the left of the spine. If long kept up, the compressing hand should be moved up or down a little so as not to press continuously in the same place. This procedure has the immense advantage of being within the reach of every one, so that the obstetrician can allow some one else to do it if he wishes to supplement it with other measures. But it should be borne in mind that this alone is sufficient, and that it can be kept up for an hour or two or even for five hours with the simple provision of moving the compressing hand up or down a little. If a reliable rubber tube is at hand it could be wound around the waist according to the Momburg technic, to allow temporary suspension of the compression. On account of the danger of ptosis of the liver or spleen and the friability of these organs at times, he regards this Momburg technic with some distrust. Among other methods of hemostasis, tamponing is the simplest, but there is danger of possible infection, and the difficulty of tamponing effectually. The lower segment of the uterus is a flabby sac, in these circumstances, and can be effectually tamponed only by flattening its walls against the bones of the pelvis. The vagina also has to be packed tight to prevent the tampon in the uterus from slipping. All this requires forceps and assistants and confidence in introducing instruments and fingers and uses up an incredible amount of gauze at a depth which may well make one shrink from attempting it unless perfectly familiar with the technic. Besides the doubtful asepsis, the results are generally disappointing. Suturing does no good unless for a tear in the cervix alone. Among the operative procedures, ligation of the uterine arteries is the most promising, especially when the cervix is seized with forceps as for vaginal hysterectomy. The cervix is drawn as far down and to the right (or left) as possible, and the forceps is applied in the lateral vault of the vagina. Instead, however, of clamping the base of the broad ligaments, as with the Henkel technic, he advises clamping the outer margin of the uterus. As the uterus is pulled toward one side, the forceps is applied almost directly across, from the back forward; one blade includes the anterior and the other the posterior aspect of the uterus. This simple modification of the Henkel technic avoids all possible injury of the ureter or bladder while the vessels are clamped through a considerable thickness of uterine tissue, thus avoiding possible injury of the uterine arteries. The results, he asserts, are as satisfactory as when the main trunk of the uterine artery is clamped—the aim is to arrest the circulation in the part of the uterus containing the placenta; it is not necessary to arrest it throughout the entire uterus. He does not approve of leaving these clamps in place for more than twelve hours, but the technic is so simple that he now applies it as a preventive measure after delivery in all cases in which the women have lost much blood.

Beiträge zur Klinik der Tuberkulose, Würzburg

XII, No. 1, pp. 1-190. Last indexed Jan. 16, p. 254

- 49 *Experimental Study of Consequences of Unilateral Pneumothorax. (Ueber Folgezustände des einseitigen Pneumothorax.) O. Bruns.
- 50 *Therapeutic Lung Collapse. (Erfahrungen und Ueberlegungen zur Lungenkollapstherapie.) L. Brauer.
- 51 *Explanation of Cutaneous and Ocular Tuberculin Reaction. (Erklärung der Tuberkulinempfindlichkeit.) A. Wolff-Eisner.
- 52 Opsonin Tests and Mixed Infection in Chronic Pulmonary Tuberculosis. (Opsoninuntersuchungen, betreffend die Bedeutung der Mischinfektion bei der chronischen Lungentuberkulose.) M. Wirths.
- 53 *The Ocular Tuberculin Reaction. (Ueber den diagnostischen und prognostischen Wert der Konjunktivalreaktion.) O. Ziegler.
- 54 *The Intracutaneous Tuberculin Test. (Ueber intrakutane Tuberkulinanwendung zu diagnostischen Zwecken.) P. H. Römer.

49. **Consequences of Unilateral Pneumothorax.**—The extensive experimental research reported by Bruns from Brauer's medical clinic at Marburg demonstrates that the pneumothorax not only promotes the healing of the tuberculous process but the atelectasis leads to the formation of connective tissue and thus aids in the encapsulation of the morbid process. His research has further confirmed the fact that anything which permanently interferes with the ventilation of the lungs entails extra work on the right heart and leads to hypertrophy of the right ventricle. In chronic bronchitis, pleurisy with adhesions, emphysema, kyphoscoliosis and pneumothorax the ventilation in the lung is hindered but the resulting disturbance is comparatively slight during abstention from muscular exercise. The blood vessels are compressed and the reduced suction and pumping action of the diaphragm and chest wall all contribute to entail extra work on the right heart. The left heart did not seem to be affected in his experiments. The findings in the rabbits and dogs and the controls are tabulated for comparison, and seventy articles on the subject are reviewed from the literature.

50. **"Lung Collapse Therapy."**—Brauer applies this term to measures which seek to immobilize the lung to promote the healing of a tuberculous process. In an illustrated monograph of more than a hundred pages, with a number of radiographs, he describes in detail his experiences with an operation undertaken to answer this purpose when the conditions rendered it impossible to induce artificially a therapeutic pneumothorax. He calls it "the extensive extrapleural thoracoplastic operation for lung collapse therapy." The aim is to place the diseased lung at rest, under a certain amount of compression. When pleural adhesions render a pneumothorax impossible, a plastic operation on the wall of the chest must be very extensive to accomplish the same results. The illustrations show how he realized this: The incision extends along the spine, low under the arm and up in front with resection of several ribs. Several patients in grave danger from a severe and progressive lung process were very much improved; others were not improved and some succumbed. He discusses how the technic can be perfected, his impressions being that this method of treatment has a future for this special class of cases.

51. **Cutaneous and Ocular Tuberculin Reactions.**—Wolff-Eisner supplements his monograph on this subject in the same journal one year ago by giving a number of colored plates, showing the exact aspect of the local reactions.

53. **Ocular Reaction.**—Ziegler declares that his experience with the ocular test on 600 patients has convinced him that it is useless for the early diagnosis and prognosis of pulmonary tuberculosis.

54. **Intracutaneous Tuberculin Test.**—Römer has modified for the clinic the method of intracutaneous application of tuberculin practiced by Lignières, of Buenos Aires, on cattle. The findings are identical with those of the subcutaneous test. The method is simple and harmless, and has been previously described by Mantoux as the "intradermo-reaction." The findings are estimated by taking up a fold of the skin in a sliding gauge graduated in millimeters. The thickness in millimeters of the fold formed when an area of 5 cm. is taken up in the gauge shows the presence of the specific, intracutaneous hardening reaction to the injection of tuberculin. The technic is illustrated.

Deutsche medizinische Wochenschrift, Berlin

February 25, XXV, No. 8, pp. 329-376

- 55 *Prophylaxis in Obstetrics. (Zur geburtshilflichen antiseptischen Prophylaxe.) H. Fritsch.
56 Further Development of Young Suprarenals Implanted in the Kidney. (Experimenteller Beitrag zur Lehre der von verlagerten Keimen ausgehenden Geschwülste.) H. Neuhäuser.
57 *Sources of Error in Determining the Opsonic Index. (Fehlerquellen der Methode der Opsoninbestimmung nach Wright.) W. Beyer.
58 *Flushing and Suction in Treatment of Empyema of the Pleura. (Spüldrainage und Saugbehandlung des Pleuraempyems.) W. Pust.
59 Pathology of so-called Circumscribed Otogenous Meningitis. Engelhardt.
60 *Haeckel and Brass. F. Keibel.

55. **Prophylaxis in Obstetrics.**—Fritsch does not agree with Krönig in several points, especially in allowing palpation through the rectum in the hands of the inexpert. He does not approve of allowing women to get up early after childbirth, nor of preliminary rinsing of the vagina except in difficult cases. He knows of two instances in which the obstetrician palpating through the rectum saw his finger emerge in the vulva. The vagina had been torn and the wall of the intestine had yielded to his exploring finger without his knowledge. In one of these cases the patient succumbed to sepsis. He bases his prognosis of the delivery on the exact determination of the position of the small fontanelle and the turning of the head under the influence of labor contractions. He remarks in conclusion that he has never encountered a case of fatal embolism in a healthy puerpera. All those with phlegmasia or thrombosis in the femoral vein had had fever before, and the puerperium was thus not normal. Thrombi in the legs are sometimes observed during pregnancy, and these would certainly not be improved by allowing the patient to get up early.

57. **Sources of Error in Determination of Opsonins.**—Beyer reports experiences with Wright's technic which show such wide differences in preparations from the same source that it is impossible to base far-reaching conclusions on them. It is his opinion that the method has so many possible sources of error and requires such pains and time that it should be regarded as not practicable for clinical purposes, in its present form at least.

58. **Drainage and Suction Treatment of Empyema of the Pleura.**—Pust proposes a simple modification of the present technics of draining empyema of the pleura. The principle is the same as when a counter opening is made in a raw egg. A curving trocar with a number of openings is introduced just below the upper limit of the empyema and another, curving upward, just above the lower limit. Each has a stop-cock and each is fastened in place with strips of adhesive plaster. Under control of the pulse the stop-cock is opened in the lower and then in the upper trocar. If the pus flows out readily, as much is allowed to escape as the patient can tolerate. The flow can be promoted by change of position or by connecting the upper trocar with an irrigator and rinsing out the pleural cavity with hot water or a solution of potassium permanganate. These rinsings are repeated once or twice a day, closing the stop-cocks in the interim at first. Later it may be an advantage to apply suction to one of the drains. This technic avoids the danger of thoracotomy and sudden pneumothorax. It does not require general anesthesia or assistance, but can be done under ethyl chlorid, and the patients can be up and about at once. It spares them the shock of an extensive operation just when they are least fitted to stand one.

60. See Berlin Letter, THE JOURNAL, March 20, page 975.

Deutsche Zeitschrift für Chirurgie, Leipzig

January, XCVIII, No. 1, pp. 1-111

- 61 *Surgical Treatment of Cancer of the Mouth. (Chirurgische Behandlung der Mundhöhlenkrebsen.) P. Steiner.
62 *Surgical Treatment of Cancer of the Breast. (Chirurgische Behandlung des Brustdrüsenkrebses.) Id.
63 True Accessory Retropharyngeal Thyroid. (Struma retropharyngea accessoria vera.) Klaus.
64 New Method of Nephropexy. C. Beck (New York).
65 Snapping Hip Joint. (Schnappeude Hüfte—Luxatio tractus cristo-femoralis.) z. Verth.
66 Primary Tuberculosis of Bursæ inducing Sclerosis. (Die primär sklerosierende Tuberkulose der Schleimbeutel.) A. Reinhardt.
67 *Implantation of Thyroid Tissue in Three Cretins. (Implantation von Schilddrüsengewebe bei Kretinen.) E. Bircher.
68 Formation of Calculi in Urinary Passages after Fracture of Spine. (Zur Frage der Steinbildung in den Harnwegen nach Wirbelbrüchen.) Mingramm.
69 Isolated Injury of Hypoglossal Nerve. (Fall von isolierter Verletzung des Nervus hypoglossus.) A. Wertheim.
70 Complicated Firearm Abdominal Injury. (Schussverletzung des Leibes.) R. Reinecke.

61. **Cancer of the Mouth.**—Steiner states that 10.3 per cent. of the patients with cancer of the mouth, operated on at Dollinger's clinic at Budapest, have been cured with no recurrence

for more than three years. The record includes 61 cases of cancer of the cheek, the patients between 27 and 72, with 15.4 per cent. cured without recurrence for three years and 11.5 without recurrence for six years. Only 1 of the 8 patients with cancer of the gum was free from recurrence for seven years and only 1 of the 4 with cancer of palate or tonsil. An operation was attempted in only 25 of the 51 cases of cancer of the tongue and 69.2 per cent. died during the first year from recurrence. The predisposing influence of smoking and chewing tobacco, congenital anomalies, scars, psoriasis and leucoplakia was evidenced anew in this material. Only 3 per cent. of the patients were women. The various procedures followed are described in detail.

62. Cancer of the Breast.—Steiner reports from the same clinic 170 cases of cancer of the breast; 2.6 per cent. of the patients were men. Heredity was noted in 3 per cent. of the total cases, chronic inflammation in 6.6 per cent., trauma in 17 per cent., and congenital anomalies and Paget's disease in a number. Fully 21 per cent. of the patients have been cured for more than three years. Only 10 per cent. of those operated on by the Heidenhain technic passed five years without recurrence; the proportion is 27 per cent. after the Halsted-Koehler technic.

67. Implantation of Thyroid Tissue.—Bircher's experiences were not satisfactory; the thyroid tissue seems to be unable to resist absorption in time. The facts observed suggest that the connection between the thyroid and cretinism is more than mere defective or lacking functioning of the thyroid.

Medizinische Klinik, Berlin

February 21, V, No. 8, pp. 269-308

- 71 Chronic Non-Tuberculous Bronchial Affections. (Chronische Bronchialerkrankungen mit Ausschluss der Tuberkulose.) Posselt.
- 72 Traumatic Ossifying Inflammation of the Triceps Tendon. (Tendinitis ossificans traumatica der Trizepssehne.) P. Frangenheim.
- 73 Serotherapy of Meningitis. (Zur Behandlung der Meningitis epidemica mit Meningokokkenserum—Kolle-Wassermann.) F. Lange.
- 74 Treatment of Chronic Emphysema of Lung and of Asthma. O. Boellke.
- 75 *Action of Powerful Electric Current on Animal Body. (Wirkung des elektrischen Starkstromes auf den tierische Körper.) S. Jellinek.

75. Treatment of Electric Accidents.—Jellinek reviews his extensive experimental work to emphasize the importance of artificial respiration in case of electric accidents. He also warns against attempting to push with the foot the injured person away from the live wire, citing cases in which the current entered at the knee and passed into the ground with fatal results. In one case the soft parts were destroyed down to the bone and the patient survived only a few days. A horse was killed by a current of 220 volts merely passing through a wire around his left forefoot for 90 seconds.

Münchener medizinische Wochenschrift

February 23, LVI, No. 8, pp. 377-432

- 76 *Pneumococcus Influenza. H. Curschmann.
- 77 *Simultaneous and Irregular Action of Auricles of the Heart. (Ueber Synergie und Asynergie der Vorhöfe des menschlichen Herzens.) E. Rautenberg.
- 78 Bacteriology of Pseudodysentery in Sumatra. G. Baermann and W. Schöffner.
- 79 *Treatment of Constitutional Eczema in Children. (Therapie des konstitutionellen Kindereczems.) Geissler.
- 80 *Clinical Determination of Blood in the Stools. (Zum klinischen Nachweis von Blut in den Fäzes.) T. Messerschmidt.
- 81 *Extrauterine Pregnancy. (Extranteringravidität.) Weisswange.
- 82 Accidental Illness from Mouse-Typhus Bacillus. (Einige Krankheitsfälle, hervorgerufen durch Mäusetyphusbazillen.) F. Fleischanderl.
- 83 *Tuberculosis as a Children's Disease. (Tuberkulose als Kinderkrankheit.) A. Schlossmann.

76. Pneumococcus Influenza.—Curschmann states that on bacteriologic examination of 49 cases of apparently typical influenza, the pneumococcus was isolated in 46 cases, and the influenza bacillus was never found. There was mixed infection in a few cases. In 20 of these cases inoculation of mice caused typical pneumococcus septicemia. In 77 out of 109 cases of a syndrome suggesting influenza, the symptoms and course were typical of true influenza.

77. Simultaneous and Irregular Action of Auricles of the Heart.—Rautenberg relates a number of clinical observations bearing on the question whether the auricles always work together or whether one may become paralyzed and the other work on independently. His study of sixty patients with heart trouble of this kind shows that isolated paralysis of one auricle may occur, but that it is extremely rare, much rarer than is generally accepted.

79. Treatment of Constitutional Eczema.—Geissler has been giving Finkelstein's method of treatment a trial and reports excellent results. The essence of this treatment is to exclude salt from the food, and the experiences related confirm the efficacy of this measure, even for older children. His patients were between 2 and 6 years old. In one case local measures and deprivation of salt arrested the eczema, which healed completely in three weeks, while a previous attack had resisted all measures for several months. In all such cases the eczema was of the "exudative diathesis" type. He declares that we are too apt to forget that this form of eczema is a constitutional anomaly and not amenable to local measures.

80. Determination of Blood in the Stools.—Messerschmidt states that the ordinary guaiac test is liable to give negative findings in some cases, even in the presence of blood, especially in elderly patients. This test therefore should not be regarded as absolutely reliable in practice. The findings should be accepted only when positive; when negative they should be supplemented by the benzidin test, which succeeds sometimes when the guaiac test fails. It is important for the patient to refrain from meat for a few days beforehand. He has modified the benzidin test and commends his technic as simple and thoroughly reliable: As much benzidin as can be taken up on the point of a knife is dissolved in 2 c.c. of glacial acetic acid. A piece of feces the size of a pea is stirred in 2 c.c. water to which a few drops of acetic acid have been added. To three drops of the resulting fluid, from 1 to 1.5 c.c. of a 3 per cent. solution of hydrogen dioxide is added, and from 1 to 2 c.c. of the benzidin acetic acid solution is stirred into the mixture. In the presence of blood the fluid turns green to dark blue in a few seconds. This technic does away with the necessity for boiling the fluid.

81. Extrauterine Pregnancy.—Weisswange affirms that it is as important to diagnose extrauterine pregnancy early as to recognize uterine cancer in its early stages. He reviews the symptoms which by their correlation allow differentiation, remarking that the main point is to bear the possibility of extrauterine pregnancy in mind. Pain is one of the most regular symptoms; it may be spasmodic or occasional or persisting. Another constant symptom is irregularity in the menses if menstruation continues. In addition to the minor signs of pregnancy and pain at a point suggesting hemorrhage in the ovary, any signs of secretion on the part of the breast are very significant. Palpation should be extremely cautious as rupture of the amniotic membranes has many times followed digital explorations. In difficult cases the findings on exploratory puncture through the vagina are instructive. The prognosis under all circumstances is grave, even if the pregnancy progresses undisturbed; at the best, a major operation is necessary at the close. He advocates treating extrauterine pregnancy in all cases from the same standpoint as a malignant growth. Even when the pregnancy is arrested and the products are reabsorbed under conservative treatment, adhesions necessarily follow, and chronic perimetritis is liable to be the outcome. The patient demands not only to be relieved from immediate but to be protected against possible disturbances later. If rupture has already occurred, it may be dangerous to send the patient to the hospital, and the only possibility for preventing the frequent fatal cases in young healthy women is to operate at once in the home. In 7 cases of tubal pregnancy 2 of the young women died on their way to the hospital after rupture; another died from hemorrhage and sepsis, the result of the use of the sound and curette. In 4 cases the diagnosis was not made at the right time and one of the women was treated erroneously and succumbed in spite of proper treat-

ment at last, which came too late. In the other cases the women recovered after being in grave danger for a long time.

83. Tuberculosis as a Children's Disease.—Schlossmann reaffirms that tuberculosis is acquired in childhood and should be prevented, treated and cured in childhood. But he adds that all children are not equally exposed. Among 105 children of the well-to-do in his charge, most of them suspected of tuberculosis, only 4 proved to be actually tuberculous, and 2 of these had been infected by their nurse, who was in an advanced stage of the disease. It is the children of the poor who are most liable to acquire tuberculosis, but even among them chronic pulmonary or simple processes frequently simulate tuberculosis. The diagnostic tuberculin test, he reiterates, is the only means to differentiate the tuberculous children and to allow appropriate treatment to be instituted in time.

Wiener klinische Wochenschrift

February 25, XXII, No. 8, pp. 257-292

- 84 Pathology and Clinical Diagnosis of Stenosis of Pulmonary Artery with Defects in the Septum. A. Posselt.
85 Hemolytic Autoinhibition and Complement Properties of Human Serum. H. Hecht.
86 *Resuscitation after being Buried under Caving Sand. (Lebenserhaltung Verschlütteter.) P. Silberstein.
87 Orthopedic Apparatus to Prevent Orthostatic Albuminuria from Lordosis. K. Preleitner.

86. Resuscitation of Persons Who Have Been Buried Under Caving Sand, Etc.—Silberstein calls attention to the fact that of all forms of suffocation that from being buried under caving sand or dirt or under an avalanche is most slowly fatal. This should be borne in mind, as sometimes no attempts at resuscitation are made, or are made half-heartedly, on account of the long time since the accident occurred, when in reality the victim is still capable of being revived. If the victim's arms are thrown over his face or in any other way a little air space is left around his mouth and nose, it is astonishing how long one can survive, and for how long resuscitation is still possible. In a number of cases on record new-born babes buried with infanticidal intent have been dug up alive after intervals up to eight hours. In all these cases the child had been wrapped in a cloth which left an air space and retained the air. Persons buried under snow may long survive as the snow melts away from around the face.

Zentralblatt für Chirurgie, Leipsic

February 27, XXXVI, No. 9, pp. 289-328

- 88 Disturbances in the Articulation of the Jaw Similar to Dislocation of the Meniscus in the Knee. (Discitis mandibularis.) Lanz.
89 *Operative Treatment of Ascites with Cirrhosis of the Liver. N. F. Bogojawlensky.
90 Advantages of Sterilization of Catgut in Vaseline. Lerat.

89. Operative Treatment of Ascites with Cirrhosis of the Liver.—The benefit of the Tálma operation for Banti's disease is ascribed by Bogojawlensky to the laparotomy and the resulting hyperemia rather than to the omentopexy. The latter helps, but the hyperemia from the laparotomy is the main factor, as he has determined in the course of ten such cases. In operating he aims to induce hyperemia as much as possible and to remove all trace of the ascites. If the kidneys are functioning defectively, absorption of ascitic fluid left behind may prove fatal. He knows of two such deaths and warns that pronounced kidney disease contraindicates the operation and that in all cases the general anesthesia should be as slight as possible.

Zentralblatt für Gynäkologie, Leipsic

February 27, XXXIII, No. 9, pp. 297-328

- 91 Treatment of Suppurative Processes with Antiferment Serum. (Behandlung eitriger Prozesse mit antifermenthaltigem Serum.) A. Fuchs.
92 Scopolamin Does not Influence Pulse and Temperature. G. Blisniansky.

Policlinico, Rome

February 21, XVI, Practical Section, No. 8, pp. 229-260

- 93 *Intravenous Injection of Bichlorid of Mercury in Acute Inflammatory Rheumatism. (Le infezioni endovenose di sublimato corrosivo nella poliartrite reumatica.) O. Ortali.

February 28, No. 9, pp. 261-292

- 94 *Theobromin in Angina Pectoris. (Intorno l'angina pectoris e specialmente in rapporto alla sua cura.) E. Marchiafava

93. Intravenous Mercurial Treatment in Acute Rheumatism.—Ortali found that the patients were not improving under salicylates in the three cases reported, and he then made an intravenous injection of 5 mg. of mercuric chlorid, repeated on the two following days, with the rapid recovery of the patients. In one case he made five injections, using 10 mg. for the later ones. The results were excellent in all; the temperature and swellings subsided, the patients felt very much relieved, and the pains became attenuated. There were no by-effects in any instance.

94. Angina Pectoris.—Marchiafava has obtained good results from theobromin in angina pectoris. In one case a man of 46 had been suffering for two months from repeated attacks of angina pectoris, recurring so constantly that he did not dare to go to bed; the attacks only lasted a few minutes, but had already induced great debility and distress. Examination revealed insufficiency of the aortic valve. He was given 0.5 gm. (7.5 grains) of theobromin, and the dose was repeated at bedtime. There were no further attacks then or later. The treatment with theobromin must be long kept up, for months and years. It is effectual in other disturbances from arteriosclerosis as well. Two of his patients recently had vertigo and were afraid to venture into the street on foot, but have been free from the vertigo since they have commenced taking theobromin.

Riforma Medica, Naples

February 22, XXV, No. 8, pp. 197-224

- 95 *Tests of Kidney Functioning. (Della diagnosi funzionale del rene.) G. Zagari.

95. Functional Tests of the Kidneys.—Zagari has been applying a number of functional tests in several cases of kidney disease, with healthy persons as controls, and tabulates the findings. The test diet contained 5 gm. of salt; on this, in health, from 1 to 1.18 per cent. of sodium chlorid was eliminated, the elimination reaching its maximum the third or fourth hour, and nearly ceasing by the sixth hour. In nephritis, on the other hand, the maximum seldom reached 0.9 per cent. and never surpassed it; in most cases not going above 0.7 or 0.8. The total in 470 gm. of urine was 5.248 salt with one average healthy person, while in nephritis, with 375 gm. urine, only 2.735 salt was eliminated in the same period of six hours. He regards this sodium chlorid test as the easiest, simplest and most reliable means of estimating the functional capacity of the kidneys. Diuresis follows with healthy kidneys or in cases of compensated kidney disease, but there is no diuresis with nephritis. The elimination of salt begins much later and is much less pronounced with diseased kidneys, and this characteristic response to ingestion of salt may reveal incipient trouble not discoverable by any other means.

Hospitalstidende, Copenhagen

January 13, LII, No. 2, pp. 33-56

- 96 *Diagnosis of Erysipelas. Sørensen. Commenced in No. 1.

January 20, No. 3, pp. 57-88

- 97 *Serodiagnosis of Congenital Syphilis. (Wassermann-Reaktion ved medfødt Syfilis.) O. Thomsen and H. Boas.

January 27, No. 4, pp. 89-120

- 98 *Lung Suction Mask in Pulmonary Tuberculosis. (Om Behandling af Lungetuberkulose med Blodoverfyldning af Lungevævet.) L. Melchior.

February 3, No. 5, pp. 121-152

- 99 Sympathetic Ophthalmia. (Nogle Betragtninger over den sympatiske Uveitis' Væsen i Anledning af et ejendommeligt Tilfælde.) C. F. Heerfodt. Commenced in No. 4.

February 10, No. 6, pp. 153-176

- 100 *Dislocation of the Semilunar Bone of the Wrist. (Luxatio ossis lunati dorsalis.) J. Ipsen.

- 101 *Periarthritis. P. Lorenzen. Commenced in No. 5.

96. Diagnosis of Erysipelas.—Sørensen reviews his experience with about a thousand cases of erysipelas, remarking that in over one-fourth of the number the affection was not recognized. He insists on the necessity for bearing in mind that pure erysipelas is a mild, serous and not a suppurative or destructive process, and that the patients should be protected against infection with other germs liable to superpose suppuration and necrosis on the erysipelatos process. The

patients should especially be kept from contact with phlegmons.

97. Serodiagnosis of Congenital Syphilis.—Thomsen and Boas applied the Wassermann test to 9 infants under 6 months old with unmistakable signs of congenital syphilis, and the response was positive in all. They also applied it in 4 young people between 13 and 20, with signs of inherited tardy syphilis, and the response was positive in all. In a third group the test was applied to 32 infants and their syphilitic mothers. In 3 of these cases the mothers showed no signs of syphilis but bore children with the taint. Sixteen of the 19 mothers of unmistakably syphilitic infants gave a positive response and 2 of the others had had a recent course of mercurial treatment; 9 of the 13 mothers with healthy children also reacted. The blood from the umbilical cord presented the typical reaction in one case in which the mother had been infected with syphilis twelve years before and had taken two courses of 48 and 33 inunctions and had not observed the slightest manifestation of the disease during the last ten or eleven years and bore no traces of the infection. She had borne four healthy children since her infection and this latest infant seemed to be healthy at birth but at the age of three weeks developed syphilids. The Wassermann reaction was particularly pronounced in the woman's blood in this case, suggesting possible reinfection, but nothing could be discovered to sustain this assumption. In every case in which anatomic changes were found in the umbilical cord, the children developed signs of syphilis sooner or later. Examination of the cord or placenta is thus shown to be a useful supplementary test for inherited syphilis. A positive response to the Wassermann test in the mother reduces the probability of the child being sound. The reaction seems to be constant in every case of clinical manifestations of syphilis in infants or older children. The authors believe that it is possible for the substances inducing the reaction to pass through the placenta into the fetus and permit a positive reaction when in reality the child is free from the disease. Every mother of a child giving a positive response to the test should be regarded as syphilitic, although free from signs of the infection. Examination of the placenta blood from numbers of healthy children never once gave a positive response.

98. Suction Mask in Treatment of Pulmonary Tuberculosis.—Melchior reports that only one of the eleven consumptives treated with the suction mask seemed to be much benefited by it. The patients were all in the second or third stage of the disease; the number of red corpuscles seemed to be increased, yet the hemoglobin percentage did not keep pace with it. The vital capacity seemed also to be increased, transiently at least. The patient who derived the most benefit was the only one in whom the disease had not reached the second stage.

100. Dislocation of the Semilunar Bone.—Ipsen's patient was a young man with dislocation resulting from an accident. The disturbances were so severe that he was unable to use his hand and, after failure of persevering conservative measures, Ipsen removed the semilunar bone as the dislocation constantly recurred after reduction. This put an end to the disturbances at once without impairment of function.

101. Periarthritis.—Lorenzen discusses the various types of periarthritis, remarking that no joint affection heals without leaving some trace of its presence in the surrounding tissues. These various forms of periarthritis frequently are disregarded or explained as growing pains. He describes in detail some typical cases of periarthritis involving the shoulder, knee, back of the neck or foot, and remarks that the local measures must be supplemented by general treatment to be really effectual. Whether water, heat, electricity or mechanical devices should be used in local treatment depends on the special skill of the physician in each line and the patient's confidence in the special treatment or combination of measures. Operative intervention is rarely necessary and should be reserved for the severest cases. His experience has shown that excellent and durable results can be obtained without it.

Hygiea, Stockholm

January, LXXI, No. 1, pp. 1-96

- 102 *Operability of Tumors in the Posterior Cranial Fossa. (I hvilken grad äro svulster i fossa cranii posterior tillgängliga för operation?) K. Dahlgren.
103 Treatment of Gonorrhea. (Ett bidrag till behandlingen af gonorré i lifmodern.) C. Cronquist.

102. Operability of Tumors in Posterior Cranial Fossa.—Dahlgren concludes from his study of the literature and personal experience with four cases that the prospects of complete recovery are very small with tumors at the base of the brain, but that transient or durable improvement has been observed so often after operative treatment that an attempt is amply justified in this otherwise hopeless condition. He reviews a number of minor points which facilitate the diagnosis, urging the publication of series of cases from the same clinic or from the same operator as much more instructive than compilation of single cases from various quarters which scarcely permit of comparison.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

FRÜHDIAGNOSE UND TUBERKULOSE-IMMUNITÄT, unter Berücksichtigung der Neuesten Forschungen: Konjunktival und Kutan-Reaktion, Opsonine, etc., Speziell der Therapie und Prognose der Tuberkulose. Von A. Wolff-Eisner, Berlin, Arzt f. innere Krankheiten u. Bakteriologie des städt. allgemeinen Krankenhauses Friedrichshain-Berlin. Edition 2. Paper. Pp. 378, with illustrations. Price, 12 marks. Würzburg: Curt Kabitzsch (A. Stuber's Verlag), 1909.

A SYSTEM OF MEDICINE. Vol. 4. Parts 1 and 2. By Many Writers. Edited by Sir Clifford Allbutt, K.C.B., M.A., M.D., LL.D., D.Sc., F.R.C.P., F.R.S., F.L.S., F.S.A., Regius Professor of Physic in the University of Cambridge and Humphry Davy Rolleston, M.A., M.D., F.R.C.P., Senior Physician, St. George's Hospital, Cambridge. Cloth. Price, \$3 per volume. New York: The Macmillan Co., 1908.

A FIRST STUDY OF THE INHERITANCE OF VISION AND OF THE RELATIVE INFLUENCE OF HEREDITY AND ENVIRONMENT ON SIGHT. Eugenics Laboratory Memoirs V. By Amy Barrington, of the Galton Eugenics Laboratory, and Karl Pearson, F.R.S. Paper. Pp. 61. Price, 4 shillings. London: Dulau & Co., 37 Soho Sq. W., 1909.

CLINICAL DIAGRAMS. Designed for the Graphic Representation of Clinical Phenomena for Preservation with the Notes of Cases. By James C. Wilson, M.D., Physician to the Hospital of the Jefferson Medical College. Paper. Twenty-five sets, 50 cents. Philadelphia: J. B. Lippincott Co.

A SYSTEM OF OPERATIVE SURGERY. By Various Authors. Edited by F. F. Burghard, M.S., F.R.C.S., Teacher of Operative Surgery in King's College, London. In Four Volumes. Vol. 1. Cloth. Pp. 751, with illustrations. Price, \$10. New York: Oxford University Press, 1909.

STUDIES ON THYROID—1. THE RELATION OF IODIN TO THE PHYSIOLOGIC ACTIVITY OF THYROID PREPARATIONS. By Reid Hunt and Atherton Seidell, Hygienic Laboratory.—Bulletin No. 47, October, 1908. Paper. Pp. 115. Washington: Government Printing Office, 1909.

MEDICINE IN ABSTRACT. By Henry P. Kohberger, Ph.B., M.D., Associate Professor of Medicine and Director of Clinical Laboratory, University of Pittsburg. Flexible Leather. Pp. 218. Price, \$1. Pittsburg: Medical Abstract Pub. Co., 219 Sixth street.

THE HOLDEN SYSTEM OF CARD RECORDS. A series of printed cards for filling out systematic card records including all data of history, examination, treatment, charges, etc. Adjustable, expandable, transportable, consultable. Yonkers, N. Y.: The Holden System.

A MANUAL OF OPERATIVE SURGERY. By H. J. Waring, M.S., M.B., B.Sc., F.R.C.S., Senior Assistant Surgeon St. Bartholomew's Hospital. Edition 3. Cloth. Pp. 750, with illustrations. Price, \$3.75. New York: Oxford University Press, 1909.

MOVABLE KIDNEY. By C. W. Suckling, M.D., M.R.C.P., Consulting Physician to the Queen's, to the Children's and to the Orthopedic and Spinal Hospitals. Cloth. Pp. 155. Birmingham: Cornish Brothers, 37 New street, 1909.

ANNUAL REPORT OF THE HEALTH DEPARTMENT OF THE CITY OF RICHMOND, VA., 1908. Paper. Pp. 113.

PROCEEDINGS OF THE NINETEENTH CONVENTION OF THE BALTIMORE & OHIO ASSOCIATION OF RAILWAY SURGEONS, 1908. Paper. Pp. 118.

REPORTS OF THE TRUSTEES AND SUPERINTENDENT OF THE BUTLER HOSPITAL. Presented to the Corporation at its Sixty-Fifth Annual Meeting, Jan. 27, 1909, Providence, R. I. Paper. Pp. 52.

MORTALITY STATISTICS—1907. EIGHTH ANNUAL REPORT. Department of Commerce and Labor, Bureau of the Census. Cloth. Pp. 538. Washington: Government Printing Office 1909.

REPORT OF THE COMMISSIONER OF EDUCATION, 1908. Vol. 1. Cloth. Pp. 382. Washington: Government Printing Office, 1908.

THE JOHN CRERAR LIBRARY, FOURTEENTH ANNUAL REPORT, 1908. Paper. Pp. 12. Chicago.

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Original Articles

THE SUPPRESSION OF A CHOLERA EPIDEMIC IN MANILA

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MANILA

The cholera epidemic of September, 1908, was probably a continuation of the outbreak which had its greatest intensity in January, 1908.

In January, 1908, there were 184 cases of cholera in Manila. In February, 14 cases of cholera were registered, and in March, 3 cases were registered. In April cases resembling cholera clinically began to present themselves, which bacteriologically were negative. On May 14, 1 case bacteriologically positive was reported. June 11, 1 case of true cholera was found, and suspicious cases, resembling cholera clinically but negative bacteriologically, were found on June 3, 4, 18, 19, 24 (2 cases), 27, 28 and 29. These cases resembled the true clinical picture of cholera more closely from day to day. Some were fatal in a few hours, and the intestinal contents yielded a motile vibrio which resembled the cholera vibrio but did not respond to the agglutination test. These suspicious cases, negative bacteriologically, continued in July as follows: July 4, 8, 11, 13, and 14, 1 case each.

On July 16 a case of typical cholera was found, and thereafter cases of true cholera appeared in July as follows: July 21 and 22, 1 case each; July 26, 2 cases; July 28, 4 cases; July 29, 3 cases; July 30, 4 cases; July 31, 2 cases.

In August cases of cholera, bacteriologically confirmed, were as follows:

August 1.....	2	August 20.....	1
August 2.....	1	August 21.....	1
August 3.....	2	August 23.....	3
August 5.....	1	August 24.....	4
August 6.....	4	August 25.....	2
August 7.....	1	August 26.....	3
August 8.....	2	August 27.....	6
August 9.....	2	August 28.....	1
August 10.....	2	August 29.....	2
August 13.....	3	August 30.....	5
August 17.....	1	August 31.....	5
August 19.....	1		

These suspicious cases bridged over a gap between the outbreak of January, 1908, and that of September, 1908. One need only see these cases at the bedside or at the autopsy to recognize the possibility that they may be cases of cholera in which the vibrio has lost some of its properties, including its agglutinability with high dilutions of anti-cholera serum.

Kolle,¹ in a series of vibrios taken from cases in Egypt, which clinically were cholera, found only a few vibrios which did not agglutinate with anticholera serum; Kolle's conclusion was that these were cases of

cholera, but that, because of faulty technic, the cholera organism was not isolated. His contention is that other vibrios are sometimes found in the human intestines which, in the enriching fluid, grow more vigorously than the cholera vibrios, and one may easily fail to isolate the cholera organisms. This seems unlikely to occur in any considerable number of cases, especially if the transfer to the hard media is made direct from the stool or after a very short time of growth in the peptone solution.

From September 1 to 9 there was an average of about three cases daily. On the 10th the cases reached 7, on the 11th 9, and on the 12th 17. The course of the disease is well displayed on the chart (Fig. 2), and on the accompanying table, showing the cases from Sept. 1 to Oct. 12, 1908:

September 1.....	3	September 23.....	45
September 2.....	1	September 24.....	40
September 4.....	6	September 25.....	44
September 5.....	4	September 26.....	37
September 6.....	4	September 27.....	14
September 7.....	4	September 28.....	18
September 8.....	5	September 29.....	13
September 9.....	3	September 30.....	11
September 10.....	7	October 1.....	12
September 11.....	9	October 2.....	10
September 12.....	17	October 3.....	5
September 13.....	11	October 4.....	9
September 14.....	10	October 5.....	11
September 15.....	16	October 6.....	6
September 16.....	37	October 7.....	8
September 17.....	25	October 8.....	13
September 18.....	24	October 9.....	8
September 19.....	43	October 10.....	6
September 20.....	60	October 11.....	3
September 21.....	55	October 12.....	4
September 22.....	38		

The high-water mark of the epidemic was reached on September 20, when 60 cases were reported in twenty-four hours.

When the number of cases reached 9 on September 11, I recognized the probability of an epidemic and took personal charge of the operations. On September 12 the number reached 17, 12 being in Meisic district. On investigating this district I found that in 18 cholera houses, that is, houses in which cases of cholera had occurred, in every case the closet was in a filthy condition. The following combination occurred: filthy closets, rats, flies, cockroaches, and other insects, and a kitchen immediately adjoining the closet; with which all that was necessary to produce the disease was the presence of the bacillus-carrier, who, by using the closet, would furnish the infective material.

Two additional disinfecting squads were put to work immediately for the exclusive duty of disinfecting closets, and on September 13 the cases dropped to 100, and on September 14 to 10. On September 15, 16 cases occurred, and 105 additional men were employed. This force was increased as rapidly as possible without causing confusion and disorganization, and by September 22 the complete organization of 500 men was working smoothly. This force was increased by September 25 to 600 men.

1. Ztschr. f. Hyg., xlv.

ORGANIZATION

The Property Division of the Bureau of Health purchased all supplies and equipment, with a very slight increase of personnel. The Statistical Division of the Bureau of Health took care of the records and statistics. The Clerical Division handled all financial transactions and current business. The Department of Sanitation and Transportation of the City of Manila furnished ambulances, tank wagons, carretelas, carromatas, and horses.

The boundaries of the health districts already existing were left unchanged, the city being divided as follows:

Station J.—Intramuros, including Malate and Ermita.

Station L.—Paco, including Santa Ana, Pandacan, etc.

Station A.—Meisic, including Binondo, Quiapo and Santa Cruz.

Station C.—Tondo.

Station I.—Sampaloc.

The office force of each station was not increased, but the field force was enormously increased.

The organization of the field force was as follows. That of Station A, Meisic District, being given in detail by way of illustration:

STATION A.—MEISIC DISTRICT

- 1 medical inspector, in charge of district.
- 3 municipal physicians, assistants to medical officer in charge.
- 1 sanitary inspector, in charge of all the men.
- 1 sanitary inspector, for inspection of disinfecting gangs and quarantines.
- 12 American foremen, each in charge of a lime squad.
- 124 Filipino lime-throwers.
- 2 American foremen, each in charge of a disinfecting tank wagon and 6 men.
- 12 Filipinos, 6 for each disinfecting wagon.
- 1 chemical fire engine and crew.
- 1 disinfecting carretela, with crew of 5 men, disinfectants and hand pumps; for room disinfection of cholera infected houses.

TOTAL PERSONNEL OF STATION

- 4 medical officers.
- 2 sanitary inspectors.
- 14 foremen.
- 136 Filipino laborers.
- 5 Filipino disinfectors.

TOTAL.....161

TOTAL PERSONNEL ALL STATIONS *

	Med. Offs.	San. Insp.	Foremen.	Labor-ers.	Disinfectors.	Total.
Station A, Meisic.....	4	2	14	136	5	161
Station C, Tondo.....	3	1	8	86	5	103
Station I, Sampaloc.....	2	1	6	112	5	126
Station J, Intramuros.....	2	2	9	117	10	140
Station L, Paco.....	2	1	4	58	5	70
Total	13	7	41	509	30	600

Lime squads varied in size according to the district. In open districts, or sparsely settled districts, one foreman could properly supervise from fifteen to twenty-five men. In a district like Meisic, where the houses are crowded together, a foreman could not properly supervise more than twelve men.

One mechanic was assigned to the duty of keeping the disinfection wagons, pumps and hose in good condition. He traveled from wagon to wagon with tools, thus avoiding sending the wagon in for repairs, which

were often trivial and could be made in a few minutes on the spot.

The amount of disinfectants used was enormous, about 150,000 pounds of lime daily, and about 700 gallons of carbolic acid or its equivalent in creolin, tricresol or formalin. There was some difficulty in securing enough disinfectants to satisfy this enormous demand. The entire stock of carbolic acid, formalin and tricresol in the Philippine Islands was used before the end of September. Four thousand gallons of Jeyes fluid (a creolin preparation) were secured from Hongkong and Japan in time to prevent the wagons lying idle. Four of the eleven tank wagons might have lost two days on account of lack of disinfectants, but the director of the Bureau of Science suggested that salt water could be electrolyzed, forming a disinfecting fluid, which, according to laboratory tests, would kill cholera bacilli promptly. His offer to electrolyze the solution was accepted, and for two days four of the wagons used this fluid. In a short time all the lime in Manila and vicinity was used and the entire daily output of the kilns in the Island of Luzon was taken. The lack of lime sometimes caused the cessation of lime disinfection at 3 or 4 o'clock in the afternoon, but lime squads were equipped with shovels, hoes, rakes, brooms or other cleaning instruments, and their spare time was utilized in digging ditches and cleaning up the yards of premises.

Infected districts were subdivided into subdistricts; maps were made of these subdistricts, and the foreman in charge of a disinfecting wagon or lime squad was furnished with a map of his subdistrict.

The ordinary chemical fire engine makes an excellent disinfecting apparatus. The eighty-gallon tanks are charged with carbon dioxide produced from bicarbonate of soda and sulphuric acid; to make an efficient disinfecting solution it is only necessary to add carbolic acid, creolin or other disinfectant to this solution. The ordinary street-sprinkling wagon is convertible into an excellent apparatus. All that is necessary is to install an ordinary pressure pump and several hundred feet of hose, put in the disinfectant, and fill the tank from the street hydrant. We used eleven of these wagons and four chemical engines, and they were all effective. The tank wagon possessed the advantage of being cheaper, as the cost of soda and sulphuric acid for charging the chemical engine is not inconsiderable. In Manila the cost was offset by the fact that we received the services of the chemical engine crew free of charge.

Several kinds of disinfectants were used in the tank wagons. Crystal carbolic acid does not mix readily and requires careful handling when used on a large scale. Formalin is good but causes a great deal of complaint from the people because of its irritating properties. Crude carbolic acid, in our experience, did not mix well, and from both kinds of carbolic acid, because of irregular distribution in the solution, minor accidents occurred, as burning of the hands and feet of the laborers, and killing of dogs and chickens. The most satisfactory disinfectant was Jeyes fluid. It is nearly fireproof and is very effective. It mixes perfectly with water, forming a milky solution of uniform strength. It does not burn the hands or feet of the laborers or children about the house, and no ill effects on animals or chickens were noticed.

The simplest and most effective way to use lime is with a bucket and a ladle. The lime gang of from fifteen to twenty-five men was handled by one white fore-

* This does not include police for house-to-house inspection, nor some 300 men of the city street cleaning force, who have been assisting in draining the worst places in the barrios, nor the constabulary for quarantine guards.

man and one native *capatas*. Each gang was followed by a cart with lime. Each native lime-thrower carried a bucket and scoop or ladle. After a little patient instruction, the natives learned to use the lime to the best advantage, to place it where it was needed, and to avoid the spots where it was unnecessary. Their instructions were definite and included liming all closets and places where fecal matter existed or was likely to be deposited.

Each chemical engine was handled by its own crew in charge of a lieutenant of the fire department.

Each tank wagon was in charge of an American foreman, who directed the disinfection, was responsible for the thoroughness of the work and for the conduct of the six natives who manned the pump and hose.

struction was encountered; the man in question refused to permit the disinfectors to enter; he was arrested, fined 50 pesos, and no further trouble occurred.

The organization was mobile, and concentration of disinfecting wagons from Paco, Intramuros and Sampaloc, as a reinforcement of Meisic and Tondo, was effected when necessary, with good results.

The general plan of campaign was as follows:

House-to-house inspection by police to discover promptly cases of cholera.

Constabulary guard on house and inmates to prevent ingress and egress until removal of the patient and disinfection of the house.

Examination of the stools of cholera contacts to find

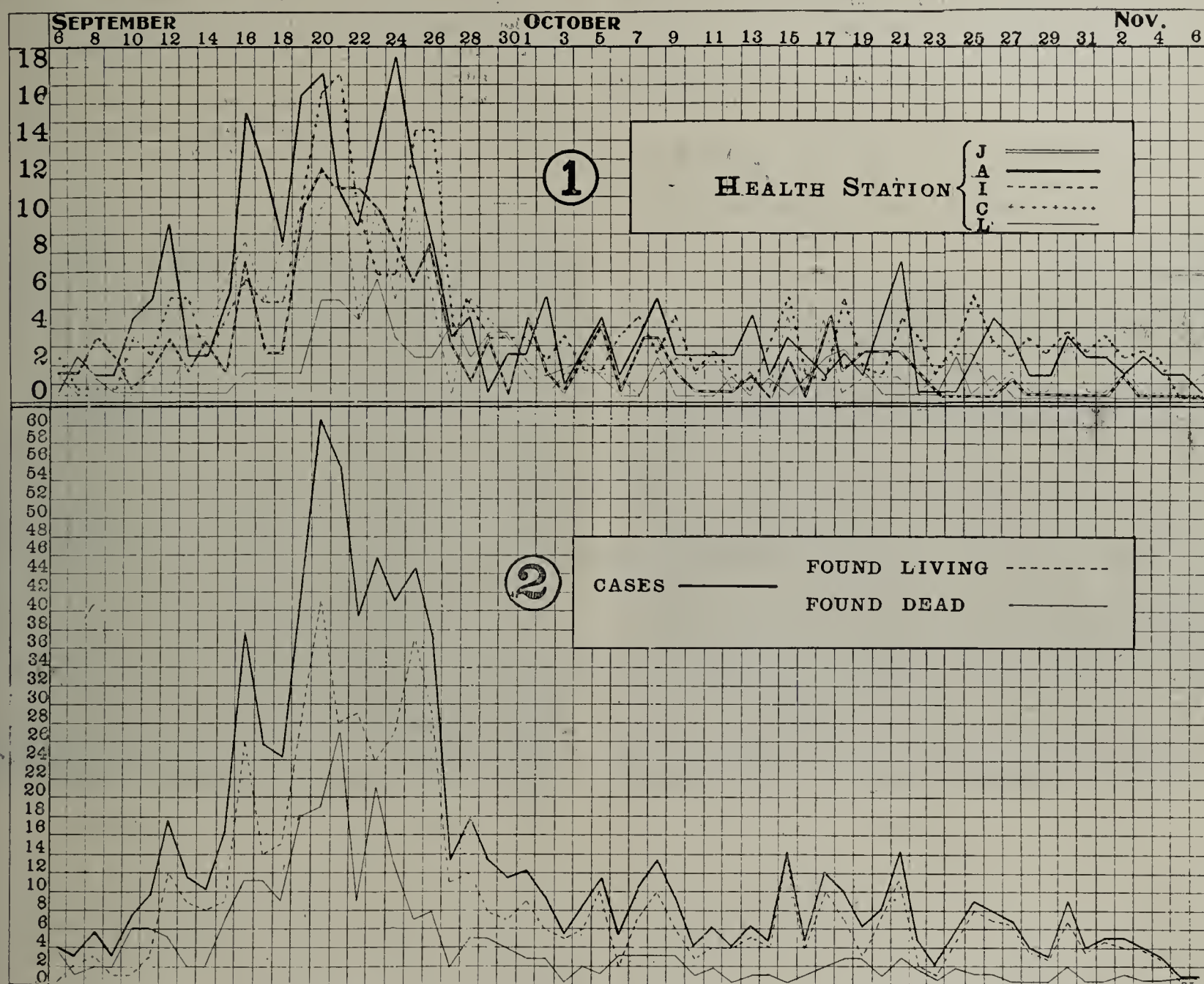


Fig. 1.—Chart showing the prevalence of cholera in Manila from Sept. 6 to Nov. 6, 1908. The spread of infection by districts: Station J, Intramuros, including Malate and Ermita; Station A, Meisic, including Binondo, Quiapo and Santa Cruz; Station I, Sampaloc; Station C, Tondo; Station L, Paco, including Santa Ana, Pandacan, etc.

Fig. 2.—Chart showing the number of cases found daily.

In giving foremen their instructions great stress was laid on the necessity of displaying courtesy at all times. They were instructed to take part in no argument with householders or others, and to do their work with consideration for the feelings of the people, but none the less thoroughly. If actual obstructions were encountered they were to notify the central office at once. The result of these instructions was that during the whole campaign the valid complaints were less than a dozen. All complaints were promptly investigated by the acting director of health, and if found valid the foreman in charge was dismissed. Only one case of actual ob-

baeillus-carriers, the baeillus-carriers being sent to San Lazaro Hospital for treatment.

Daily disinfection of all insanitary closets with lime, and disinfection of ground surfaces known to be, or suspected of being, soiled with fecal matter.

An attempt was made to disinfect daily all closets in the strong material districts which were not flush closets or which were not kept clean. In the light material districts the effort to disinfect the dejections of the entire population necessitated the disinfection of entire districts. It was necessary to disinfect practically the whole ground area. When one considers the

enormous area to be covered daily in Tondo, Sampaloc, Malate and Paco, with their outlying barrios, and the fact that there are over 5,000 insanitary closets in the Meisic district alone, the magnitude of this work may be imagined.

Two general methods of disinfecting were employed: (1) the spreading of lime; (2) disinfection with water wagons, hose and pump, or by chemical engines containing carbolic acid, creolin, formalin or other disinfecting material.

Lime was effective in conjunction with drainage in the low-lying, swampy nipa districts, and also for disinfecting the bad closets in the strong material districts. The tank wagons and chemical engines were used for general disinfection of lower floors, outhouses, patios, stables and closets in both strong and light material districts.

My experience in the recent epidemic points to the fact that the most important rôle in the transmission of cholera is played by the bacillus-carrier.

If a bacillus-carrier be a person of cleanly habits, and if he can and does make use of proper closet facilities, he is practically harmless. But, on the other hand, a bacillus-carrier of filthy habits, who has no closet facil-

The following tables show the number of apparently healthy persons examined for cholera bacilli and the number who were really carrying the bacilli:

BILIBID PRISON	
Number of persons examined.....	264
Number found positive.....	17
Percentage found positive.....	6.44

CITY OF MANILA (Exclusive of all hospitals and Bilibid Prison)	
Number of persons examined.....	376
Number found positive.....	27
Number found negative but containing vibrios other than cholera	46
Percentage found positive.....	7.18
Percentage found negative but containing other vibrios than cholera	12.23

Even with perfect daily disinfection of closets and places soiled with fecal matter, all chance of infection from bacillus-carriers is not cut off, because a bacillus-carrier with soiled fingers may infect the food or drink of other persons.

The prohibition of certain native foods, fruits and vegetables was necessary, not only because these substances were often infected or dangerous of themselves.



Fig. 3.—Chemical fire engine converted into disinfecting apparatus.



Fig. 4.—Street-sprinkler converted into a disinfecting wagon.

ities, or refuses to avail himself of the public closets furnished him, is the greatest menace to the public health which can possibly exist, so far as cholera is concerned. The demonstration of the fact that over 7 per cent. of apparently healthy individuals in the Meisic and Tondo districts were bacillus-carriers, coupled with the insanitary closets of Meisic district and the absence or failure to use public closets in the nipa districts, will go far toward explaining the dissemination of cholera in Manila this year.

Every effort was made to discover promptly light cases of the disease and bacillus-carriers. When a case of cholera was found the house was quarantined until the removal of the patient and the completion of the disinfection. The stools of the other inmates were taken for the purpose of discovering bacillus-carriers. These, if found, were sent to the San Lazaro Hospital and there detained until the vibrios disappeared from their stools. A house-to-house inspection was made of a large area, having the infected house for a center. This was done daily for five days.

but they were also the substances carelessly handled by dirty people of dirty habits, many of whom were undoubtedly bacillus-carriers, and they were the substances which were eaten without sterilization by boiling or cooking after such handling.

It has been demonstrated this year that the perennial outbreaks of cholera in Bilibid Prison are probably due to bacillus-carriers. On the appearance of cholera in Bilibid Prison this year I gave orders that stools be examined for cholera of those who had anything to do with the preparation or handling of food or drink. Out of twenty-six apparently healthy persons, seventeen were carrying cholera organisms in their intestines. To find out and isolate all the other bacillus-carriers would have involved an amount of work in stool examinations alone which would have been impossible for the already overtaxed bacteriologists.

Results were obtained by an order which I issued to compel washing of the hands in disinfecting solution after stool and before eating. This order was enforced and cases ceased to appear, although there were doubt-

less many bacillus-carriers among the 3,000 prisoners whose stools had not been examined.

The practice of taking stools had to be discontinued when the cases increased to such an extent that it was no longer possible to do it. For the same reason the house-to-house inspection of infected areas had to be supplanted by a general house-to-house inspection of the whole city when the number of infected houses, that is, houses in which cholera had appeared within five days, reached 200.

Failure to find cases of cholera early makes the suppression of the disease difficult. Patients, even with the house-to-house inspection, are from two to twenty-four hours sick before discovery. On discovery a quarantine guard is placed on the house and inmates, and from this point that particular focus is adequately cared for, but in the hours before discovery other individuals probably have been infected.

When a Filipino falls ill all the neighbors, either through interest or curiosity, will crowd into the house. On discovery of the case, or decision of the householder or doctor to report it, these people promptly scatter, go to their meals without washing their infected hands, eat their rice with these same infected hands, and even



Fig. 5.—Small water wagon converted into disinfecting wagon.

carry with them from the infected house mats, articles of clothing, food and drink to save them from the all-destroying disinfectors. Our disinfectors try to trace out these other houses to which clothing, etc, has been carried, but it is very difficult and often impossible.

To illustrate the spread of the infection in this way, the course of the disease in the Meisie District, Station A, may be taken as an example. It will be observed (Fig. 1) that every four days there is a sudden increase in the number of cases. These are the persons infected from the cases of four days previous. It does not mean an incubation of four days, for these patients when found have already been sick for some time, but it would indicate an incubation of from two to three days.

Considering a house where cholera has been found within five days as a focus, on September 23 there were 241 infected foci in the city of Manila, well scattered, as is shown by the following table:

Meisie	66
Tondo	59
Sampaloc	41
Intramuros	54
Paco	21
Total	241

With the organization and the employment of the measures outlined above, in twelve days the number of cases was reduced from 60, the maximum number in one day (September 20), to 5 cases on October 3. A few cases occurred daily throughout October, and these cases, in nearly every instance, came from well-known cholera areas, districts in which cholera persists after its eradication from the more cleanly and sanitary portions of the city.

For example, of the last 75 cases in October, one-third occurred in the district bounded by Calles Bilibid and Paz on the south, Calle Magdalena and San Lazaro on the west, the railroad on the north, and Calle Felix Huertas on the east. This district has no surface drainage, the interiors were lower than the street gutters of Calle Cerventes and the majority of the houses, during the greater part of the year, stand over collections of filthy water, slime and muck. This office demonstrated to the city authorities the feasibility of draining this area by ditches and the drainage work is now in progress.

Nine per cent. occurred in a triangle formed by Calle Ascarraga on one side, Tondo Beach on the second side,



Fig. 6.—Lime-throwing squad.

and Calle Ylaya and Calle Quesada on the third side, one of the best examples of the illegal perpetuation of the nipa shack in the strong material district. Less than 10 per cent. were found in the strong material district, and most of these could be traced to one of the above-mentioned plague spots.

Cholera is the same disease, whether encountered in Germany, Russia, Italy, Egypt, India or the Philippines, but the measures taken to prevent its spread and to suppress the infection depends on the geographical location of the epidemic. To suppress a cholera epidemic in a country like Germany, for example, it is a comparatively simple proposition, while in the Philippines its suppression is complicated by existing conditions peculiar to these islands.

Four things are of prime importance for the suppression of cholera: (1) a good water supply for all the people; (2) safe disposal of the defecations of the entire population; (3) prompt discovery of cholera cases, suspects or bacillus-carriers, with immediate isolation and disinfection; and (4) habits of cleanliness.

If the water supply is free from cholera and can be kept so, then the spread of the epidemic depends on the

improperly cared-for stools of the persons carrying the bacilli of cholera. Flies, cockroaches and other insects or animals having access to such stools carry the infection to food or drink. There is infection from persons who do not wash their hands and whose soiled fingers carry the infection to food or drink. There is also direct infection from actual cases of cholera.

WATER

Manila city water has been examined daily by the Bureau of Science and the cholera bacilli have not been found therein. However, with the appearance of cholera in San Mateo and Marikina, it was deemed prudent to place a military guard to prevent possible pollution of the river.

The new water supply, taken from higher up the gorge, will be practically safe from contamination by human excrement.

The great trouble with the Manila water supply is that it does not reach all the people. Some barrios are at a great distance from the nearest hydrants, and the inhabitants must carry or pay for carrying water a long distance. As a result they use the water from shallow wells, ponds, esteros or other questionable sources for washing clothes, kitchen utensils, and also in many instances for drinking purposes.



Fig. 7.—Drainage of a cholera area under the direction of the Bureau of Health.

It was deemed necessary to close all wells, except a few in the more distant barrios, which were treated with permanganate of potash. In addition, wherever possible all stagnant places were drained by digging ditches, and certain small, infected esteros were patrolled by the constabulary to prevent the people using the water.

DISPOSAL OF HUMAN EXCREMENT

The new sewer system is another sanitary improvement anxiously awaited. The existence in Meisic districts of thousands of tight vaults and filthy closets is responsible in a great measure for the spread of cholera in that district and the difficulty experienced in eradicating the disease. These filthy closets and tight vaults can be replaced by modern flush closets connected with the new sewer system. In the newer residence districts septic vaults and absorbing basins are used as receivers of sewage from modern flush closets. It will be an improvement when all vaults, however satisfactory, in construction, are no longer necessary, because of the installation of the new system.

In the nipa districts the people depend on the sparsely scattered closets or have no closet facilities whatever. In the latter instance the fecal matter is deposited in the most convenient place: in the long grass, in the estero, in pools or gutters, or under the house. The family pig takes care of a considerable quantity of human excreta and garbage.

There are large barrios within the limits of the city of Manila where the only way of entrance is a path too narrow to permit a wagon to enter. In these, of course, there is no collection of garbage nor are there any closet facilities.

Habits of cleanliness are best secured by a campaign of popular education. Excluding the water supply and the disposal of feces, the other factors in spreading infection can be nullified by the inculcation of cleanly habits. If the bacillus-carrier washed his hands often enough and at the proper times he would not transfer infection from his dirty fingers to the food or drink of others. If the kindly native neighbors who assist these sick with cholera, and who disappear before the arrival of the health officers, can be taught the necessity of washing their hands before eating or handling food, many more cases will be prevented.



Fig. 8.—Drainage of a cholera area under the direction of the Bureau of Health.

The Bureau of Health has printed cholera circulars in Spanish, English and all the native dialects, telling how to protect one's self and others against the infection of cholera. This campaign is best conducted in the schoolroom and from the pulpit. The Bureau of Education and the Roman Catholic Church have cooperated in an attempt to spread the knowledge and advice contained in the cholera circulars among the people. Efforts along this line have met with success, but it requires a long time to change the habits of a people entirely, and it will probably require another generation to complete the work.

In my report to the Secretary of the Interior I have made the following recommendations, calculated to prevent the recurrence of cholera in epidemic form in Manila. The difficulties which attend the carrying out of these projects are recognized as well-nigh insuperable, but the ideals are not impossible, and an attempt to realize them should be the policy of the bureau.

The Manila city water supply must be extended to every part of the city and placed within easy reach of every one.

Tanks and reservoirs must be so constructed as to preclude the possibility of contamination.

Esteros must be controlled and confined to definite beds either by adequate walls or by dredging so that any overflow land will be drained between tides.

It is essential to fill in low places which can not be drained to the proper height above the curb.

Public closets must be established in all barrios, so that every inhabitant of the city of Manila will have closet facilities at his disposal. It is advisable to have more closets even if of less seating capacity; six closets of six pails each will be of more value than three of twelve pails each, for the reason that the native has a shorter distance to travel; also the cutting of alleys through the back yards will facilitate his journey to the closet.

Before permitting land to be used for building purposes within the city limits the land should be subdivided



Fig. 9.—Sample of construction permitted by the municipal board in the strong material district of Manila.

vided by streets and alleys on a definite plan. The indiscriminate building of nipa shacks on the interior of a block without order or regard for necessary intervening spaces should not be permitted. Streets and alleys should be cut through already existing collections of nipa shacks and when necessary houses removed to permit proper spacing. Streets must be opened into barrios within the city limits which are now isolated and have no wagon road entering them to permit the collection of garbage and refuse.

There should be a sufficient force of sanitary police to enforce the use and sanitary maintenance of closets.

All wells must be filled in.

More stringent measures should be used to compel the prompt reporting of suspicious cases, with severe penalties for infractions of this ordinance.

Stricter enforcement of the building code is necessary in the erection of new buildings.

Nipa shacks in the strong material districts must go, and repair to old nipa shacks, which perpetuate this problem, must be prevented. These nipa districts exist by sufferance within the strong material districts, dilapidated shacks crowded together in the most insanitary manner, where there are excellent public closets, patronized only by a select few. The majority still find it easier to deposit or throw their dejecta on the swampy ground. These districts are the natural homes of cholera, and from there the people who are trying to live decently are infected by means of cooks, coachmen or other servants, who spend their spare time in these plague spots.

A proper system of surface drainage is requisite for every part of the city of Manila, where such drainage is lacking, but especially (1) the San Lazaro Estate and that portion of the city from the San Lazaro Estate to the railroad crossing on both sides of Calle Cervantes; (2) Santa Monica; (3) Antonio Riveria; (4) Palomar and Magdalena interior; (5) that portion of Tondo north of Moriones and west of Estero de la Reina; (5) Malate district, bounded by Herran, Wright, San Andres and Nueva.



Fig. 10.—New light material construction permitted by the municipal board in strong material districts.

SYPHILIS OF THE STOMACH *

ARTHUR CURTIS, M.D.

CHICAGO

Syphilis of the stomach is of considerable pathologic interest because it is rarely diagnosed. Although the affection is infrequent, the value of recognizing its presence is enhanced for clinicians by the fact that serious complications, amenable to treatment, have arisen in two out of sixteen cases thus far reported. One is the case of Fraenkel,¹ in which extensive syphilitic ulceration resulted in general peritonitis and death; the other is a perforated syphilitic ulcer of the stomach reported by Flexner.²

Undoubted instances of stomach syphilis have been described by the following: Chiari³ (2 cases), Klebs⁴

* From the Pathologic Institute of the Berlin City Hospital (Krankenhaus Friedrichshain); director, Dr. Pick.

1. Fraenkel, Eugen: Virchow's Arch. f. Path. u. Path. Anat., 1899, clv; Münchener med. Wchnschr., 1901.

2. Flexner: Gastric Syphilis with Report of Case of Perforating Ulcer of Stomach, Am. Jour. Med. Sci., October, 1898.

3. Chiari: Magensyphilis Festschr. F. R. Virchow, 1891, II, 297

4. Klebs: Handbuch der Pathologischen Anatomie, 1869, I, 269.

(1 case), Cornil and Ranvier⁵ (1 case), Fraenkel¹ (1 case), Stolper⁶ (1 case), Flexner² (1 case), Weichselbaum⁷ (1 case), Birch-Hirschfeld⁸ (4 cases), Buday⁹ (1 case), Bittner (3 cases).

A summary of literature with synopsis of cases to date shows four important factors which play a part in the anatomic diagnosis.

1. Location of changes. — The seat of primary involvement is, as a rule, the submucosa, the gummatous tissue invading other coats secondarily.

2. Miliary gummata, sometimes with giant cells of the Langhans type.

3. *Spirochæta pallida*. — These are not to be depended on, according to the views of both Koch and of Schmorl.¹⁰ They are often not present in undoubted syphilis; on the other hand, Koch, using the Levaditi stain, found, in cases of undoubted carcinomata of the lung, organisms of the typical appearance of *Spirochæta pallida*.

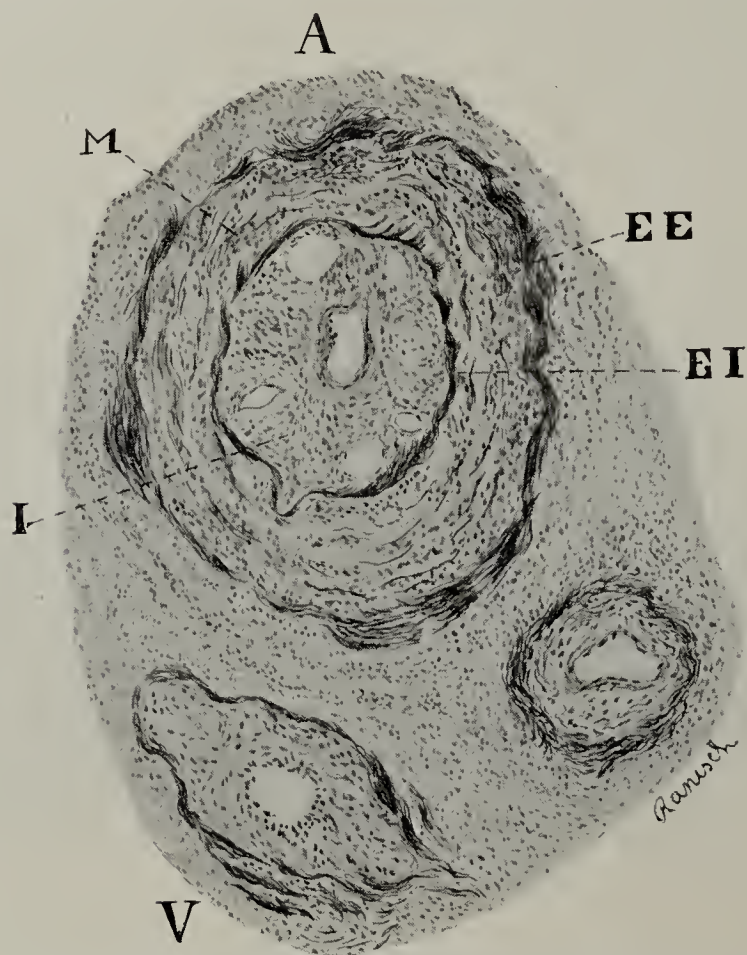


Fig. 1.—A group of three thickened blood vessels (orcein stain): A, artery; I, intima with high-grade subendothelial proliferation and cellular infiltration; in the center of the small lumen of the vessel; EI, elastica interna; M, thickened media; EE, elastica externa; V, vein correspondingly altered.

4. Peculiar vascular changes of high grade, resulting in partial occlusion or obliteration of vessels. — Cellular accumulations are found about the vessels. The latter may become thickened from cell increase, thus beginning from without, or subendothelial change may be the prominent feature. The process tends to spare many vessels entirely, while others are thickened to the point of occlusion.

Chiari,³ with careful examination of 243 cases of syphilis, extending over a period of seven years, found only two gastric cases. The first was that of a three

weeks' child with multiple syphilitic involvement. In the stomach were several flat, gummatous elevations, the majority being superficially ulcerated. Microscopically the submucosa consisted of round, oval and spindle-celled new tissue. Round cells were beautifully arranged about the vessels and invaded their walls to a limited extent. The second case was that of a man with stomach ulcer, showing an infiltrated ulcer wall and a surrounding gummatous area, chiefly situated in the submucosa. The microscopic findings were as in the previous case, except for more marked vascular changes.

Fraenkel¹ thoroughly demonstrated the almost pathognomonic changes in the blood vessels. In a case with gumma of the spleen and thirty-one syphilitic ulcers of the intestine, he found thirteen ulcerating gummata of the stomach. Encircling the veins were round, oval and spindle cells, which penetrated the vessel walls, causing a thickening of the coats with partial or complete obliteration of the lumina. In some veins existed a localized, narrowing endophlebitis, not infrequently associated with the just-mentioned cellular infiltration from without. The arterial walls were penetrated by similar granulation tissue, the degree of alteration being a lesser one. Fraenkel found similar changes in a case of intestinal syphilis.

Other authors emphasize the localization of changes in the submucosa; Stolper⁶ describes a submucosa infil-

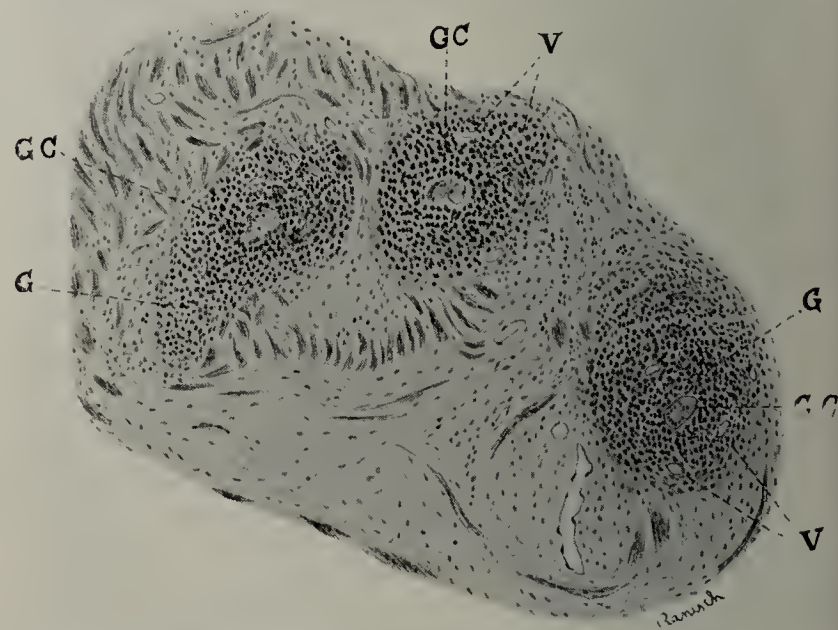


Fig. 2.—Miliary gummata imbedded in fibrous and muscle tissue: G, gumma, composed of epithelioid cells; GC, giant cells of Langhans type; V, blood vessels, found plentifully in each nodule.

tration, microscopically showing large connective tissue cells, most numerous about the vessels, in which they cause frequent obliteration.

Patient.—The case under present consideration is that of a woman, aged 30, who was on the surgical service, in Pavilion IX, Krankenhaus Friedrichshain, Berlin. Points of interest in the history, obtained through the kindness of the chief surgeon, Oberarzt Dr. Braun, are as follows:

History.—The patient at the time of entrance had been married twelve years and had had four apparently healthy children and one abortion. After the birth of her third child, while the patient was confined in the Charité Hospital with postpartum parametritis, a brownish-red, spot-like eruption was present on the chest. Further suggestive of possible syphilis is the fact that the patient once had complete paralysis of the right arm and leg, the trouble gradually passing away in two weeks. (At the time of obtaining the history the examining physician noted a drooping of the right side of the face and decreased power in the right hand.) Stomach trouble began one and a half years before entrance into the hospital.

5. Cornil and Ranvier: Manuel d'histologie pathologique, 1884, ii, 269.

6. Stolper: Beitrag zur Syphilis visceralis, Biblioth. med., 1896, C., No. 6.

7. Weichselbaum: Ber. d. Rudolfspitales in Wien, 1883, p. 383.

8. Birch-Hirschfeld: Lehrbuch der pathologischen Anatomie, ii.

9. Buday: Virchow's Arch. f. Path. u. Path. Anat., cxli, 517.

10. Schmorl: Verhandl. d. deutsch. Gesellsch., ii.

with pains after meals, at times associated with vomiting. Fourteen days before entrance one-half cup of blood was vomited.

Examination.—Physical examination showed above the navel a moderately tender, apple-sized, slightly movable tumor, distinctly separable from the liver. Dilatation of the stomach showed that the mass lay on the greater curvature. An examination of stomach contents revealed combined acid decreased, free hydrochloric acid absent, lactic acid present in small amount. A diagnosis of carcinoma was made, and operation was decided on.

Operation.—In the stomach, anteriorly, not far from the pylorus, and posteriorly near the head of the pancreas, were tough, flat, tumor-like thickenings of the wall. A gastrectomy was performed, the resected portion extending from the middle of the stomach almost to the pylorus. The excised tissue was taken to the pathologic institute, where Dr. Pick made a macroscopic diagnosis of gummata of the stomach, with beginning ulceration.

Postoperative History.—Following the operation the patient went on to uneventful recovery. Tuberculin skin and conjunctival tests, which were made during convalescence because of the unusual appearance of the excised tissue, failed to give the tuberculin reaction. Wassermann's test was unsatisfactory.

Pathologic Specimen.—The resected stomach, preserved in

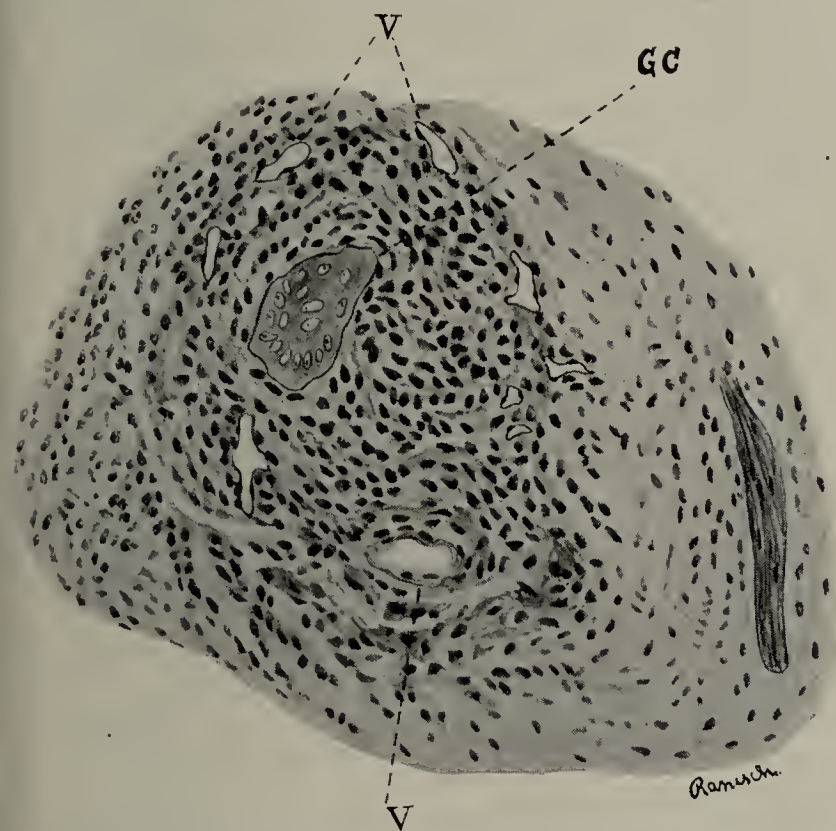


Fig. 3.—Young gumma, under high magnification, showing cell structure; V, numerous blood vessels in a stroma of epithelioid cells; there is absence of spindle cells, indicating that the process is not far advanced; GC, giant cell, with pale peripheral nuclei.

natural condition in Pick's solution, presented a wall which was everywhere somewhat thickened. The mucosa was mammillated, with gastric areas clearly defined and unusually prominent. On the mucous surface of the opened stomach two flat longitudinal elevations were seen. One elevation was 7 cm. in length, with average width of 2.5 cm. It was covered with an ulceration which extended through the mucosa, here and there involving the submucosa. The slightly elevated wall of the ulcer was composed of a series of confluent crescents, and was sharply defined, with vertical margin except for 1 cm. of its length along the upper border, where it was undermined. The base had a thin grayish coat, the removal of which laid bare the mottled, fatty-looking submucosa. Except at the margins the ulcer floor was elevated to the level of the uninvolved mucous membrane of the stomach. The second elevation lay parallel with and beneath the first. It rose gradually from the surrounding gastric mucosa, forming a smooth, yellowish-brown, plateau-like elevation, 6 cm. in length and 2 cm. in width, the end nearer the pylorus being capped with a small irregular ulceration. There were no tubercles associated with

the ulcers, nor were they to be found on the corresponding serosa. The involved tissues, including the ulcer floor as well as the non-ulcerated elevations, had an elastic, rubber-like consistence. Incision through the thicker portions showed that the increased thickness of the stomach wall was due mostly to changes in the submucosa.

Microscopic Examination.—Specimens were stained with the following: Weigert's elastic tissue stain, hemalum and eosin, orcein, carbol fuchsin, silver nitrate and pyrogallie acid. The submucosa consisted of coarsely meshed cells, with clearly staining nuclei. It was very richly vascular and in association with the blood supply characteristic changes were manifest. There were extensive accumulations of round, oval and spindle cells, most numerous in the vicinity of blood vessels, around which they formed concentric rings, and, invading the vascular coats, greatly increased their thickness. In many veins, and in a lesser number of arteries, the lumen was entirely occluded, an orcein stain being necessary to establish the identity of the vessel. (Fig. 1.) A limited number of vessels on cross-section were free from areolæ of cells, while in the case of those longitudinally cut a part of the course might be entirely free, with the remainder surrounded by a rich cellular envelope. A subendothelial proliferation occurred in some vessels; it involved as a rule only a portion of the circumference and took place independent of cellular encroachment from without. The richness of cell infiltration prohibited the determination of subendothelial proliferation in many blood vessels. The submucosa and that portion of the muscular coat adjacent to it contained several accumulations of epithelioid cells bearing characteristics of gummata. (Fig. 2.) They showed no tendency to necrosis, small blood vessels being numerous and distributed throughout. Giant cells with peripheral position of the nuclei (Langhans type of giant cells) were found in association, and in a few instances existed also entirely independently. Among the foreign elements were numerous eosinophiles and also a goodly number of polynuclear leucocytes. The lymph vessels were distended with round cells; lymph follicles were numerous, each supplied with easily distinguishable large capillaries. In the mucosa and muscular layers, except for the persistence of a moderate perivascularitis, and the noteworthy accumulations of epithelioid cells found near the submucosa, no changes were manifest. Stains for the *Spirochæta pallida* by Levaditi's method gave negative results. Careful search for tubercle bacilli was likewise negative.

Differential Diagnosis.—The possibilities which came into consideration were (1) simple gastric ulcer, (2) tuberculous ulcer, and (3) syphilis.

Simple gastric ulcer did not account for plate-like, non-cicatricial thickening of the stomach wall, or extensive perivascular proliferation with high-grade vascular occlusion. It would, moreover, be unusual for the base of an extensive simple ulcer to be elevated to the same plane as the surrounding gastric mucosa.

Tuberculosis, although extremely rare in the stomach, was more difficult to exclude. The presence of Langhans giant cells narrowed down the diagnosis to either tuberculosis or syphilis, but did not distinguish between them. In diagnosis of the above mentioned probably gummatus accumulations of epithelioid cells, three factors opposed tuberculosis. First, there was no caseation, such as would be somewhere expected among such a relatively large number of tubercles. Second, there was no sharp demarcation from the surrounding tissues. Third, there was present in each such nodule a liberal number of small blood vessels. Such a finding as this last, in the opinion of Baumgarten, is decisive evidence that we are dealing not with tubercle, but with gumma. (Figs. 2 and 3.) Such a marked infiltration of the stomach, and the accompanying ulcer having regular and vertical walls, are not suggestive of tuberculosis. Other negative findings were the absence of reaction with skin and conjunctival tuberculin tests, lack of tubercles on the serosa, and absence of tubercle bacilli.

Syphilis accounted most logically for the gross appearance of the specimen. It was a non-malignant, tubercle-free, plateau-like tumor, with gradual gradation into normal gastric tissue. The submucosa was primarily and chiefly involved. An

overlying crescentic ulcer, with fatty floor and base elevated to the normal gastric level, was characteristic. The microscopic picture was typical. There was a richly cellular infiltration localized about the vessels. The vessels were infiltrated with these cells, their walls were thickened, their lumina partially or completely occluded. Endovascularitis was present, chiefly in the veins. Such a vascular picture, with some vessels entirely normal, others tremendously thickened and invaded with cellular new growth, found in an individual thirty years of age, is that of syphilis. The finding of giant cells and miliary gumata plentifully supplied with blood, verifies the diagnosis.

This surgical case serves to emphasize once more the value of utilizing every available resource in diagnosis of stomach diseases. Syphilis is probably a more frequent cause of gastric tumor than is commonly recognized. Inasmuch as the therapeutic mercurial test is so easily applied, it is at least worthy of consideration in certain selected cases.

PARTIAL MYXEDEMA*

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The morbid conditions resulting from total abolition of the thyroid functions constitute a distinctive and well-known clinical picture. Partial insufficiency of the thyroid gland likewise occurs, in all gradations to complete suppression of its activity, and corresponding partial, incomplete or transitional clinical forms of myxedema are observed ranging in intensity to the typical and complete forms, and in connection with all the varieties of the disease, adult, infantile and postoperative. The symptoms are much less characteristic than in the complete forms, and a clear conception of this class of cases has not yet become crystallized in the professional mind.

Various names have been applied to the condition under consideration. In the English language it is usually called "partial" or "incomplete myxedema," or "partial" or "incomplete hypothyroidism." The usual French designation is *myxœdème fruste*, or the *forme fruste* (as contrasted with the complete form, *myxœdème franc* or *grand*). It is also termed "benign hypothyroidism," "attenuated myxedema," "masked myxedema," etc.

The occurrence of a partial form of myxedema was first recognized by Reverdin,¹ who in 1887 (five years after his epoch-making communication which first showed the relation of myxedema to the thyroid) reported two cases of partial hypothyroidism following thyroidectomy and called attention to the existence of this disorder in the postoperative variety of myxedema. He designated the disorder by the term *fruste*, which became the common name for it in French. In 1891 Thibierge,² citing Reverdin's contribution, surmised the possibility of the occurrence of *fruste* cases of the spontaneous adult variety of myxedema, as well as of the operative variety, though he did not report any definite observations. The first actual case of partial adult myxedema, recognized and reported as such, that I have been able to find was one by Chantemesse and Marie³

in 1894. In England Murray⁴ in 1895 announced the occurrence of incomplete spontaneous myxedema, apparently from independent observations. In 1894 Brissaud⁵ called attention to the relationship of infantilism to partial thyroid insufficiency. After the introduction of practicable thyroid-gland therapy in 1891 and 1892, a means for definitely recognizing the manifestations of partial thyroid insufficiency became available. Since 1897 a number of observers have reported cases and studies of the disease, both in adults and children.

In considering the reported cases of partial myxedema, it must be remembered that some of the symptoms occurring in particular cases may be coincidental and unrelated to the thyroid. The diagnosis in some of the cases does not seem well substantiated or verified by the results of treatment. Some of the cases may be really instances of complete myxedema observed in the early stage of their development. Yet in spite of doubtful cases and symptoms, there can be no doubt of the existence of partial myxedema as a distinct disorder, with many characteristic or at least suggestive clinical features. Some of the symptoms are similar to those of complete myxedema, only of less degree; other symptoms are of entirely different character from, or even opposite to, those of the complete form. The cases of true partial hypothyroidism remain partial throughout and do not progress to complete athyroidism; it is probable that spontaneous recovery may even occur.

In the partial, as in the complete, forms of myxedema, spontaneous adult, infantile and postoperative varieties occur.

SPONTANEOUS ADULT PARTIAL MYXEDEMA

In this, as in the infantile form, heredity is a marked factor in the etiology. In many of the reported cases hypothyroidism is familial, various members of the same or different generations exhibiting the manifestations of partial or complete thyroid insufficiency. In some instances the hereditary taint is shown by the occurrence of other forms of thyroid disease, as goiter or exophthalmic goiter, in other members of the family. In other cases defective thyroid development has been attributed to the occurrence of tuberculosis, syphilis, alcoholism, gout, cachexias, poverty, etc., in the parents or ancestors.

Females are much more subject than are males to the incidence of spontaneous adult partial myxedema; of 38 cases in the literature, 7 were in males, 31 in females.

The age at which the disorder is most apt to develop seems to be from 30 to 50 years, three-fourths of the reported cases beginning during this period. Thus, in 23 cases in females, 2 apparently developed under 30 years, 7 from 30 to 40, 10 from 40 to 50, 3 from 50 to 60, and 1 from 60 to 70; of 4 cases in males, 1 developed from 30 to 40, 3 from 40 to 50.

The development of partial hypothyroidism does not seem to be definitely caused by any particular disease, though acute infections or the like may doubtless contribute to the production of sclerotic or inflammatory changes in the thyroid or the lowering of its nutrition and activity. A frank or latent thyroid insufficiency seems to be related to the occurrence of many morbid conditions whose dependence on the thyroid is obscure,

* Read before the Medical Society of the District of Columbia, Nov. 18, 1905.

1. Reverdin, J. L.: Rev. méd. de la Suisse rom., 1887, vii, 275, 318.

2. Thibierge, G.: De la cachexie pachydermique, ou myxœdème, Gaz. d. hôp., Paris, 1891, lxiv, 117; Le Myxœdème, Paris, 1898.

3. Chantemesse and Marie, R.: Eull. et mém. de la Soc. méd. d. hôp. de Paris, 1894, series 3, xi, 124.

4. Murray, G. R.: Twentieth Century Practice of Medicine, 1895, iv, 696; Brit. Med. Jour., Oct. 1, 1898, p. 942.

5. Brissaud, E.: Leçons sur les maladies nerveuses (Salpêtrière 1893-94), Paris, 1895; De l'infantilisme myxœdémateux, Nouv. iconog. de la Salpêtrière, 1897, x, 240; Myxœdème thyroïdien et myxœdème parathyroïdien, Presse méd., 1898, i, 1.

perhaps indicating the existence of a radically defective constitution or lessened resisting power.

In a number of cases the myxedematous condition has been preceded by the opposite disorder, exophthalmic goiter. Mixed cases are also recognized ("dysthyroidism") in which mingled manifestations of hyperthyroidism and hypothyroidism are said to occur.

The onset is gradual and insidious and the disease is not usually recognized until long after its development.

The symptoms of partial myxedema are multitudinous and bewildering and cover a wide range of the organic activities.

Asthenia.—This is one of the most common and most prominent symptoms. The patients have a feeling of lassitude, are incapable of much effort, or become inordinately fatigued on slight exertion. In some of the cases weakness or giving way of the knees is especially noted.

Mentality.—The intellect is much less apt to be impaired in the partial than in the complete forms. Many of the patients are entirely normal and some even above the average in intelligence. Impairment of the intelligence or memory, mental sluggishness, apathy, etc., may, however, occur, and even slight hallucinations have been noted. Sleep is variable and not characteristic, some patients suffering from insomnia, some being somnolent; it is apt to be unrefreshing, and the patients may be weaker and have more pain in the morning than later in the day. The characteristic facial expression is described as being one of "sorrowful fatigue."

Pain.—This is a conspicuous and common symptom of partial, more so than of complete myxedema. Recurring headache (both frontal and occipital), backache (especially interscapular), or articular and muscular pains are noted in most of the cases. The pain is sometimes excessive. In some such cases chronic rheumatism is simulated. Some cases are recorded in which attacks of migraine or epileptic paroxysms have been the principal features, though accompanied by other minor hypothyroid symptoms, in which cure or relief has been effected by thyroid therapy. Vertigo and tinnitus aurium have been noted in some cases.

Metabolism.—Metabolism in partial myxedema undergoes a disturbance or diminution similar to that which occurs in the complete form of the disease. A study of the nitrogen exchanges in my case showed the same characteristic metabolism as occurs in complete hypothyroidism; that is, a marked retention of nitrogen under the natural conditions of the disease, and a great increase in nitrogenous oxidation and excretion under the influence of thyroid therapy.

The subnormal metabolism and nutrition is also manifested by the nutritive or atrophic changes that take place in the skin, hair, nails, teeth, etc. These changes may bring about a general appearance of premature senility.

Obesity.—This, another manifestation of sluggish metabolism, occurs in many cases, but is also absent in many. The accumulation of fat may be general, or there may be conspicuous local deposits of adipose tissue, as, characteristically, in the clavicular regions. Adiposis dolorosa is by some regarded as a manifestation of hypothyroidism.

Hypothermia.—In most of the cases thermic disturbances of various kinds are conspicuous and marked. They are probably due to the lowered metabolism yielding an insufficient supply of body heat. In many cases

the body temperature is subnormal, though sometimes normal. The extremities may be cold. The patients feel cold, chilly, shivery; are subject to chills and rigors, and may be unduly sensitive to slight exposure to cold, often excessively so. The slightest exposure, such as baring the arms, in some cases brings on chills. The patients protect themselves by wearing unduly heavy clothing, even in comparatively warm weather, and are more comfortable in warm seasons or climates than in cold. Exceptions, however, occur.

Integument.—Changes in the skin, while not so extreme as in complete myxedema, are highly characteristic in partial cases. A yellowish tinge has been noted in many instances. A flushed or congestive area over the cheeks, often with a central patch of dilated venules, is frequently observed. The skin is apt to be dry and harsh, with scaly patches. The perspiration in such cases is scanty, but in some instances it is profuse. Thickening, infiltration and tumefaction of the skin and subcutaneous tissues in localized regions are common and characteristic in many of the cases; the generalized myxedematous infiltration of complete hypothyroidism does not occur. The eyelids may be thickened and stiff, the eyebrows may be elevated (to aid in raising the stiffened upper lids), and the forehead transversely wrinkled. The nose may be infiltrated, the ear lobules thickened, the cheeks full, the chin rounded, the backs of the hands and feet puffy, the ankles, shoulders, jaws or neck tumefied, or other circumscribed regions or plaques of infiltration present. Transitory edemas may occur on the face, or extremities, or diffuse; usually rather firm, indolent, white. The nails frequently exhibit trophic deficiencies, dryness, brittleness, deformity, etc. Characteristic changes in the hair usually occur. The hair may turn gray prematurely, contributing to the precocious senile appearance. It may become dry and brittle and fall out. The hair on the scalp may become thinned, or distinct patches of alopecia may develop. The eyebrows may become scanty and fall out, especially at the outer third, where the skin is apt to show a scaly dermatitis; this *signe du sourcil* is regarded as a very significant symptom. The eyelashes and beard may fall out, and the axillary and pubic hairs often become scanty or altogether lost.

Circulatory System.—Palpitation and tachycardia are frequent; the heart may be weakened and dilated; pain in the cardiac region is sometimes found. Venous enlargements are stated to occur—varices, hemorrhoids, dilatation of the veins on the back of the hands. Vasomotor spasms—chilblains, mortui digiti—may occur. A hemorrhagic tendency is frequently noted. Some anemia may occur; the leucocytes are normal in number, but marked lymphocytosis (up to 60 per cent.) seems to be characteristic. Occasionally the thyroid gland is enlarged, but it is usually normal or diminished.

Alimentary System.—The teeth very often undergo marked caries and decay. The gums may be softened, swollen, reddened and bleed easily. The tongue may be enlarged. Anorexia is often noted. Hypochlorhydria is common. The liver is congested and tender, and cholelithiasis is a frequent accompaniment. Constipation, persistent and obstinate, is a highly characteristic symptom. Some cases of mucomembranous enterocolitis, according to Trémolières,⁶ are of hypothyroid causation.

6. Trémolières, F.: L'entéro-colite muco-membraneuse, Paris, 1906.

Respiratory System.—The nasal and pharyngeal mucous membranes are often swollen, the tonsils enlarged, adenoids frequently present, and this locality subject to frequent infections and catarrhs. The thickening of the mucous membranes is probably of the same character as that of the skin. The voice is often husky, or raucous, or muffled, from infiltration of the vocal cords. A sense of tingling of the larynx or constriction of the throat frequently occurs. Dyspnea, brought on by exertion or talking, is an exceedingly common and characteristic symptom.

Urinary Organs and Functions—These are not materially affected, except that the lessened excretion of urea from the lowered nitrogenous katabolism may simulate renal insufficiency.

Reproductive System.—Of symptoms affecting the female sexual functions, uterine hemorrhage is most frequently observed—metrorrhagia, menorrhagia, frequent menstruation, postpartum hemorrhage—a manifestation of the general hemorrhagic tendency in this disorder. In some of the cases, however, the menses were regular and normal, or even scanty. Congestion, swelling and tenderness of the uterus, also retroflexion, have been observed; in several instances there have been uterine fibroids, in one such the tumor disappearing under thyroid therapy.

The advent of the menopause seems to be delayed. Of 13 cases affording data on this point, in 6 menstruation had ceased at ages of from 47 to 52 years, in 7 the patients were still menstruating at the ages of 43, 45, 46 (2 cases), 48, 49 and 51 years respectively. In 6 cases menstruation began at 10, 12, 13, 17 and 18 (2 cases) years.

A relationship between the female reproductive functions and the activities of the thyroid has been supposed to exist, but as to the exact nature of that relationship the evidence and opinions are not altogether harmonious.

That pregnancy and child-bearing have any influence on the development of partial myxedema is not shown by the scanty statistics available. Of 21 cases, 15 occurred in married women, 6 in unmarried. Of 12 cases in married women, 10 patients had borne children, 2 were nulliparous. Adding the unmarried to the nulliparous, 10 cases developed in women who had had children, 8 in women who had not.

The menopause is not a specially etiologic factor; 13 cases developed during the menstrual period, 3 after the menopause.

In some cases the symptoms of hypothyroidism are aggravated during pregnancy and lactation—sometimes taken to indicate a relative insufficiency of thyroid activity in this period; and some of the disorders of pregnancy—constipation, for instance—have been attributed to thyroid insufficiency at this time. In other cases, however, there is said to be relief from the symptoms (as from migraine, articular pains, etc.) during gestation, which is taken to indicate a greater stimulation of the thyroid activity under these circumstances, leading to “autotherapy.” Several observers note an exacerbation of symptoms during the menstrual periods, as headaches and huskiness of the voice at these epochs. These periodical outbreaks or intermissions of hypothyroid manifestations coincident with female menstrual or reproductive epochs constitute the class of cases denominated “paroxysmal hypothyroidism.”

Not all the foregoing phenomena appear in every case. The particular combinations of symptoms that occur are variable, and the diagnosis may remain obscure until illuminated by the effects of thyroid treatment.

INFANTILE PARTIAL MYXEDEMA

A distinction is made between congenital myxedema, or cretinism, developing at or within a few months after birth, and the so-called infantile form, which develops in childhood at any age prior to puberty. The cases of partial myxedema reported in children are nearly all of the infantile rather than the congenital form.

This variety of partial myxedema seems to occur more frequently in males than females, as of 27 reported cases 16 were male, 11 female. It may begin to develop at any time up to the age of puberty, the child being previously normal. The onset may follow an attack of some acute infection, as measles.

The most typical form of partial myxedema developing in childhood is that ordinarily called myxedematous infantilism, in which to attenuated symptoms of myxedema or cretinism is conjoined the condition of infantilism—by which is meant an arrest or retardation of development, so that the physical and mental characteristics of childhood persist after the ordinary age of puberty.

In this class of cases the figure is short and stunted, stout and obese; the head large; the face large, rounded or circular (the “lunar face”); the eyes well separated; the expression dull and heavy; the facies old for the age. The skin, especially about the face and hands, may be thickened and infiltrated, dry, scaly, itchy. The hair may be scanty, or fall in patches. The veins may be distended, the surface cyanotic, the hands and feet cold and affected with chilblains in winter, and with profuse perspiration in summer. Constipation occurs; the abdomen is often protruding, and with an umbilical projection. The tongue may be thickened, the mucous membranes of the respiratory passages turgid, and adenoids frequent, causing obstruction to respiration. Nocturnal incontinence of urine is often noted. Other symptoms similar to those of the adult form of partial myxedema may occur.

The mentality is sometimes unimpaired, or but slightly affected, as by some slight lowering of intelligence or persistence of childishness in thought, manners and actions. In other cases there is an arrest or retardation of mental development; the child may be tardy in learning to talk, or very backward in learning at school. Sometimes the mental development is permanently arrested, and the subjects never able to advance beyond a certain point, so that a patient over 20 may have the mentality of a child of 10. A fuller degree of mental development may, however, be ultimately, though tardily, attained.

The arrest or retardation of physical development is a conspicuous feature of myxedematous infantilism. Growth may be permanently checked, so that a subject of mature years may have the size, build and appearance of a child of the age at which the disorder appeared. If the case develops early enough the child may be very slow in learning to walk; dentition may be delayed. The epiphyseal cartilages persist long after their usual time of ossification. The voice may retain a childish quality. The hairy system may not develop.

Especially, and almost or quite invariably, is the physical retardation manifested by non-development of the sexual organs and functions. In females this is mani-

festated by non-development of the breasts and pubic hair and retarded beginning of menstruation; or in some cases menstruation never occurs at all, even in maturity. In males the penis and testicles remain rudimentary and of infantile size throughout life, sexual power or impulse is absent, and the beard and pubic hair (secondary sexual characters) are scanty or undeveloped. Males may present a certain effeminacy of voice, appearance and character—"feminism."

Cases of myxedematous infantilism are not observed exclusively in children, but have been reported at the ages of 33, 39, 48 and 66 years, the underdevelopment, rudimentary genitals and history enabling the condition to be sharply differentiated from adult hypothyroidism.

Another definite type of infantilism is distinguished, namely, the type Lorain, described by Lorain in 1870. Opinions are divided as to the extent to which this disorder is dependent on hypothyroidism, but, judging from the improvement that takes place under thyroid therapy, thyroid insufficiency would seem to be at least partially responsible, though doubtless other factors, such as arterial hypoplasia, are also operative.

Infantilism of the type Lorain is characterized mainly by a symmetrical arrest of physical development, and is a form of nanism or dwarfism. The reported cases are nearly all in males. The specific myxedematous symptoms are absent. Men showing this defect have the size of boys, but the facial appearance and actions corresponding to their years; they are miniature or dwarfed men, and have been likened in aspect to men viewed through the reverse end of an opera glass. Genital development may or may not be relatively retarded. They have not the stocky build of cases of myxedematous infantilism, but their physique is slender.

POSTOPERATIVE PARTIAL MYXEDEMA

Of this variety of the disorder the only report which I have found is the original contribution of Reverdin,¹ in which the occurrence of partial myxedema cases was first noted. He described two cases in which symptoms resembling those of the spontaneous adult form of partial myxedema developed after thyroidectomy.

CLASSIFICATION

Attempts have been made to classify cases of thyroid insufficiency, the following being some of the classes distinguished:

- Euthyria, normal thyroid activity.
- Hypothyroidian temperament (hypothyroidia minima).
- Paroxysmal hypothyroidism, associated with female sexual epochs.
- Hypothyroid neurasthenia.
- Physical and mental retardation of hypothyroid origin.
- Myxedematous infantilism.
- Incomplete myxedema of adults.
- Complete myxedema and cretinism.

TREATMENT

The specific treatment of partial myxedema in all its forms consists in the administration, by mouth, of preparations of the thyroid gland. The daily dose is from 5 to 75 centigrams (1 to 12 grains) of the desiccated gland substance (from sheep), equivalent to five times as much of the fresh thyroid. The administration of thyroid substance requires caution and close observation until the proper dosage for each patient is determined by individual trial. Given in excessive doses thyroid causes unpleasant and even dangerous effects, those of hyperthyroidism, such as undue acceleration of the

pulse, great prostration, headaches, sweating, restlessness. Special care is necessary in giving the drug to patients with arterial or cardiac disease, as death has occurred during treatment in such cases. At first the treatment is vigorously pushed, but after the symptoms subside only sufficient thyroid need be given to maintain the patient in optimum condition.

The treatment is highly efficient, and there is a prompt and marked subsidence of the abnormal manifestations. The excessive weight is rapidly reduced, the strength is increased, the nutrition of the skin and hair improves, the pains, constipation and dyspnea diminish, mental and physical development is advanced. Complete recovery, or at least great and highly gratifying improvement, can be confidently expected, though in some cases absolute restoration to normal is not attainable, and vestiges of the trouble may persistently continue.

DIAGNOSIS

I am speaking of diagnosis after treatment because verification or establishment of the diagnosis, especially in cases so obscure and atypical as many of those of partial myxedema are, rests on the results of thyroid therapy. A combination of the cardinal symptoms of asthenia, headache and other pains, obesity, cutaneous infiltration, lowered nutrition of skin and hair, constipation and dyspnea, also mental and physical arrest in children, may be very suggestive; yet the therapeutic test is conclusive. When only a few of the characteristic symptoms are present the diagnosis would be quite uncertain, except from the results of treatment. Whether every case, of whatsoever character, in which there is benefit from thyroid therapy is to be regarded as one of partial hypothyroidism is an open question.

Incomplete myxedema may not be a very common disorder; yet the great relief occasionally obtainable makes the trial of thyroid treatment well worth while in obscure and obstinate cases exhibiting headache, dorsal or articular pains, obesity, constipation, dyspnea, backwardness in children, etc., as conspicuous symptoms.

CASE REPORT

I have had the opportunity of observing a well-marked case of partial myxedema which illustrates a number of the typical characteristics of the disease:

Patient.—Female, unmarried, aged 53 when she first came under my observation, in November, 1905.

Family History.—There was an opportunity for paternal inheritance of syphilis, though no manifestations of congenital syphilis are known to have appeared. The maternal grandfather and six of his sisters died of tuberculosis. The maternal grandmother died at 70 of cancer of the stomach, and other cases of cancer occurred in collateral branches of her family.

Previous History.—The patient has lived in many different parts of the country. In earlier life she was a music teacher; latterly engaged in scientific pursuits. She has always been a hard student, has greatly overworked, and has been exposed to severe family troubles. She is a woman of exceptionally high mentality. Her clinical history is very voluminous. In childhood she had Asiatic cholera, whooping cough, mumps, measles, scarlatina followed by nephritis, fracture of humerus and ribs, malarial attacks, varioloid, frequent headaches, eczema capitis, frequent earaches. Menstruation began at 12. At 26 she had an attack of lung trouble regarded as incipient tuberculosis, from which she rallied in a few months. She has had repeated attacks of chronic staphylococcus infection—styes, furunculosis, repeated axillary abscesses, acne—at 12, 15, 25, 33, 48 and 54 years. She has had chronic or recurring arthritis of the left knee, which kept her in bed or on crutches

for two to fifteen months at a time at the ages of 29, 34, 39 and 54. From overwork and trouble she had attacks of neurasthenia at 19, 33, 40 to 43, and more or less continuously since about her fifty-first year. She had tertian malaria at 41, and a tapeworm at 43 years. Since her fortieth year she has been subject to attacks of pain, numbness, jerking, etc., of her right foot. At 48 years she had a similar attack of pains and numbness, called "neuritis," on the ulnar side of the right arm and hand. Menstruation was always regular, rather scanty and brief (two or three days) and painless.

Her weight, so far as the data available show, ranged from 113 to 133 pounds (minus clothing) to her thirty-fifth year. She then increased to 168 pounds at 39, which was the following year reduced by dieting to 143. At 41 to 43, during one of her severe illnesses, the weight fell to 117 pounds, and afterward gradually rose again.

History of Myxedematous Condition.—It is difficult to fix the insidious beginning of the myxedematous disorder. Certain of the symptoms, however, seem to have developed subsequent to an attack of grip followed by what was regarded as

In July, 1902, she had a suppurating right kidney, with pyuria and enlargement of the kidney. In August, 1902, menstruation ceased rather abruptly (age 50).

After the operations and the cessation of menstruation in the summer of 1902 there was another gain in weight, and for a time general improvement, but neurasthenic and other symptoms continued, and during the years 1903, 1904 and 1905 a partial myxedematous condition developed and became well established.

During this period the patient suffered marked asthenia, fatiguing easily on physical exertion. Her facial expression I would describe as one of placid fatigue. Mental impairment was very slight; there was some lessening of mental alertness and of continuity of thought and speech, slight forgetfulness, and easy fatigue on mental exertion; but she was at the same time engaged in intellectual and scientific work of high order. The only pains apparently referable to the hypothyroidism were the right hypochondriac pains and pains in the upper left chest. There was no headache or backache, aside from two or three attacks of lumbago, 1904-05. The patient had pains in



Fig. 1.—From photograph of patient with partial myxedema, taken in November, 1905, prior to the institution of thyroid treatment.

whooping cough (the second attack), which occurred in the winter and spring of 1899-1900, just after her forty-seventh birthday. After this attack there was a marked increase of weight, which reached 172 pounds in November, 1900. The next year, 1901, while in the Philippines, she had dengue and hematuria (blackwater fever?). Following the cough in 1900, she had pains in the right hypochondriac region, which continued. On June 13, 1902, an appendicectomy was done, with the idea that these pains were due to the appendix, but it was not found appreciably affected. June 25, 1902, cholecystotomy was done, and a large gallstone removed. The hypochondriac pains continued after the operation.

In April, 1902, the patient was told that she had Bright's disease, the urea excretion being stated to be much diminished, down to 4 and even 2 grams daily; casts were at times observed, and occasionally a trace of albumin. She was on a milk diet in 1902-04, and took meat very sparingly in 1904-05.



Fig. 2.—From photograph of same patient as in Fig. 1, taken 1 May, 1908, twenty-nine months after beginning thyroid treatment. The chair and the position of the body were the same in the two pictures.

her left knee in connection with her long-standing arthritis also "neuritic" pains in right arm and leg, probably independent of the hypothyroid condition.

She had vertigo and tinnitus aurium from 1901. Her weight gradually increased until at the beginning of thyroid treatment it reached 214 pounds (minus clothing); height being feet $2\frac{3}{4}$ inches. The deposition of fat was general, giving massive and bulky physique; there were voluminous clavicular accumulations of fat.

For many years, from 1893, the patient stated, the body temperature tended to subnormal; and she was unable to take her accustomed cold baths from 1893 until thyroid treatment in 1906. After 1902 she became exceedingly sensitive to cold, wore unduly heavy clothing, and suffered chills and rigors on slight exposure.

The skin after 1901 turned a dirty yellowish color; it became dry and scaly over the extremities, so that rubbing the arm would produce a white powdered appearance. The perspiration, previously profuse, diminished in 1903-05. There was puffiness of the eyelids, face and back of hands; the lids and lips felt stiff. The patient had occasional transient edemas about the ankles, hands and face, pitting on pressure. There was no flush over the cheeks. The nails became brittle. The hair on the scalp, previously very oily, became harsh, dry and

The patient came under my observation in November, 1905, presenting the multiplicity of symptoms just detailed, which had gradually increased to a maximum. No special organic abnormalities were found to account for the symptoms. Blood pressure was 150 mm. Examination of the stomach contents revealed a hypochlorhydria (total acidity was 28). The general clinical picture seemed to be that of neurasthenia. The patient believed herself to be suffering from chronic nephritis; but repeated examinations of the urine, even with an increased

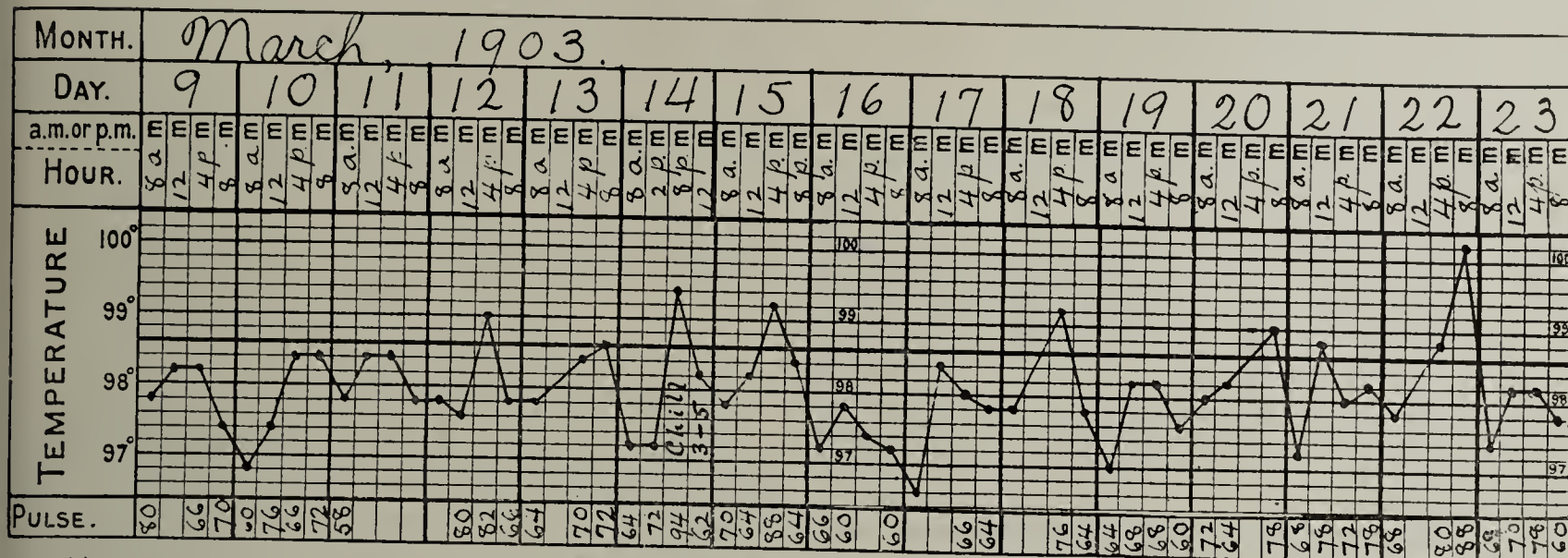


Fig. 3.—Chart of temperature in period of partial myxedema, while patient was untreated, showing subnormal temperature.

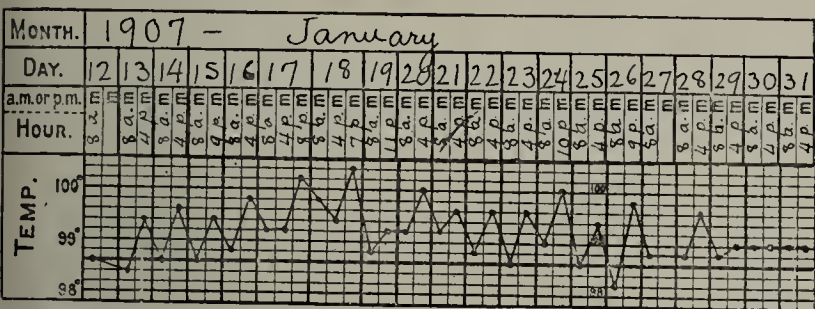


Fig. 4.—Chart of temperature while patient was under full influence of thyroid treatment, showing supranormal temperature.

"dandruff," and turned markedly gray in 1903; there was no change in the hair elsewhere.

Palpitation of the heart developed. No hemorrhagic tendency was evinced. A differential count made in September, 1905, showed the existence of a marked lymphocytosis (lymphocytes, mononuclears, and transitionals 58 per cent.). The teeth suffered marked decay. The gums, tongue and naso-

nitrogenous diet, showed no evidence of renal involvement. Careful comparison of the urea output with the nitrogenous intake in the food showed a nitrogen retention, which in the light of later developments is to be interpreted as a result of subnormal proteid oxidation and not a result of renal insufficiency.

Treatment.—Tonics, sedatives, iodids, etc., made no impression. In the latter part of January, 1906, the administration of thyroid was instituted, more with the hope of reducing the obesity than with a realization of the general hypothyroid basis of most of the symptoms. Except for some interruptions for experimental purposes, the administration of thyroid has been continued ever since, in doses ranging from 15 to 2 grains of the desiccated gland substance daily. The striking results of this treatment warrant the diagnosis of this case as one of incomplete myxedema, probably associated with neurasthenic manifestations.

Course of Disease.—The patient's weight, which was 214 pounds at beginning of treatment, in two months fell 23

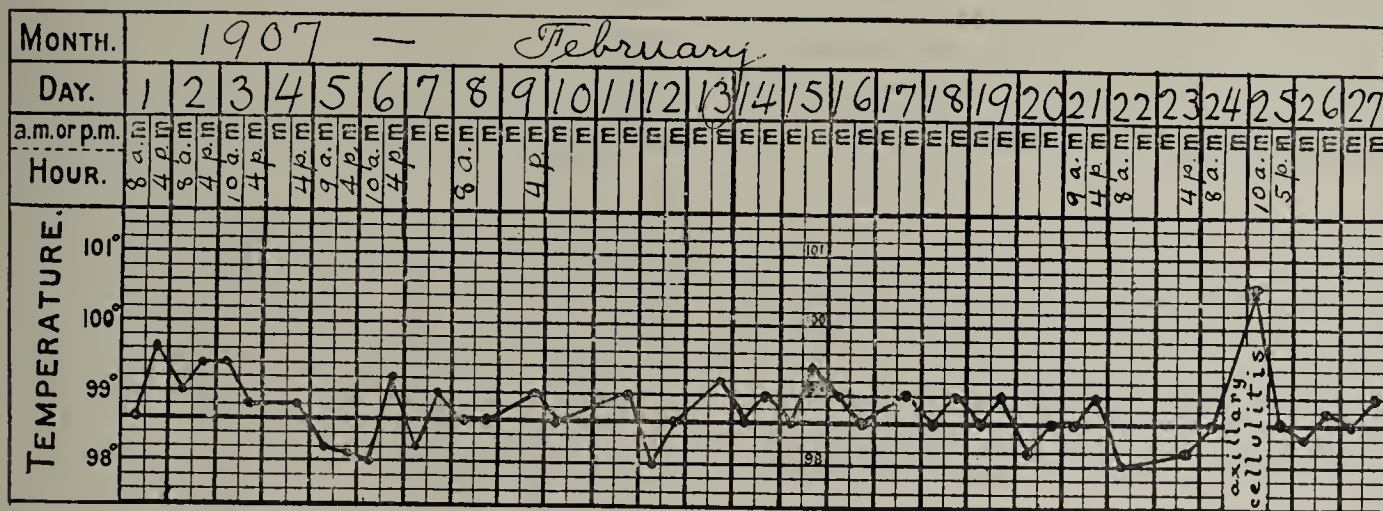


Fig. 5.—Chart of temperature during a period of suspension of thyroid treatment (administration of thyroid discontinued Feb. 1-28, 1907), showing a normal range of temperature.

pharynx exhibited no change. There was slight anorexia. Marked constipation began 1903, with hemorrhoids. The voice was not affected. A sense of constriction of the throat was caused by slight pressure of collar buttons, clothing, etc., over the larynx. The patient suffered marked dyspnea on exertion, and especially on talking.

pounds; remained stationary for three months; then steadily declined until on Dec. 31, 1906, it reached 159 pounds. During the year 1907 the weight declined 10 pounds more, reaching a minimum of 149 pounds on Dec. 31, 1907, a total lowering of 65 pounds. The weight has since continued at about 150 pounds.

Along with the loss of weight there was in the course of a few months' treatment a subsidence of the other symptoms, some in part, some completely. The physical asthenia on exertion diminished considerably. The slight mental symptoms subsided entirely. The pains in hepatic region and left chest, the vertigo, and the tinnitus aurium ceased. The body temperature from being subnormal ranged above normal (mostly 99 to 100) during the administration of thyroid. The chilliness and sensitiveness to cold entirely disappeared, and the patient was able to resume cold bathing.

The yellowish color of the skin persisted; but the dryness and desquamation of the skin and brittleness of the nails subsided, and perspiration increased. The puffiness of the skin mostly subsided; a little thickening of the nose continues, and transient edema still occasionally occurs, though much less than previously. The hair fell out freely under the thyroid treatment, but grew out again, softer and less dry. The cardiac palpitation has subsided. Blood pressure has been 110 to 125. The lymphocytosis has continued, the percentage of lymphocytes and mononuclears, large and small, being 50 per cent. Aug. 16, 1906; 43 per cent. Nov. 22, 1907; and 55 per cent. Nov. 13, 1908. The numbers of red and white cells on these dates were normal. The condition of the teeth improved. The anorexia, constipation and sense of constriction in the throat disappeared. The dyspnea greatly improved, but has not entirely ceased.

A study was made of the nitrogen metabolism for two three-day periods, one while the patient was taking thyroid, the other while its administration was suspended. The same diet was taken during both periods, and for three days preceding each period, namely, 1 liter of milk, 4 eggs, 300 grams of Vienna bread and 30 grams of butter, on each day, yielding (by calculation) 1930 calories and 13.9 grams of nitrogen. The results were as follows:

NITROGEN METABOLISM						
Date. 1906	Conditions of Experiment.	Nitro- gen In- take.	Nitrogen Output.			Nitrogen Gain or Loss.
		Food. Gms.	Feces. Gms.	Urine. Gms.	Total. Gms.	
June 15..	No thyroid taken	13.9	1.1	10.1	11.2	+2.7
June 16..	May 22 to	13.9	1.0	10.0	11.0	+2.9
June 17..	June 18:	13.9	1.1	9.3	10.4	+3.5
Average per day...		13.9	1.1	9.8	10.9	+3.0
July 14..	Thyroid taken	13.9	1.5	11.5	13.0	+0.9
July 15..	since June 19:	13.9	1.4	10.8	12.2	+1.7
July 16..		13.9	1.5	14.2	15.7	-1.8
Average per day...		13.9	1.5	12.2	13.7	+0.2

This result shows a marked retention of nitrogen while the patient was not under treatment, with a markedly increased metabolism and oxidation of nitrogen while under the influence of thyroid medication, and agrees with the characteristics of the metabolic conditions that prevail in myxedema in general.

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THE DIAGNOSTIC VALUE OF URETERAL CATHETERIZATION

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At the time of the greatest activity in this field of work abroad, and with the birth of it in this country, I became interested in following cystoscopy and ureteral catheterization to the present.

In 1897 I wrote on this subject, and three years later perfected my double catheterizing cystoscope. Before and since this time much has been accomplished, and it seems almost useless to enlarge again on the diagnostic value of cystoscopy and ureteral catheterization; and such would have been my opinion had I not recently listened to one of our most learned internists from Boston, who, in his paper on "The Degree of Functional Ability of the Kidney," took up one by one of the methods at our disposal, such as cryoscopy of the blood, cryoscopy of the urine, the ingestion of anilin dyes, and disposed of all as not giving trustworthy conclusions. The three latter methods require catheterization. To catheterization of separate urines he gave the most credit, but concluded that it was wrought with much danger and therefore unsatisfactory. With this I could not agree, and a number of other questions connected with the subject made me feel that the present status of the question should be well defined.

In order to get other views to corroborate my experience and conclusions I have addressed fourteen physicians in this country, all of whom have a wide experience in the use of the ureteral catheter, and asked them for their answers to six questions. I received replies from thirteen, namely: Dr. Howard A. Kelly, Dr. Willy Meyer, Dr. Eugene Fuller, Dr. F. Tilden Brown, Dr. Hugh Cabot, Dr. John B. Murphy, Dr. George R. Swinburne, Dr. R. Guiteras, Dr. H. E. Hayd, Dr. Winfield Ayres, Dr. Follen Cabot, Dr. W. F. Braasch for Dr. Charles H. Mayo, and Dr. Bransford Lewis.

- Q. 1.—How frequently does a secondary infection occur in the healthy side when one infected kidney exists and no instrumentation employed?
- A.—The bulk of the evidence summarized would show the occurrence to be rare, particularly if the bladder is not infected. It is more common by systemic or (hematogenous) conveyance than through the urine. It has been observed in calculus and tuberculosis of the kidney. Only one observer (Dr. Lewis) answers that it is common. It is probable that he sees many cases of pyonephrosis with calculus and tuberculosis in a late stage. Secondary infection being of rare occurrence we must conclude that the healthy side is very tolerant and not easily infected.
- Q. 2.—Should infection occur at all following catheterization of the ureters when no prior infection exists?

A.—All answer this in the negative. This conclusively shows that catheterization is practically harmless in a healthy individual and so may be done for diagnostic reasons or for demonstration and teaching.

Q. 3.—One side being infected, how frequent is infection of healthy side produced by catheterization?

A.—Ten never knew it to occur. One: "Can't answer." One: "Never if bladder is healthy." One: "Most infrequent, no personal experience of occurrence."

This is certainly overwhelming evidence of its usefulness and safety.

Q. 4.—Knowing one side to be infected, can one rely on catheterization of this side alone, leaving the other side to be represented by a catheter in the bladder?

A.—Seven answer: "No." Three: "If bladder is not involved." One: "In some cases." One: "If urine from catheter in bladder is normal." One: "If catheter is inserted high in ureter and if bladder is healthy."

From these answers one must conclude that it is necessary to catheterize both sides in the majority of cases. Particularly since we know the bladder or its contents to be infected in most cases.

Q. 5.—After nephrectomy without resection of the ureter or injection of same toward the bladder with pure carbolic acid, is it not common to have pus in the urine coming from ureter so left?

A.—Six say: "Yes." One: "Yes if pyelitis existed." Two: "Yes in tuberculous cases." One: "Majority for short time, persists in few." One: "Yes for few months." One: "No." One: "No. Observed, however, in two cases pyonephrosis."

This being answered by almost all in the affirmative, it seems best surgery to resect the ureter and inject any portion remaining with carbolic.

Q. 6.—If infection of healthy side does occur should one expect marked symptoms and should these follow soon after the instrumentation?

A.—Nine: "No such experience." Four: "If it occurs, marked symptoms soon."

These answers imply that such an accident must be very rare and that should it occur marked and rapid symptoms should be expected.

These six questions cover, as I intended they should, every possible point on which a question of justification for this procedure can be raised, and I am most grateful for the responses received.

In order to have experts available in this field it is essential that all work in the smaller cities be turned over to one or two men who are willing to give it their earnest attention. No man who has not had good surgical training should attempt this work.

Having established the usefulness of this procedure and almost conclusively proven its safety when done by one trained for the work, we are ready to look into the bladder and see what can be learned from the use of the ureteral catheter.

We will spend no time in determining or discussing which medium, water or air, or direct or indirect view, is best. It matters not what instrument is used so long as the operator who uses it can get results. For a long time I used air only, but of late have found many instances in which I prefer to use water to distend the bladder.

An examination of the bladder is in a way unavoidable while catheterizing the ureters. The condition of the mucous membrane, the presence of cystitis, ulcer, polyp, tumor or stone, the existence of diverticuli, or sinuses connecting with another viscus may be recognized. The jet of urine as it spurts from the ureteral opening without the entrance of the catheter often makes clear a vague pathologic kidney condition. I have twice seen the expulsion of a calculus through the

dilated ureteral opening. A tuberculous kidney can often be diagnosed by the appearance of the mucous membrane about the ureteral opening in the bladder. Recently I saw a picture on looking into the bladder that showed such an amount of venous stasis from pressure of a large renal growth of the left side that the veins honeycombed the surface of the mucosa so extensively that the bladder seemed trabeculated. On dilating still further the pressure from within entirely overcame the condition. Stricture of the ureter at its opening or along its tract gives symptoms long before any marked destruction of the kidney occurs, and when relieved naturally avoids the loss of the kidney and often the life of the patient. Obstruction of the ureter by calculus, kink or pressure from extrinsic tumors are diagnosed. Sacculations of the ureter with pus pockets are made out by the flow of pus in good quantity before the catheter has reached the pelvis with a cessation of flow on passing beyond the pocket. Pyelitis, pyonephrosis, hydronephrosis, pyonephritis and calculus are easily distinguished, and in some instances even before the urine is microscopically examined. The microscopic examination of the urine so drawn in the hands of experts will to-day differentiate the various pathologic kidney lesions.

Bacteriologic examination even more than the above gives the greatest amount of information concerning the various infections with which the human genitourinary tract abound. The distention of the kidney pelvis with a small quantity of sterile water or antiseptic solution will often reproduce exactly the symptoms that exist during an attack. Leaving the catheters in place for several hours gives a very good comparative test of the functioning power of each kidney, and if the diseased organ is not functioning all the more reason for its removal. The first urine escaping from the catheter is often stained with blood and should not be retained for examination unless the bleeding persists. A few blood cells found microscopically and no other renal elements should not be taken to signify a pathologic condition.

Lastly, the introduction of the ureteral catheter prior to performing complicated pelvic surgery or hysterectomy is a safe guide in avoiding injury to the ureter. I have once seen the ureter cut in a Kraske operation. Even though it was successfully transplanted it would not have happened had there been the catheter as a guide.

Till some better method is at our disposal let us take the optimistic view of this procedure which, I feel, is to stay supreme for a long time.

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SYSTEMATIZED TECHNIC OF SUPRAPUBIC PROSTATECTOMY

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Since the inauguration by Belfield of the suprapubic operation for relief of prostatic hypertrophy, and its further development by McGill, Freyer, Guiteras, Burkhardt and others, a certain standstill seems to have taken place in the further elaboration of its technic, while perineal prostatectomy has become a competitor, especially since the Zuckerkandl, Rydygier, and the French technics were adapted and amplified by Young.

The definite success of suprapubic prostatectomy will depend, as that of other surgical methods, on the reduction of primary mortality and the securing of good and permanent functional results. An analysis of the basic factors on which these two issues depend will show the way to their improvement.

Primary mortality is essentially influenced by the immediate and remote dangers of anesthesia, by hemorrhage and by infection, especially of the peritoneum and the prostatic venous plexus. The primary mortality is, furthermore, influenced by the length of time patients are kept in bed after operation; old individuals, whose hearts and excretory organs are, if not already materially injured, certainly impaired in resistance, do not very well stand a prolonged confinement in bed. The functional results depend on the extent and nature of the surgical injuries inflicted on the tissues by the operation and on the conditions resulting therefrom. Bruising and tearing the tissues will not only interfere with quick healing, but will also tend to result in cicatricial distortions which will impede the urinary flow. If favorable conditions for the obliteration of the bed of the prostate are not secured, that cavity will remain a granulating basin in which stagnation of the urine, with all its undesirable consequences, will again occur.

The working points, from a consideration of which the evolution of a successful technic could be developed, might be enumerated as follows: In order to reduce to a minimum the primary and remote dangers of anesthesia, nitrous oxid and oxygen narcosis should be employed. The absence of pronounced or prolonged malaise after this anesthetic enables the patient to take food and drink very soon after operation. The absence of prostration and stupor, so common after ether or chloroform, does away with paresis of the intestines and renders it possible to start out a few hours after operation with the regular breathing exercises so important in old patients. Since nitrous oxid does not attack the heart muscle, the circulation is left unimpaired and hypostatic pneumonia and embolism do not occur. All these conditions make it possible to let the patient sit up twenty-four hours after operation and to begin taking him out of bed on the third day.

In order to prevent involvement of the peritoneum by an infection which might already have existed in the bladder or which might appear during the course of the healing process, the peritoneal duplication should, before the bladder is opened, be removed from the field of manipulations and should be entirely and securely secluded from the operative wound. In order to prevent tearing and subsequent thrombosis and infection of the prostatic venous plexus, the shelling out of the prostatic tumor should be done in such a way that this plexus is never touched. In order to prevent superficial necrosis of the denuded surfaces and to foster their quick healing, all traditional drainage of the perivesical spaces should be abolished; such drainage, furthermore, leads quite often to infection of the concerned cavity from without. In order to create in the operative field conditions most favorable for obtaining good functional results, the various operative steps should be adapted to the specific character of the prostatic hypertrophy encountered. The recognition of such conditions can be obtained only if the prevailing formations can be not merely palpated, but also seen, for faultless technic depends on the possibility of doing

all the operative steps under the guidance of the eye. This means that the inside of the bladder must be freely exposed through a liberal incision; the incision leading down to the prostate and the subsequent enucleation of the tumor can then be modified according to the conditions peculiar to the case.

A comparison of the technic of various surgeons as gleaned from personal observation and from publications, together with a study of the different types of prostatic tumefaction, as well as various attempts to adapt the different steps of the operation to the above-mentioned demands and points, led me to the development of a certain technic in my cases which has so far proved very satisfactory. It is my purpose, first, to describe the steps of this operation as they are common to all the cases, after which the modifications rendered necessary by the peculiarities of various types will be specified.

Previous to the opening of the abdomen, the bladder is filled with a lukewarm 2 per cent. collargol solution; the amount of fluid injected depends on the condition and size of the bladder. The injection of this fluid should be kept up until the bladder is moderately distended; in other words, until the muscular resistance of the bladder against further distention is perceived; it is, therefore, best, before the patient is anesthetized, to make this injection with a smoothly running hand-syringe. The catheter used for injection is left in place and, in order to prevent its slipping out, a gauze strip is tied around the penis just tightly enough to prevent any dislocation of the catheter. Care should be taken not to strangle the member by this manipulation; otherwise extensive subcutaneous hemorrhage or edema might follow. If a soft rubber catheter is used, the escape of the fluid is prevented by tying a loop in its distal end; in case an elastic Mercier is employed, it is closed by a little wooden stopper. Even in cases that do not permit of any distention of the bladder on account of certain inflammatory conditions, a catheter is inserted and left in place so as to mark the internal urethral opening after the bladder is once incised. The patient is then anesthetized and afterward placed in Trendelenburg's position.

A median incision over the region of the bladder is now made through the skin; this incision goes well down to the symphysis and is carried upward above the border of the bladder dulness. The incision must be of this extent, because its upper end, as will be shown later, is closed up again before the bladder is opened, and sufficient space must be reserved for the ensuing manipulations. The subcutaneous fat and fascia are also split with the knife and all bleeding points carefully attended to. The muscles appearing in the bottom of the wound are separated by blunt dissection, exposing the perivesical and preperitoneal fat and the peritoneal duplication. Both the recti are now drawn aside by retractors and the perivesical fat and the peritoneal fold are stripped together from the bladder and then pushed upward by means of a gauze sponge; this detaching is carried on until the whole anterior aspect of the bladder is freely exposed. The perivesical fat and the peritoneal fold are then caught in a suture running transversely from the uppermost part of the edge of one rectus, through the fat and the fold, to the uppermost part of the edge of the other rectus. An assistant pushes this entire flap underneath the muscles while the suture is tied. Two more

sutures reunite the fascia and bury the flap completely, so that from now on the peritoneum is kept absolutely out of the field of operation and out of the reach of any existing or subsequent infection. Two sutures are now inserted at either side of the intended bladder incision pretty close to the symphysis; these sutures are later on used as guy-ropes for lifting up the edges and the base of the bladder after the viscus has been opened.



Fig. 1.—The prostate exposed through the mucosa incision and seized by vulsellum; a, edge of severed mucosa; b, prostate.

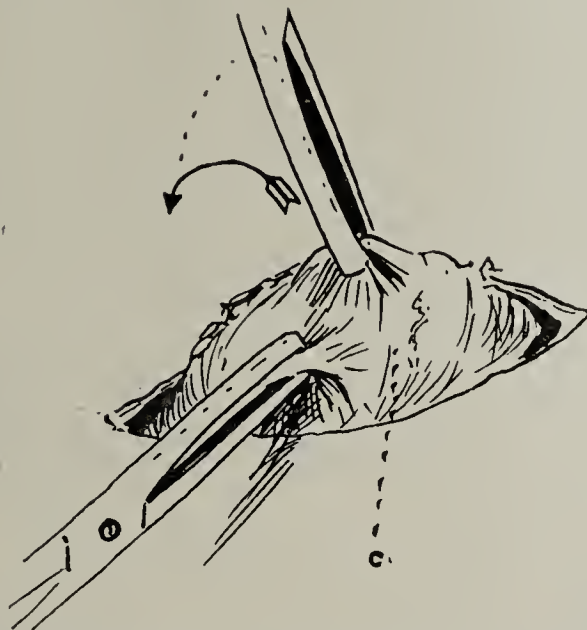


Fig. 2.—Partial enucleation of the prostate and lifting up of the loosened part of the gland above the incision; c, prostate.

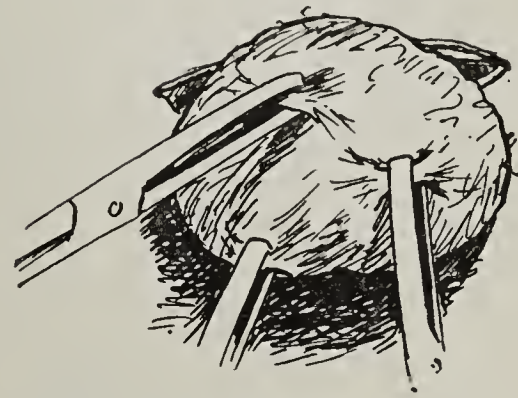


Fig. 4.—Prostate delivered in front of the mucosa incision.

The bladder is then incised in a vertical line by means of a pointed bistoury. The fluid pouring out of the bladder is taken up by gauze pads until everything inside and outside of the bladder is perfectly dry. The

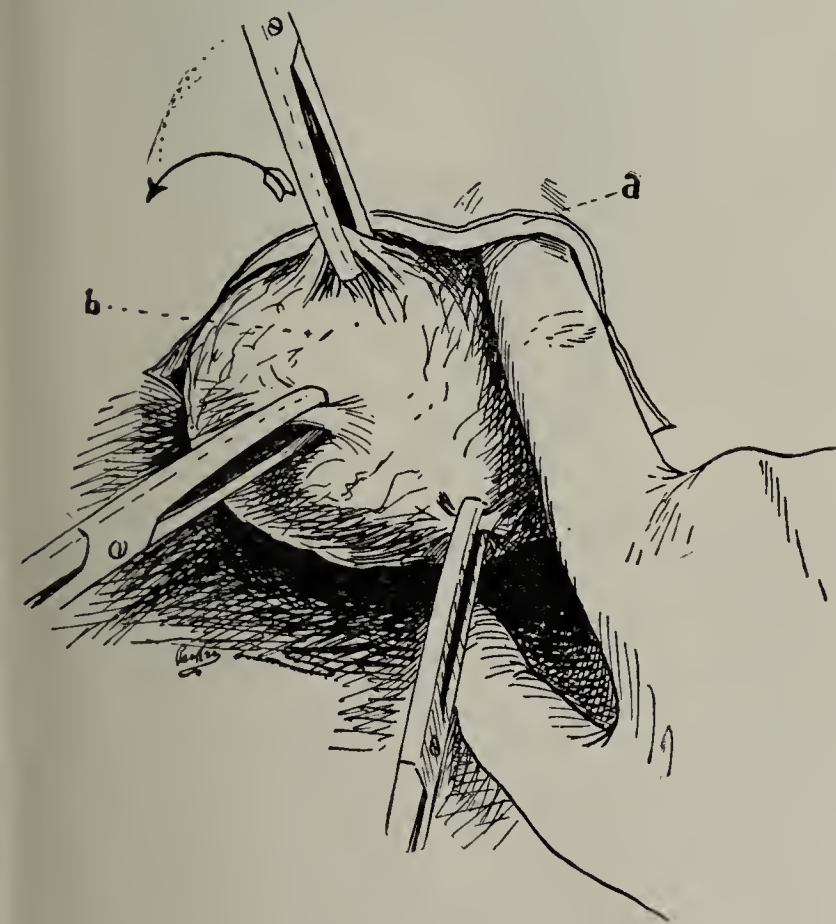


Fig. 3.—Further progress of enucleation; a, vesical mucosa; b, prostate.

incision in the bladder wall is then enlarged until the base of the bladder and the internal urethral orifice are brought into plain view.

A Simons or Martin vaginal retractor is now inserted in the upper angle of the bladder wall while the lower angle is stretched and pushed back by the insertion of a

bayonet-shaped vaginal lever; in this way the field of the endovesical operation is made satisfactorily accessible. The tip of the catheter plainly marks the internal urethral orifice; while the intraureteral ligament and the ureteral openings can also be readily seen. This free exposure of the inside of the bladder also makes it possible to avoid incising the atheromatous arteries which quite frequently run over the prostatic region.

The nature of the prostatic tumefaction we are dealing with is now determined by inspection and palpation; this information, together with the above-mentioned landmarks, enables us to

decide whether a partial exsection is sufficient, as is sometimes the case, and just where the incision into the vesical mucosa can be made to the best advantage.

The introduction of one or two fingers of the operator into the rectum, in order to push the prostate upward, I have abolished entirely as non-aseptic. Only in rare cases of very soft prostates it might seem to be to advantage to mark the prostate better by such a manipulation, and then the fingers of an assistant should be made use of for this purpose. The prostate is fixed and lifted up into the field of interference by grasping its most prominent part by means of a vulsellum, after which an incision is made with a knife into the mucosa of the bladder at the selected place. The use of the finger-nail, instead, in digging down through the mucosa to the prostate is clearly a surgical impropriety. Bruised and torn tissue does not heal readily, and the statement that it is easier and safer to find the right cleavage between the mucosa and the prostate by means of this blunt digging does not hold good if one operates under the guidance of the eye. I think, furthermore, that at the present time few surgeons, at least no American surgeons, would operate without rubber gloves, which fact would certainly make this digging more difficult and time-wasting. The incision should not be made too short, for if the tumor is forced through a small opening tears in the mucosa might result, although the elasticity of the mucosa insures a certain amount of stretching.

The incision into the mucosa is deepened until a white layer appears. There are now two possibilities: If the incision has been made over a portion of the tumor that protruded prominently into the viscus, the true capsule of the prostate will be immediately recognized from the fact that the palpating finger does not find a movable layer over the prostate, whereas, if the incision has been made near the base of a prominence, the first white layer to appear is the so-called sheath

of the prostate, recognized by its mobility over the underlying prostate and its true capsule. In case this sheath is encountered, it is also split by the knife, and the prostate, covered by its adherent true capsule, appears in the incision. This exposed portion of the prostate is now seized with a vulsellum and dragged upward under moderate tension (Fig. 1).

A poker or the tip of the index-finger is then introduced back of the vulsellum, between the prostate and the mucosa and sheath, and the covering layers are stripped from the gland (Figs. 2 and 3). Two principles should be kept in mind during this proceeding: The prostate with its capsule should be enucleated from the sheath formed by the rectovesical fascia, and the enucleation should proceed from the posterior surface of the tumor toward the symphysis. While this enucleation is being carried on, the gradually appearing parts of the prostate are seized progressively by vulsella and lifted out in the general direction of the enucleation while the index-finger, by slitting motions, detaches it from its surroundings.

in the same manner. The index-finger is then reintroduced into the cavity and a careful search is made for small nodules which are occasionally left in the depth. These also are enucleated with the index-finger in order to avoid a recurrence of the tumefaction. After all this is done the bladder and the prostatic side are flushed out with a hot 2 per cent. collargol solution until the fluid returns clear. Everything is then dried by means of large gauze sponges and the catheter is removed.

The mucosa flap covering the prostatic cavity, which by this time has shrunk considerably, is now pressed down toward the underlying tissue and kept in this position by packing the bladder with a wide strip of very weak iodoform or of similar gauze. The end of this strip is led to the surface and the bladder closed with catgut sutures, save for a little gap in the vertex which permits the emanation of the gauze. These sutures are inserted in such a way as to bring the denuded surfaces of the muscularis together and to avoid any impaction of the mucosa. After the bladders of

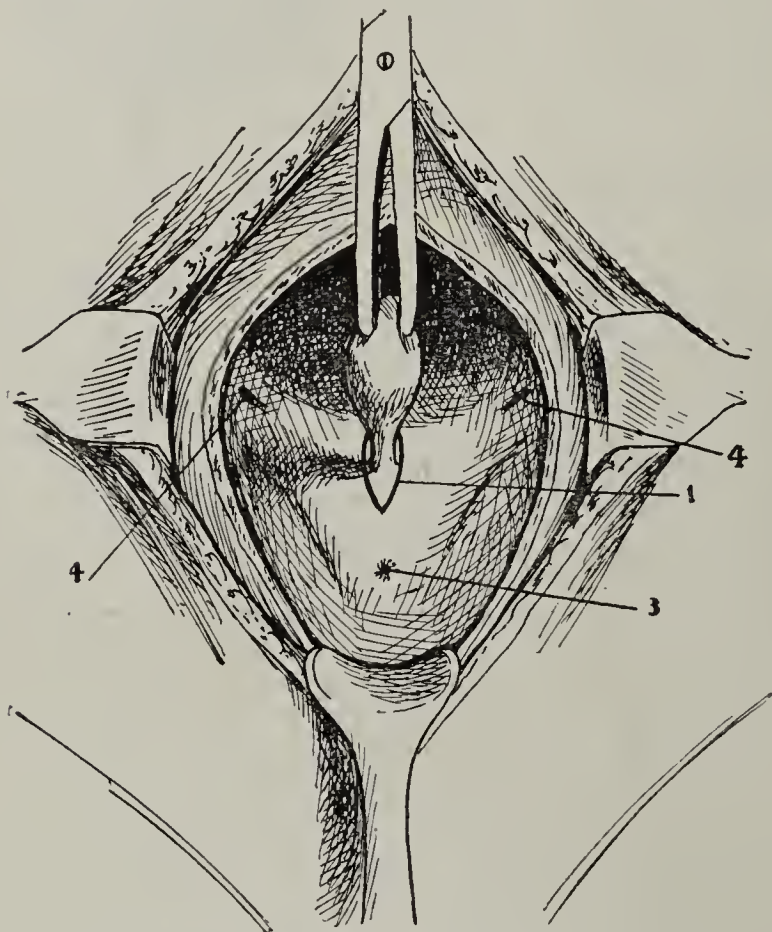


Fig. 5.—Solitary pedunculated excrescence of the prostate; 1, incision in vesical mucosa; 3, urethral orifice; 4, 4, ureteral openings. Half-schematic drawing.

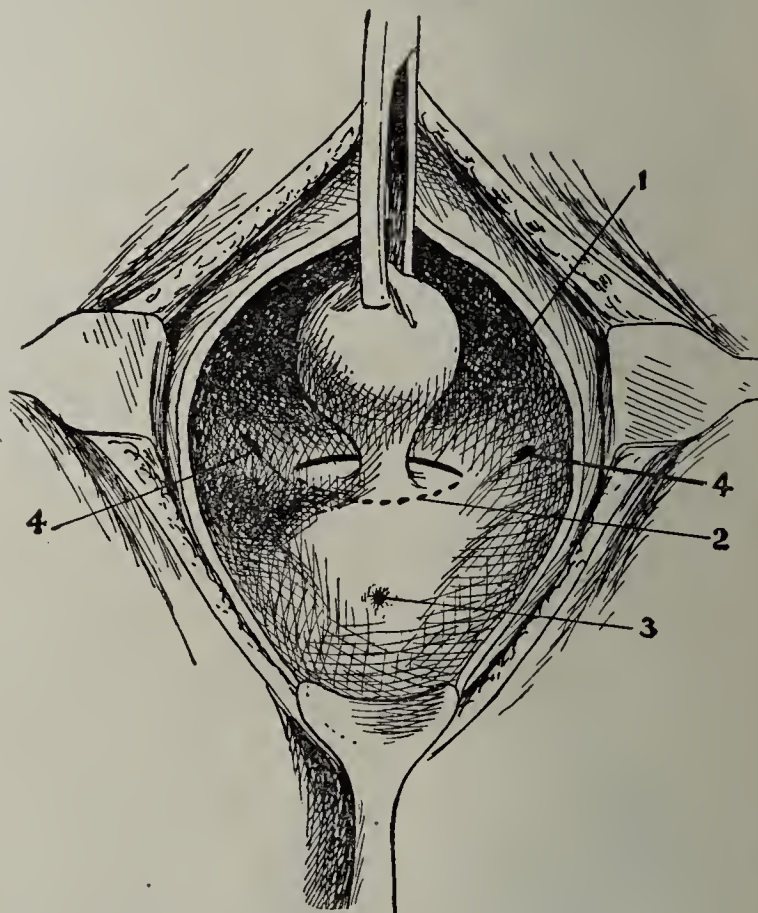


Fig. 6.—Pedunculated median lobe protruding into the bladder coincident with general hypertrophy of the prostate; 1, first incision into the vesical mucosa; 2, occasionally necessary incision; 3, urethral orifice; 4, 4, ureteral openings. Half-schematic drawing.

Thus the enucleation is done under the constant guidance of the eye. One should be careful to watch for tissue strands running from the capsule of the prostate to its sheath; these strands should not be torn, but should be severed with a knife or curved scissors. In this way injury to the sheath and breaking into the prostatic venous plexus are avoided. After the entire prostate is freed and lifted up, the finger detaches it from the triangular ligament. This is the only step of the enucleation that has to be done in the dark and by palpation alone; no difficulty is encountered, however, because by this time the entire prostate has been developed into the cavity of the bladder and no possible harm can be done by rolling it off from the ligament (Fig. 4). This enucleation almost always produces the organ *in toto*. Should such not be the case the remaining portion is again seized by a vulsellum and removed

old people are opened the mucosa will as a rule detach itself spontaneously from the muscular coat, appearing as a fine border; if not, it is detached to a small extent with a knife-handle or small poker in such a manner that when the sutures are inserted the mucosa lips will fold themselves together and protrude like an edge into the cavity of the bladder. After this the fascia of the muscles is reunited by catgut sutures up to the drainage openings; the skin is then closed in the same manner.

The gauze strip just mentioned also serves the purpose of leading the urine out of the bladder until natural urination takes place. It is not only unnecessary but also disadvantageous to insert a rubber tube deep into the bladder, as this necessitates leaving a larger opening; moreover, the pressure of such an extraneous

body often leads to necrosis. One should not forget that the bladder, being a contractile organ, drains itself, as it were.

I have entirely abandoned both suspension of the bladder to the abdominal wall and drainage of the perivesical space. The suspension of the bladder tends to excite spasmodic contractions of that organ which interfere with the knitting together of the tissues and cause pain and discomfort to the patient. I was induced to do away with drainage of the perivesical space by the fact that in my experience this space is entirely obliterated by natural pressure after the patient is brought back into a recumbent position, and that the abolition of drainage leads to quicker healing. This observation was also made and published by several German surgeons.

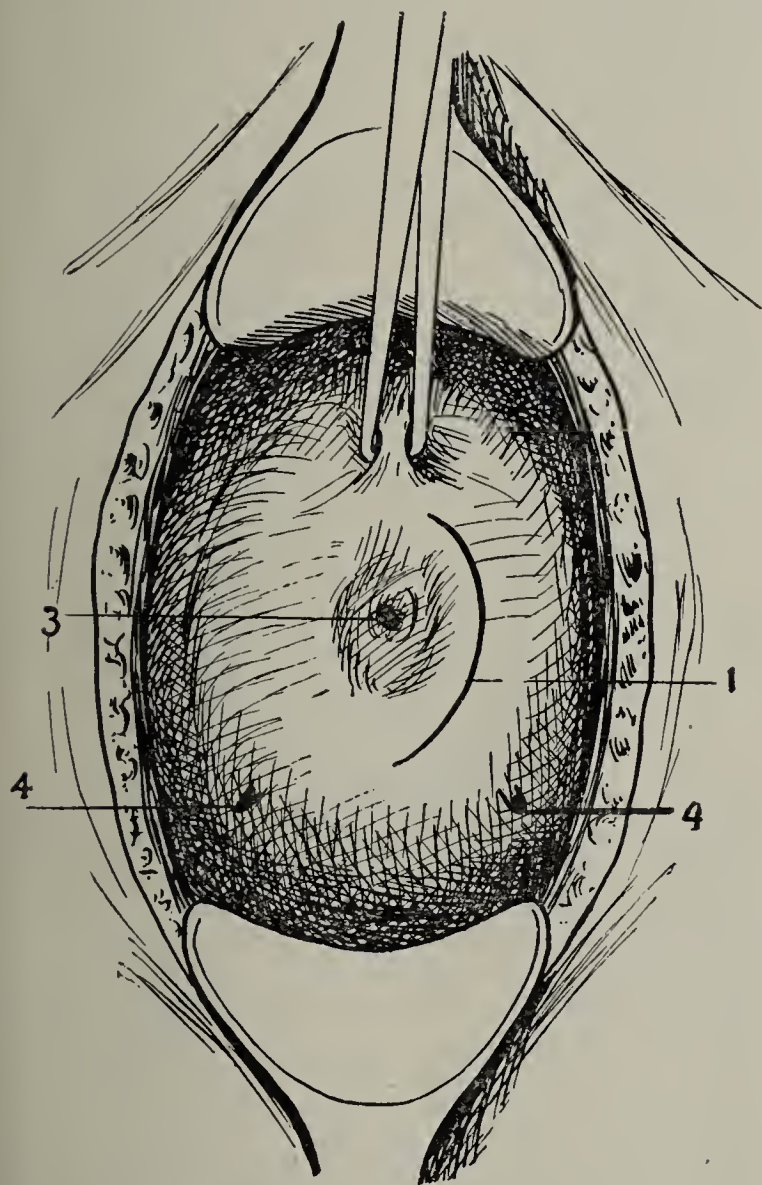


Fig. 7.—Ring-shaped hypertrophy of the prostate surrounding the whole prostatic urethra; 1, incision through vesical mucosa; 3, urethral orifice; 4, 4, ureteral openings. Half-schematic drawing.

An extremely vital step in the operation is the determination of the location of the incision through the vesical mucosa, for the proper selection of this location ensures a greater facility in enucleating the tumor and the most favorable conditions of the cavity and wound after removal has been completed. The importance of a definite diagnosis after opening the bladder is exemplified by the type of prostatic obstruction illustrated in Figure 5, which shows the protrusion into the bladder of the median lobe of an otherwise untumefied gland in such a way as to act like a ball-and-socket valve. In a case like this it would be absolutely unnecessary to remove the entire gland, the excision of the pedicle of this lobe, as indicated in Figure 5, being sufficient. The pedicle is circumscribed by an oval incision and a

wedge-shaped piece of the underlying tissue is excised in continuity with the pedicle. The resulting wound is then firmly closed by a few deep catgut sutures and the bladder sewed up completely. As a rule patients urinate naturally a few hours after operation; in the rare cases in which they are unable to do so the bladder is emptied at proper intervals by means of a soft catheter. A permanent catheter should never be employed.

Another type is seen in the development of a more or less distinctly pedunculated median lobe in addition to hypertrophy of other parts of the gland, and is marked by the pushing of the base of the bladder into the cavity (Fig. 6). In such an event the protruding lobe is seized at its top by a vulsellum and dragged upward until the basal mucosa becomes tense. A crescent-shaped incision into the mucosa is then made somewhat distant from the base of the pedicle, as indicated by the heavy line in Figure 6. After the prostatic surface is exposed the gland is enucleated in the manner de-

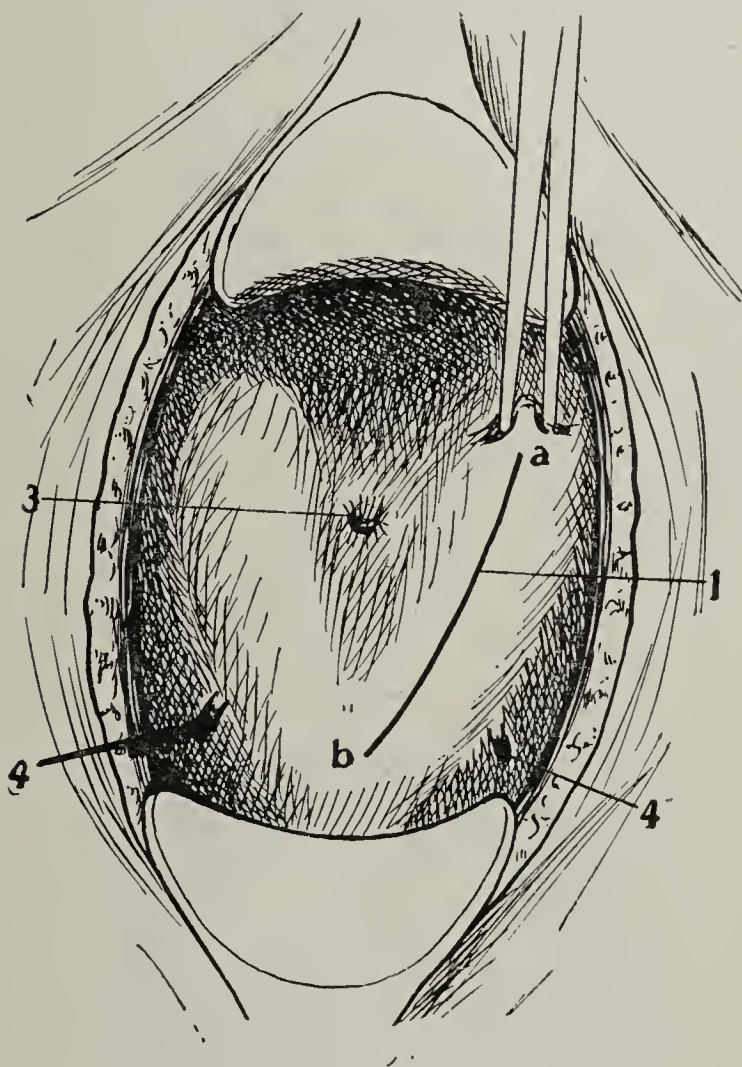


Fig. 8.—V-shaped hypertrophy of both lateral lobes; 1, summit of lateral lobe; a, b, incision through vesical mucosa; 3, urethral orifice; 4, 4, ureteral openings. Half-schematic drawing.

scribed above. The enucleation often runs along quite smoothly until the junction of the bladder mucosa with the tumor in front of the pedunculated lobe is reached. If the detaching of this part of the mucosa seems difficult, or if the resulting anterior flap appears a little too large, the mucosa is severed by an incision indicated by the dotted line in Figure 6.

In those cases in which the anterior portion of the prostate also participates in the enlargement, so that a hypertrophied ring encircles the whole urethra, the incision through the mucosa is best made in such a way as to half encircle the urethral opening; this semicircular incision is made either to the right or to the left, according to the side of greater prominence (Fig. 7). Here, too, the enucleation of the prostate is done under

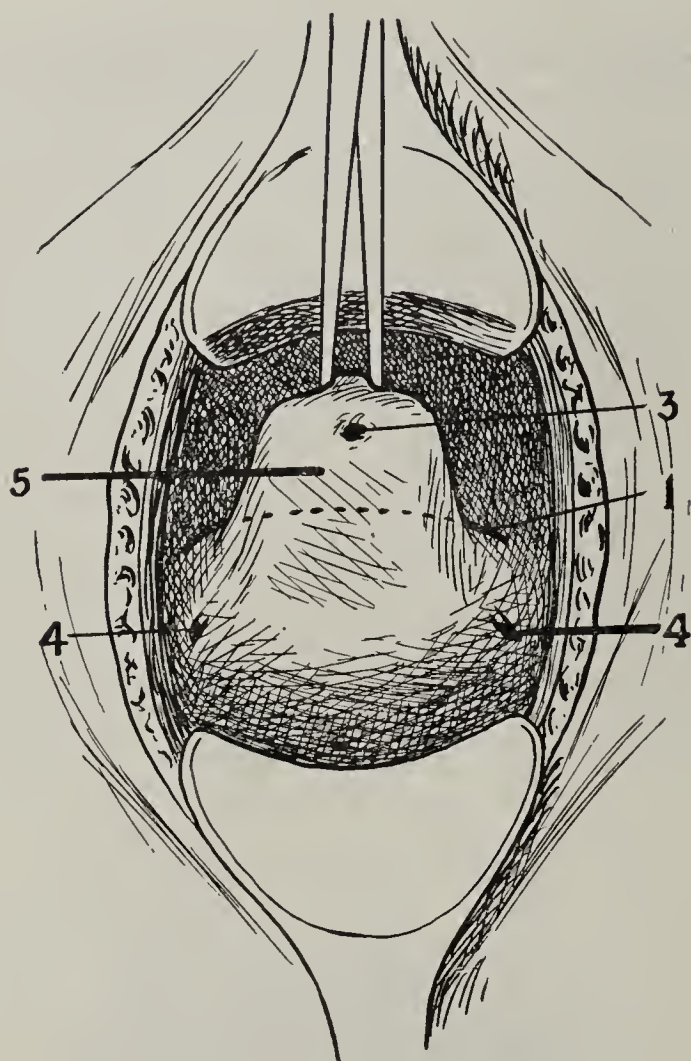


Fig. 9.—Hypertrophy of prostate with protrusion into the bladder of the median lobe carrying along the prostatic urethra; 1, line of incision through vesical mucosa; 3, urethral orifice; 4, 4, ureteral openings; 5, median lobe of prostate. Half-schematic drawing.

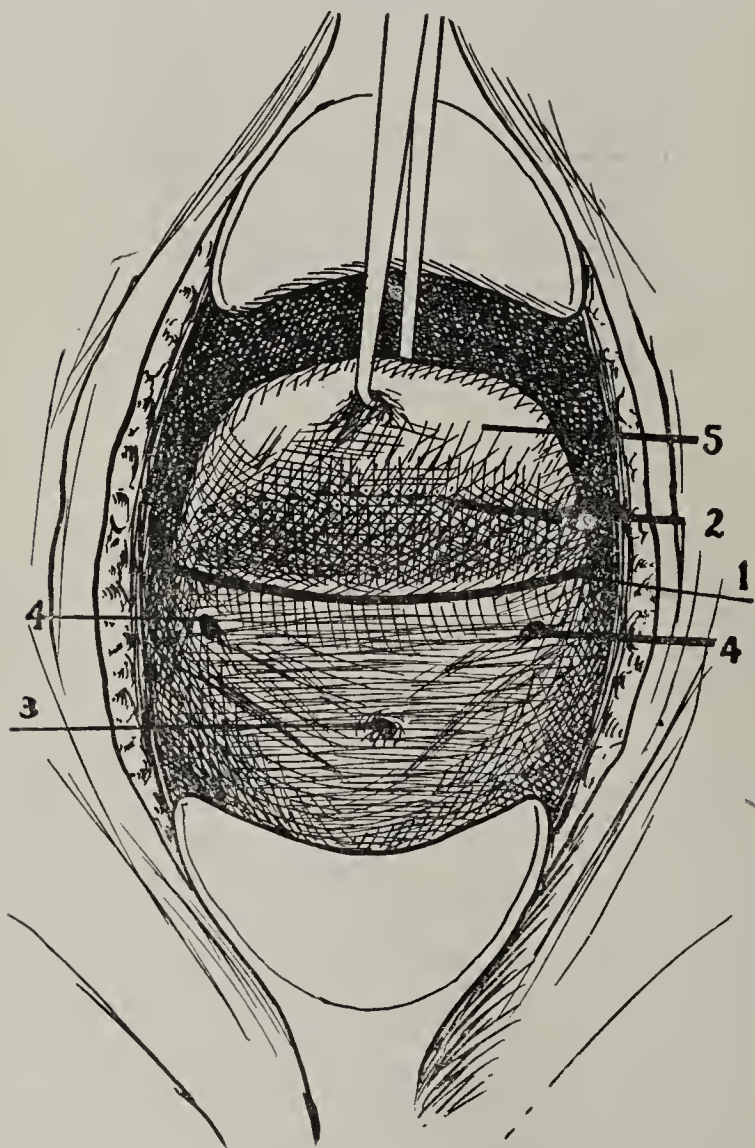


Fig. 10.—Median lobe of the prostate growing into the bladder as a massive tumor; 1, anterior circumference of mucosa incision; 2, posterior circumference of mucosa incision; 3, urethral orifice; 4, 4, ureteral openings; 5, massive tumor of prostate. Half-schematic drawing.

the guidance of the eye and by gradually lifting the tumor out by means of progressing vulsella. On this occasion I wish to mention that the partial or total removal of the prostatic urethra does not in the least interfere with a smooth healing and a perfect final result, provided that the after-treatment be carried out in a manner adapted to this particular incident.

In instances where the hypertrophy is confined mainly to both lateral lobes, so that what is commonly called a "prostatic thor" results, the incision is made over the most prominent contour of one of the lobes, as indicated in Figure 8, and the enucleation is performed in the above described manner.

Another type of prostatic hypertrophy, as illustrated in Figure 9, demonstrates again how important it is to make a correct final diagnosis after the bladder is opened. It will occur in certain cases that the median lobe, by growing into the viscus, carries along the cen-

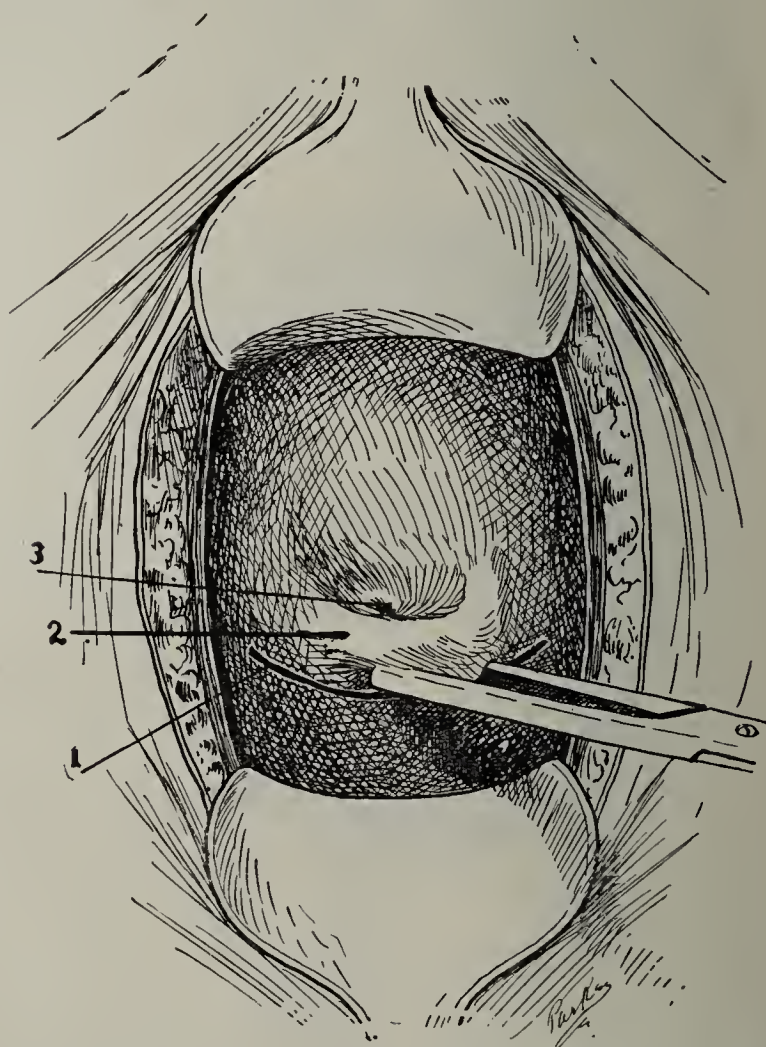


Fig. 11.—Collar-shaped hypertrophied prostate; 1, line of incision through mucosa; 2, collar-shaped protrusion of prostate into the bladder; 3, urethral orifice. Half-schematic drawing.

tral end of the urethra so that the internal urethral orifice appears at or very near the top of the tumor. Were this incision to be made indiscriminately—for instance, were it to cross the anterior surface of the tumor—severe injury to the urethral end, with all its complications such as hemorrhage or traumatic stricture, could not be avoided. In such instances the mucosa incision should encircle the posterior base of the tumor, as indicated by the dotted line, and the enucleation thus begun will proceed without difficulty and without dangerous lesion to the urethra.

In other cases the median lobe will grow into the bladder as a massive tumor of such extent that it practically divides that organ into two halves (Fig. 10). It is entirely erroneous to make the incision, as is so often done, over the top of a tumor of this description, for such an incision means only unnecessary hemorrhage

and loss of time. It is impossible to find the right cleavage at the top of such tumors because there is no sheath and because the true capsule of the prostate and the vesical mucosa are thinned out to such an extent in this location that they scarcely can be isolated. In such instances the base of the tumor is encircled by a complete circumcision as indicated in Figure 10. This incision should be made in such a way as not to interfere with the urethral openings which, according to the nature of the case, may lie in front of or behind the tumor. The enucleation is then started from the posterior incision.

In cases of collar-shaped prostate it is important to grasp the prostate with a vulsellum in the proper manner. It is a mistake to apply the forceps to the protruding edge at right angles to the elevation, for if this be done the forceps or vulsellum will tear out and unnecessary injury and hemorrhage will be produced. The vulsellum should be applied at the posterior aspect of the collar, somewhat above its junction with the base of the bladder (Fig. 11). This incision through the mucosa is made parallel to the collar and posteriorly from it, somewhat distant from the insertion of the vulsellum. The enucleation of the prostate is then carried on from behind forward. Thus the mucosa adjacent to the internal urethral orifice rolls off easily from the tumor and any injury to the urethral mouth as well as any tearing of the edges of the vesical mucosa is avoided.

92 State Street.

IGNORANCE OR MALPRACTICE?

FINANCIAL AND CLIMATIC CONDITIONS IN THE TREATMENT OF TUBERCULOSIS

W. WARNER WATKINS, M.D.

PHOENIX, ARIZ.

The object of this communication is to call attention to a phase of the tuberculosis question which is being treated with reprehensible neglect by far too large a percentage of general practitioners. It must be understood that these remarks apply solely to a particular class of patients and to a particular custom of which they are the unfortunate subjects; the word "custom" is used advisedly since the practice does not merit the term "treatment."

The patients are those who have reached an advanced stage of phthisis and in whom the disease is making steady progress, insidious or rapid as the case may be; whose financial means are small and who can not, under the most favorable surroundings, provide themselves with more than the necessities of life or who perhaps are the actual wards of charity.

The custom is that, in the face of all known teachings concerning the disease and in the face of common sense and humanity, physicians will persist in sending this class of patients away from home, family and friends to die in a strange land, by holding out to them the fatuous hope of recovery in a "change of climate."

There is no intention here to disparage the value of a suitable climate in the treatment of pulmonary diseases; but every intelligent physician knows that any climate, however favorable, is valuable only as a subsidiary adjunct to one of the three essentials for the constitutional upbuilding required to check the progress of a pulmonary tuberculosis, these essentials being rest, proper food and fresh air. The Salt River Valley may have the

most equable climate and the finest atmosphere in the world—and we who live here firmly believe that it has—yet any physician who advises a patient to sacrifice the first two essentials for the sake of the third is guilty of something more than mere ignorance, for in this day of free knowledge ignorance on this point is sin. Not even 360 days of sunshine each year can equip our climate with any curative value in tuberculosis when the system is deprived of food and the patient of rest or, even when these are granted, when the patient is hopelessly diseased. I am as firm an advocate as any one of this and similar climates as an adjunct to outdoor life (fresh air) when the patient is financially able to provide himself with the other more vital essentials of rest and proper food. But if he has not the means to place himself under the direction of a physician, if he is not able to pay for the necessary care when he is required to rest in bed or otherwise, if he is not able to provide himself with the very substantial food which is always required, then he can hope for absolutely no more improvement in Arizona or any other resort than will come to him at his own home—wherever that may be—with the advantage of the solicitous care of family and friends. The physician who advises him otherwise is guilty either of ignorance or malpractice; and even with all these advantages possible, moribund patients can hope for nothing more here than at home and should be so advised.

It seems inconceivable that physicians can dwell in enlightened communities and remain ignorant of the rudiments of pathology and therapeutics as applied to tuberculous processes when the entire medical world is surcharged with the purpose of educating even the public in these facts. But that such ignorance does exist is only too evident to those of us who practice in communities like this, where are congregated the victims of such professional ignorance, or, if not ignorance, then malpractice, pure, simple and unadulterated. It is deception as cruel and heartless as are the methods of the ubiquitous fakers against whom such a relentless warfare is being waged.

CASE 1.—A boy, aged 16, worked on an elevator in Pittsburgh, Pa., until forced by a hemorrhage to stop; his mother being dead, his father a loafer, the boy was dependent on his own efforts. Some business man gave him \$150 and on the advice of a prominent physician of Pittsburgh he came to Arizona with these instructions: "Live outdoors, stay away from doctors and you will get well." A charitable institution found him and referred the case for admission to St. Luke's Home, to whose staff I belong. The patient was found to be in the advanced stages of pulmonary tuberculosis with consolidation, cavities and visceral involvement. He was not admissible to St. Luke's and was advised to return by the first train to his home town and friends, which he did.

CASE 2.—A young married woman (two months pregnant) with acute miliary tuberculosis was sent to Phoenix from one of the most enlightened cities of southern California; she spent her last dollar for traveling expenses and arrived in Phoenix absolutely destitute, not having means to provide even a night's lodging. Charitable people learned her plight, collected a sum of money and placed her in a tent colony for two weeks, from which she passed first into the County Hospital and then under the care of the Associated Charities, which provided for her until she died. Her physician in California, in whom she had placed implicit confidence and who knew her financial condition, had told her that Arizona was her only hope for recovery.

CASE 3.—A young man was sent here from Oregon, with an advanced tuberculosis of three years' standing which had finally reached that stage of morbidity where Arizona was the "only hope" in the judgment of his physician. The patient learned from the same source that all he had to do was to

secure a bed, a tented roof, camp on the desert "somewhere" and provide his own meals, all at a cost of about \$8 per month, and *get well*. Presumably this physician, besides having unbounded faith in the curative value of our climate, also felt a noteworthy confidence in the protection of a benign Providence over his patient, possibly expecting the birds of the air to fetch his food as the ravens did for the prophet.

If these were isolated cases they would be interesting only as examples of man's inhumanity to man; but they are representative of a vast number of cases and the number is constantly on the increase. Phoenix is one of the best-known health resorts in the country for pulmonary tuberculosis, and what is said of Salt River Valley is true of any similar section of the country to which health-seekers are sent indiscriminately. Patients come here and have to be taken from the train by strangers, by representatives of charity or by the civil authorities. The point in the protest is this: that reputable physicians in every section of the country are responsible; they have urged the patient to leave his home where he could at least have died comfortably; have placed him on the train at his home town with no means save his railroad fare and with the delusive advice that he could doubtless find some light work at the destination at which he could make a living and the climate would do the rest. The effort to find that work almost invariably adds the finishing touches to that physician's culpability. Two such cases that fell into my hands during the past year when I was county physician here are noteworthy, since in neither case had the physician who gave such advice even made an examination of the chest.

Each winter the Associated Charities of this city is swamped with such a class of patients and the county hospital is filled with them, and our potter's field is a veritable monument to the guilt of all practitioners who are guilty of such malpractice.

The eastern physician will naturally ask what is to be done for his patients in advanced stages if he can not order a change of climate. Each community must solve this question for itself, and many of them are doing so, but the duty of the physician in charge of such a case is plain. He should carefully acquaint himself with the stage and probable course of the disease, and in prognosticating the outcome he should never lose sight of the social and financial condition of the patient; before sending a patient into a new community he should know how he is to be received there; under what social conditions he is to live; how the requirements as regards rest and food can be and will be carried out; and if all these are not in the highest degree favorable a change of climate—which is a minor consideration—should never be recommended. The doctor should honestly, firmly and courageously meet the conditions as they exist. If these are hopeless he should gently ease his patient's pathway into the grave and not deliberately shirk his duty by shipping the patient across the continent to die away from the solicitous care of friends and loving ministrations of a family.

23 East Adams Street.

Otitis Media Following Varicella.—M. Jaed states that nineteen cases are now on record; in three out of five cases in his own experience there were pre-existing lesions in the nose or pharynx. The ear affection caused by varicella is not so serious as from diphtheria or scarlet fever and rapid recovery is the rule under proper treatment. The greatest care is necessary in the hospital to ward off mixed infection in varicella. His study of the subject is published in the *Revue Hebdomadaire de Laryngologie*, Jan. 16, 1909.

SPELLING AS AN INDEX TO THE PREPARATION OF THE MEDICAL STUDENT

GEORGE DOCK, M.D.

NEW ORLEANS

For many years I have collected certain data bearing on the preliminary education of medical students. From these I have formed some conclusions, and believe that the data, as well as the conclusions, will be of interest not only to medical educators, but to those in other departments of universities, for I do not think that the students whose work I now criticize are the only ones of the kind in their respective classes. I hope that teachers of high schools, and those of lower grades, will also be interested in the following observations, but I hasten to add that I have no intention of suggesting that the results I shall set forth indicate a universal or even widespread condition among the output of secondary schools. My observations have been too scattered to permit such a conclusion, even if I had a desire to draw one. At the same time I think that the examples I submit might profitably lead to a general inquiry, by those in a position to make it, bearing on that point.

My observations have been made chiefly in examination books of medical students in their third year. All had high-school diplomas or their equivalent; a few had college degrees. The proportion of the latter is too small to permit a strict comparison, but suggests the question whether the college degree really indicates sound scholarship, when it is taken after such training as appears in the other candidates. I am prepared for the assertion that one should not expect perfect orthography and English in examination books. I not only realize the certainty of error from haste, preoccupation and confusion, but hope to show how I exclude most of the mistakes of that kind in my present task. I also hasten to meet the assertion as to incorrigible bad spellers—of the errors often looked on by the perpetrators and their admirers as evidences of lofty intellectual quality. There may be such, but I have a conviction that genuine examples of "natural bad spellers" are extremely rare, and that the real cause is almost always poor training. I have seen some of the worst spellers, under the persuasive influence of a "condition," become almost perfect in less than a year. If this can be done in the crowded medical course, it can be done much more easily earlier in school life—if the conviction and willingness to try are only present.

In the case of the people with whom I am now concerned I may add that as the result of what might be called preliminary observations, attention was called, in the beginning of each course, to the importance of English and spelling in the future papers. Moreover, I spent some time in the beginning pointing out the difficulties to be encountered, the value of accurate knowledge of technical terms, the necessity of the dictionary, and other preliminary matters.

EXCUSABLE AND INEXCUSABLE ERRORS

In my criticism I pay no attention to mistakes that can easily be explained by slips of the pen or the mind, such as "apetite," "aposite," confusion of "ei" and "ie," of single or double e and other double letters. In an otherwise good paper I do not note such a mistake as "crisis," after the example of "lysis," "anophales" for "anopheles," "ridig" for "rigid," or "appendicitis" with one p. An isolated phonetic spelling I also overlook, giving the writer credit for being serious. A mild but earnest spelling reformer myself, I look on the writer

of "brest" or "rist" as not necessarily more ignorant or careless but perhaps bolder than I, who leave out the "ne" in "catalog" and the other l in "dulness." If some similar examples occur in the list of unexcusable errors, it should be understood they were associated with what I consider indubitable examples of the latter.

In most of the examples I cite I think it will be admitted that temporary causes are not obviously concerned. Many of the words are technical terms, first used, if not first learned, in the study of medicine. With proper methods of study the student should become familiar with them, so that in an examination he would be not at all in the position of a pupil in a spelling match who encounters a "hard" word like "phthisis" or "Brown-Séguard." Many involve the question of single or double letters, and so may seem excusable, but in those I have selected I do not think this a valid excuse. Finally, the mistakes are not rare or isolated, but occur in some books in every class, and to an extent shown numerically below.

The most flagrant examples are the following:

"Aery" for "area,"	"Inflamed,"
"Agglutinate,"	"Indivigual,"
"Ajacent,"	"Irruption" for "eruption,"
"Anamil,"	"Iscolation,"
"Antiseptic,"	"Epieac,"
"Arrises,"	"Larangeal," "Jarnyx,"
"Arrose,"	"Laeramation,"
"Billiary,"	"Lanciolatus,"
"Bowals,"	"Measels,"
"Bowles,"	"Movvable,"
"Buldging,"	"Nausia,"
"Chrisis,"	"Omebic,"
"Conjenital,"	"Oposthotonus,"
"Corpussule,"	"Puss,"
"Coriza," "cariza,"	"Piiorus,"
"Cracentie," "crescentric,"	"Petieular" for "peteehial,"
"eresentrie,"	"Phthysis,"
"Diehrotic" for "dicrotic,"	"Papulary," "papularry" for
"Dycrotic," "diacrotic,"	"papillary,"
"Diarrhoeah,"	"Simptom," "symtom,"
"Dispnoea," "dyspanœa,"	"Stridilous,"
"Dissease," "decease" for	"Suddon,"
"disease,"	"Searlitalinal,"
"Desquimation,"	"Sturnum,"
"Dissapear,"	"Skyograph,"
"Ellicited,"	"Tetnas,"
"Effectcd" for "affected,"	"Traecheal," "trachial,"
"Elyptical,"	"Tonsalitis,"
"Execllerated,"	"Tempiture," "temprature,"
"Epidurmus,"	"Tubereules,"
"Empyemia" for "empyema,"	"Turpid" for "turbid,"
"Aevisto" for "estivo,"	"Umbillicated,"
"Feal," "fealt,"	"Ulseration,"
"Fassetted,"	"Vacanation,"
"Fourty,"	"Varacella," "vericella,"
"Hepitization,"	"Veriola,"
"Insiduious," "insideous,"	"Vareloid,"
"Immaeiation,"	"Ventillated,"

SPELLING OF PROPER NAMES

Not less suggestive are certain errors in the spelling of proper names; and in this connection I must point out that in the most striking examples the names are not difficult to memorize. Moreover, all are encountered in reading that is supposed to be required; they are frequently written on the blackboard during the first two years or the second year. From the results, especially "Hotchins," "Laverent," and the modifications of "Kernig," "Koplik," "Oppler" and "Boas" one might receive the impression that the student had no

opportunity to learn the words except by hearing them, and that in an imperfect way.

"Clebs" for "Klebs," "Hotchins" for "Hodgkins," "Lavar-ent" for "Laveran," "Koenig," "König," "Konig" for "Kernig," "Lefler," "Loefler" for "Loeffler," "Oplar," "Opeler," "Upler" for "Oppler," "Bowas," "Boos" for "Boas," "Waehselbaum" for "Weichselbaum," "Pyer," "pyer" for "Peyer." For "Widal": "Widall," "Weidal," "Weidall," "Wedol," "Widol," "Wiedal." For "Koplik": "Koplie," "Kopliek," "Coplick," "Caplex," "Koplig," "Kopligk," "Kolpig," "Koep-lik," "Köplik," "Poplik."

Certain words I have used as indices to classes, especially words that must be used in every examination. The most conspicuous of these are "crescentic," misspelled by 8 to 10 per cent. of each class; "measles," misspelled by a proportion almost as large. Among proper names the phonetic "Koplik" has been misspelled by most classes with a striking degree of uniformity—10.5 to 10.8 per cent., but the class of 1908 raised the proportion to 16.6 per cent.

Examples of the collected errors of individuals are interesting, and I give a few:

1. (an A.B.): "Afasia," "effectcd" for "affected" (many times), "basular," "feberil," "paracite," "parisite," "disapear," "quartian," "irruption" for "eruption," "motal," "sight" for "site."
2. "Bowals," "feal," "eary" for "area," "baee" for "base," "membrain," "pustual," "tungue," "persperation," "erescentric," "palet" for "palate," "eript" for "crypt," "friabil," "extream," "pilaris," "alveoliar," "cheak."
3. "Cresentic," "dissease," "postular," "vessiele," "bron-cophony," "fluroscope," "untill," "stoped," "rappid," "controll," "delerium," "medistinal."

In the criticism of the language of examination papers it is easy to go to extremes, but I submit a few examples to show that some mistakes occur that do not reflect credit on the preliminary training of the writers:

"A sequelae of," "quiet constant," "looses" for loses, "dye from poison," "who's health," "aloud to dry," "pulse are rapid," "temperature raises," "gastritis of stomach," "ventricule of stomach," "larangeal scope" for "laryngoscope," "a protozoa," "equitable climate," "lied down," "plumb colored."

THE CAUSE

I think there is a close relation between such mistakes as I have submitted and imperfect technical training in other respects. I never have found it necessary to condition a student for bad spelling or English; the technical matter is always faulty in such cases. Almost without exception, the student who writes "cracentic" or "crescentric" does not understand the real characteristics of a "crescentic" eruption; the one who writes "Koplik" as given above never knows when and where "Koplik's spots" occur, how they look or what they signify. It is not from a love of preciosity that I call attention to the matter, but because it reveals faulty training that must be undesirable in other lines than medicine. As a matter of propriety, however, I think such examples as I have given are unworthy of candidates for a profession still called learned. Physicians who should make such blunders will be made to feel ashamed, or will be looked on with condescension by educated men and women.

The causes of the condition I think are chiefly the following: (1) imperfect training in the precollegiate or preuniversity years; (2) imperfect scrutiny of candidates for admission to the medical school; (3) looseness with reference to scholarly fitness all through the medical course. It is not enough to dismiss the first reason, poor primary and secondary education, as we

often do, as if it were inevitable. I am aware of the complexity and difficulty of the subject, but I venture to say that if all university departments insisted on better preparation, the standards in the lower schools would rapidly be raised.

The need for more careful investigation of entrance credentials is so well known that I shall not discuss it, but mention one of the reasons often given for the existing imperfection, that is, that the public is unwilling to support properly educated graduates, or, in the case of universities supported by states, that the tax-payers wish their children to get through as easily as possible. Risking the accusation of demagogism, I question the accuracy of such replies. Tax-payers and students are never consulted as to standards. Their information on such matters is conveyed chiefly by announcements and catalogues, and at functions like commencements. In the former and at the latter the perfection and superiority of the school are enlarged on with as much eloquence as the writers and speakers can command. Tax-payers and parents, as well as students, who often make great material sacrifices and would willingly make more, not only want the best, but think that they are getting it. But even if they did not want the best there could be no justification for a university to yield to a betrayal of its trust.

The fact that my observations were made in the cases of students who had been in a university two full years shows the need of more care in regard to scholarship even in technical or bread-winning courses. The capable should be stimulated to better work, the incapable removed from the school before there has been an undue loss of time on the part of teachers and fellow students. The present neglect of such efforts is often reflected in an obvious impatience when a fault in preliminary training is pointed out. The study habit, the effort for improvement, has not been acquired. In correcting, as kindly as possible, the annual blunder of pulse as a plural I have been told that the perpetrator "did not come to learn English." One of my colleagues relates an instructive experience. Pronouncing several times without the desired result a word the undergraduate called "larynx," he finally said that the proper pronunciation was "larynx." "Well, then, larynx, as you call it," was the reply.

The present movement for raising entrance requirements may be expected to change these things, but I think and beg to urge that a more definite and continued effort will be necessary.

124 Baronne Street.

Clinical Notes

MUSCULAR SPASM DUE TO MUSCULAR EXERTION IN A HEATED ATMOSPHERE

TREATMENT BY APOMORPHIN

HOWARD M. WELSH, M.D.

LEECHBURG, PA.

During the past six years I have observed this condition frequently in employes of the American Sheet Steel Company, and in one instance in an employe of the West Leechburg Steel Company. In these mills the twenty-four hours are divided into three periods of eight hours each and are known as the morning, day and evening "turns." The "morning turn" begins at 12 midnight and ends at 8 a. m.; the "day turn" begins

at 8 a. m. and ends at 4 p. m.; the "evening turn" begins at 4 p. m. and ends at midnight. The men work morning turn one week, day turn the next, and evening turn the next; they, therefore, can not form any regular habits in regard to eating or sleeping. While at work they are constantly employed, during the eight hours, and have but a moment now and then to eat a mouthful. The heat is intense, as large sheets of red hot iron are being passed to and fro continually. The active exercise together with the heat causes a profuse perspiration, so profuse that the men remove their shirts and wring the perspiration from them in a stream as though they had been dipped in water. In order to make up for this great loss of fluid caused by such free perspiration great quantities of water are consumed, sometimes several gallons during the eight-hour period.

There seems to be a special susceptibility to these cramps in certain individuals, as some men will work from ten to twenty years without an attack, while others have them almost every hot day. The condition is rare in the winter months, but during the first warm days of spring, especially if the atmosphere be moist, cases are apt to occur. Chronic alcoholism seems to bear no relation to the attacks; several patients were total abstainers. It is a notorious fact that iron mill workers use alcohol, chiefly beer, to excess.

The two chief factors in the production of the condition are muscular exertion and heat. Men whose work is light, even though subjected to the same temperature as the others, do not develop the symptoms. If for some reason a susceptible man does not get his accustomed rest between "turns" he is likely to develop the condition much earlier in his "turn" than if he had secured the usual amount of rest; in fact, anything that lowers the vitality in a susceptible individual increases the chances of an attack. Humidity of the atmosphere bears some relation to the condition, as attacks are more frequent on sultry days at a temperature much below that required to produce the same effect when the air is dry.

The patient will frequently state that he was not feeling so well as usual when he went to work and that more effort was required to keep up with his duties. He may complain that he was unable to perspire, or that the perspiration, profuse for a time, became more scanty or even ceased to be perceptible.

Gradually involuntary spasmodic contractions of certain groups of muscles occur. The flexors of the fingers as a rule are affected first; these cramps occur every few minutes. In other cases the smaller muscles will remain unaffected and the larger ones of the arms or legs or even those of the abdominal wall develop the condition. Sometimes many muscles or groups of muscles are affected at one and the same time, at other times one muscle after another becomes cramped. If untreated the contraction lasts from one to three minutes, when it gradually relaxes. The beginning of the cramp is usually ushered in by a few feeble twitchings of the muscles about to be affected; these occur long enough before the general spasm for the patient to know that a cramp is coming on. A cool breeze or a sudden jarring of the bed is often sufficient to throw the affected muscles into contraction. There seems to be a predilection for certain groups of muscles in certain individuals: the group or groups of muscles affected in the first attack are likely to be the ones affected in succeeding attacks. As the condition improves the individual cramps are of shorter duration and further apart.

In a well-developed case the cramps may occur every two or three minutes; later they may be five or ten minutes apart, and finally a few faint contractions may occur at intervals of half an hour. The pain during the cramp seems to be severe; I have often had patients tell me that they would rather die than go through another attack. The pupils dilate with each cramp. The pulse as a rule is normal, but in some cases may be slightly accelerated, rarely being over a 100. The skin is often clammy, sometimes dry; when perspiration becomes free the patient improves. The patient seldom vomits, even though the abdominal muscles be involved.

If a leg or an arm is allowed to become flexed by a cramp a large amount of force is required to extend it; not so much force is required to prevent flexion. After an attack the patient feels stiff and sore; but even after a severe attack lasting four or five hours he will be able to return to work at the end of forty-eight hours. The muscles appear to be abnormally strong in these attacks. It is not uncommon to see a patient on his back on the floor and from six to eight of his fellow workmen beside him and putting forth considerable effort to keep his muscles from contracting. I recollect one case in which I volunteered to hold the right arm of a patient during the cramp. I got the arm near the edge of the bed and exerted all my force to keep it in an extended position, using my weight as an aid, but was unable to prevent the flexion. This patient did not weigh more than 140 pounds and was but 19 years old. A sharp slap or two, with the open hand, over the affected muscle will usually produce immediate relaxation. This effect is so well known about the mills and the method is applied so vigorously that the patient is often so pummeled by his associates as to present the evidences of his treatment for several weeks after an attack. In a certain number of cases the patients have finished their "turn" and have been attacked on their way home from work; in still others the cramps do not develop until the patient has reached home, changed his clothing and, to a certain extent, cooled off. It is the rule for these men to sweat freely for several hours after they have completed their work, and as a rule they do not cramp until this free perspiration ceases.

The attacks vary greatly in severity. In some cases only a few muscles are affected; in others a number of groups. An untreated case may last from one to fifteen hours. I have never heard of a case resulting fatally, but have had several patients who were so susceptible that they thought it advisable to change their occupation.

In the treatment of the condition morphin has been used probably to a greater extent than any other drug. To a certain extent it relieves the pain, but has little or no effect in cutting short the attack. I have given as many as three quarter-grain doses, hypodermically, within two hours. Even with this dosage the symptoms continued for several hours. Hot packs are more effective. Some mills are provided with an emergency room where hot water and woolen blankets are provided, and when a patient develops cramps he is taken immediately to this room, stripped and wrapped in a hot blanket. These are changed frequently and usually, after an interval varying from fifteen minutes to half an hour, the cramps become less severe. In all attacks an effort is made to keep the part affected in extension, as in this position the pain is less severe. If the muscles of the hands and feet are the only ones affected, the affected part can be placed in hot water and kept there for sev-

eral hours. If this treatment is discontinued too soon the cramps are likely to return.

Apomorphin in doses varying from 1/12 to 1/20 grain will produce immediate relaxation. As a rule the emetic action is prompt and is followed by marked prostration. In the first cases treated with this drug the larger dose was used, but later I found that the smaller dose would entirely control the cramps, and in some instances did not produce any marked emetic effect. When the prostration is marked it usually lasts from five to eight hours. As has been mentioned before, a cramp in an individual muscle may be made to relax by a sharp slap over the affected muscle, but the relief is only temporary. The best treatment is probably to treat the milder cases with hot water or hot packs on account of the prostration following the use of apomorphin, but in all severe cases apomorphin should be given and followed by strychnin, 1/30 grain every four hours.

I have treated between fifty and sixty attacks of these cramps in twenty-four or twenty-five individuals. Of these one patient has been observed in ten different attacks extending over a period of three years. A number of men have been treated in but one attack. A brief account of a few of these cases will be given:

CASE 1.—E. K., aged 18, single, American, worked a turn one very sultry morning. He had probably walked about a quarter of a mile on the way home from work when cramps began in the legs. He was carried into a near-by saloon. This occurred about 8:30 o'clock. I saw him at 9 o'clock, and found him lying on the floor with six or eight of his fellow workmen holding his arms and legs in extension. When the cramps came on, which was every two or three minutes, they would strike the offending muscles with their fists, to produce relaxation. Several blankets and coats were wrapped around the patient. I gave him 1/4 grain morphin hypodermically, which somewhat relieved the pain. At the end of half an hour the cramps had not diminished in frequency, and I repeated the dose of morphin. At the end of two hours the cramps had diminished both in frequency and severity, and the patient was taken home on a stretcher. He was put to bed and warm blankets applied. About 2 p. m. the cramps had entirely disappeared. I saw the man the next day and found him feeling well; there was a little soreness in the muscles but not more than one would expect from the treatment of his fellow workmen. He went to work the next day, thus losing but one turn.

I attended this patient in nine subsequent attacks covering a period of three years. In regard to the muscles affected, the attacks were very similar to the first. In one attack I gave him 1/4 grain morphin and followed it by the administration of chloroform. I kept the chloroform up for twenty minutes. When he recovered from the anesthetic the cramps had disappeared. In another attack, which came on about 6 p. m., I gave the usual dose of morphin and followed it with about 3 ounces of whisky every hour for four doses. The cramps gradually disappeared and were completely gone by midnight. The patient became somewhat intoxicated. In the last attack in which I had the opportunity to treat him I gave him 1/16 grain of apomorphin; vomiting occurred in ninety seconds. The cramps ceased immediately. His pulse varied in the different attacks, but was usually between 80 and 90 before the treatment; sometimes it went up to 120 near the end of the attack.

CASE 2.—J. F. C., aged 42, single, American, has worked in an iron mill the greater part of the time for the past twenty years. He is not addicted to the use of alcohol or tobacco. He served as a soldier during the late Spanish-American war. There is no evidence or history of lues. He was working evening turn at the time of this attack. He had been at work about two hours when he noticed cramps in the muscles of his fingers. He worked about ten minutes longer when cramps developed in the muscles of his legs and arms. He fell to the

floor and his fellow workmen carried him to the emergency room, where I saw him about fifteen minutes later. Pulse was 84, skin moist and clammy. The smaller as well as the larger groups of muscles of both upper and lower extremities were affected. The various muscles were not affected simultaneously but at different times so that the patient had no interval during which he was entirely free from the cramp. He continually cried out with pain and begged me to give him relief; 1/12 grain apomorphin was given hypodermically; the cramps ceased immediately. In about two minutes he began to vomit and to sweat profusely. In two hours he was taken home in a buggy and was able to return to work three days later.

This man gives a history of having had attacks of greater or less severity at intervals during the past fifteen years. All attacks, except the one here described, lasted from two to six hours.

CASE 3.—J. W., aged 44, married, American, has been a mill worker for fourteen years. He uses alcohol to excess at times. He has had four or five previous attacks of cramp. He completed the usual eight-hour turn and walked home, a distance of about one-half mile, when the cramps came on in the large muscles of the arms, legs and trunk. I arrived a few minutes later and found the man on the floor. He was a large, muscular man, weighing over 200 pounds, and when the cramps came on they were something terrific. I gave him 1/12 grain of apomorphin, which produced immediate relaxation followed by vomiting. He was able to return to work the next day, thus not losing any time.

CASE 4.—C. S., aged 21, single, American, has worked in mill for past five years. He never had cramps before. He takes an occasional glass of beer. He went to work at 4 p. m. on a hot, sultry evening. About 7:30 he noticed an occasional cramp in the muscles of the arms; these gradually became worse until 8 o'clock, when he had to stop work. A few minutes later they were so severe that he was taken to the emergency room and hot blankets applied. I saw him about 9 o'clock, when he was having cramps every three or four minutes. The flexors of the arms and legs were the only muscles affected. He received 1/20 grain apomorphin. No more cramps developed. In three or four minutes he broke out in a profuse perspiration. No vomiting occurred. An hour later he was able to walk home and returned to work the next evening.

CASE 5.—G. B., aged 32, single, Hungarian, is an employé of the West Leechburg Steel Company. He has been in this country about nine months. He had worked his usual period of ten hours, returned to his boarding house, and finished eating his supper before very severe cramps in muscles of legs, arms and abdomen developed. He screamed each time a spasm developed. The pain seemed to be most severe at the beginning of the cramp, and not more than a minute intervened between the individual cramps. I gave him 1/12 grain of apomorphin. The cramps ceased, but there was great prostration for five or six hours. This man went to work the next day. This is the only case that I have observed in a person of foreign birth, although there are many foreigners working under the same conditions that seem sufficient to produce the muscular cramp in a native-born American.

DARNING-NEEDLE EXTRACTED FROM THE EPIGASTRIUM OF AN INFANT

A. T. HUBBELL, M.D.

DAVID CITY, NEB.

Patient.—Baby H., a well-nourished, breast-fed child, 10 weeks old, had always been healthy and good-natured until about Feb. 10, 1909. At this date the mother noticed a slight change in the baby's disposition; also that some positions caused discomfort or pain. No cause was apparent; the bodily functions continued normal. On February 17 I was called.

Examination.—Over the epigastrium was a localized erythema and a slight prominence an inch above and to the left

of the navel. A hard, pointed object, apparently projecting from the stomach, was perceptible on palpation, and a diagnosis was made of the presence of a foreign body—a pin or a needle.

Operation.—A slight skin incision over the prominence revealed the point of a needle, which was easily extracted with the forceps. It was a darning-needle, one and three-quarters of an inch long.

The swallowing of pins, needles, etc., by babies is not rare, but such a case in an infant so young is unprecedented in my experience. I can account for it only by supposing that the needle had been stuck in the mother's dress and had slipped into the baby's mouth during nursing.

A FIBROID TUMOR OF THE UTERUS

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Surgeon to St. Francis Hospital
PEORIA, ILL.

At this time, when there is a discussion as to the advisability of removing the "symptomless fibroid," it may not be inopportune to report the following case:

History.—The patient, Miss D. M., aged 46, came under my care at the St. Francis Hospital on Dec. 28, 1907. Her menstruation had been established at seventeen and had been regular every four weeks with a scanty flow of one or two days' duration. She had some pain the day before each menstrual period. On Dec. 16, 1907, she was taken with pain in the lower abdomen and with difficult and frequent urination. She had a temperature of 102, pulse 100. She complained of an intense pelvic soreness. This was the first sickness she had had for eighteen years. Her menstrual period began the next day, December 17, and lasted one day with a very scanty flow. On December 18 the soreness began to subside and on December 20 the temperature became normal.

Examination.—This revealed a hard, symmetrical fixed mass in the lower central abdomen, and a diagnosis was made of fibroid tumor of the uterus. The patient had not been aware of any enlargement in the lower abdomen.

First Operation.—On Jan. 2, 1908, a non-continuous longitudinal median incision was made above the symphysis and the omentum and intestines were seen to be closely adherent to the tumor mass. When the adhesions were separated and the tumor delivered through the incision it was seen to be a large fibroid of the uterus which had become so tightly twisted on its pedicle that the circulation was cut off and the tumor was of the greenish-yellow color of gangrene. The pedicle was clamped and the tumor removed. The uterus contained a large number of smaller fibroids, so a supravaginal hysterectomy was done. All raw surfaces in the pelvis were covered with peritoneum. There were so many abraded places on the intestines due to the adhesions to the tumor that no attempt was made to do anything to them. The patient's recovery was uneventful.

In June, 1908, she had an attack which resembled obstruction of the bowels, but the family succeeded in relieving it. On Oct. 29, 1908, her bowels became obstructed again. On October 30 she began to vomit. On October 31 she began to vomit fecal matter and was placed on the train and brought to the St. Francis Hospital.

Second Operation.—An incision was made around the old scar. There were no adhesions to the floor of the pelvis. Several coils of small intestine were found adhered to each other. The cecum had slipped through a loop formed by two coils of small intestine which were densely adhered together. The cecum was greatly distended because of the pressure at its distal portion by the tight loop, and it in turn pressed tightly against one of the limbs of the loop. The small intestine above this compressed limb was greatly distended and had a few small dark-colored spots on its surface. The adhesions were separated and the cecum released. As the obstruction had been relieved it was thought that the intestine might regain its

vitality. The patient was put to bed, and two hours afterward her pulse became very rapid, she grew cold, and died six hours after the operation.

It was very evident that the abraded surfaces left on the intestine by the separation of the adhesions to the gangrenous fibroid had become adherent to each other and thus formed the adventitious opening through which the cecum had slipped.

Is it assuming too much if one concludes that if the fibroid had been discovered and removed before it became twisted on its pedicle the patient might be alive to-day?

402 Observatory Building.

ATROPIN POISONING IN A CASE OF INTERSTITIAL KERATITIS

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GRAND JUNCTION, COLO.

In the literature to which I have access it is stated that poisonous symptoms rarely occur with the instillation of 1 per cent. solution of atropin sulphate.

Patient.—A boy, aged 8, blond, fairly well developed and nourished, had been under treatment for interstitial keratitis since November, 1908. This was complicated with a posterior synechia in the left eye. Treatment consisted of instillations of one drop of a 1 per cent. solution of atropin sulphate five times daily with the administration of biniodid of mercury and potassium iodid internally. Six weeks ago the instillations were reduced to one drop three times daily. The general health and sight were improving.

Poisoning.—On Feb. 25, 1909, I was called at noon and told that the boy was acting very queerly. It was also stated that there was muscular incoordination of both lower extremities and that articulation was difficult and incoherent. I saw him within an hour after these symptoms began. Rectal temperature was 98.2 F., pulse 104 and respirations 22. The pupils were widely dilated from the instillations of atropin, the face was flushed, the lips dry, the tongue moist, the throat dry, but normal in color, the mucous membrane of the nose dry, no nausea or vomiting. There was considerable mental excitement with illusions, delusions and hallucinations. The patient seemed to become momentarily rational at times. During these rational moments he would protrude his tongue when asked and also stated that nothing pained him. Reflexes were exaggerated. The patient refused to take anything to drink. A tepid sponge bath was ordered and an enema given. The patient passed a small unformed stool and about a half pint of amber-colored urine which contained no albumin. The diagnosis of atropin poisoning was made and all medication discontinued. Six hours later the only change noticed was decidedly clearer articulation. The patient had passed a large quantity of urine during this time. Chloral and bromid were administered and about 10 p. m. the patient passed off into a normal sleep, not awakening until 7 a. m. the next morning, perfectly rational, with a good appetite and anxious to be up and at play.

DYSPNEA AND URTICARIA FOLLOWING INJECTION OF ANTITOXIN IN DIPHTHERIA

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PEORIA, ILL.

Patient.—On Sept. 20, 1908, a young man of 28 presented himself complaining of a sore throat and giving the history of exposure to diphtheria three days previously. An examination of the throat showed a typical membrane on the right tonsil, a culture from which gave the Klebs-Loeffler bacillus. Externally the throat was tender to pressure and the cervical lymph

glands were enlarged. The patient was nervous; temperature 100 F. and pulse 95. The examination was otherwise negative.

Reaction from Antitoxin.—At 11:30 a. m. 2000 units of antitoxin were injected in the back with no especial discomfort to the patient. In about ten minutes the patient became restless, the face cyanotic and the respirations difficult. Gradually the respiratory distress became marked, the patient lying in a slightly raised position, with head extended, face cyanotic, expression agonized, nostrils dilated, the body limp and covered with cold sweat—the picture of suffocation. The pulse was rapid and weak, 120 a minute; the respirations were noisy, 30 to the minute. A hypodermic injection of morphin, gr. 1/4, and atropin, gr. 1/150, was administered. A cold towel was applied to the head, the extremities were rubbed and the patient fanned. After twenty minutes the urgent dyspnea gradually left and a fine general urticarial rash was noticed. This rash was white and raised, itched only slightly and persisted for four hours. When the patient could be moved he was taken home and put to bed.

Treatment for Reaction.—As it was feared that another injection might be necessary, the dry antitoxin was telegraphed for, and calcium lactate given by mouth every two hours in 5-grain doses. A gargle of hydrogen peroxid was ordered and strychnin, gr. 1/40, was given every four hours. A few drops of antitoxin were dropped into the nostrils every hour, in the hope that some might be absorbed and retained. At 11 p. m. the patient experienced a slight attack of dyspnea, which was readily controlled by morphin and atropin by mouth. In the morning the membrane had increased, covering parts of both tonsils, and the patient's general condition was not so good. After waiting several hours, the dry antitoxin not arriving and the patient's condition growing worse, we thought best to renew the injection in the hope that the calcium lactate would control the unfavorable action of the antitoxin. A hypodermic injection of morphin, gr. 1/8, and atropin, gr. 1/150, was administered and a few minutes later, at 3 p. m., the injection of antitoxin was begun. In the next twenty minutes 4000 units of antitoxin was given; then the patient again became restless and cyanotic, the difficulty of breathing reappearing as on the previous day, though with hardly the same severity. A second hypodermic injection of morphin, gr. 1/8, with strychnin, gr. 1/40, was administered. The urgent dyspnea lasted about fifteen minutes, and as the patient's breathing became easier the urticaria returned. This time also it was general and white but the wheals were larger, persisting for twenty-four hours and the itching was marked. The next morning the throat was nearly clear. The recovery was complete and uneventful. At no time in the disease did the temperature go above 101.5 F. and the pulse ranged between 90 and 110 except in the dyspneic attacks, when it was about 120.

History.—Later a history was obtained of attacks resembling hay fever when the patient was around horses, especially when they were sweating. These attacks began by itching of the eyelids, and a feeling of rawness in the nose, and were followed by a coryza, which persisted for about two hours. The attacks were so oppressive that the patient always avoided a livery stable. During previous years he had had several asthmatic attacks not at all associated with hay fever. Since these injections of antitoxin the attacks of asthma have disappeared. The patient had received hypodermic injections of morphin previously, so that was not the cause of the urticaria. The association of dyspnea from the use of horse serum and the attacks of something resembling hay fever from the odor of horses is at least an interesting coincidence, if not showing a causal relationship.

One might be censured for administering the second dose of antitoxin when the first was so fraught with danger; but at that time it was regarded as the less of the two dangers. So far as an opinion can be formed from one case, it seems that the calcium lactate lessened the bad effects of the serum, which were lighter and of less duration after its administration, although twice as much of the serum was given. Sixty grams were administered between attacks.

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THE RESPIRATORY RATIO: A PRELIMINARY
NOTE

C. M. COOPER, M.B.

SAN FRANCISCO

The respiratory ratio which I wish to describe is obtained as follows: The patient is told to take a deep breath and to hold it as long as he can. He is further instructed to raise his hand when he feels that he must expire. Some little time (five minutes) is then spent in the ordinary examination; then the patient is told to expire fully and not to breathe in till he is compelled to do so, when he again must raise his hand. The time from the beginning of either of these phases of respiration to the time of raising the hand is noted and the ratio thus obtained.

The period during which the breath has been held in full inspiration by healthy individuals has varied from 40 to 70 seconds. The period during which the breath has been held in full expiration in the same individuals has varied from 20 to 35 seconds. The first term of the respiratory ratio then varies from 40 to 70 and the second from 20 to 35.

It seemed likely that we might expect departures from the normal in different directions according to the lesion present.

In individuals with a narrowing of the field of cardiac response due to cardiovascular lesions we might expect a shortening of each period, the ratio, however, being more or less maintained. This has been borne out in clinic patients with valvular lesions, myocardial insufficiency and aneurisms whom I have investigated, the time ratio reading about 25:15.

A paradoxical respiratory time ratio would seem to be likely to occur in the following classes of patients:

1. In patients with paralysis or paresis of the muscles of inspiration, since the maintenance of the inspiratory position is a muscular act.

2. In patients in whom pathologic lung conditions have led to changes which increase during sustained inspiration the resistance to the pulmonary circulation beyond the limit of response of the right ventricle, or which lead to a considerable reduction of the quantity of fresh air taken in during the inspiratory act. Two asthmatics who came to the clinic during the period of almost complete abeyance of the attacks had ratios 15:25 and 20:35, respectively, both thus exhibiting considerable diminution in the period of sustained inspiration, while the period of sustained expiration was normal. One patient with a fibroid phthisis and with a rapidly-acting, partially-exhausted but not dilated heart exhibited a ratio 5:7, etc.

In three normal individuals who had taken lung gymnastics the ratios were, respectively, 90:25, 75:25 and 75:25, these ratios seeming to suggest that the increased period of sustained inspiration was probably due solely to an increased chest expansion leading to an increased air intake.

3. In patients with mediastinal and pericardial adhesions which prevent the concomitant movement of lung root and heart. One such patient exhibited a ratio of 9:25.

Naturally many variations will occur, since complicated lesions are frequently present, and naturally such a ratio should vary with the decline and improvement of the patient.

Therapeutics

SCABIES

While the diagnosis of "itch" is considered perfectly easy to make, and, having been made, the treatment is likewise considered simple and always the same, it is well pointed out by Dr. Douglas M. Montgomery, San Francisco (*California State Journal of Medicine*, February, 1909) that the diagnosis is not so simple, and that the treatment should not always be the same, and that with any treatment the itch is often difficult to eradicate.

If the burrows and the itch mite are found, of course, the diagnosis is made, but there are many cases of itch in which the burrows are difficult of discovery, and the itch mite is elusive and evades the dermal scrapings for microscopic examination. Even the itching varies with different individuals, some few being very tolerant of the irritation and thus becoming conveyors and transmitters of the disease without their personal knowledge.

Various types of skin irritation develop during the various stages of scabitic inflammation. There may be papules, vesicles, pustules and crusts. The severest itching is generally present at night, and especially on first retiring.

"The burrow or run is made by the female in the lower layers of the cornified epithelium of the skin." These burrows, or "roughened, curved furrows," occur most frequently on the anterior surfaces of the wrists and between the fingers. Sometimes these burrows are simulated by dirt-filled lines in the epidermis. The diagnosis can generally then be made by shaving off the suspected epidermis with a scalpel, then laying the epithelial slice on a slide, adding a drop of glycerin, placing a cover glass over it and examining with a low power lens. If the eggs of the itch mite, or the mite itself, are found, the diagnosis is established.

When the fingers and hands do not show signs of this infection, signs may be discovered on the elbow tips, and on the nipples in women. When there is a generalization of the disease, characteristic signs and eruptions will be seen on the hands, wrists, axillary folds, abdomen, nates, in the popliteal spaces, and more or less on the genitals.

It should not be forgotten that the itch may be present in a mixed infection; in other words, there is more or less eczema from the irritations and scratchings, there may be nodular and suppurative processes, enlarged glands and syphilitic eruptions.

The disease does not seem to be acquired in ordinary social life, but is caught mostly in bed, from individual to individual, or by sleeping in an infected bed.

Montgomery believes that the treatment generally advised for scabies is too rigorous, and declares that many of the prescriptions ordered "are more of a cure for lassitude than for the itch." The parasiticides most used in eradicating the itch are sulphur, betanaphthol, balsam of Peru, cresol and styrax.

The patient should be instructed to take a hot bath, using plenty of soap and thoroughly cleansing, perhaps with a soft nail brush, the parts where the parasites are mostly located. He should then anoint all parts of his body with the sulphur ointment prescribed, and should especially rub it into the parts most affected. This same treatment should be carried out on nine successive nights, says Montgomery. He advises during the whole

course of treatment that the patient "should wear a full suit of woolen underclothing, so that the ointment, by getting into the underwear, may be returned to the skin and rubbed in with every movement of the body." Therefore he should wear the same undershirt and drawers during the whole nine days and nights of treatment, only taking them off to rub in the ointment. It would seem as though the sort of clothing would depend much on the time of year and the patient. It is frequently better to use old cotton underwear during this treatment and to change it several times during the nine days.

The official sulphur ointment contains 15 per cent. of sulphur, and is stronger than should generally be used, on account of the irritation and actual dermatitis that it may cause. Either one of the following is preferable:

R.	gm. or e.e.	
Sulphuris loti	10|	or 3iiss
Adipis benzoinati, ad	100|	3iii
M. et Sig.: Use externally, as directed.		
R.	gm.	
Unguenti sulphuris	50|	or
Adipis benzoinati	50|	āā, 3iss
M. et Sig.: Use externally, as directed.		

In mild cases of this disease thorough bathing and cleansing of the affected parts with strong alkaline soap, rubbing and dusting the rest of the body with washed sulphur, and then dusting the sheets of the bed with this dry sulphur, may cause an eradication of the disease without the necessity, discomfort and nastiness of ointments.

Very popular in treatment of the itch to-day is the balsam of Peru. It may be used alone or combined with sulphur. Montgomery makes use of it in the following combination:

R.	gm.	
Sulphuris precipitati	12|	or
Balsami Peruviani	12|	āā, 3iii
Adipis lanæ hydrosi	50|	
Petrolati, ad	100|	āā, 3iss
M. et Sig.: Use externally, as directed.		

In infants, or when there is considerable dermatitis, Montgomery uses the balsam alone, as follows:

R.	gm.	
Balsami Peruviani	25|	or
Adipis lanæ hydrosi	25|	āā, 3i
Petrolati	25|	
M. et Sig.: Use externally, as directed.		

Although balsam of Peru may be painted all over the skin in full strength, it should not be forgotten that it may cause serious dermatitis. When the balsam of Peru is used alone, only a small amount is required for each application, and 10. grams (2½ drams) is sufficient to rub over the entire body. "Such an application should be made twice a day for two succeeding days, and the patient should neither bathe nor change his underclothing for four or five more days, after which a bath is taken." The undergarments used with the balsam of Peru treatment must be thrown away, as they can not be cleansed.

If it is deemed best not to use sulphur or balsam of Peru, styrax may be used as follows:

R.	gm. or e.e.	
Styracis	25|	3i
Alcoholis	10|	or fl.3ss
Olei olivæ	65|	fl.3iiss
M. et Sig.: Use externally, as directed.		

Or styrax may be combined with balsam of Peru as follows:

R.	gm. or e.e.	
Styracis	80|	3iiss
Balsami Peruviani	20|	or 3v
Alcoholis	15|	
Glycerini	15|	āā, fl.3ss
M. et Sig.: Use externally, as directed.		

Also valuable as parasiticides in scabies are betanaphthol and cresol. The former may be used as follows:

R.	gm.	
Betanaphtholis	7|	or 3iss
Petrolati	100|	3iii
M. et Sig.: Use externally, as directed.		

This ointment may be used in the same manner as are the sulphur applications.

Cresol may be used as follows:

R.	e.e.	
Liquoris cresolis compositi	50|	or
Olei olivæ, ad	100|	āā, fl.3ii
M. et Sig.: Rub into the affected parts morning and evening.		

Montgomery finds dermatitis or severe irritation is less likely to be caused when the medicament used is varied during the progress of the treatment. Therefore he often uses a sulphur and balsam of Peru ointment for three days, then a betanaphthol ointment for three days, and then, perhaps, a cresol treatment for the remainder of the time.

If dermatitis is caused he recommends the application of the following paste, viz.:

R.	gm. or e.e.	
Acidi salicylici	1 50	gr. xx
Amyli	15|	or
Zinci oxidi	15|	āā, 3ss
Glycerini	30|	fl.3i
M. et Sig.: Apply twice a day.		

As to general disinfection, Montgomery finds that boiling the patient's underclothing is sufficient. He does not believe it is necessary to disinfect the outer garments, with the exception of the gloves. These he advises should all be either burned, or, if to be used again, thoroughly dusted with powdered sulphur.

BONE TUBERCULOSIS

Dr. W. A. Tatchell (*British Med. Jour.*, Feb. 13, 1909), writing from Hankow, Central China, states that tuberculosis of the joints, bones, glands and skin is one of the most common diseases which he has to treat, and says that he has had most splendid results with the application of iodine in tuberculosis of the bones.

He operates on a tuberculous bone as usual, then he thoroughly swabs the cavity with the iodine liniment of the British Pharmacopeia. The application does not cause pain, neither does it destroy tissues as does pure carbolic acid, and granulations do not become excessive. At the first application he leaves a thin piece of gauze in the sinus, but subsequently uses no plugs or strips for drainage, as he believes they have often been responsible for chronic sinuses.

Internally he administers the following:

R.	gm. or e.e.	
Potassii iodidi	6|	3ii
Syrupi ferri iodidi	75|	or fl.3iii
Syrupi, ad	100|	ad, fl.3iv
M. et Sig.: A teaspoonful, in water, three times a day, after meals (best taken through a glass tube).		

Linimentum iodidi of the British Pharmacopeia is made as follows:

Iodin	1¼ ounces
Iodid of potassium	½ ounce
Glycerin	¼ ounce
Rectified spirit (alcohol)	10 fluidounces

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[For other information see second page following reading matter]

SATURDAY, APRIL 10, 1909

THE TUBERCULOSIS BACILLUS AND ENVIRONMENT

Probably the most interesting declaration made at the International Congress on Tuberculosis, held in Washington, D. C., last fall, was that of the Russian surgeon general that the body of every adult over 30, even though dead from some other disease, when carefully examined, shows that at some time during life tubercle bacilli have been present. The opportunities afforded for investigation of this subject in the Russian army are very complete, and, as all sorts of men are in the army, those raised in the country as well as in the city, and all classes of the population, since army service is compulsory, the declaration would seem to be founded on indubitable evidence. Of course this statement is not new: Investigations made in Vienna over twenty years ago showed that at least three-fourths of all the bodies of individuals dead from other diseases than tuberculosis, presented evidence that the tubercle bacillus had been at some time active in the tissues. Corresponding investigations elsewhere showed similar conditions. As a consequence of these investigations, and of the older tradition of the ubiquity of tuberculosis, we have the well-known Viennese expression: "*Wir sind Alle am Ende ein bisschen tuberkulös.*" "We are all of us after all a little tuberculous." Formerly this seemed an exaggeration, but recently it has come to be looked on as a literal truth. The bacillus of tuberculosis succeeds in gaining implantation in the tissues of all of us at some time during the first half of life, but seven individuals out of eight are able to resist its invasion and so do not develop tuberculosis.

We have here then an important problem as to the relation of the bacillus to the conditions for its successful growth. It has long been recognized that while the bacillus of any infectious disease is the direct cause of that disease, the micro-organism will not succeed in producing the disease unless there is a predisposition on the part of the individual or at least a lack of immunity, that is, of resistive vitality. It is rather interesting to study the reasons for the power of resistance of seven-eighths of mankind. Tuberculosis is a city disease and we now know that inhalation of any irritant particles has more to do with it than almost anything else. In certain polishing trades involving the inhalation of a great deal of dust the death rate

from tuberculosis is so high that it is impossible to provide a death-benefit fund in the trade, since the average term of life is so short.

There are other conditions that just as obviously predispose the individual to such physical conditions as lower the resistive vitality against tuberculosis. Most of the mill trades in which many people are associated in a single room, especially if the occupation is dusty, have the same effect. Wherever people work together closely associated with one another, crowded so that the emanations from their bodies get into the air and are not removed by ventilation, this same lowering of immunity is produced. Any of these people who acquire tuberculosis fail to resist it. For them their environment is much more important than the contagion itself, and apparently this is true for most cases of tuberculosis. It is not the natural immunity that is at fault when the disease makes rapid progress, but it is that the environment is so unfavorable that Nature is not able to exert the resistive vitality that she normally possesses.

The same thing happens if there is a constant renewal of the contagious material finding its way into the body. The statistics of Paris serve to show that laundresses who handle the clothing of the general population, containing a certain proportion of tuberculous patients, are more likely to die from tuberculosis than are other women of the same class who are not subjected to this frequent contact with tuberculous material. In London it has been noted that scrub-women, especially in large buildings, who through sputum are likely to be brought in contact often with tubercle bacilli, suffer from the disease much more than other individuals in the same station in life who live and are fed in about the same way.

It is evident, then, that the problem of the reduction of the mortality from tuberculosis is to an even greater extent a question of improving the environment in which individuals live than of reducing the contagion to which they are subjected. The bacillus is important, but not nearly so important as the predisposition and unfavorable conditions of life. This is because our natural immunity is not lessened by an unfortunate environment but is helped by the conditions in which we live, and it is only by appreciating this fact, and by laboring also to prevent the maintenance of such unfavorable conditions, that the crusade against tuberculosis will be successful.

THE ROLE OF LIPOIDS IN IMMUNIZATION

It is a long-recognized fact that the sodium chlorid solutions ordinarily used in experimental study of problems in immunity afford only an approximation to the conditions actually present in the living organism. In view of this fact, Pick and Schwarz¹ recently carried out some experiments under conditions different from

1. Biochem. Ztschr., 1909, 15, p. 453.

the ordinary, which not only give interesting results, but are of great value in furnishing suggestions for future work. The fluids of the body, in addition to their content of inorganic salts, also contain to a considerable extent so-called lipoids, that is, substances having the general property of being soluble in the organic fat solvents. It was the rôle of these lipoids in immune processes that was investigated; the lipoids used were lecithin and alcoholic extracts of various organs and of blood constituents.

It was found that the use of a lecithin emulsion in place of sodium chlorid emulsion in the preparation of suspensions of typhoid bacilli for the purposes of inoculation produced a relatively highly agglutinative serum in a short time, even though only small amounts were injected. Further, precipitation of the organisms in such a suspension by typhoid serum occurred much more quickly and perceptibly than is the case in the agglutination reaction as ordinarily performed. Other lipoids behaved similarly to lecithin in these respects, the blood lipoids somewhat surpassing those from the organs in their effects.

While agglutination reactions were obtained in any particular instance for all the typhoid-lipoid suspensions, in each case the greatest effect was obtained with the homologous suspension. That the effect was not, even in part, owing to the presence of an antibody for the lipoid alone was shown by the peculiar fact that the serum of an animal immunized with serum lipoid alone gave a reaction with that lipoid only in the absence of typhoid bacilli.

This work has some immediate practical value because of the greater sensitiveness of the agglutination reaction as modified by Pick and Schwarz; indeed, they state that actual clinical experiment has demonstrated its sensitiveness even rather early in the disease. But aside from this, the evidence that greater response to immunization may be expected when material more closely adapted to the living organism is used may possibly lead to greater accuracy in fields already gone over by the usual methods, as well as open up avenues of investigation previously considered closed.

PREHISTORIC PATHOLOGY

When we begin to contemplate Egyptian history our ideas as to what constitutes true antiquity receive a sudden shock, for ancient Rome is to predynastic Egypt as Chicago is to the Acropolis of Athens, and a perusal of the works and monuments of the physicians of early Egyptian and Assyrian times causes Hippocrates to seem like one of our most recent graduates. Indeed, so overwhelmed is our vanity at finding that at so early a period in history there existed some really accurate practical knowledge of pathology and therapeutics that we have been perhaps too willing to render homage to antiquity, and have credited the early Egyptians with

even more skill than they actually possessed. For example, it is a current belief that the Egyptians were practiced in filling teeth with gold; yet Comrie,¹ in an interesting lecture on "Medicine Among the Assyrians and Egyptians in 1500 B. C.," states that he has been unable to obtain any confirmation of this belief in spite of considerable search and inquiry. Likewise, the idea that amputations were performed by Egyptian surgeons seems to be incorrect, and indeed the very idea of the mutilation of the body was so foreign to their religious belief that this practice would seem to have been impossible.

On the other hand, they attacked tumors boldly with knife and cautery and seem to have distinguished between the various forms of tumors to no inconsiderable extent. Accounts exist in old papyri which depict clearly enough to permit of recognition certain of the diseases that were met with at that time. Several forms of intestinal parasites were known, as well as appropriate vermifuges, while the apparent prevalence of a pernicious form of anemia suggests ankylostomiasis. The existence of malignant disease, leprosy, infantile paralysis, gout, and especially of rheumatoid arthritis, has been demonstrated, while at least one mummy has been found possessed of fibrous adhesions consequent on appendicitis.

Perhaps the oldest pathologic specimen that has ever been thoroughly studied is the urinary calculus investigated and reported by Shattock.² This was found lying among the pelvic bones in the grave of a boy, aged 16 years, and associated findings showed that the grave was that of an individual of the predynastic period, some generations at least before the advent of the first dynastic king, about 4800 B. C. This calculus on analysis was found to have a central body composed chiefly of uric acid and urates, surrounded by a crust of phosphates, the entire stone having a diameter of 6.5 cm.

As is well known, urinary calculi are very common in Egypt in modern times, a fact which is ascribed to the frequency of infection of the urinary bladder with bilharzia, but Shattock was unable to demonstrate the presence of traces of these parasites or of their ova. Had bilharzia ova been present they could probably have been distinguished, for their chitinous covering is extremely resistant to time and solvents.

The same author has also studied one of a group of four calculi coming from a tomb of the second dynasty, and computed to be about 600 years later than the first specimen. These calculi were found lying beside the first lumbar vertebrae and are therefore assumed to be renal. The one examined was 1.6 cm. in diameter and was found to consist of calcium combined with carbonic, phosphoric and oxalic acids. In the center was a cavity containing great numbers of mould conidia, but no bil-

1. *Edinburgh Med. Jour.*, February, 1909.

2. *Trans. Path. Soc. London*, 1905, lvi, 275.

harzia ova. It would be interesting to record that these mummified moulds were found to be still living after a sleep of sixty or more centuries, but, unfortunately for romance, the plates remained sterile!

PRESIDENT TAFT AND THE PROPOSED NATIONAL BUREAU OF PUBLIC HEALTH

The fact that President Taft, during the rush incident to the first few weeks of his administration, has taken a business-like initiative in an effort to secure a satisfactory national public health policy is a comforting reassurance to the friends of that movement. This step on the part of the President can not, however, be a matter of surprise to the readers of *THE JOURNAL* who, from time to time, have been advised of his active interest in great sanitary and scientific problems that have come under his administrative supervision.

In the Philippines, he not only placed sanitation on a strong footing, but established original scientific investigation and general medical education on a firmer governmental foundation than obtains in any of the states. The moment that he, as Secretary of War, took charge of the affairs in the Isthmian Canal Zone, the sanitary administration was for the first time given proper status in that great undertaking. His activities in improving the conditions of the Army Medical Corps and his recent address before the University of Pennsylvania are additional evidences, not only of his general interest in these and allied subjects, but that he has intimate knowledge at first hand on all of them.

President Taft's action in approaching this question by requesting the views of the Surgeon-General of the present Public Health and Marine-Hospital Service, is in line with practical governmental methods. The whole problem must be solved from the viewpoint of the existing public-health agencies, their possible expansion and their necessary coordination. The proposed new public health bureau must be an evolution and not a *de novo* creation. It will be much better to have such an evolution come from inside rather than outside of governmental influences. And it is distinctly of the highest importance that the attitude of the existing bureaus that will be more or less affected by the change shall be determined before specific proposals are formulated.

The necessity of considering the attitude of existing bureaus is shown by the fate of the proposal, under the preceding administration, to establish a national health bureau by executive order. This constituted a distinct departure from precedent and was evidently regarded as an encroachment on the prerogatives of Congress. No bureau has ever yet been so established and the attitude of Congress indicates that such an innovation will not soon be realized. The agitation was, however, of distinct educational value. The country at large is ready for a national health bureau and will welcome it, no matter by what means it is secured.

EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS

A few weeks ago¹ we discussed the reasons why an early diagnosis was not oftener made in pulmonary tuberculosis. It seems possible that we emphasized too strongly the rôle played by the patient, judging from a recent paper by Stoll,² who thinks that the physician is more to blame than the patient. Stoll submitted to 150 tuberculous patients a series of questions asking how long they had been ill before consulting a physician, how long before they were properly examined, and how many months elapsed before they were told that they had tuberculosis and were instructed regarding the care of their sputum. The figures obtained showed that nearly 80 per cent. of the patients delayed over five months before consulting a physician. When they did seek medical advice 43 per cent. were not examined at the first consultation. Curiously enough the incipient cases consulted the physician earliest and were the ones most frequently examined properly at their first visit. A correct diagnosis was reached at first in only 56 per cent. of the patients, and this notwithstanding the fact that over 80 per cent. had been ill over five months. While too much dependence can not be placed on the statements made by the patients in this investigation, still the results are worthy of consideration and may be regarded as a sad commentary on the methods of many physicians. It emphasizes a statement made years ago by Weir Mitchell, in an address to medical students, that more mistakes in medicine were due to carelessness than to ignorance. We should always bear in mind that early diagnosis of pulmonary tuberculosis is not easy, and seldom possible, unless the patients are stripped and the examination is most thoroughly and carefully made.

RECENT MODIFICATIONS OF THE WASSERMANN REACTION—A CORRECTION

An unfortunate accidental error occurred in our editorial³ designed to facilitate the clinical use of the Wassermann test for syphilis. In describing Noguchi's test, these words are used: "This means that the suspension of sheep blood corpuscles and patient's serum are all that the physician himself needs to furnish." Now the point is that no sheep corpuscles or any corpuscles other than human are needed in the test as simplified by Noguchi.

Medical News

ARKANSAS

Personal.—Dr. Leonidas Kirby, Harrison. William B. Lawrence, Batesville, and James H. Lenow, Little Rock, have been appointed members of the medical board of the University of Arkansas, to fill vacancies.

Illegal Practitioners Fined.—"Dr." Caponia, Des Arc, who was arrested March 3, on the charge of practicing medicine without a license, is said to have been fined \$25 and costs.—In the case of Dr. William H. Hickson, Hot Springs, charged with violating the city ordinance prohibiting the drumming of patients, a fine of \$25 is said to have been assessed against the defendant.

1. *THE JOURNAL*, Feb. 20, 1909.
2. *Yale Med. Jour.*, March, 1909.
3. *THE JOURNAL*, April 3, p. 1113.

Asks Appropriation for Tuberculosis Hospital.—The Arkansas Association for the Relief and Control of Tuberculosis, at its meeting in Little Rock, unanimously agreed to submit a bill to the legislature asking for an appropriation of \$110,000 for the establishment of a tuberculosis hospital, and its maintenance for two years. The following officers were re-elected: Dr. John S. Shibley, Paris, president; Drs. William B. Lawrence, Batesville, and Henry C. Dunavant, Osceola, vice-presidents, and Dr. Malene G. Thompson, Hot Springs, secretary-treasurer.

DELAWARE

Diphtheria Closes Schools.—There are said to be twenty or more cases of diphtheria in Lewes, and the public schools and Sunday schools have been closed.

Personal.—Dr. Peter W. Tomlinson, Wilmington, has declined reappointment as a member of the State Medical Society Examining Board.—Dr. L. August H. Bishop, Dover, has been elected jail physician of Kent county, vice Dr. Edwin S. Anderson, resigned.

Vital Statistics.—The report of Dr. Abram E. Frantz, Wilmington, secretary of the Delaware State Board of Health, shows that in the biennium ended June 30, 1908, there were 4,801 deaths, and in the same time 3,079 births and 3,810 marriages were reported.

Deaths from Tuberculosis in Wilmington.—The secretary of the board of health has prepared a statement of deaths from tuberculosis for periods of five years, which shows a steady decrease in the death rate from that disease. In 1885, there were 150 deaths out of a population of 55,800; in 1890, 165 occurred out of a population of 61,427; in 1895, 169 out of a population of 72,500; in 1900, 164 deaths were reported out of a population of 76,500; in 1905, 152 deaths occurred out of a population of 87,000; and in 1908 the same number of deaths were reported with a population of 91,500.

DISTRICT OF COLUMBIA

Fire in Medical Department.—A fire occurred March 19 in the Medical Department of George Washington University as a result of an explosion, and caused considerable damage.

Acquitted.—Dr. Patrick J. McDonald, Providence Hospital, charged with failing to report a case of smallpox, and with neglecting to detain the patient until the health department had been notified, was acquitted March 16.

Hazen Obtains License.—The District Board of Medical Supervisors has issued a license to practice medicine to Henry H. Hazen, who then dismissed his suit asking for a writ of mandamus to compel the board to grant him license to practice.

Personal.—Dr. J. H. Castle, for three years chief of the division of chemistry in the hygienic laboratory, Washington, has been elected professor of chemistry in the University of Virginia.—Dr. William C. Woodward, health officer of Washington, who has been ill for two weeks, has recovered.

Physicians of Services To Need No License.—Senator Gallinger has submitted a favorable report from the District committee on the bill to amend the act regulating medicine and surgery in the District, which allows honorably discharged surgeons of the Army, Navy and Marine Corps to practice in Washington without obtaining a license.

Resolutions Commend Dr. Wiley.—The Medical Society of the District of Columbia, at its meeting, March 17, unanimously adopted resolutions setting forth the sterling integrity, courage, persistent justice and skill and accomplishments as a chemist of Dr. Harvey W. Wiley; heartily commending and endorsing his arduous and difficult work in protecting the American people from impurities and adulterations in their food, drink and medicine, and trusting that his efforts will be generously sustained by the government, supported by the cordial sympathy of his professional colleagues and encouraged by the sincere appreciation of a grateful populace.

FLORIDA

War on Phthisis.—On March 24, the ninety-day campaign against tuberculosis in Florida closed. The work has extended throughout the state and has been prosecuted with unusual vigor by the state health department, State Federation of Women's Clubs, and other organizations.

Sanitarium Opened.—Pensacola Sanitarium was recently opened to receive patients. The institution has been incorporated with a capital stock of \$20,000, and has a capacity for 22 patients. The officers are Dr. Clarence Hutchinson, presi-

dent; Dr. Marion E. Quina, vice-president; Dr. William A. J. Pollock, secretary, and Dr. Frank G. Renshaw, treasurer.

Society Meetings.—Swansea County Medical Association has elected the following officers: President, Dr. Will C. White; vice-president, Dr. Lester J. Efride, and secretary-treasurer, Dr. Thomas S. Anderson, all of Live Oak.—At a meeting held February 23, in Jacksonville, the organization of the new Duval County Antituberculosis Society was perfected, and a constitution and by-laws were adopted.—Medical societies have recently been organized in Santa Rosa and Walton counties.

GEORGIA

Tuberculosis Campaign Begins.—On March 27, the ninety-day antituberculosis campaign was opened in Atlanta. The exhibit will remain in that city until April 15.

Personal.—Dr. Louis M. Warfield, who has been practicing in St. Louis for four years, has returned to Savannah, his home town, to practice.—Dr. Newton Z. Anderson has been appointed city physician of Covington.

Object to Tuberculosis Dispensary.—Twenty-nine tenants of the Gould Building, Atlanta, have petitioned that the office and free dispensary of the Antituberculosis Association on the top floor of the building be discontinued.

Expelled from Society.—Dr. Arnold M. Rosett, Savannah, found guilty of, and serving one year's imprisonment for performing an illegal operation, is said to have been expelled from membership by the Georgia Medical Society, March 23.

Found Guilty.—In the case of Dr. Rose F. Monnish, Atlanta, charged with illegal use of the mails, the defendant is said to have been found guilty on two counts, March 24. Sentence was suspended and the defendant was released on bail of \$2,000.

ILLINOIS

Sanatorium Needs More Funds.—The Chicago-Winfield Tuberculosis Sanatorium now has 20 patients, 15 of whom are being treated free. The directors have decided to open a subscription list for annual memberships, in order that the full quota of patients may be accommodated as soon as possible.

Against Tuberculosis.—At the annual meeting of the Morgan County Antituberculosis Society, held in Jacksonville March 29, an illustrated lecture on tuberculosis was delivered by Dr. James W. Pettit, Ottawa, president of the Illinois State Medical Society, Alfred T. Capps was re-elected president of the society, and Dr. Tully O. Hardesty was re-elected secretary.

Progress of Sterilization Bill.—The bill of Senator Womack to provide for the sterilization of habitual criminals and imbeciles, which is a duplicate of the Indiana sterilization bill, has been reported favorably by the judiciary committee, and ordered to a second reading. The Southern District Medical Society, Chicago, adopted resolutions, March 29, favoring sterilization.

Asks Appropriation for State Hospital.—Dr. George A. Zeller, superintendent of the Illinois General Hospital for the Insane, South Bartonville, appeared before the house committee on appropriations, March 31, and asked for an appropriation sufficient to build seven new cottages for the institution. There are now nearly 2,200 inmates and more are constantly arriving. Dr. Zeller also asked for a new dining hall for patients.

Conference on Public Health.—A conference on public health will be held at the University of Illinois, Urbana, April 19-24, under the auspices of the University of Illinois and the Illinois State Board of Health. Prof. W. T. Sedgwick of the Massachusetts Institute of Technology will deliver a series of lectures on "Science in the Service of Public Health"; Dr. T. J. Bryan, chemist of the Illinois State Food Commission, will speak April 20 on "The Relation of Pure Food to Public Health," and a special session of health officers will be held April 23 for a general discussion of problems of health in the state. This session will be opened by Dr. James A. Egan, secretary of the State Board of Health. Municipalities and villages of the state are especially invited to send their health officers to this conference.

Chicago

Interne Examination.—Of the 117 medical students who took the county civil service examination March 9 to 11, 48 attained the required standing, one of whom was a woman.

Memorial for Nicholas Senn.—At the meeting of the Nicholas Senn Club, March 29, it was proposed to erect a memorial to Dr. Senn in one of the Chicago parks. Plans were also discussed for the establishing of a memorial lectureship or for fit-

ting up a room in the new Crerar Library in memory of Dr. Senn.

Diphtheria Rate High.—The department of health, in studying the high death rate from diphtheria, finds three major causes: First, that the doctor does not see the patient early enough; second, that he does not give enough antitoxin, and third, that in prolonged cases he does not repeat the antitoxin early enough.

IOWA

Society Meetings.—At the fifteenth annual meeting of the Southwestern Iowa Medical Association, held in Creston, February 16, Dr. Thomas M. Thackmorton, Chariton, was elected president; Dr. Homer L. Sweet, Mt. Etna, vice-president, and Dr. John W. Reynolds, Creston, secretary-treasurer. It was decided to hold the next meeting in Albia.—At the annual meeting of the Rural Mutual Medical Society of Northeastern Iowa, held at Farley, February 17, the following officers were elected: President, Dr. John Mueller, Dyersville; vice-president, Dr. Alonzo L. McNeil, Epworth; secretary, Dr. Claude B. Rogers, Earlville; and censors, Drs. Charles A. Kearney, Farley; Joseph L. Abeln, New Vienna; Emil Mueller, Dyersville; Franklin Reynier, Epworth; J. Irwin Limburg, Farley; Frank N. Schroeder, Holy Cross; Edward J. Wintenburg, Delhi; Martin E. Dittmer, Colesburg, and Salmon S. Douglas, Earlville.—At the annual meeting of the Waterloo City Medical Society, held February 17, Dr. Charles A. Waterbury was elected president; Dr. Elmer E. Dunkelburg, vice-president; Dr. DeWitt C. Huntoon, secretary, and Dr. Edwin R. Shannon, censor.

KENTUCKY

Association Changes Name.—At the February meeting of the Kentucky Antituberculosis Association, the name was changed to the Louisville Antituberculosis Association.

Forbids Distribution of Medical Samples.—The Owensboro city council has passed an ordinance forbidding the distribution from house to house of medicine samples of any sort.

Medical Property Transferred.—Formal transfer of the properties of the Kentucky School of Medicine and the Louisville Medical College to the University of Louisville was made March 20, when the deeds for both holdings were put on record. This completes the merging of the three colleges, which took place last August.

Louisville Health Statistics.—The health department of Louisville, in its annual report for the fiscal year ended Aug. 31, 1908, shows a total death rate of 39.77, or 250 fewer than for the preceding year. Tuberculosis leads the death causes with 229, and typhoid fever caused 109 deaths. During the year 3,981 births were reported. The health department urges a thorough system of school inspection and the establishment of a public abattoir.

Personal.—Dr. John M. Wells, Carlisle, has been elected secretary and health officer, and Drs. Oliver S. Kash, Moorefield, Benjamin F. Reynolds, Carlisle, and Samuel R. Fisher, Headquarters, members of the Nicholas Board of Health.—Dr. J. Thomas Wallingford and Cleon C. Owens have been elected members of the Covington Board of Health.—Dr. John Goodman, Louisville, is reported to be critically ill with septicemia.

County Issue of State Journal.—On April 15, the *Kentucky Medical Journal* will issue a mid-monthly issue to be known as the Jefferson County issue. This issue will be made up entirely of proceedings of the Jefferson County Medical Society and its sections, and will be edited by Drs. Virgil E. Simpson, Dunning S. Wilson and Henry Enos Tuley. The money required for the publication of this number has been raised by advertisements secured in and around Louisville by Louisville practitioners. The University of Louisville Department of Medicine will have a special section.

MARYLAND

Personal.—Dr. Benjamin R. Benson, Jr., Cockeysville, has been appointed assistant surgeon at the New York Lying-In Hospital.—Dr. J. Percy Wade, superintendent of the Maryland Hospital for the Insane, Catonsville, is making a trip of Europe.—The late Dr. Asa S. Linthicum, Jessups, left an estate estimated to be worth more than \$100,000.

Baltimore

Smallpox in House of Correction.—A case of smallpox has developed at the House of Correction, and 700 prisoners and attendants were vaccinated March 25, as a precaution against the spread of the disease.

Hospital Opened.—The formal opening exercises of Sydenham Hospital for Infectious Diseases were held April 3. The building will accommodate 32 patients. Dr. Warren P. Morrell is in charge of the institution.

Berliner Fellowship Awarded.—The committee in charge of the Sarah Berliner Research Fellowship for Women has awarded the fellowship work \$1,200 a year for two years to Miss Caroline McGill, instructor in anatomy in the University of Missouri. The fellowship is available for research in physics, chemistry or biology either in Europe or America.

Testimonial to Dr. Keirle.—A movement is on foot of a subscription testimonial volume to Dr. Nathaniel G. Keirle, director of the Pasteur Institute. The volume will contain the collected published writings of Dr. Keirle on rabies, a sketch of his life and work, and his portrait. The committee having the matter in charge is composed of Drs. Harry Friedenwald, John W. Chambers and Archibald C. Harrison.

Laennec Society Election.—At the annual meeting of the Laennec Society, March 22, Dr. H. Barton Jacobs was re-elected president, and Dr. Louis Hamman, secretary. Dr. A. M. Forster, superintendent of the Eudowood Sanatorium for Consumptives, spoke on "Farming as a Healthful Diversion for Consumptives," and stated that \$1,000 had been cleared at Eudowood by the sale of farm products raised by the patients during the last year, which made it possible to pay the farm hands wages for their labor.

Personal.—Drs. H. Barton Jacobs and J. Whitridge Williams have sailed for Europe.—Dr. Robert T. Miller, Jr., resident surgeon at the Johns Hopkins Hospital, has resigned, and has been succeeded by Dr. John W. Churchman. Dr. Miller was given a farewell dinner at the Baltimore Club by his associates, and will go to Europe for hospital study.—Dr. G. F. Sargent, Baltimore, has been appointed assistant physician of the Florida Hospital for the Insane, Tallahassee.—Dr. Wirt A. Duvall, Baltimore, captain and assistant surgeon of the Fourth Infantry, Maryland N. G., has resigned.

State Society Meeting.—The annual meeting of the Medical and Chirurgical Faculty of Maryland will be held in conformity with its constitution on the fourth Tuesday in April. In order to prevent any legal complications it is the intention of the officers to convene and transact the necessary business to constitute it a legal meeting, and then adjourn to May 13-15, the time selected for the dedication exercises of the new library building. On that occasion the building will be presented by Dr. Brush, the dedicatory address will be delivered by Dr. S. Weir Mitchell, and responses will be made by representatives of the New York Academy of Medicine, Boston Medical Library Association, Surgeon-General's Library, Washington, and the College of Physicians of Philadelphia. Osler Hall will be dedicated with an address by Dr. William H. Welch, and the annual dinner will be held there. The annual oration will be made by Dr. Osler. There will be presented a portrait of the late Dr. William H. Stokes, and a bronze memorial medal will be struck in commemoration of the occasion.

MICHIGAN

Bequest to Hospital.—By the will of the late Charles A. Rust, Saginaw, \$25,000 is devised to the Saginaw General Hospital.

Society Elections.—The physicians of Grand Ledge have organized the Association of Grand Ledge Physicians, and have elected Dr. Ray T. Fuller, president; and Dr. Martha E. Hixon, secretary-treasurer.—The Grand Rapids Academy of Medicine, at its annual meeting February 3, elected Dr. Christian Van der Veen, president; Dr. Burton R. Corbus, vice-president; Dr. Abel J. Baker, secretary, and Dr. Charles Hooker, treasurer.

New Hospitals.—Dr. Guy L. Bliss has opened a hospital at Three Rivers in the Sage Building.—Dr. E. Ilmari Lindgren, Ishpeming, will erect a hospital in Marquette, to accommodate from twenty-five to thirty patients.—The Grand Rapids Antituberculosis Society has established a free dispensary at 23 Park Street, at which physicians and nurses are on duty from 12 to 1 on Monday, Wednesday and Friday of each week.

MISSOURI

Association Chartered.—The secretary of state has issued a charter for the Nevada Medical and Surgical Association, incorporated by Drs. Isaac W. Amerman, V. O. Williams and others.

Ground Broken for Hospital.—Ground was broken March 17 for the addition to St. John's Hospital, Joplin, to cost \$30,000.

The Sisters of Mercy have raised one-half of the required amount and the remainder is to be obtained by subscription.

Fined for Not Registering Certificate.—James A. Burke, consulting physician of a medical company of Kansas City, is said to have been fined \$25, March 15, for practicing medicine without having first registered his certificate in the county as required by law.

Revocation of Licenses.—The State Board of Health, at its March session in Kansas City, is said to have revoked the license of Dr. William H. C. Sterett, Corning. Action toward revocation of the licenses of Drs. George Schmitt and J. A. Loughson, Kansas City, was stopped by injunction from the Whartherfield court on March 27. The temporary order restraining the board from revoking these licenses was dissolved on ruling of the judge that the Circuit Court had no jurisdiction, and that the physicians in question had redress in appeal from the decision of the state board. The board charged that these two physicians sold cocaine in drug stores, and they were fined an aggregate of \$10,500 in the municipal court.

St. Louis

Unlicensed Practitioner Fined.—Henry Hisserich is said to have been found guilty of practicing medicine without a license and fined \$100, March 26.

New Tuberculosis Commission.—The mayor has signed the bill to create a second tuberculosis commission to take the place of the present commission whose term expires in a short time. The new commission is to be appointed for five years, and an annual appropriation of \$25,000 a year has been made for it.

Social Service Hospital.—The Social Service Hospital, formerly the Protestant Hospital, 1011 North Eighth Street, has been entirely reorganized. As the name indicates, a social service department will form an integral part of the institution, which is located in the most densely populated portion of the city. The medical staff is as follows: Drs. Frances L. Bishop, Cyrus E. Burford, William W. Graves, John Green, Jr., Horace W. Soper, George S. Drake, Jr., Archer O'Reilly, Roy P. Sholz and Frederick J. Taussig.

NEW HAMPSHIRE

Medical School Commencement.—The graduating exercises of Dartmouth Medical School were held in Dartmouth Hall, Hanover, March 26, when degrees were conferred on a class of fourteen. Dr. Frank E. Kittredge, Nashua, delivered the doctorate address.

Surgical Club Meets.—The semi-annual meeting of the New Hampshire Surgical Club was held at Nashua March 18, and was the largest gathering ever held by the organization. Clinics were held in the morning at the Nashua Emergency Hospital by Drs. John M. Gile, Hanover, Fred B. Lund, Boston, and others. At the afternoon session Dr. Gile read a paper entitled "A Survey of Our Present Knowledge of Pancreatitis"; Dr. Alonzo S. Wallace, Nashua, spoke on "The Vaccine Treatment of Cancer," and Dr. Fred B. Lund discussed "Acute Gastric Hemorrhage and Its Treatment."

NEW YORK

Physicians in New York.—There are 13,937 physicians in New York, and of these 12,784 are registered as regular; 931 as homeopaths and 292 as eclectics. There are 283 medical colleges represented by their graduates in the state, 103 of which are in foreign countries.

County Tuberculosis Hospitals.—The State Charities Aid Association has drafted and introduced a bill which amends the law so that private patients may be taken in county hospitals for the care of persons suffering from tuberculosis. It provides that such a hospital shall not be a part of the almshouse.

Large Gift for Crippled Children.—Mrs. Elizabeth Milbank Anderson has given \$500,000 to the Children's Aid Society to purchase the Chappaqua Mountain property in Westchester county in order to establish a free sanitarium which will be open all the year around for sick and crippled children. Of the sum given, \$150,000 was paid for the purchase of the property and \$250,000 will be used as an endowment fund.

For Inebriety Board.—A bill has been introduced into the legislature providing for the appointment of a board of inebriety for the City of New York to consist of five members, to serve without pay for a term of five years each, and for the establishment of an inebriety hospital and an industrial

colony in which persons arrested for public intoxication may be detained and treated scientifically. This measure was framed by the standing committee on hospitals of the State Charities Aid Association. The five members are to be named by the mayor after nominations submitted by the heads of the United Hebrew Charities, the Association for Improving the Condition of the Poor and the New York Council of the Society of St. Vincent de Paul.

State Charities Report.—The State Charities Aid Association has issued its thirty-sixth annual report for the year ended Nov. 30, 1908. This is a voluntary association having local committees which have supervised the almshouses and public hospitals in forty-three counties of the state. A careful study has been made of the ambulance service in hospitals. As a result of the campaign by the Association for the Prevention of Tuberculosis in the state, outside of New York City, six dispensaries have been opened, two large hospitals have been built, and visiting nurses for patients have been provided in six cities. Tuberculosis exhibits have been shown at the state fair and at thirty-five county fairs, and 344,640 pieces of literature have been distributed in this way. The association has placed 1,082 children in families and it is estimated that if these children were collected in an institution, the cost to the institution would be at least \$500,000, and the cost of maintenance \$100,000 per annum. The total expenditures for the year amounted to \$64,295.

New York City

Automobile Ambulance.—A twenty-horse-power automobile ambulance has been put on service at Bellevue Hospital. The machine is equipped with every appliance, making it practically a traveling hospital.

The McCosh Memorial.—The committee in charge of the Andrew J. McCosh Memorial announces that more than \$100,000 has been subscribed. The fund is to be devoted to the use of the new buildings of the Presbyterian Hospital.

May Lose Million Dollar Bequest.—Some time ago Louis A. Heinsheimer bequeathed \$1,000,000 to Jewish charities on condition that existing institutions in the city should form a federation, but Mount Sinai Hospital has steadfastly refused to consider the formation of such a federation, although several meetings have been held, and the time allowed by the will for the consummation of such a federation has almost expired.

To Fight Cocain Sale.—Dr. Walter Benschel, city sanitary superintendent, has made an appeal to the Woman's Municipal League for money to enable the health authorities to fight the cocaine traffic. He states that many physicians buy cocaine for the purpose of selling it. The facts are known to the Board of Health, but there is no fund for the purpose of making convictions. It is said that the traffic in this drug is rapidly growing in the city.

Ozone a Germicide.—About two months ago Dr. Alvah H. Doty, health officer of the Port of New York, had a plant for the manufacture of ozone installed in his laboratory at Quarantine, and since that time he has been experimenting with this gas. He finds that it has several distinct advantages over steam and formaldehyde. The results of Dr. Doty's experiments will be of great practical use on shipboard as well as in sick rooms, theaters and public buildings.

Campaign to Save Babies.—New York's work to reduce the infant mortality was begun for the summer of 1909 April 5, by a meeting of fifty-five private agencies with officers of the department of health. The invitations were issued by Dr. Darlington and the conference on summer care of babies which was organized in 1908. It is planned to have two or three meetings before summer comes, so that hospitals, dispensaries, diet kitchens, and fresh air societies may be thoroughly prepared. The New York Milk Committee, which made an appeal for money last January with which to continue the milk depots for infants, states that \$21,000 has been raised since that time, which will enable them to pay off their deficit and to support the seven milk stations until September 1. At present the committee is feeding 585 babies and these constitute less than 7 per cent. of the tenement babies in Manhattan absolutely without proper food or instructional supervision.

Classes for Consumptives.—The Bellevue tuberculosis clinic has started a series of classes on the plan of the Emmanuel Church of Boston. Hitherto the clinic has been able to exercise only a very indefinite supervision over the 700 patients who visit the clinic. From among the more intelligent, fifteen

patients have been selected for the first class, and they meet once a week on the deck of the ferry boat, "Southfield," which is the Bellevue tuberculosis camp. Here progress is reported, records are compared, and advice and encouragement given. Each patient keeps his own record, takes his temperature four times a day, records the amount of nourishment taken, the amount of rest, and the time spent in the open air. A nurse supervises home arrangements and endeavors to bring them up to conditions in a sanatorium as nearly as possible. The families of the patients are examined and any member who has a predisposition to the disease is treated, as it is the aim of the clinic to get the cases in the earliest stage.

PENNSYLVANIA

Personal.—Dr. Edward R. Walters has been appointed director of the Department of Health and Charities at Pittsburgh.—Dr. William W. Cadbury has resigned as pathologist in the Henry Phipps Institute, Philadelphia, and sailed for China March 6, where he will aid in the establishment of a University Medical School in Canton.

Applies for Charter.—The Physicians' College of Pittsburgh has applied to the governor for a charter for the purpose of purchasing real estate and establishing a permanent home. The incorporators plan an extension of the library of the college, the establishment of a medical museum, and the provision of a directory of trained nurses.

Child Labor Bill Passes.—With only two votes against it out of a possible 188, the child labor bill was passed in the house March 31. One of the new features of the bill is its prohibition of the employment of minors, less than 18 years of age in furnaces, tanneries, dynamite and powder factories or in other hazardous places. Further, it is made unlawful to employ minors, less than 16, in the manufacture of paints, acids, matches or in tobacco factories. Minors less than 14 are not to be employed in any establishments, and those between 14 and 16 must have a rudimentary knowledge of English, be physically capable and have an employment certificate issued by the school authorities. They shall not be employed more than ten hours in any one day, or after 9 o'clock at night, nor more than fifty-eight hours in any one week. Penalties for violation of law range from a fine of \$10 to \$50, or 10 to 90 days in prison, or both.

Philadelphia

Home-Coming Week at the University.—The University of Pennsylvania will observe home-coming week and has arranged a program extending from April 12 to 17.

Appropriations for the University of Pennsylvania.—On March 29, the House Appropriation Committee reported a bill recommending \$700,000 to the University of Pennsylvania, or \$200,000 less than the amount asked from the state by the institution.

Personal.—Dr. Charles A. Groff has been appointed assistant chief medical inspector to succeed the late Dr. Thomas J. Beatty.—Dr. Thomas S. Stewart is in Vienna.—Dr. William Drayton has been appointed to the division of Medical Inspection of the Board of Health.

State Appropriations.—The House Appropriations Committee reported favorably, March 31, appropriations to the following institutions: St. Joseph's Hospital, \$50,000; Jewish Hospital, \$40,000; Mercy Hospital, \$40,000; Women's Hospital, \$45,000; Fred Douglas Hospital, \$22,000; Polyclinic Hospital, \$145,000; Gynecean Hospital, \$25,000; Lying-in Charity Hospital, \$18,000; Medico-Chirurgical Hospital, \$210,000; Kensington Hospital for Women, \$45,000; Orthopedic Hospital, \$33,000; Rush Hospital, \$55,000; Garretson Hospital, \$40,000; Howard Hospital, \$22,000; Women's Medical College, \$30,000; German Hospital, \$60,000; St. Mary's Hospital, \$30,000; Samaritan Hospital, \$100,000; Stetson Hospital, \$5,000; West Philadelphia Hospital for Women, \$15,000; St. Christopher's Hospital, \$21,000; Frankford Hospital, \$70,000; Mt. Sinai Hospital, \$65,000; Jefferson Medical College, \$175,000; American Hospital for the Stomach, \$20,000; Wills Eye Hospital, \$90,000; and Jewish Sanatorium for Consumptives, \$7,500.

GENERAL NEWS AND COMMENT

Opium Barred.—Beginning with April 1, neither opium nor any mixture or compound containing or representing opium in any form legally can be brought into the United States or any outlying possessions excepting for strictly medicinal purposes. This term is declared to mean for treatment or prevention of disease only.

Coming Meetings.—The twenty-fourth annual meeting of the Association of American Physicians will be held in the New Willard Hotel, Washington, D. C., May 11 and 12, under the presidency of Dr. Victor C. Vaughan, Ann Arbor. The annual dinner and smoker will be held May 11.—The annual meeting of the Surgeons of the Frisco System will be held in Fort Worth, Texas, April 26 to 28.

Oliver Wendell Holmes Centenary.—The centenary of the birth of Dr. Oliver Wendell Holmes will be celebrated April 27 at Harvard University, where he held the chair of anatomy and physiology from 1847 to 1882. Former President Eliot of Harvard will preside. Addresses will be made by Dr. Ralph Waldo Emerson, Concord; Dr. David Williams Cheever, Boston; Col. Thomas Wentworth Higginson, and Rev. Samuel M. Crothers, D.D.

Charities Changes Name.—*Charities and the Commons*, with the issue of April 3, changes its name to *The Survey* with the sub-title *Social-Charitable-Civic*. The magazine stands for the prevention of poverty, disease, crime and inefficiency. It examines conditions of life and labor and points where they fail, and shows how long hours, low pay, and insanitary housing, disease, intemperance, indiscriminate charity and lack of recreation break down character and efficiency.

Bacillus of Leprosy Cultivated.—Cable dispatches from Manila, March 28, announce that Dr. Moses Clegg, bacteriologist of the Bureau of Science, Manila, has succeeded in making five successful cultures of the bacillus of leprosy, and has carried them through successive generations. Dr. Clegg is said to have obtained organisms from both living and dead lepers. He has been equally successful in making cultures from amebic dysentery, and is said to have established symbolic relationship between the germ of the two diseases.

Canal Zone Health Report.—The chief sanitary officer of the Canal Zone, in his report for February, announces that the death rate for that month for employes was at the annual rate of 10.98 per 1,000. The death rate for the total population was 18.59 per 1,000, the lowest death rate since the United States has been in charge of the Isthmus. There was also a large diminution in the amount of sickness among employes in February as compared with January, the respective daily figures being 951 and 1,116. During January, 1,258 cases of malaria among employes were admitted to the hospital, and during February only 852. No case of yellow fever, plague or smallpox occurred during the month.

Twelfth International Congress on Alcoholism.—This biennial congress will convene in London, Eng., July 18, 1909, and last a week. This is really a medical congress, in which the latest studies and conclusions are presented from a strictly scientific point of view. Alcohol will be discussed in its relation to:

Lobar Pneumonia and Enteric Fever, by Dr. Holitscher, Karlsbad.
Immunity, by Dr. Laitinen, Helsingfors.
Temperature of the Body, by Prof. G. S. Woodhead, Cambridge.
Muscular and Mental Fatigue, by Dr. W. R. Rivers, Cambridge.
Resistive Power of the Brain, by Prof. Clouston, Edinburgh.
Nervous System—(Hospital and Asylum Practice), by Dr. F. W. Mott, London.
Inebriety and Insanity, by Dr. La Grain, Paris.
Legislation for the Inebriate, by Dr. Branthwaite, London.
Children, by Dr. Deutsch, Budapest.
Vital Statistics, by Dr. Hansen, Kell.
Home Life, by Drs. Bramwell and Booth, London.

The scientific section will hold five different meetings. There will also be general meetings and an educational section to take up sociologic problems. The undersigned, as honorary vice-president, has this matter in charge and will be glad to confer with anyone who would like to be present and take part.

T. D. CROTHERS, Hartford, Conn.

Health of the Isthmus.—Col. William C. Gorgas, medical corps, U. S. Army, chief sanitary officer of the Canal Zone, in his annual report calls attention to the low death rate of employes, which has decreased from 41.37 per 1,000 in 1906 and 28.77 per 1,000 in 1907 to 13.01 in 1908. The death rate for the entire population of Panama, Colon and the Canal Zone has also decreased, the respective figures for the last three years being 49.10 per 1,000 in 1906, 33.63 in 1907, and 24.83 in 1908. In 1906 there were 69 deaths from dysentery out of 26,705 employes, in 1907 48 deaths out of 39,343 employes, and in 1908 16 deaths out of 43,819 employes. Similarly in malaria, in 1906 there were 233 deaths from malaria, in 1907 154 deaths and in 1908 73 deaths. Typhoid fever caused 98 deaths in 1907, but only 19 deaths in 1908. There has also been a great diminution in deaths from pneu-

monia. In 1906 there were 431 deaths from this cause; in 1907 328 and in 1908 93. Among white Americans from the United States there were 42 deaths during the year, one-half of which were from violence, the death rate from disease among this class being 3.84 per 1,000. The best sanitary work done he considers to be in malaria, as in 1906 821 out of every 1,000 admissions to the hospital were from that cause. In 1907 424 out of every 1,000, and in 1908 282 out of every 1,000. Beriberi caused 68 deaths in 1906, 53 in 1907, and 38 in 1908. More than three years have passed since a case of yellow fever has developed on the Isthmus, the last case of plague occurred in August, 1905, and no case of small-pox was reported during the year.

Therapists to Meet.—The tenth annual meeting of the American Therapeutic Society will be held in New Haven, Conn., May 6-8, under the presidency of Dr. Frederick H. Gerish, Portland, Maine. The presidential address will be on the subject, "The Therapeutic Value of Hypnotic Suggestion." On the first day the symposium will be on "Diabetes," led by Drs. Alfred C. Croftan, Chicago; Solomon Solis Cohen, Philadelphia; Robert T. Morris, New York City, and Alfred King, Portland, Maine. On the second day, the symposium will be on "Diet," in which papers will be presented by Drs. Louis M. Gompertz, New Haven; Alexander D. Blackader, Montreal; Lafayette B. Mendel, New Haven; Frank P. Underhill, New Haven; Russell H. Chittenden, New Haven; Harvey W. Wiley, Washington, D. C., and M. Howard Fussell, Philadelphia. On the third day, the symposium will be on "Psychotherapy," and will be participated in by Drs. Morton Prince, Boston; Ernest Jones, Toronto; Edward W. Taylor, Boston; Tom A. Williams, Washington, D. C.; James J. Putnam, Boston; Boris Sidis, Brookline, Mass.; George A. Waterman, Boston, and John E. Donley, Providence, R. I. The president's reception will be held on the evening of May 7; the society will be entertained at luncheon and organ recital at University Hall by the local membership on the afternoon of May 7, and the annual dinner will take place at the Union League Club on the evening of May 8.

International Congress on Hygiene and Demography.—This congress will meet in Washington, D. C., Sept. 26-Oct. 1, 1910, according to the decision of the committee on organization, which held a preliminary meeting at the call of the Department of State in Washington, April 6. This convention was invited to Washington by the United States Government. Our Washington correspondent reports that the following members of the committee were present: Mr. Huntington Wilson, Assistant Secretary of State; Simon N. D. North, Director of the Census; Lieut. Col. Walter D. McCaw, of the Surgeon-General's Library; Dr. William H. Welch, Baltimore; Dr. John S. Billings, New York; Dr. John S. Fulton, Washington; General George M. Sternberg, Washington, D. C.; Medical Inspector Henry G. Beyer, U. S. Navy; Dr. Abraham Jacobi, New York; Dr. George H. Simmons, Chicago; and Dr. A. D. Melvin, Chief of the Bureau of Animal Industry, Washington, D. C. The committee made the following recommendations to the Department of State: For president, Dr. Henry P. Walcott, of Cambridge, Mass., president of the Massachusetts State Board of Health; for secretary-general, Dr. John S. Fulton, secretary-general of the last International Tuberculosis Congress; executive committee, Drs. Welch, of Baltimore; North, Beyer, McCaw, Wyman and Sternberg, of Washington; Biggs, Jacobi and Billings, of New York; the president, secretary-general and chairman of the organization committee, and Mr. Huntington Wilson, ex-officio members. It was recommended that the executive committee should arrange the general plan of organization, determine policy, organize a definite scope of sections and report to the Department of State under the supervision of which department the Congress will be held. The date of the meeting was tentatively fixed at Sept. 26 to Oct. 1, 1910.

CANADA

Unregistered Practitioner Found Guilty.—"Dr." Pelletier, Ottawa, charged with practicing medicine in the city without having registered as a physician in the Province of Ontario, is said to have been fined \$25 and costs March 6.

Grenfell in Winnipeg.—Seventy medical men of Winnipeg attended a complimentary banquet in honor of Dr. Grenfell, March 27, Dr. John A. McArthur presiding. Dr. Grenfell made an address dealing with the phases of his work on the Labrador coast.

Proprietary Medicine Act in Force.—The Dominion Proprietary Medicine Act was put in force April 1. It provides that formulas must be put on labels if any of thirty-three common poisons are used in the mixture, and eight drugs which are used for the production of abortion are placed on the expurgatory list. It is now an offense in Canada to distribute samples of medicine from door to door.

Society Meetings.—At the annual meeting of the South Waterloo (Ont.) Medical Association, Dr. Robert J. Lockhart, Hespeler, was elected president; Dr. William S. Dakin, Galt, vice-president; Dr. Sylvester E. Charlton, Galt, secretary, and Dr. Ward A. Woolner, Ayr, treasurer.—St. Thomas (Ont.) Medical Association at its annual meeting elected Dr. Frederick Guest, president; Dr. John H. Cormack, vice-president; Dr. Duncan A. McKillop, secretary; Dr. C. E. Berkeley Duncombe, treasurer; Dr. Archibald Leitch, librarian, and Drs. George A. Marlatt, Archibald C. Campbell and Frank Lawrence, members of the executive council.—Sarnia (Ont.) Medical Library Association has elected Dr. David B. Bentley, president; Dr. Joseph A. Bell, vice-president; Dr. Robert G. McDonald, secretary-treasurer, and Dr. Thomas Bradley, librarian.

Hospital Notes.—St. Catherine's Hospital has secured a site of seven acres for a tuberculosis sanatorium.—Brantford, Ont., is to have a tuberculosis sanatorium. The Ontario government has donated \$4,000 and the citizens will raise \$10,000.—Toronto voted in January to appropriate \$50,000 to St. Michael's, Grace and Western hospitals in that city. The hospitals will not accept the donation if the city authorities insist on the condition that every patient that pays seventy cents a day must be treated by his own physician.—Final plans for the Manitoba Provincial Sanatorium at Ninette have been prepared and submitted to the trustees. Dr. David A. Stewart is to be superintendent of the sanatorium, and the first unit will probably be able to accommodate 60 patients.—The management of the Montreal General Hospital has decided to erect a new building to cost about half a million dollars. The institution when completed will accommodate 500 patients.—The new Winnipeg Children's Hospital will formally open February 6. The hospital is surrounded by two acres of land, and the building will accommodate 30 patients.

Fighting Tuberculosis in British Columbia.—At the annual meeting of the British Columbia Anti-Tuberculosis Society held recently in Victoria, the superintendent of the Sanatorium for Consumptives at Tranquille, reported that the number admitted during 1908 was 47 and the number discharged 34. Of the incipient cases, there were 12 apparent cures, one case of arrested disease, one progressive case and no deaths. Of the advanced cases, the disease was arrested in five; much improved in one; improved in one; stationary in one; progressive in two, and none died. Of the far-advanced cases, the disease was arrested in one; improved in one; stationary in one and progressive in one, and two died. The meteorologic report showed that out of 245 days of which records were taken, there were 207 days of bright sunshine and 38 days entirely without sunshine. The amount expended on building improvements during the year was more than \$24,000. The work at this institution is confined solely to residents of British Columbia, although numerous applications have been received from all parts of Canada and from the northern and western states. The maintenance fund for the year showed a deficit of over \$2,000. Dr. Charles J. Fagan, provincial medical health officer of British Columbia, was re-elected secretary of the society.

FOREIGN

Typhus at Kiev.—The epidemic at Kiev, Russia, has attained such proportions that there were 650 typhus patients in the public hospitals and 300 in the prison hospital February 23.

Fire Destroys Hospital at Venice.—The Ospedale di Campo San Piero at Venice was recently destroyed by fire, but the 160 patients were all safely transferred to neighboring houses or buildings, although the panic at first was indescribable and many escaped only in their night clothes. The hospital at Padua has set apart a pavilion for the reception of those able to be transferred to this distance.

French Congress for Neurology and Psychiatry.—The nineteenth Congress of French-speaking Neurologists and Alienists will be held this year at Nantes, August 2 to 8. The three subjects appointed for discussion are: "Obsessions in Psychiatry," "Chronic Chorea," and "The Insane in the Army from the Medical Standpoint." The membership fee is \$4, with a \$2 fee for associate membership. For further particulars

address the secretary, Dr. C. Mirallié, 11, rue Copernic, Nantes, France.

Alleged Discovery of Germ of Trachoma.—None of the micro-organisms described by various writers hitherto as the specific germ of trachoma has given satisfactory inoculation experiments, but the cable now announces that Prof. R. Greef of Berlin, chief of the eye department at the Charité, has succeeded in inoculating apes with a micro-organism which he has discovered, and which he regards as the true causal germ. He has been making a special study of trachoma for a number of years, having been sent to the strongholds of trachoma in Westphalen and Posen by the government on different occasions to study the disease and means to combat it. His translation of Cajal's great work on the retina of vertebrates is a classic; his other works deal mostly also with the finer structure of the eye. Professor Greef will be 47 years old next June.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, March 27, 1909.

Admission of Women to the Royal College of Surgeons

The end of the long struggle for the admission of women to the Royal College of Surgeons has been recorded in previous letter. According to the new by-law which has just been published women may be admitted members and fellows of the college and licentiates in dental surgery, but they will not be eligible for seats on the council, nor to take part in the elections to the Council nor to attend any meeting—except purely scientific ones—of the fellows or of the fellows and members, nor be elected examiners. The new by-laws, therefore, will probably prove anything but acceptable to medical women. The admission of women to the fellowship, the highest qualification of the college, and yet denying them the right, which has always accompanied this distinction, of taking part in the election of the council, is most inconsistent, but consistency is not a quality which troubles the English mind. Indeed, these by-laws exemplify the national characteristic of compromising in everything and adopting reforms in a cautious and gradual fashion.

Plague in India

During the present year plague is in abeyance in India and the deaths number only hundreds instead of thousands, but no one can foretell when it may reappear in epidemic form. Since the outbreak in the summer of 1896 the mortality has been appalling. In that year it began in the Bombay Presidency, where it caused 2,219 deaths, most of them in the city of Bombay. In the following year the mortality rose to 54,000. Then the disease spread inland to other provinces. In 1901 the deaths amounted to 283,000; in 1902, to 584,000, and in 1904, to 1,144,000. In 1905 over a million deaths occurred. In 1906 a great decrease occurred, the deaths falling to a third of those of the previous year. No explanation could be given for this sudden fall, and it was hoped that the disease had expended its virulence. But in 1907 it gained fresh vigor and caused more deaths than ever—1,316,000. Then another lull occurred and the number fell to 149,000 in 1908. The total deaths for the twelve and a half years since the disease appeared in epidemic form has reached the enormous figure of 6,200,000.

Medical Officers of Schools Condemn Violent Athletics

In consequence of a joint letter published in the London *Standard* by Sir Lauder Brunton, Sir Thomas Barlow, Dr. Goodhart, Dr. Hale White and Sir Alfred Fripp, stating that "school and cross country races over a mile in length are wholly unsuitable for boys under 19," an important discussion took place at the Medical Officers of Schools Association. In introducing the subject, Dr. Collier of Oxford emphatically denied that many schoolboys were injured by long-distance racing. But at the universities functional albuminuria was frequently produced by rowing. Dr. Goodhart said that the nervous effect of long races was felt in after life. After considerable discussion, in which many speakers said they had never observed ill effects from school athletics, though they insisted on the necessity of medical examination before the boys were permitted to take part in them, it was decided that "only a few of the stronger and older boys should be allowed to compete for the longer distances. . . . Competitions in long-distance diving and in long-distance swimming are dangerous for adolescents, and the so-called Marathon races are wholly inappropriate."

PARIS LETTER

(From Our Regular Correspondent)

PARIS, March 23, 1909.

An Association of Medical Teachers

There has been founded, on the initiative of the Faculty of Lyons, an association to protect the material interests of the members of the teaching body of the faculty in regard to the superior administration and the public authorities, as well as to study together connectedly the problem of the organization of medical studies. The first general meeting of this association will take place at Paris April 2-4, when the following subjects will be discussed: (1) The competitive examination and the privat-docent system, regarded as a recruiting-ground for the teaching body of the faculty, by Professors Gross and Michel (of Nancy); (2) the reform of the competitive examination for the assistant professorship, by Professor Grasset of Montpellier and Professor Charneil of Lille; (3) specialization of the *agrégation*, by Drs. A. Broca, Brunot, and P. Teissier, *agrégés*, the faculty of Paris; (4) nomination of *agrégés* on a single list (one for all the faculties) or on multiple lists (one for each faculty), by Professor Réclus of Paris and Dr. Barrier, *agrégés* at Toulouse; (5) transformation of the temporary position of *agrégé* to a permanent post, by Professor Arnozan of Bordeaux. While the first four questions are connected with recent events, the fifth has always occupied the attention of the teaching body of our faculties, for, contrary to the usage in the faculties of science and jurisprudence, the *agrégés* in which are appointed for life, the *agrégés* of the faculties of medicine are nominated only for a period of nine years, which renders their material status precarious and often prevents them from devoting themselves entirely to teaching.

The Consumption of Alcohol and Absinthe in France

The statistics and chart showing the consumption of alcohol and absinthe in France during the year 1907 have been recently published. In glancing over the chart one is struck by the inequality of the consumption in the different districts of France. A compact group of 21 departments which, starting from Paris, embraces part of the northeast, the north, and the west of France—the departments producing beer and cider—forms a large black blot. It is there that the greatest consumption of alcohol occurs. Seine Inférieure takes the lead, with nearly 12 liters *per capita*; the consumption in the other departments of this group ranges from 4.06 (Seine) to 9.11 liters. The departments on the east and southeast consume from 2 to 4 liters *per capita*. Finally, one sees on the chart a great white space, extending over the center, the southwest, and a large part of the east; this represents the departments in which the consumption of alcohol falls below 2 liters *per capita*. The consumption of alcohol is higher in the towns than in the country, the proportion remaining the same according to the groups of departments above indicated. One reassuring deduction may be drawn from these statistics, namely, that the consumption of alcohol (but not of absinthe) tends generally to diminish, and that this diminution is more rapid in the town than in the country. This is proved by comparison of the figures for 1897 and 1907. Havre and Rouen, which head the list, have dropped from 19 to 15 and from 17.51 to 13.79 liters *per capita*; Paris from 7.95 to 3.87; Marseilles from 7.53 to 3.45; Lyons from 5.73 to 2.59; Bordeaux from 4.52 to 2.75; Nice from 5.09 to 2.32; Toulon from 8.08 to 4.70; Montpellier from 5.27 to 2.27, etc.

The drop is perceptible in every district. It is to be attributed in part to the increased taxation voted by parliament, which has led the liquor producers to reduce the proportion of alcohol in their liquors; in part to the town-dues (*taxes d'octroi*) that the towns have imposed on alcohol, and, finally, in part to the success of the anti-alcohol movement. Another cause of this diminution has been the prohibition of alcohol in the barracks (*casernes*). During their term of compulsory military service young men are little by little broken of the habit of drinking alcohol, and they bring these new morals with them on their return to civilian life.

However, if the consumption of alcohol, generally speaking, has diminished in France, the statistics reveal another danger, namely an increased consumption of absinthe. In this the south takes a startling lead over the north. It is the provinces of the south, southeast and east which drink most absinthe. Marseilles stands at the head, with 3 liters of pure absinthe *per capita*; on the other hand, in the departments of the north, center and west, the consumption of absinthe does not reach 1 liter *per capita*.

A Girdle of Parks Around Paris

Most of the great cities of Europe and America outlined a plan in advance for work to be executed later. Thus London, Berlin, Manchester, Vienna and Hamburg reserved around the heart of the city large open spaces for parks, playgrounds, etc. In America, New York, Boston, Philadelphia, Baltimore, Chicago and San Francisco are surrounded by a girdle of parks, assuring to the population air and light according to the requirements of public hygiene. Paris has no plan of this kind outlined, and all such work is done haphazard. The Social Museum (*Musée social*) has taken up the matter and organized two years ago a special department on urban and rural hygiene to study the means for remedying this deficiency. The department has prepared a plan which takes note of the present crowded condition of Paris, and proposes to repurchase from the government the fortifications around Paris, as well as a part of the adjoining military zone, and to divide the land into nine large parks with an average area of 15 hectares each (about 30 acres) and 13 playgrounds of an average of 1½ hectares (about 3 acres). This work will cost 75 millions of francs, out of the 145 which the sale of the surplus land will bring in; the remaining 70 millions represent the sum that the city of Paris will pay into the national treasury for the land. The plan thus promotes public hygiene without expense to the people of Paris. On March 5 a delegation from the *Musée social* laid the plan before the secretary of the interior, M. Clemenceau, who approved of it, and the matter is now under discussion by the municipal and national authorities.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, March 15, 1909.

Practical Value of the Wassermann Reaction for Syphilis

An important discussion on the clinical value of the so-called Wassermann serum reaction for syphilis took place a short time ago in the Society for Internal Medicine of this city.

One of the speakers, Dr. F. Lesser, states that in 2,000 cases he has never found the reaction positive unless syphilis was present or unless there was a well-founded suspicion of its presence. The reaction, to be sure, is marked in many cases of scarlet fever, but this exception has no practical significance. The negative result of the serum reaction, however, does not argue against the presence of syphilis. In cases of hereditary lues the reaction is almost always strongly positive, and indeed survives the first decade. Either the watery or alcoholic extract of a syphilitic liver or an alcoholic extract of normal heart may be used, but Lesser believes that Wassermann's original directions to employ a watery extract of the liver give the best results. In a primary lesion, the reaction appears first, as a rule, after a three weeks' duration of the primary sore. For this reason Lesser regards the reaction as unsuitable for the differential diagnosis between chancre and chancreoid.

In rare cases a positive reaction is obtained before a primary lesion is demonstrable. In cases of progressive paralysis Lesser has constantly obtained a positive reaction. He therefore has no hesitation in attributing the paralysis to syphilis without exception. In tabes he has obtained a positive reaction in only 56 per cent. of the cases. Lesser found that in most cases it was possible by an energetic specific treatment to transform a positive into a negative reaction. He concludes, therefore, that when the reaction is positive the syphilitic virus is still active, and that it is the duty of the physician in such cases to institute antisyphilitic treatment. The reaction gives no basis for determining the severity, extent or localization of the disease. The diseased focus may be situated where it can do no harm; but it is to be remembered that every syphilitic who gives a positive reaction is exposed to the danger of developing tabes or progressive paralysis. Lesser has never seen a change of the reaction from the use of atoxyl.

The second speaker, Professor Blaschko, though likewise convinced of the diagnostic value of the reaction, calls attention to the fact that complement deviation has also been observed in occasional cases of leprosy, frambesia, sleeping sickness, scarlatina, severe diabetes, and after vaccination. On the other hand, there are cases in which syphilis is clinically certain, but the reaction fails. These cases may be isolated lesions of the skin or mucous membrane, or advanced cases of tabes and cerebral syphilis, or, finally, relatively often affections of the bones. Blaschko believes that the neg-

ative reaction obtained as a result of treatment is seldom permanent or of long duration, particularly in early cases, while in the later stages the influence of treatment on the reaction appears to be more lasting. Blaschko thinks that patients should be treated until a negative reaction is obtained, as a general rule, but that the possible damage to the patient from a long-continued mercurial treatment must always be borne in mind.

Blaschko also believes that treatment should be begun whenever the reaction is positive, even if visible lesions are lacking. Syphilitics should be subjected at regular intervals not only to clinical, but also to a serodiagnostic examination, the latter to be made several times a year in the early years and later yearly. In many cases, to be sure, it will be necessary, even in the later years, to repeat the examinations several times in a year. The prognostic value of the reaction, positive or negative, is slight in the first three years of the disease.

In the debate on these papers most of the speakers expressed themselves more reservedly than the two leaders regarding the value of the reaction for diagnosis, prognosis and therapy.

An assistant of the clinician, E. Lesser, emphatically believed that we were not yet justified in placing the diagnostic value of the serum reaction on a par with that of the well-known clinical symptoms.

Professor Wassermann emphasized the fact that he had from the beginning recommended that significance should be attributed only to positive reactions and not to negative. He said that in ordinary practice alcoholic extracts from normal organs would answer for eliciting the reaction, but in laboratories which deal specially with the serum diagnosis of syphilis there must be on hand, as a standard for control, a watery extract prepared according to the original directions which should be frequently tested for possible changes.

Increase of Insane in Prussia

While according to the last census, taken Dec. 1, 1905, the number of deaf mutes and blind in Prussia had relatively decreased, a regrettable increase of the insane was ascertained. In 1880 there were 66,345 insane in Prussia; in 1905, 139,182; 24.3 per 10,000 inhabitants in 1880, 37.3 in 1905. While the number of inhabitants increased 36.7 per cent. in twenty-five years, the number of insane increased 110 per cent. It must be noted, however, that the term "insane" was given a wider meaning in 1905 than in previous censuses, which accounts for a part of this striking increase.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, March 20, 1909.

Appointment of von Strümpell

Finally, the *Wiener Zeitung* publishes the appointment of Professor von Strümpell to the chair of the third medical clinic in Vienna, as successor of Professor Schrötter. As pointed out in my last letter, there were some apparently uncontrollable influences at work, trying to prevent, if possible, the appointment, but the energetic attitude of the senate of the university succeeded in impressing on the determining personage that a public scandal would arise if the proper course were not adhered to, so it was deemed best to fill the vacancy.

Health of the Viennese Laborers

The report of the *Arbeiter Kranken Kassa* (laborers' sick benefit society) of Vienna, contains some interesting figures regarding the health of a fairly uniform group of earners. This society has 310,000 members, all living in Vienna. In January, the number of reported cases of illness was 11,469; only those incapacitated to work are reported to the registrar. Of these, 10 per cent. (1,138) were suffering from tuberculosis of the respiratory organs, 562 from influenza, 59 from pneumonia, 2,028 from other catarrhal affections of these organs, 592 had tonsillitis, 371 diseases of the circulatory system, 728 suffered from disease of the intestinal canal, including the stomach, 7,210 had rheumatic pain, and there were 1,746 cases of illness due to work (accidents called work injuries). The number of deaths was 319 in this one month; 48 per cent., or 157, succumbed to tuberculosis; 10 patients died owing to work injuries, 23 from neoplasms, 39 from heart disease. These figures are official, but it must be remembered that some of the better-paid wage earners prefer to call in their own private physician, as the contract physician is often so overburdened that he really has not much time for the individual patient; 1,000 to 1,500 persons are

allotted to each of these physicians, living often not in the same district. In busy times, there are from 20 to 30 visits to be made daily, besides about the same number of patients to be attended to in the office. Naturally, the physician is forced to be brief in his directions and his examinations. Taking these conditions into consideration, it may be assumed that 4 per cent. of the members of the societies are incapacitated monthly, or about 50 per cent. yearly.

Pharmacology

Kataplasma Kaolini, U. S. P., 1900

To the Editor:—Many things are revived, which already have passed in oblivion, and many things fall, which are now held in honor (Horace).¹ Dr. Herman Schelenz of Cassel, Germany,² has shown positively that earth and clay pastes and poultices have been used intermittently from the very earliest period in the history of medicine. The recent introduction into our pharmaceutical armamentarium of the earth poultices and clay pastes should not be regarded, therefore, in any way as a novelty.

In the course of the past few years, such preparations have been exploited broadcast and with vigor, and many medical journals are filled with almost frantic attempts to convince the profession that these remedies are *sine qua non* in a host of diseases of amazing variety, special reference, however, being shown for diseases ending in "itis." That the labors of these exploits were not wasted soon became evident. Physicians began to prescribe these preparations to an extent far beyond the dreams of their "originator;" indeed, the demand became so great that the committee for the revision of the Pharmacopeia of 1900, in its paternal effort to rescue the general practitioner from the "patent-medicine" prescribing habit, inserted an official preparation, which the physician could prescribe "ethically." Then a peculiar thing happened: instead of prescribing the official preparation, the physician continued to prescribe the proprietary, and if the pharmacist attempted to serve the official preparation in such circumstances the physician promptly cried "substitution," much to the pharmacist's discomfort. A natural consequence was that the official preparation was neglected, and now to all intents and purposes has ceased to exist. Instead of accomplishing their much-desired and worthy end, this committee therefore merely afforded additional advertising ammunition to the exploiters of these nostrums, who now boast that the U. S. Pharmacopeia—which incidentally Dr. Schelenz calls "an aristocrat among all the pharmacopeias"—advises the use of their preparations in the treatment of diseases, and that all these pastes are regarded as sufficiently worthy to be classed with such well-recognized and time-honored remedies as opium, quinin, arsenic, iron and mercury.

The widespread use of this preparation by physicians furthermore has resulted in an unforeseen and to the general practitioner disagreeable consequence, namely, that the layman has introduced these pastes into his own pharmacopeia to a surprising extent.

A few experiences with these preparations have not endeared them to me nor encouraged me in their use. One of my first observations was in the case of a child, suffering from bronchopneumonia, whom I found encased in a heavy layer of one of the best known of these western mnds, and in whom the already seriously impaired respiration was further embarrassed by the weight of the clay poultice. Furthermore, the pores of the skin were closed and the paste interfered with the free access of air to the body, an important principle in the treatment of any disease, particularly in fever. I have also seen the same preparation applied to corns, bunions, ingrowing toenails, typhoid fever, spinal meningitis, miliary tuberculosis, varicose veins, rheumatism, appendicitis, swollen testicles and even to open wounds and

ulcers. The clay paste covers a multitude of complaints. I have seen it cause severe irritation due to its most active principle, glycerin.

There is no valid reason whatever for the use of these clay preparations; the U. S. Pharmacopeia contains a sufficient number of counterirritants and rubefacients that are in every way superior to them. There is no need for a clay paste and no necessity for canonizing such a preparation by making the formula official.

A. A. HERZFELD, M.D., New York.

How Testimonials Are Secured

An article by George Frank Lord on "Testimonials in Advertising" (*Printer's Ink*, Feb. 3, 1909), undoubtedly deserves the prize for a cynical unveiling of the unscrupulousness that underlies the modern advertising method. He supports the use of the testimonial on the following ground: "Until the evolution of a perfect man with infallible judgment and universal knowledge, we must all of us depend on the experience and opinion of others—and that is exactly what a testimonial represents." He then proceeds to demonstrate that that is exactly what a testimonial does not represent, in very many cases: "The average 'patent medicine' testimonial is genuine . . . because the 'patent medicine' ad. appeals chiefly to hypochondriacs who are not sick, but imagine they are when they read their 'symptoms.' The same ad. creates the sickness and effects a cure *à la* Christian Science. The purchase of the medicine is really unnecessary except from the advertiser's viewpoint."

Another instance of the value of the so-called experience and opinion of the testimonial giver is displayed in the following advice: "The best time to get a testimonial is shortly after the purchase is made, while the buyer's first enthusiasm is at its height. . . . Further, advantages resulting from the use of an article are not always permanent, and unless the testimonial is secured at the psychologic time it can not be obtained at all."

If the principles involved in the foregoing excerpts are not blankly dishonest, then we must confess that the meaning of the term dishonest is not clear to us. And yet they are the principles that are adopted in securing "patent medicine" testimonials.

Correspondence

A New Sign of Perforation in Typhoid Fever

To the Editor:—In THE JOURNAL, February 27, page 695, in the article entitled a "New Sign of Perforation in Typhoid Fever," the following statement occurs: "A small area of tenderness was found low down in the right iliac fossa. The patient was turned on his left side and in half an hour the area of tenderness had moved toward that side about two inches."

This seems such bad teaching that it should not be allowed to pass unchallenged.

Patients with perforation in typhoid fever die from general peritonitis. With the vast improvement in results from Fowler's position, based on Muscatello's finding as to regions of absorption, a surgeon of to-day can scarcely justify his position if he treats his patients otherwise. No one would dream of using Clark's position. It would seem equally indefensible to place the patient in any position whatsoever, merely to make him worse in order to prove the diagnosis. The position on which this "new sign" depends simply means spreading the septic material to the left side in order that peritonitis may occur there, and thus help in the diagnosis. Rather should it be laid down that in any case of suspected perforation the resident staff and the nurses must be instructed that their duty lies in a series of negatives, except that the head of the bed should be elevated. After that the patient must not be sponged, must not receive food, must not be moved, must not receive an enema, and must not be exam-

1. Multa renascentur, quæ iam cecidere, cadentque, quæ nunc sunt in honore.

2. Die Geschichte der Pharmacie, Julius Springer, Berlin.

ined by any and every physician who happens to come to the hospital. One could not think of any worse treatment than that recommended, except it be giving a purgative or an enema or adopting Clark's position.

Without going into details in the diagnosis of typhoid perforation, I should like to say that the most essential point is to have trained observers who can detect the signs at the time of perforation. The sharp, stabbing pain is the chief feature, and if not taken into account at once by an observant resident physician, or an equally observant nurse, it will, in many cases, be lost entirely, for when the attending physician visits the bedside the patient has forgotten all about it. Then the diagnosis must rest largely on the spreading peritonitis.

As to whether or not the first sign mentioned has been noticed before, see the discussion on Dr. J. D. S. Davis' paper on "Treatment of Typhoid Perforations" which took place at the twenty-first annual meeting of the American Association of Obstetricians and Gynecologists at Baltimore, September, 1908, published in the *American Journal of Obstetrics and Diseases of Women and Children*, December, 1908, pages 1053-1060.

Throughout the whole realm of medicine we are often tempted to seek pathognomonic "signs," and in looking for these, many other very relevant, though singly minor, symptoms are lost sight of. With all the advancement in modern medicine, we err if we lack in close observation and expect to replace it with new devices.

JASPER HALPENNY, Winnipeg, Manitoba.

[The above letter was referred to Dr. Brown, who says:]

With regard to the sign to which objection is taken, I would refer Dr. Halpenny to the closing paragraph of the article. There I place the limit of time for observance of the sign as half an hour. I can see no reason why it is not better to allow the peritonitis to spread in a definite direction, which direction will help us in the diagnosis and at the same time tend to keep it from spreading upward or from spreading around the cecum into Morrison's space, and thence upward under the liver, than to allow it to spread in any direction than it may by chance take, or by placing the patient in the Fowler position to make it spread downward into the pelvis. Furthermore, I do not think that if the limit of one or two inches is observed the peritonitis will become uncontrollable in that direction (namely, toward the unaffected side), any more than it will in any other, provided immediate operation is performed.

With regard to the "series of negatives," I would call Dr. Halpenny's attention to the fact that with an estimated average of 25,000 persons dying annually in the United States from perforation in typhoid fever, in twenty-three years but 524 cases operated on have been reported. In my opinion the "series of negatives" has to a great extent been responsible for this.

In the discussion referred to, Dr. T. B. Noble of Indianapolis calls attention to the value of auscultation in the diagnosis of typhoid perforation and the sign which he describes is elicited in the following manner: He used an ampliphone, placing it over the area of greatest tenderness, and by making alternate palpation on either side he was able to elicit a friction sound such as one would get in a pleuritis. The same sound was produced by deep respiratory movements, which indicated roughened peritoneal surfaces passing over each other, the roughening due to an infection which came from an impending or already existing perforation.

The sound elicited by the method described by me is not a friction sound, but is similar to a very fine crepitant r le. Furthermore, the sign described by Dr. Noble necessarily presupposes that the surfaces must be in contact in order to produce the friction while in the sign described by me the surfaces are made to come into contact with one another by the dipping with the bell of the stethoscope.

As to the priority, the sign which I describe was first mentioned by me in a paper read before the Clinical Society of St. Luke's Hospital Staff, Utica, N. Y., in October, 1907.

With regard to the point of trained observers I would state that such a condition is much to be desired, and the fact that I might possibly help a little toward helping others to become "trained observers" was the reason I wrote the article.

General Practitioners and Simple Refraction

To the Editor:—There may have been some excuse in times past for the public's resorting to the old time spectacle vendor to "get glasses fitted"—at any rate for the larger part of the public, which is unable to pay high professional fees in addition to the expense of costly glasses. Now, however, that the optician has arrogated to himself a would-be professional status, accompanied, of course, with a more or less commensurate fee, the question insistently suggests itself: Should not the general practitioner be able to recognize and manage cases of simple refraction? The answer indisputably must be "yes," for various reasons.

First: The main reason for equipping family physicians with a working knowledge of simple refraction is that they may be able to do the medical practice now in the hands of opticians. While complicated refractive cases will often exceed the limitations of a family physician, no medical student or competent physician is so stupid that he can not learn to refract as well as, or better than the optician. Observations show us that some family physicians have mastered the art of simple refracting, so that we know others can do the same if they so desire. These will have the good sense to follow the custom established in other branches of practice, and seek the aid of a specialist in cases too intricate for their skill.

Other reasons why the family physician should possess working knowledge of simple refraction are: (1) That he may detect eye disabilities at their inception and so prevent the suffering sure to follow their neglect; (2) that no excuse may occur for patients heeding the specious promises of the optician's advertisements; (3) that the optician be relegated to his proper function, of selling glasses on physicians' prescriptions.

Second: A "working knowledge of simple refraction" by the family physician will (1) augment his income from enlarged service to patients; (2) strengthen his hold on families; (3) remove the necessity of his patients applying to a stranger for relief from eye disability; (4) broaden his intellectual capacity, increase his technical skill, and sharpen his power to penetrate the intricacies of other classes of cases. Such equipment enables him to appreciate better the difficulties of special ophthalmology, and fits him for cooperation with ophthalmologists in intricate cases.

Third: Without a "working knowledge of simple refraction" no family physician can meet his full obligations to the laity. Thus when his families consult him for ailments involving simple refractive defects, he must refer them to strangers or prescribe on a mere guess—either alternative is sure to disturb their faith in him. The intelligent student of social conditions may observe bright family physicians directing their warfare to an aching head, a distressed stomach, constipated bowels, or other organs, when the real source of the trouble is a defective eye; others, suspecting a defective eye, send the patients to a layman optician rather than to an ophthalmologist; still others consult an optician themselves; while multitudes sign petitions or write letters to legislatures, entreating them to legalize the illegal practice of ophthalmology by opticians, and, in divers other ways exhibit the legitimate fruits of an education defective in a "working knowledge of simple refraction." All these work untold harm to both the laity and the profession.

Thanks to a movement started last June by the Michigan State Medical Society, this question has passed its academic stage. The Michigan State Board of Registration in Medicine has notified medical colleges that, beginning next spring examination, all applicants for a license must demonstrate their possession of a "working knowledge of refraction," and that a failure to obtain 50 per cent. of possible standing will subject the applicant to refusal of license.

LEARTUS CONNOR, M.D., Detroit.

Carbolic Acid in Boils and Felons

To the Editor:—The treatment of boils, carbuncles, felons, in fact any local infection in its early stages by hypodermic injection of pure carbolic acid, has probably been used by others, but failing to find any mention of it in the literature, and having tried it on myself, I wish to report my method in order that it may be more widely known.

Having suffered from a boil on one hand and a carbuncle on the other, which ran their usual course, when others made their appearance, I was ready to experiment, and having tried without success to abort the first one by boring down into the center with a tooth pick wet with the acid, I went a step further with the second crop and injected the acid with a hypodermic syringe. To my great joy the pain instantly ceased (one must have boils to appreciate this), did not begin again, and the hard lump soon disappeared. Since then I have used the method sufficiently to satisfy myself and others—patients—that it is a cure.

The method consists in injecting pure carbolic acid into the center of the inflamed spot, taking pains to introduce the needle not at the most prominent point of the swelling, but rather to one side where the skin is sound and shows no signs of pointing. It is not necessary to count the drops, enough to make the tissue tense.

It stops the pain instantly, destroys the germs, and is absorbed so slowly that no harm comes from it.

H. D. GARDNER, Scranton, Pa.

An Eye Bandage

To the Editor:—In THE JOURNAL, March 27, page 1033, Dr. Morley describes "An Eye Bandage and Its Method of Application." This bandage has all the good qualities claimed for it, as a number of years' experience has convinced me. But it is only fair to state that it was invented many years ago by the late Dr. Russell Murdoch of Baltimore, and has been regularly used at the Baltimore Eye, Ear and Throat Charity Hospital. Dr. Morley will find Dr. Murdoch's description in the *Ophthalmic Record* of 1904, and will I am sure regret having described as his own something which belongs to another.

HARRY FRIEDENWALD, Baltimore.

The Evolution of Refraction and Its Necessity

To the Editor:—In THE JOURNAL, March 27, page 1048, appeared a communication on the above subject by L. Haynes Buxton. Quoting from the third paragraph: "It was with much surprise that I read some of the statements contained in the paper by the late Dr. St. John Roosa, which appeared in THE JOURNAL, Feb. 13, page 543. My own personal and clinical experiences are so greatly at variance with the conclusions of Dr. Roosa that it is but just that they be recorded." This quotation, and, in fact, the whole letter, which gives admirable evidence of progressive thought conservatively expressed, so well represents not only my own views, but those of many other oculists, that it deserves a hearty endorsement.

EDWARD LAUDER, Cleveland.

Medical Education and State Boards of Registration**COMING EXAMINATIONS**

ARKANSAS: Three boards, each at Little Rock, April 13. Regular Sec., Dr. F. T. Murphy, Brinkley; Homeopathic Sec., Dr. P. C. Williams, Texarkana; Eclectic Sec., Dr. A. J. Widener, Little Rock.
DISTRICT OF COLUMBIA: Washington, April 13-16. Sec., Dr. George C. Ober, 210 B St., S. E.
ILLINOIS: Northwestern University Bldg., Chicago, April 15-17. Sec., Dr. J. A. Egan, Springfield.
NEW MEXICO: Santa Fe, April 12. Sec., Dr. J. A. Massie.
OKLAHOMA: Guthrie, April 13. Sec., Dr. Frank P. Davis, Enid.
WEST VIRGINIA: Huntington, April 13-15. Sec., Dr. H. A. Barbee, Point Pleasant.
WISCONSIN: Park Hotel, Madison, April 13. Sec., Dr. J. V. Stevens, Jefferson.

COUNCIL ON MEDICAL EDUCATION

Fifth Annual Conference, held at Chicago, April 5

The Chairman, DR. ARTHUR DEAN BEVAN, Chicago, presiding

The fifth annual conference of the Council on Medical Education of the American Medical Association was held at the Auditorium Hotel, Chicago, April 5. In his address Dr. Bevan reviewed briefly the past history of the Council and called attention to the most marked improvements in medical education. The work of the past year was reported by the secretary, Dr. N. P. Colwell, who gave some of the conditions found by the inspection of medical colleges and also gave in detail the status of medical education at the present time.

Reports were then presented by the chairman of the ten subcommittees on medical curriculum, as follows:

1. ANATOMY, INCLUDING HISTOLOGY AND EMBRYOLOGY.—Dr. Charles R. Bardeen, Professor of Anatomy, University of Wisconsin, College of Medicine, Madison, Wis.

2. PHYSIOLOGY AND PHYSIOLOGIC CHEMISTRY.—Dr. Elias P. Lyon, Professor of Physiology, St. Louis University, School of Medicine, St. Louis.

3. PATHOLOGY AND BACTERIOLOGY.—Dr. William T. Councilman, Professor of Pathology, Harvard Medical School, Boston.

4. PHARMACOLOGY, TOXICOLOGY AND THERAPEUTICS.—Dr. Torald Sollmann, Professor of Pharmacology and Materia Medica, Western Reserve University, Medical Department, Cleveland.

5. MEDICINE, INCLUDING PEDIATRICS AND NERVOUS AND MENTAL DISEASES.—Dr. George Dock, Professor of Medicine, Tulane University of Louisiana, New Orleans.

6. SURGERY, GENERAL AND SPECIAL.—Dr. Charles H. Frazier, Professor of Clinical Surgery, University of Pennsylvania, Department of Medicine, Philadelphia.

7. OBSTETRICS AND GYNECOLOGY.—Dr. J. B. DeLee, Professor of Obstetrics, Northwestern University Medical School, Chicago.

8. DISEASES OF THE EYE, EAR, NOSE AND THROAT.—Dr. George E. de Schweinitz, Professor of Ophthalmology, University of Pennsylvania, Department of Medicine, Philadelphia.

9. DERMATOLOGY AND VENEREAL DISEASES.—Dr. William A. Pusey, Professor of Dermatology and Clinical Dermatology, College of Physicians and Surgeons, Chicago.

10. HYGIENE, MEDICAL JURISPRUDENCE AND MEDICAL ECONOMICS.—Dr. F. F. Westbrook, Professor of Pathology and Bacteriology, University of Minnesota, College of Medicine, Minneapolis.

These reports recommended a curriculum which aggregated 4,400 hours. At a meeting of the chairmen held on the day preceding the conference, these reports had been compared, a few duplications of courses were eliminated, and the total hours for each section reduced as follows:

SUBJECT.	HOURS.
I. Anatomy, including histology and embryology.....	700
II. Physiology and Physiologic Chemistry, including 80 hours of Organic Chemistry.....	530
III. Pathology and Bacteriology.....	500
IV. Pharmacology, Toxicology and Therapeutics.....	240
V. Medicine, including Pediatrics and Nervous Diseases....	890
VI. Surgery: General and Special.....	650
VII. Obstetrics, 180 hours, and Gynecology, 60 hours.....	240
VIII. Diseases of the Eye, Ear, Nose and Throat.....	140
IX. Dermatology and Syphilis.....	90
X. Hygiene, Medical Economics and Medical Jurisprudence	120
Total	4,100

These figures were voted to represent the maximum requirement of a medical curriculum covering four years of 32 weeks each of actual work. It was the opinion of those present that the curriculum should not be made a hard and fixed requirement with which all colleges should comply. Its chief value was considered to be in its suggestiveness and from the fact that it represented an exhaustive study by over 100 leading medical educators, representing all the subjects included in the curriculum.

Dr. George W. Webster, president of the Illinois State Board of Health, gave an address on "The Medical Curriculum from the Standpoint of the State Board."

Dr. Fleming Carrow, of the Michigan State Board of Registration in Medicine, gave an address on "The Character of the State License Examination." In this address and the discussion which followed, it was shown that the best means of differentiation between the graduates of schools of the "quiz compend" type and those which have been trained in laboratories, dispensaries and hospitals would be to give—in addition to written examinations—practical tests, wherein the applicant would be required to identify histologic specimens, urinary casts, bacteria, etc., under the microscope, or

to point out certain tissues on the cadaver or even to examine patients.

In a paper entitled "Some Results of Higher Standards of Preliminary Education." Dr. Richard H. Whitehead, dean of the Medical Department of the University of Virginia, gave the results of higher requirements in that school. While the increase caused a reduction in the number of students it greatly raised the average quality. He added that while the south had some serious educational problems to work out, the Council should not lower its standards on that account. The south needed the standard as a goal to be striven for. In conclusion, Dr. Whitehead said: "The day is not so very far off when there will exist the proper basis for high standards in medical education. Already the leaven of high ideals is working in at least three southern universities. And so, I say, do not worry about the south; it will work out its educational development in due time. In the meanwhile the Council can be of much service by stimulating, encouraging, helping—but not by lowering its standard."

Association News

RAILROAD RATES TO ATLANTIC CITY

Transportation Committee Announces Rate of One and a Half Fares for the Round Trip

The Transportation Committee announces that it has secured a rate of one and a half fares for the round trip to the Atlantic City session, June 7 to 12.

On a two cent basis, this rate is equivalent to the one fare rate on the old three cent basis. This rate applies to all parts of the United States, with the exception of the extreme western or Trans-Continental Passenger Association territory, for which a special rate has been made to the gate-ways of the Western Passenger Association territory, where the one and a half fare rate applies.

A special train (or more if necessary) has been arranged for from the Chicago district to Atlantic City, without change, via the Pennsylvania Lines. This is the only line reaching Atlantic City from the West without transferring and changing at Philadelphia. This train will leave Chicago Sunday, June 6, arriving at Atlantic City Monday, June 7.

A special train will be run by the Chicago & Alton from the West and Southwest, from Kansas City and St. Louis, and special sleepers by the Chicago, Milwaukee and St. Paul, from the Northwest to Chicago, connecting directly with the Pennsylvania Special, thus providing for all who wish the most direct routes and the best possible accommodations.

The dates of sale of the tickets have been arranged sufficiently early to accommodate those who wish to attend the special societies' meetings in advance of the American Medical Association.

M. L. HARRIS, Chairman.

NEW MEMBERS

List of new members of the American Medical Association for the month of March, 1909:

ALABAMA

Clayton, O. W., Sylva.
Fuller, E. L., Parryville.
Goodloe, J. R., Demopolis.
Greene, P. F., Clayton.
Greer, W. H., Tusculum.
Hogan, R. E., Bessemer.
Inge, H. T., Mobile.
Reld, A. M., Florence.
Watson, C. M., Florence.
Williams, V. H., Calera.

ARIZONA

Rosenberry, A. J., Jerome.

ARKANSAS

Amls, J. C., Ft. Smith.
Baker, J. J., Magnolia.
Holt, C. S., Ft. Smith.

CALIFORNIA

Banter, L. A., Redding.
Card, C. W., San Francisco.

Cowan, A. B., Fresno.
Ellis, J. A., Alameda.
Gillespie, J. A., Kingsbury.
Frizzell, J. P., Yreka.
Huntington, W. O., Oakland.
Johnson, E. E., Palo Alto.
Krull, Frank, Sacramento.
Lennon, M. B., San Francisco.
McClurg, Katherine, Oakland.
Molony, J. J., San Francisco.
Morris, Margaret M., Los Angeles.

Pitts, A. D., Point Arena.
Sehnze, O. T., Napa.
Smith, A. M., Oakland.
Stewart, J. T., Los Angeles.
Thomas, H. G., Oakland.
Walker, B. F., Stockton.
Williams, F. H., Selma.

COLORADO

Agan, J. M., Pierce.
Bartelt, E. E., Lamar.
Bolton, L. C., Cedaredge.

Cellins, E. W., Denver.
Copeland, W. C., Hotchkiss.
Crisp, J. D., Denver.
Crosby, L. G., Ouray.
Cummings, G. D., Florence.
Depeyre, L. N., Colorado Springs.
Garwood, H. G., Gorham.
Geith, C. R., Wellington.
Green, A. S., Denver.
Healy, M. D., Denver.
Howard, C. J., Boulder.
Lassen, Fritz, Pueblo.
Leinbach, R. C., Shoshone.
Yacoubi, H. B., Paonia.

CONNECTICUT

Bedford, A. L., Waterbury.
Chillingworth, F. P., Haddam.
Martelle, H. A., Hartford.
Simmons, W. N., Tolland.

DELAWARE

Carey, H. M., St. George's.

DISTRICT OF COLUMBIA

Frankland, W. A., Washington.
Goodman, W. R., Washington.
Groover, T. A., Washington.
Hunt, P. C., Washington.
Jenner, N. R., Washington.
Kerr, H. H., Washington.
Magee, G. H., Washington.
Mason, E. L., Washington.
Riggles, J. L., Washington.
Roy, P. S., Washington.
St. Clair, F. A., Washington.
Wilkinson, W. W., Washington.

FLORIDA

Bouchelle, L. B., New Smyrna.
Halton, John, Sarasota.
Henry, H. W., Lake Weir.
McKinstry, Jr., J. F., Gainesville.
Roberts, J. L., Plant City.
Sandusky, C. M., Jacksonville.

GEORGIA

Beauchamp, J. C., Williamson.
Benedict, S. C., Athens.
Brown, V. L., Fort Valley.
Charlton, T. J., Savannah.
Glenn, R. P., Columbus.
Goolsby, R. C., Forsyth.
Johnson, J. E. L., Roberta.
McNeill, R. J., Danbury.
Miller, R. L., Waynesboro.
Moore, B. R., Temple.
Rawlings, Wm., Sandersville.
Wall, F. M., Dodge.

ILLINOIS

Carlisle, J. W., Robinson.
Carr, Jesse W., Sheridan.
Carter, A. R., Murphysboro.
Cheadle, C. M., Ashton.
Code, W. E., Chicago.
Everett, W. W., Highland.
Fast, H. D., MacKinaw.
Gibson, O. N., Eldorado.
Gunn, R. M., Montrose.
Hayden, A. A., Chicago.
Heitman, J. H., Toga.
Hill, A. S., Chicago.
Kan, A. M., Chicago.
Kring, C. H., Livingston.
Laughlin, E. O., Paris.
Lillie, C. W., St. Louis.
Loeser, Wilhelm, Chicago.
Martin, W. B., Naperville.
Moessner, F. R., Chicago.
O'Reilly, W., Glasgow.
Reticker, J. K., Quincy.
Rockefeller, C. D., Bunker Hill.
Schneider, G. A., Chicago.
Watson, Walter, Mt. Vernon.

INDIANA

Baxter, J. W., Lanesville.
Bear, L. H., Vevay.
Bowers, H. C., Seleville.
Brumbaugh, M. T., Foraker.
Caraway, S. H., Indianapolis.
Clokey, M. C., Huntington.
Coomes, M. J., Batesville.
Fauve, A. E., Fort Wayne.
Fermier, P. G., Leesburg.
Gabe, H. E., Indianapolis.
Gibbs, E. R., Greenfield.
Good, C. H., Warren.
Grim, Simon, Elberfeld.
Johnston, S. A., Indianapolis.
Kennedy, Frank, Goodland.
Kirkpatrick, J. C., Roll.
Kitchen, W. B., Indianapolis.
McPherson, S. L., Washington.
Moore, W. H. H., Lafayette.
Ostrowski, R. O., Hammond.
Powers, U. G., Albany.
Richardson, G. G., Van Buren.
Siders, W. B., Millersburg.
Smith, M. S., LaPorte.
Stone, C. E., Shoals.
Sturm, E. A., Jasper.
Swadener, E. L., Jeffersonville.
Wileox, F. T., LaPorte.
Wolfe, F. E., Danesville.

IOWA

Aschenbrenner, C. F., Pella.
Bellinger, M. J., Council Bluffs.
Bruce, J. H., Dickens.
Canfield, H. W., Baxter.
Cobb, E. A., Harlan.
Gantz, S. B., Albia.
Gibson, C. G., Sioux City.
Harris, G. W., Marshalltown.
Heidel, G. A., Muscatine.
Hart, U. L., Numa.
Johnson, E. M., Afton.
King, D. H., Batavia.
Kuhl, A. B., Davenport.
DeLispinasse, G. A. F., Orange City.
Logan, F. W., Fenton.
Merritt, E. A., Emerson.
Meyers, J. F., Elliott.
Noyes, A. A., Mason City.
Peterson, R. A., Swedesburg.
Pugsley, G. W., Moorhead.
Vorweck, A. H., Burlington.
Watson, E. J., Burlington.
Whitwall, W. R., Hastings.

KANSAS

Bolton, J. W., Iola.
DeTar, M., Kinsley.
Fear, R. C., Gardner.
McDonough, W. C., Topeka.
Munford, R. H., Greeley.
Outland, J. H., Kansas City.
Reinemund, C. A., Junction City.
Sloss, H. J., Meade.

KENTUCKY

Adington, E. L., Rocky Hill Sta.
Baxter, W. E., Frankfort.
Blackford, C. M., Hickman.
Cassady, R. B., LaGrange.
Cornelius, Preston, Berea.
Craddock, J. W., Bonville.
Donan, Jr., D. C., Horse Cave.
Edwards, C. L., Sebree.
Fitzpatrick, Joseph, Bosworth.
Gambill, Jr., J. J., Blaine.
Gardner, W. H., Elizabethtown.
Hale, J. G., Harlin Springs.
Hester, J. H., Munfordville.
Hoffman, C. G., Louisville.
House, J. B., Scottsville.
House, T. B., Hopkinsville.
Irwin, W. E., Owensboro.
Jones, O. G., Smith Mills.
Keys, B. B., Murray.
Koehler, H. H., Louisville.
Land, J. A., Locust Branch.
London, Finis, South Union.
May, E. K., Allen.
Moore, C. H., Canmer.
Robertson, G. A., Louisville.
Simpson, H. B., Breeding.
Simpson, Sidney, Ashbrook.
Smith, Henry, Calhoun.
Stallard, J. M., Sparta.
Taylor, S. D., Beaver Dam.
Walton, J. P., Central City.

LOUISIANA

Allums, C. C., Ringgold.
Bailey, C. A., Athens.
Cole, C. G., New Orleans.
Gandy, E. R., Westlake.
Johnson, J. R., Amite.
Jones, H. P., New Orleans.
Kelly, J. L., Rochelle.
Maestri, Angelo, New Orleans.
Mann, Gustav, New Orleans.
Prejean, L. A., Scott.
Robichaux, E. C., New Orleans.
Spurrell, H. C. H., New Orleans.
Stromer, George, Broussard.

MAINE

Card, A. M., Head Tide.
Sawyer, A. D., Fort Fairfield.
Small, A. E., Winter Harbor.

MARYLAND

Billingslea, J. S., Armiger.
Buell, M. C., Cumberland.
Burrow, W. T., Baltimore.
Coe, J. A., T. B.
Conroy, T. L., Frostburg.
Deetjan, Christian, Baltimore.
Fisher, W. A., Jr., Baltimore.
Hammerbaeher, G. M., Baltimore.
Hodges, W. R., Cumberland.
Miller, Irving, Baltimore.
Norment, R. B., Baltimore.
Perrie, A. H., McKendree.
Schultze, Anna D., Baltimore.
Schwartz, W. F., Baltimore.
Stauffer, J. H., Baltimore.
Wilson, R. T., Baltimore.
Wyse, W. P. E., Pikesville.

MASSACHUSETTS

Allen, S. W., Boston.
Baker, F. H., Worcester.
Barker, W. W., Boston.
Bloog, G. W., Fall River.
Burgess, C. J., Lawrence.
Clark, A. U. F., Westboro.
Curry, E. F., Sagamore.
Davis, M. F., Boston.

Ellis, A. H., North Dane.
Evans, M. H. A., Dorchester.
Fernald, G. G., Concord Junction.
Griswold, M. L., Uxbridge.
Heald, C. G., East Pepperell.
Hoban, J. J., N. Chelmsford.
MacLeod, N. M., Beverly.
McClusky, H. L., Worcester.
Myers, Elizabeth Y., Springfield.
Myers, Edmund, Boston.
Shattuck, G. C., Boston.
Wirth, E. P., Edgartown.

MICHIGAN

Barley, J. H., Almont.
Fox, T. G., Raber.
Galbraith, D. A., Lansing.
German, F. D., Franklin.
Heitger, J. D., Kalamazoo.
Landon, H. W., E. Lansing.
Lehman, C. G., Palmyra.
Pinkerton, W. J., Bessemer.
Southwick, C. R. W., Weidman.
Southworth, B. H., Schoolcraft.
Turner, R. J., Anchorville.
Waller, W. F., Frontier.

MINNESOTA

Beise, R. A., Brainerd.
Boeckmann, Ergil, St. Paul.
Cannon, Harry, St. Paul.
Cosman, E. O., Minneapolis.
Eshelby, E. C., St. Paul.
Holloran, F. J., St. Paul.
McGaughey, H. F., Winona.
Moir, W. W., McKinley.
Scherer, C. A., Ruthton.
Whipple, C. D., Minneapolis.

MISSISSIPPI

Howard, E. F., Vicksburg.
Patterson, C. W., Rosedale.

MISSOURI

Black, W. D., St. Louis.
Fienup, T. F., St. Louis.
Gettys, Henry, St. Louis.
Lyon, H. N., St. Louis.
McNay, A. L., Pacific.
Riesmeyer, L. T., St. Louis.
Vitt, R. S., St. Louis.

NEBRASKA

Deemer, G. W., Chadron.
Meredith, G. W., Ashland.
Wekesser, H. P., Lincoln.

NEVADA

Wheeler, E. A., Goldfield.

NEW JERSEY

Banister, R. L., Newark.
Bidwell, H. G., Jersey City.
Britton, C. P., Trenton.
Dieffenbach, R. H., Newark.
Douglas, James, Morristown.
Frohwein, Ida L., Haverstick.
Elizabeth.
Kirk, G. E., Camden.
Koppel, Joseph, Jersey City.
Larkey, C. J., Bayonne.
Lippincott, Jesse D., Newark.
MacMurrrough, F. K., Jersey City.
Mayer, F. W., Jersey City.
McCroskery, J. H., Weehawken.
North, James, Atlantic City.
Robinson, M. N., Newark.
Slack, C. M., New Brunswick.
Snydam, J. L., Jamesburg.

NEW MEXICO

Phillips, W. W., Roswell.

NEW YORK

Bandler, C. G., New York City.
Bird, J. T., New York City.
Bonetecow, R. B., Troy.
Burns, G. C. H., Central Islip.
Cary, W. H., Brooklyn.
Chapin, H. D., New York City.
Combes, A. C., Elmhurst.
Crumb, J. M., South Otselic.
Daniels, F. H., New York City.
Dietrich, A. E., Bay Shore.
Doescher, T. F., Albany.
Eising, E. H., New York City.
Fagan, P. J., New York City.
Fischer, R. M., Wanakena.
Folger, Rupert, Whitestone.
Gray, H. B., College Point.
Halley, Erving, Willard.
Holdridge, W. H., New York City.
Jaques, A. D., Lynbrook.
Kurtz, H. T., Highland Falls.
Meagher, J. F. W., Brooklyn.
Meyer, D. W., Brooklyn.
Miles, C. C., Greenport.
Otis, J. C., Poughkeepsie.
Pierson, Helena B., Albion.
Pratt, W. H. B., Brooklyn.
Reynolds, W. A., Albany.
Rodgers, W. A., New York City.
Schumer, Henry, New York City.
Schweikart, F. J., Elmhurst.
Stoughton, H. W., Chateaugay.
Stuart, S. H., Hornell.

Sulzman, F. M., Troy.
Thomson, W. R., New York City.
Tieck, G. J. E., Brooklyn.
Walter, Josephine, New York City.
Welch, J. E., New York City.
Wendover, W. W., Warwick.
Whitmore, J. E., Buffalo.
Wolff, H. T., Yonkers.
Wood, W. C., Brooklyn.
Woodruff, W. S., Mt. Vernon.
Zwisohn, L. W., New York City.

NORTH DAKOTA

Busch, U. F., Fargo.
Eltnm, F. J., Vela.
Rogers, G. F., Fargo.
Stone, E. C., Balfour.

OHIO

Brett, J. H., Cleveland.
Ellis, L. A., Van Wert.
Fisher, E. A., Yorkshire.
Hough, C. A., Lebanon.
Lanzer, A. H., Cleveland.
McGay, N. P., Shiloh.
O'Hara, P. H., Lewisburg.
Rike, W. H., Versailles.
Yaggi, H. K., Salem.

OKLAHOMA

Allen, J. R., Caddo.
Ruble, G. W., Wagoner.

OREGON

Dix, G. E., Marshfield.
Parker, H. G., Portland.

PENNSYLVANIA

Abbott, F. C., Philadelphia.
Ahlers, G. L., Allegheny.
Bausch, F. R., Allentown.
Beck, C. E., Portland.
Bliss, G. D., Altoona.
Bowles, L. C., Grampian.
Burhenn, C. G., Jeannette.
Butler, T. J., S. Bethlehem.
Cawley, J. I., Springtown.
Christine, G. M., Philadelphia.
Clark, O. C., Worthington.
Cleaver, P. R., Johnstown.
Darlington, E. E., Harrisburg.
Darlington, H. H., Concordville.
Dechan, S. J., Philadelphia.
Everett, S. A., Freeland.
Fisher, Lewis, Philadelphia.
Fitzpatrick, I. L. J., Philadelphia.
Franklin, M. B., Philadelphia.
Gordon, J. K., Chambersburg.
Grube, J. M., Punxsutawney.
Guthrie, K. S., Philadelphia.
Hayes, T. R., Bellefonte.
Heed, C. R., Philadelphia.
Henderson, W. L., E. McKeesport.
Henry, T. J., Apollo.
Hill, G. A., Philadelphia.
Hower, H. V., Millville.
Ingraham, E. R., Masontown.
Jenkins, J. C., Lititz.
Jones, C. J., Philadelphia.
Johansson, A. H., Warren.
Kennedy, G. W., Sharon.
Kevin, R. O., Philadelphia.
Landry, W. A., Chester.
Large, C. P., Meyersdale.
Lehr, M. D., Lykens.
Leonard, C. F., Philadelphia.
McCuaig, J. E., Erie.
McCune, C. E., Buena Vista.
McKeldin, R. A., Philadelphia.
Moffitt, G. R., Harrisburg.
Murfitt, J. G., Philadelphia.
Nolan, T. F., Reynoldsville.
Ord, E. Y., W. Elizabeth.
Park, W. E., New Milford.
Patton, J. M., Vandergrift.
Quinn, L. W., DuBois.
Raiman, W. A., Swarthmore.
Reichard, N. W., Bangor.
Rohrbach, H. O., Freemansburg.
Ross, J. H., Philadelphia.
Rouse, W. J., Williamsport.
Ruch, C. F., Summit Hill.
Rupert, Mary P., Philadelphia.
Russell, H. B., Sheffield.
Schlemm, H. E., Reading.
Schneideman, Florence M., Philadelphia.
Seifert, F. R., Philadelphia.
Senn, John, Williamsport.
Shirey, C. A., Manor.
Shull, J. H., Stroudsburg.
Smith, L. C., Lawrenceville.
Stauffer, H. J., Jeannette.
Strickler, A. H., Waynesboro.
Thorp, J. S., Straight.
Troxell, W. C., Macungie.
Volgt, A. C., Hawley.
Wilson, O. H., Philadelphia.
Wagner, V. C., W. Pittsburg.
Woods, A. H., Bryn Mawr.
Whitall, J. D., Philadelphia.
Young, J. H., Lansford.
Zerbe, J. L., Polk.

RHODE ISLAND

Barrows, A. A., Providence.
Smith, S. N., Jr., Providence.

SOUTH CAROLINA
Eaddy, A. G., Timmons ville.

SOUTH DAKOTA
Moore, D. V., Yankton.

TENNESSEE
Ayres, J. C., Memphis.
Butler, H. T., Union City.
Harris, W. H., Pikeville.
Horton, J. W., Chattanooga.
Hayes, Jesse T., Oliver Springs.

TEXAS
Jackson, Eugene, Elmo.
Weeks, W. B., Maypearl.
Woolsey, Jefferson, San Antonio.

UTAH
Irvine, A. R., Salt Lake City.
Jorgenson, H. C., Payson.
Rich, W. L., Garland.

VERMONT
Tanner, J. D., Burlington.

VIRGINIA
Eaker, B. N., Norfolk.
Black, A. J., Roanoke.

Howlett, H. H., Walkerton.
Jeffery, Aaron, Newport News.
Nowlin, J. B., Richmond.
Payne, R. J., Fredericksburg.
Rawls, D. S., Suffolk.
Scott, J. W., Gordonsville.
Shipp, J. B., Norfolk.
Simms, T. J., Newport News.

WASHINGTON
Carlsen, E. L., Tacoma.
Nadeau, Fonda, Seattle.
Petit, H. L., Chehalis.

WEST VIRGINIA
Peck, S. P., Hinton.
Stump, J. L., Charleston.

WISCONSIN
Gendron, A. E., River Falls.
Holz, A. P., Seymour.
Morris, E. K., Merrill.
Nutt, C. R., Plymouth.
Oatway, W. H., Lake Mills.
Schnetz, L. N., Racine.
Sharp, E. L., Fox Lake.
Smith, E. A., Milwaukee.

HAWAII TERRITORY
Hodgins, A. G., Honolulu.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

HAINES' TEST FOR GLYCOSURIA

To the Editor:—Please give the formula, advantages, and disadvantages of Haines' reagent for the detection of glycosuria.

Z. Y.

ANSWER.—The formula of Haines' solution is as follows:

	gm. or c.c.	or gr. xxx
Copper sulphate	2	3ss.
Water	15	3ss.
Glycerin	15	3ss.
Liquor potassæ	150	5v

Dissolve the copper sulphate in the water with heat, if necessary cool, and add the liquor potassæ previously mixed with the glycerin. The solution keeps well. For use, heat 4 c.c. to boiling, when, if no change occurs, the reagent is known to be pure. Add to this quantity not more than 10 or 12 drops of urine and boil. If sugar is present in a quantity of clinical significance, a reddish or yellowish precipitate will occur. A whitish precipitate is merely the precipitated phosphates of the urine and has no significance.

The advantages of the reagent are that it keeps well and is sensitive enough to detect sugar in a quantity of urine so small that other reducing substances are not likely to interfere. It has also the advantage of requiring the use of but one solution.

Its disadvantages are the same as those of other copper solutions for detecting glucose. Cupric oxide is reduced by a number of substances normally or abnormally present in urine or artificially added. The chief of these are creatinin, uric acid, glycuronic acid, the pentoses, chloral, chloroform and formaldehyd. The first three are seldom present in sufficient amount to give a reaction when not more than ten drops of the urine are used in the test. Glycuronic acid and the pentoses seldom interfere, but if they are suspected the presence of dextrose should be confirmed by fermentation with yeast. When chloral, chloroform, or formaldehyd has been added as a preservative, that fact is generally known and should be borne in mind by the analyst.

CLEARING A HOUSE OF VERMIN—FUMIGATION BY CYANOGEN METHOD

To the Editor:—Please give in THE JOURNAL (1) the best way of clearing a house of bedbugs; (2) the technic and advantage of fumigating houses by the cyanogen method.

P. G.

ANSWER.—1. Gasoline is the best agent for killing the adult bugs; but due regard must be had to its inflammable and explosive character. It is conveniently applied by means of a wash bottle fitted with a movable tip by which a fine stream of gasoline can be directed into the crevices in which the bugs secrete themselves. The rubber bulb of an atomizer can be attached to the mouthpiece of the wash bottle so that the pressure can be conveniently exerted by the hand. Corrosive sublimate is also recommended, especially for killing the eggs and larvæ, and may be applied by the same apparatus in the strength of an ounce of corrosive sublimate with an ounce of glycerin to the pint of alcohol. This solution and the gasoline can be emulsified by shaking so as to be applied at the same time. Repeated applications may be necessary to secure the desired result. Petro-

leum may be substituted for gasoline and when the amount used must be large would be much safer. Fumigation by sulphur dioxide has been recommended in cases in which it is not possible to make direct applications. This is probably the best method when a whole house is to be treated. Hydrocyanic gas is very fatal to the bugs, but is not to be recommended on account of the extreme danger of poisoning in handling it.

2. By the cyanogen method is meant the evolution of hydrocyanic acid gas. This is best generated by first preparing a diluted sulphuric acid containing 1.5 parts of sulphuric acid mixed with 2.25 parts of water, taking care to add the acid to the water in a non-metal vessel capable of withstanding the heat which will be caused. One part of the potassium cyanid should then be tied in a bag so arranged that it can be lowered into the acid by a cord passing out of the room. The operator should retire and then lower the bag into the acid. For plant fumigation about 1 ounce or 25 gm. of potassium cyanid per 100 cubic feet should be used. For room disinfection a greater amount is necessary. This gas is a fatal poison for all forms of animal life. Its extremely poisonous character makes great care necessary in handling it and almost forbids its employment about the household. It is of especial value in ridding greenhouses, granaries, etc., of insects, but is less useful as a disinfectant against bacteria. It has few advantages over sulphur dioxide in ridding a place of vermin, and its germicidal power is inferior to that of formaldehyd.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending April 3, 1909.

Farr, C. W., capt., granted sick leave of absence to June 1, 1909.
Hopwood, L. L., 1st lieut., granted leave of absence for 1 month.
Brooks, W. H., capt., granted sick leave of absence for 1 month.
Truby, A. E., major, granted leave of absence for 2 months, about June 15, 1909.

Bispham, W. N., capt., granted leave of absence for 1 month.
Marrow, C. E., major, ordered to duty at the Presidio, San Francisco, at the expiration of the leave of absence heretofore granted him.

Miller, E. W., capt., ordered to duty at Fort Williams, Me., on the expiration of the leave of absence heretofore granted him.

Wilson, W. H., major, granted leave of absence for 1 month, 20 days.

McAndrew, P. H., capt., relieved from duty at Fort Slocum, N. Y., and ordered to Fort Mackenzie, Wyo., for duty.

Brooks, W. H., capt., relieved from duty at Fort Mackenzie, Wyo., and ordered to Presidio, San Francisco, Cal., for duty.

Wilson, W. H., major, relieved from duty at Fort Hamilton, N. Y.; will sail from San Francisco, June 5, 1909, for Philippine service.

Wilson, J. S., major, granted leave of absence for four months, when relieved from duty in the Philippines Division.

Mason, C. E., major, relieved from duty in the office of the Surgeon-General of the Army, to take effect May 1, 1909, and ordered to duty with the Isthmian Canal Commission.

Duncan, L. C., capt., relieved from duty at Fort Missonia, Mont., and ordered to sail June 5, 1909, from San Francisco for Philippine service.

Trotter-Tyler, Geo., M. R. C., ordered from Fort Adams, R. I., to Fort Howard, Md., for temporary duty.

Leamon, Robt., M. R. C., ordered from Fort Howard, Md., to Fort Jay, N. Y., for temporary duty.

Campbell, G. F., M. R. C., relieved from duty at the Pacific Branch, U. S. Military Prison, Alcatraz Island, Cal., and ordered to Fort Wingate, N. M., for duty.

Anderson, E. A., M. R. C., when relieved at Fort Wingate, N. M., ordered to Alcatraz Island, Cal., for duty at the Pacific Branch, U. S. Military Prison.

Kierulff, H. N., M. R. C., relieved from duty at Fort Apache, Ariz., and ordered to Fort Missoula, Mont., for duty.

Waddell, R. W., dent. surg., granted leave of absence for 1 month, 18 days.

Carpenter, Alden, dent. surg., ordered to Fort Slocum, N. Y., for temporary duty.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ending April 3, 1909:

Connor, W. H., appointed acting asst.-surgeon from March 24, 1909.

Robbins, I. W., acting asst.-surgeon, ordered to duty at the Naval Hospital, Mare Island, Cal.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended March 31, 1909.

Young, G. B., surgeon, relieved as chairman of board of medical officers convened under bureau order of March 23, 1909.

Cofer, L. E., P. A. surgeon, relieved from temporary duty at Hygienic Laboratory and directed to proceed to Reedy Island Quarantine Station and assume temporary command.

Anderson, John F., P. A. surgeon, detailed to represent the service at the annual meeting of the American Association of Pathologists and Bacteriologists, to be held in Boston, April 8, 1909.

Bogges, J. S., P. A. surgeon, granted 1 day's leave of absence, March 28, 1909.

Creel, R. H., P. A. surgeon, detailed as chairman of board of medical officers convened under bureau order of March 23, 1909.

Roberts, Norman, P. A. surgeon, granted 4 days' leave of absence from March 28, 1909.

Prebble, Paul, asst.-surgeon, on arrival of Asst.-Surgeon F. A. Ashford, directed to proceed to Baltimore and report to the medical officer in command for duty and assignment to quarters.

Kimmet, William A., acting asst.-surgeon, detailed as recorder of board of medical officers convened under bureau order of March 23, 1909.

Robertson, Herman, acting asst.-surgeon, granted 23 days' extension of leave of absence from Feb. 8, 1909, on account of sickness.

Stewart, W. J. S., acting asst.-surgeon, granted 7 days' leave of absence from March 26, 1909.

BOARD CONVENED

Board of medical officers convened to meet at the Marine Hospital, Port Townsend, Wash., March 26, 1909, for the purpose of conducting a physical examination of a captain of the United States Revenue-Cutter Service. Detail for the board: Surgeon W. G. Stimpson, chairman; P. A. Surgeon J. H. Oakley, recorder.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 2, 1909:

SMALLPOX—UNITED STATES

Arkansas: Allbrook, Jan. 1-March 25, 40 cases.

California: Los Angeles, Feb. 27-March 6, 2 cases; Oakland, Feb. 28-March 7, 1 case; Sacramento, Jan. 1-31, 22 cases; Feb. 1-28, 7 cases.

Georgia: Macon, March 14-21, 1 case.

Illinois: Chicago, March 13-20, 2 cases; Danville, March 14-21, 1 case; Galesburg, March 6-13, 1 case; Peoria, Feb. 13-20, 24 cases.

Indiana: LaFayette, March 8-22, 5 cases.

Kansas: Kansas City, March 6-20, 12 cases; Topeka, March 13-20, 8 cases; Wichita, March 6-20, 5 cases.

Kentucky: Fulton, Feb. 1-22, 27 cases; Lexington, March 6-20, 2 cases; Newport, Jan. 20-March 20, 34 cases; Paducah, March 6-13, 2 cases.

Louisiana: New Orleans, March 6-20, 3 cases, imported; Winnfield and vicinity, Jan. 1-March 24, 33 cases.

Massachusetts: Boston, March 13-20, 2 cases; Lawrence, March 6-13, 1 case.

Minnesota: Minneapolis, March 6-13, 3 cases; St. Paul, Jan. 1-31, 37 cases.

Missouri: Kansas City, March 6-20, 4 cases; Rich Hill, Dec. 5-March 20, 5 cases.

Montana: Butte, March 9-16, 1 case.

Nebraska: Lincoln, Feb. 1-21, 8 cases.

New Jersey: New Brunswick, March 6-20, 2 cases; Perth Amboy, March 24, 18 cases; Plainfield, March 6-20, 3 cases.

New York: Buffalo, March 13-20, 1 case.

Ohio: Cincinnati, March 5-19, 19 cases; Columbus, Dec. 26, March 2, 14 cases.

South Carolina: Winnsboro, Feb. 21-March 21, 5 cases.

Tennessee: Knoxville, March 6-20, 5 cases; Murfreesboro, March 15-31, 1 case; Nashville, March 13-20, 4 cases.

Texas: El Paso, March 9-16, 3 cases; Fort Worth, Feb. 1-28, 3 cases; Galveston, March 5-12, 1 case; Houston, Feb. 28-March 13, 2 cases; Laredo, March 19, 1 case; San Antonio, March 13-20, 2 cases.

Virginia: Richmond, March 13-20, 1 case.

Washington: Spokane, March 6-13, 1 case; Tacoma, Jan. 24-Feb. 7, 11 cases; Mar. 7-14, 4 cases.

Wisconsin: Appleton, March 13-20, 1 case; La Crosse, March 6-20, 3 cases; Milwaukee, Feb. 28-March 20, 24 cases.

SMALLPOX—FOREIGN

Algeria: Algiers, Feb. 1-28, 20 deaths.

British Honduras: Stann Creek, March 4-11, 6 cases, 1 death.

Canada: Halifax, March 6-13, 2 cases; Yarmouth, March 21-27, 1 case.

China: Tientsin, Jan. 16-23, 4 cases, 1 death.

Egypt: Alexandria, Jan. 14-28, 6 cases; Cairo, Feb. 6-8, 68 cases, 33 deaths.

France: Paris, Feb. 27-March 6, 5 cases.

Great Britain: Bristol, Feb. 27-March 6, 5 cases.

Greece: Athens, Feb. 27-March 6, 1 death.

India: Bombay, Feb. 16-23, 24 deaths; Calcutta, Feb. 6-13, 171 cases; Madras, Feb. 13-19, 1 death; Rangoon, Feb. 6-13, 6 deaths.

Italy: General, Feb. 21-March 7, 14 cases; Florence, March 3-10, 2 cases; Naples, Feb. 22-March 6, 15 cases.

Japan: Kobe, Feb. 13-20, 4 cases, 1 death.

Java: Batavia, Feb. 6-13, 3 cases.

Portugal: Lisbon, March 6-13, 6 cases.

Russia: Moscow, Feb. 20-27, 32 cases, 5 deaths; Odessa, Feb. 27-March 6, 6 cases; St. Petersburg, Feb. 13-20, 7 cases, 1 death.

Siberia: Vladivostok, Feb. 4-14, 1 case.

Spain: Valencia, Feb. 19-26, 5 cases.

Turkey: Smyrna, Jan. 29-Feb. 26, 5 deaths.

YELLOW FEVER

Barbadoes: March 14-20, 2 cases.

Mexico: Mexcanu, vicinity, March 13-20, 2 cases, 1 death.

CHOLERA

India: Bombay, Feb. 16-23, 5 deaths; Calcutta, Feb. 6-13, 17 deaths; Rangoon, 7 deaths.

Russia: Charkov, March 10, 4 cases; Jaroslav, to March 7, 59 cases, 26 deaths; Romano-Borissglabsk, March 13, present; St. Petersburg, March 6-11, 43 cases, 15 deaths.

PLAGUE

Azores: Fayal, March 16, present; Terceira, Feb. 1-28, 15 cases, 5 deaths.

Chile: Iquique, Feb. 16, 14 cases, in lazaretto.

India: Bombay, Feb. 10-23, 94 deaths; Calcutta, Feb. 6-13, 12 deaths; Rangoon, 14 deaths.

Peru: General, Feb. 13-20, 80 cases, 40 deaths; Callao, 7 cases, 3 deaths; Lima, 5 cases, 3 deaths.

Marriages

A. O. WILLIAMS, M.D., to Miss Josie Martin, both of Providence, Ky., March 18.

SETH A. LIGHT, M.D., Lebanon, Pa., to Miss Mary Royer of Prescott, Pa., March 25.

J. B. SAMPSELL, M.D., Dayton, Ohio, to Mrs. Ethel Grubbs, of Columbus, Ohio, March 16.

WALTER C. WOODWARD, M.D., Seattle, Wash., to Miss Carrie Draper of Boston, March 25.

JOHN D. BUTZNER, M.D., Scranton, Pa., to Miss Elizabeth Robison, at Epsy, Pa., March 25.

Deaths

Phineas Sanborn Conner, M.D. Jefferson Medical College, Philadelphia, 1861; who served as assistant surgeon in the Army during the Civil War and until August, 1866, and was brevetted captain and major for "faithful and meritorious service"; a member of the American Medical Association; once president of the American Surgical Association, American Academy of Medicine, Ohio State Medical Society, and Cincinnati Academy of Medicine; during 1866 and 1867 professor of surgery in the Cincinnati College of Medicine and Surgery; from 1867 to 1869 professor of chemistry in the Medical College of Ohio; from 1869 to 1876, professor of surgical anatomy; later professor of clinical surgery and since 1907 emeritus professor of surgery and dean in the same institution; professor of surgery in Dartmouth Medical School, Hanover, N. H., for many years; surgeon to the Cincinnati and Good Samaritan Hospitals; a prolific writer on surgical topics; and a member of the presidential commission to investigate the question of foods supplied to soldiers in the Spanish-American War; died suddenly from cerebral hemorrhage at his home in Cincinnati, March 26, aged 69. Dr. Conner's last public appearance in Cincinnati was on March 20, when he was the first speaker at the memorial meeting of the Cincinnati Academy of Medicine for the late Dr. Thaddeus A. Reamy. A memorial meeting was held for Dr. Conner at the University of Cincinnati, April 1.

Robert Reyburn, M.D. Philadelphia College of Medicine and Surgery, 1856; a member of the American Medical Association; dean and professor of hygiene in the Medical Department of Howard University, Washington, D. C.; consulting surgeon to Providence Hospital; vice-president of the Woman's Clinic; and president of the Medical Society; a surgeon in the U. S. Army from 1862 to 1867 and mustered out as brevet-lieutenant colonel; chief medical officer of the Freedmen's Bureau in 1871 and 1872; surgeon in charge of the Freedmen's Hospital from 1867 to 1875; who attended both President Lincoln and President Garfield in their last illnesses; died at his home in Washington, March 25, from kidney disease of long standing, aged 75.

Joseph Palmer Fessenden, M.D. New York Medical College, New York City, 1854; a member of the Massachusetts Medical Society; for 11 years postmaster, superintendent of schools, and a member of the board of aldermen and common council of Lewiston, Maine; for 35 years a member of the medical staff of Salem Hospital; and a member of the local board of United States Pension Examining Surgeons; died at his home in Salem, March 26, from pneumonia, aged 77.

Thomas J. Reed, M.D. Jefferson Medical College, Philadelphia, 1860; acting assistant surgeon, U. S. Navy, from 1860 to 1864; and then for a year assistant surgeon in the U. S. Army; a member of the Ohio State Medical Association and formerly president of the Northeastern Ohio Medical Association; died at his home in Massillon, from cerebral hemorrhage, March 27, aged 70.

Levi Farrow, M.D. College of Physicians and Surgeons, New York City, 1865; a member of the Medical Society of New Jersey; for 25 years secretary and once president of the Morris County Medical Society; and formerly president of the Tri-County Medical Society of Morris, Sussex and Warren counties; died March 21, from nephritis, at his home in Hackensack, N. J., aged 64.

Harry Butler, M.D. University of Pennsylvania, Philadelphia, 1895; a member of the American Medical Association;

surgeon to the nose and throat department of the Eastern Maine General Hospital, Bangor; eye, ear, nose and throat surgeon to the Children's Home; special United States Pension Examiner; died at his home in Bangor, March 23, from nephritis, aged 40.

John Patterson Wilson, M.D. College of Physicians and Surgeons, New York City, 1851; surgeon of General Custer's Brigade during the Civil War; health officer of Pontiac Mich., and a member of the school board for fifteen years; and once resident medical trustee of the Eastern Michigan Asylum; died at his home in Pontiac, March 26, aged 80.

Frank Baylor Hogg, M.D. University of Texas, Galveston, 1896; of Houston, Texas; a member of the State Medical Association of Texas; assistant surgeon of the First Texas Infantry, U. S. V., with service in Cuba during the Spanish-American War; died at the Baptist Sanitarium, Houston, March 21, from pneumonia, aged 37.

Ludwig M. Michaelis, M.D. College of Physicians and Surgeons, New York City, 1889; a member of the American Medical Association and New York Academy of Medicine; adjunct obstetric surgeon to Sydenham Hospital, New York City; died at his home from pneumonia, March 30, aged 45.

Samuel Reynolds, M.D. Jefferson Medical College, Philadelphia, 1865; of Reynoldsville, Pa.; formerly a member of the Medical Society of the State of Pennsylvania; died at Connellsville, March 24, while on his return home after undergoing operation at Mercy Hospital, Pittsburg, aged 65.

Daniel McLean Forman, M.D. College of Physicians and Surgeons, New York City, 1866; a member of the American Medical Association; surgeon to the Monmouth (N. J.) Memorial Hospital ever since its foundation; died at his home in Freehold, N. J., March 29, from heart disease, aged 64.

Joseph Clinton Hughes, M.D. Medical College of Ohio, Cincinnati, 1877; for several years coroner and health officer of Atchison county, Mo., and a member of the board of pension examining surgeons; of Rockport; died in a hospital in St. Joseph, March 20, aged 57.

John M. Rankin, M.D. Rush Medical College, Chicago, 1863; assistant surgeon of the Eleventh Pennsylvania Volunteer Infantry during the Civil War; a pioneer physician of Richland, Mich.; died at the home of his son in Kalamazoo, from septicemia, March 28, aged 76.

Franklin Pierce I. Clark, M.D. College of Physicians and Surgeons, New York City, 1876; a member of the Connecticut State Medical Society, and once president of the Danbury Medical Society; died at his home from pneumonia, March 24, aged 55.

Reynold Price Baird, M.D. Atlanta (Ga.) College of Physicians and Surgeons, 1902; a medical missionary to Brazil; died suddenly from cerebral hemorrhage on a train of the Southern Railway, between Atlanta and Jesup, Ga., March 10, aged 51.

Frederick P. Dorschug, M.D. Miami Medical College, Cincinnati, 1884; police surgeon of Cincinnati from 1882 to 1896; died at his home in Mount Auburn, Cincinnati, March 25, from locomotor ataxia, after an illness of twelve years, aged 48.

John Newland Starr, M.D. Rush Medical College, Chicago, 1873; a member of the Washington State Medical Association; formerly of Wilbur, Wash.; died suddenly from heart disease, at his home in Toppenish, Wash., in January, aged 69.

Hugh Finlaey Terry, M.D. Tulane University, New Orleans, 1902; while in a state of delirium, said to have been due to drugs or liquor, was shot and instantly killed by his brother at the family home in Dallas, Texas, March 25, aged 31.

Henry A. Hildreth, M.D. Eclectic Medical Institute, Cincinnati, 1873; of Bethlehem, N. H.; a member of the New Hampshire Medical Society; died at the home of his son in New York City, March 25, from diabetes mellitus, aged 58.

Henry K. Macomber, M.D. New York University, New York City, 1867; a veteran of the Civil War, and for more than 30 years a resident of Pasadena, Cal.; died at his home in that city, March 23, from acute gastritis, aged 65.

Asa S. Linthicum, M.D. University of Maryland, Baltimore, 1852; formerly a member of the board of Commissioners of Anne Arundel county; died at his home in Jessups, Md., March 28, from cerebral hemorrhage, aged 78.

Gustav Hessert, M.D. University of Würzburg, Germany, 1858; for many years a member of the staff of the Cook

County and German hospitals; died at his home in Chicago, April 4, from cerebral hemorrhage, aged 73.

James O. Carter, M.D. Starling Medical College, Columbus, Ohio, 1860; formerly of Lincoln, Neb.; a surgeon during the Civil War; died in a hospital in Chicago, March 28, from myocarditis and arteriosclerosis, aged 76.

John William Smith, M.D. Cooper Medical College, San Francisco, 1900; of San Francisco; a member of the Medical Society of the State of California; died recently in Yuma, Ariz., from tuberculosis, aged 34.

Frank T. Kunker, M.D. Albany (N. Y.) Medical College, 1883; a member of the Medical Society of the State of New York; died at his home in North Chatham, March 25, from pneumonia, aged 51.

George W. Walls, M.D. Cincinnati College of Medicine and Surgery, 1882; a member of the Indiana State Medical Association; died at his home in Mitchell, from heart disease, March 20, aged 60.

G. W. Williams, M.D. Louisville Medical College, 1875; for many years a practitioner of Eddyville, Ky.; died at the home of his daughter in Paducah, March 22, from cerebral hemorrhage, aged 78.

Medical Economics

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month.—Second Weekly Meeting

FORMS OF INSANITY¹

MANIA AND MELANCHOLIA

MANIA.—Symptoms: Mental symptoms, prodromal period of depression, stage of exaltation, slight or marked, emotional, loquacious, increased flow of ideas, motor agitation, incoherence, acute delirium, occasional hallucinations, expansive delusions, sexual excitation, insomnia. Convalescence may be stage of depression, differentiate circular insanity. Physical symptoms, temperature at times, pulse, absence of fatigue, increased saliva, gastric disorders, urinary changes.

Varieties of Mania: Mild, grave, acute delirious, reasoning, hallucinatory, acute, subacute or chronic, periodic, epileptic, alcoholic, puerperal, etc.

Course of Disease: Recovery, death, secondary dementia, secondary paranoia, chronic mania.

MELANCHOLIA.—Etiology: Age, sex, heredity, physical ill-health, mental stress, pregnancy and lactation, climacteric, alcoholism.

Symptoms: Mental symptoms, varies from dejection to profound depression, may be agitation, diurnal oscillation of depression, precordial distress. Apathetic variety. Acute hallucinatory variety. Slowing of thought processes important symptom. Delusions of persecution, having sinned, poverty. Motor symptoms: motor inhibition (apathetic variety) or agitation (hallucinatory variety), "catatonic rigidity." Suicidal tendencies frequent. Self-mutilation. Physical symptoms: pulse, respiration, sleep, gastrointestinal disorders.

Varieties: Acute, subacute and chronic; melancholia passiva, m. attonita, m. agitata; acute hallucinatory, hypochondriacal, catatonic, periodical, etc.; senile, puerperal, etc. Course: Slow progress, gradual recovery, months or years. Terminates in recovery (90 per cent.), recovery with defect, death, secondary dementia, chronic melancholia, secondary paranoia.

CIRCULAR INSANITY

SYNONYMS.—Alternating insanity; insanity of double form; insanity of double phase; cyclic psychosis.

1. Church and Peterson: Nervous and Mental Diseases.

ETIOLOGY.—Heredity, trauma to head, alcoholism, hysteria, epilepsy. Age, sex.

SYMPTOMS.—Melancholic period, degrees and varieties of depression, interval. Maniacal period, variations. Course and terminations.

DIAGNOSIS.—Differentiate from mania or melancholia with reactive phase.

MANIC-DEPRESSIVE INSANITY (Kraepelin)

The classification of the psychoses, mania, melancholia and circular insanity, according to Kraepelin, is as follows:

1. Manic type of manic-depressive insanity. Simple, delusional and confusional.
2. Depressed type of manic-depressive insanity. Simple, delusional and stuporous.
3. Mixed type of manic-depressive insanity. Circular type. Psychomotor excitement with emotional depression. Psychomotor inhibition with emotional exaltation.

Etiology and pathology.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

Alabama, Medical Assn. of State of, Birmingham, April 20-23.
American Therapeutic Society, New Haven, Conn., May 6-8.
Association of American Physicians, Washington, D. C., May 11-12.
Arizona, Medical Association of, Prescott, May 19-20.
Arkansas, Medical Society of, Pine Bluff, May 18-21.
California, Medical Soc. of State of, San Jose, April 20.
Connecticut State Medical Society, Hartford, May 26-27.
District of Columbia, Medical Assn. of, Washington, April 27.
Georgia, Medical Association of, Macon, April 21.
Illinois, State Medical Society, Quincy, May 18-20.
Iowa, State Medical Society, Dubuque, May 19-21.
Kansas, State Medical Society, Emporia, May 5-7.
Louisiana, State Medical Society, New Orleans, May 4-6.
Maryland, Med. and Chir. Faculty of, Baltimore, May 13-15.
Mississippi State Medical Association, Jackson, April 13.
Missouri, State Medical Association, Jefferson City, May 18-20.
Montana, State Medical Association, Missoula, May 12-13.
Nebraska, State Medical Association, Omaha, May 4-6.
New Hampshire, Medical Society, Concord, May 13-14.
North Dakota, State Medical Association, Fargo, May 11-12.
Ohio, State Medical Association, Cincinnati, May 5-7.
South Carolina Medical Association, Summerville, April 21.
Tennessee State Medical Association, Nashville, April 13-15.
Texas State Medical Association, Galveston, May 4-6.

AMERICAN ACADEMY OF MEDICINE

Second Mid-Year Meeting, Held in Chicago, March 25, 1909

(Continued from page 1136)

The Underlying Principles Permitting Advanced Standing in a Medical College

DR. CHARLES MCINTIRE, Easton, Pa.: In the arrangement of studies for the medical course in the great majority of schools considerable time is given to subjects of general science as a foundation to the application of these sciences to medicine. Under either, the first degree is required for admission as in the medical schools of the Johns Hopkins type, or these subjects of general science are omitted from the medical course and required as premedical studies. The claim of medical teachers that general science subjects should be taught from the start with medicine in view by medical men in medical colleges, and not in the broad manner tending to a liberal education, must be recognized. In this connection one should note: 1. All medical teachers do not accept this conclusion; some excellent medical colleges employ science teachers who are not physicians. 2. Other motives than the future welfare of the student may have assisted some in arriving at this opinion. The longer attendance of the student increasing the number of names in the catalogue and incidentally the fees is one of the possibilities. Fairness compels the statement that the same motive might have equal influence with those who desire to retain the student in the literary college. 3. While the elementary study of any science with the single purpose of developing its appli-

education to the art or profession elected by the student may make him more proficient in the applied science so far as it is taught him, it also makes initiative less probable and prevents a just appreciation of new methods or of alleged advances in that science. 4. Is it not true that specialism is running riot in educational processes at the present time, not alone in medicine, but everywhere? Would it not be better for the man and for mankind ten years after the doctorate has been bestowed should he have the broader foundation even at the expense of some finish in the superstructure? We must recognize three classes of students in our colleges: Those who will plan to enter the postgraduate medical school, as Harvard or Johns Hopkins; those who will demand a special course chiefly of those subjects fitting them for entrance on the medical course, and those who may or may not be induced to take the first degree, depending on individual circumstances. Many literary colleges are in the habit of accepting students for their freshmen classes when certified by certain preparatory schools, but do not accept such certificates from other preparatory schools. Again, in many institutions, a student coming from another college will be received into temporary standing on college comity, his final standing being determined after the student shows what is in him. Some plan combining these questions should be devised whereby certain institutions could be privileged to certify their students to the medical college. Should the literary college abuse the privilege, it can be withdrawn. A student admitted on college comity would not be given standing at once as a member of the second year class, although he would be permitted to take the subjects for the second year, or a combination of studies from the first and second year, omitting those that he has already gone over. His work in the laboratories and in the recitation room for a definite period, until the mid-year examinations for example, will give ample opportunity for the faculty to ascertain his ability. They will be able to determine (1) whether it will be possible for him to continue in advanced standing or not, and if the degree of possibility is sufficient to make it desirable for him to do so; and (2) if it be desirable, his conditions, if any. If he be admitted to the second year with conditions, all conditions belonging to the first year must be removed by the end of the year before he can enter on the third year. Of course, any conditions for second year subjects should be governed by the same rules as apply to his classmates who have taken the first year.

As many medical schools are now organized, this plan would permit most of the students pursuing biologic electives in the better equipped colleges to save a year in the two courses without lowering the requirements in any way. At the same time, by the control of the individual, it would eliminate those who are not fitted for this condensation of courses. There are evidences of changes in the medical curriculum which may prevent the working of the plan as detailed. Should these changes result in a medical course of five years, the plan will permit the condensed course to consume but eight years in place of nine. It is worthy of discussion, whether it would not be better for the community to make such a plan possible rather than to begin specializing too early as some of the proposed changes in lengthening the medical course might do. A student who has completed his undergraduate course probably will be a better trained man after three years in medicine in such a school than his fellow students would be with four years of medical study following a less thorough preliminary training. Besides, the possessor of a first degree would not be apt to select the school of this standing, unless he failed to keep up somewhere else, when the very change would arouse suspicion. In view of the distrust that exists in some quarters, it might be politic, should any plan for comity be adopted, to have a confederation of institutions voluntarily placing themselves under the oversight of some organization entirely independent of them and whose character and reputation would insure that the oversight would be real and not perfunctory merely. In the procession and progress of events a new educational system will

be evolved of necessity, and the present haphazard condition, misnamed system, will be replaced by one where the first degree will be bestowed at the time when the required studies for a liberal culture end, and before the proper time for electives begin.

Preliminary and Graduation Requirements for the Medical Course in Terms of Work Done

DR. EDWARD JACKSON, Denver: In this paper I discuss the practicability and importance of having a recognized standard of the work to be done, apart from the time required by the average student to do the work. Some conception of the purpose and work to be done must be formed in the mind of the educator or legislator, along with some understanding of the capacity of the average student and the time properly to be spent in education before any rational time standard can be carried out. However, the time standard is in general use in colleges, college associations, state laws and the requirements of boards of medical examiners. It has in one direction great elasticity; it permits one teacher to use the time in teaching certain parts of his subject; while another can select quite different parts of the subject on which to instruct his students. But in another direction it is undesirably rigid. As applied to the medical course it may compel the student to pass four years in a medical college, when a part of the subjects studied there could be better studied in some other institution. It compels the student who, by reason of more extended and thorough preliminary study, could complete the medical course in three years, to spend four years in a medical school, part of the time wasted in going over work which he has already been taught, perhaps more thoroughly. It prevents students from taking a combined general academic and medical course which would better fit them for their life-work unless they are willing to devote unnecessary time to it, or take the combined course in an institution that can give both courses. The framing of a standard curriculum in terms of work to be done is quite practical. Something of the sort is done by everyone who writes a text-book, or lays out a course of instruction for students, or examines students, without any definite idea of what they should know after having conformed to a given time requirement. Such a standard could be given all necessary flexibility by provision for electives, and also variations at the judgment of the instructor. It could be revised by a representative body as frequently as might seem desirable. The discussion as to what it should include would have great value in bringing about a better general understanding of what the preliminary training and professional education of the physician ought to be; would promote professional unity, and furnish a rational basis for the plans of educators.

Discussion on Papers of Drs. McIntire and Jackson

PROF. ROBERT N. BLAKE, South Bethlehem, Pa.: Speaking entirely from the point of view of one connected with a college that is detached from a medical school and without any affiliation with it, Dr. Jackson's paper is suggestive. It shows the spirit of unrest which is at work in medical schools as well as in literary and college circles. The subject under discussion is really the complete training of the physician. The physician occupies a unique position among men. He comes into closer touch with the people than any other professional man. In Germany, the work of the physician and his services are rapidly taking the place of the work of the minister or professor and his services, in so far that one is declining and the other rising. This conception of the value of the work of the physician has been re-emphasized recently in our own country in a report by President Pritchett of the Carnegie foundation, under the heading, "The Profession of Medicine versus the Business of Medicine." The physician, above all men, should be adequately trained, not only in those sciences which deal with health and disease, but in such a way as to make him a broader, a more cultured, sympathetic, humane man, and the question of whether his education shall cover a year or two more is one of secondary importance.

PROF. MELVINE A. BRANNON, University of North Dakota: There has been great improvement in the actual requirements, but there is need of continued progress, and this conference is one of the agencies through which the needed progress should be secured. Manifestly, the time element is not a satisfactory standard alone for measuring work. This is recognized in manufacturing and business. Piecework of a certain quality is usually demanded as a companion of time standards. If this is practical in material matters, it would seem that a test of efficiency should accompany the time standard in the progress of activities that are far less tangible, such as training the mind and developing character. In order to secure proper standards for training physicians of the highest possible efficiency, it is necessary to recognize and to deal with certain obstacles which oppose or seriously hinder the desired changes. In the first place, we have no central, unifying agency. The various state boards of medical examiners have approached such an authority in so far as they have become reciprocal, but reciprocity embraces comparatively few states at present. The American Medical Association has done much in the movement of advancing and unifying the educational requirements of medical colleges. Notwithstanding all this, a wide variation in content of the work is offered in the preliminary and graduation requirements of medical colleges. A serious difficulty in the way of standardizing and securing actual requirements both in the preliminary and professional work of medical schools is the competition for students. Undoubtedly, the proprietary medical schools have been the great offenders in this regard because their continuance depended on the fees received from students. However, I do not believe that all state schools are free from this unhealthy competition for student attendance. To quote Dr. Pritchett: "Medical education in this country is in a low state, and this is due in a large measure to the rivalries of the various medical sects, each clamoring for a separate medical school and for special privileges in each state. New York has solved this question by refusing to recognize any sect standard. Just as soon as the same educational standard is required of all medical schools, it becomes a matter of small moment whether they call themselves allopaths, homeopaths, osteopaths, or adopt some other name from medical sectarianism. The Council on Medical Education of the American Medical Association has most wisely taken the position, that so long as a medical college will hold high standards, the Council will recognize it without regard to the particular name it chooses to take. And I venture to repeat the statement that true college standards do not mean necessarily the possible academic requirements as printed in the catalogue. They mean reasonable standards, honestly lived up to."

There is no question but that other elements than time should enter into the standardizing of preliminary and professional work in medicine. The difficulties of having no central authority, no general coordinating agent, excessive competition for students, and misleading outlines of courses in college catalogues, together with the distractions of athletics and social life—the public are only partially informed in respect to the pressing needs of medical training, and the relative merit of medical schools—all these are real and formidable obstacles to the desired progress. It is pertinent to observe that each of these obstacles is also a primary reason for standardization in the terms of work as well as time.

DR. WARREN B. HILL, Milwaukee, Wis.: The paper of Dr. Jackson is particularly timely because of the fact that in all the work we have been doing in the last decade toward elevating the standard of education in medicine and in bringing order out of chaos, we have failed to establish a criterion of accomplishment, and have emphasized rather the length of time that was necessary for the average student to reach this point, and the general equipment that was necessary instead of looking forward to and establishing a standard to which all people must conform. And we would not have come to this question at all if it were not for the fact that there has been a conflict of interest between the university medical

school and the university school of letters and science and the smaller colleges, in which the smaller colleges, the independent colleges, are demanding credit not only for scholastic training, but for time as well. Dr. McIntire has called attention to the fact that the student is entitled to credit for what he has done in the college of arts, and yet we are confronted by the fact that we have a state board which says, "Thou shalt not or thou shalt," and I think it would be well for us to consider the state board as a unifying agent, because, after all our deliberations, we must come back to the fact that the state board is the unifying agent in this matter. But let us require of the state boards that they give better examinations. In examining senior students in medical colleges, we require two weeks, yet state medical examining boards do it in two days without having any knowledge of the students beforehand. Let us require that they take sufficient time to examine the product, and that they shall examine the students in a practical manner.

DR. H. C. TODD, Epworth University, Oklahoma City: I do not believe that the entrance requirements to a medical school should be based on graduation from any school. I believe they should be based on the amount of work done. We are thrown on the old time-honored system of examination when it comes to the question of preliminary requirements of students for entrance to medical schools, and if we could decide on some method of examination we would solve a great deal of the difficulty that we are now meeting.

DR. ARTHUR DEAN BEVAN, Chicago: The discussions to-day show one thing very clearly, namely, that the university, in order to have a complete and well-rounded course in every sense, needs a well-equipped medical department; and I think every medical school, on the other hand, needs to become a part of a complete, well-rounded university. The solution of this entire question of whether we are to have a six, a seven, or an eight-year course, seems to depend on the fact that eventually every medical school that will do good work and survive will become in this country, as in Germany, the medical department of some strong university.

Medicolegal

For What Physicians Called as Witnesses May and May Not Charge

The Kansas City Court of Appeals says, on the second appeal of *Burnett vs. Freeman*, that it held on the first appeal "that a witness called to testify as an expert, whether as a physician, or in any other branch of knowledge, may be compelled to state his opinion, on hypothetical or other questions involving his professional knowledge, without compensation other than the witness fee taxed to the ordinary witness." And, further, the court held that public policy forbade him from increasing his fees for such services by contract with the party who called him. But the court said that a professional man, summoned to testify as an expert, can not be required to specially prepare himself for that particular case, and may make such preparatory service the subject of a valid contract for compensation.

On the new trial awarded, the plaintiff, a practicing physician, endeavored to bring his cause of action within the scope of this rule. His testimony was: "I saw I was getting into something that I had not anticipated, where I would have to give extra services, and I made the statement that if I had to go to court on this matter that I would charge him \$25 if I were put on the stand and not kept over an hour. If I were detained longer than that, I would charge \$50 for my services." This, however, was nothing but an agreement for extra compensation for the service of attending court as a witness, and as such was void under the principles and rules applied in the first decision.

It was permissible for the plaintiff to contract with his patient that he should be paid for his services in making ex-

aminations of her injuries and in holding professional consultations with her and her husband, but it was not permissible for them to make the payment of such charges, or their amount, dependent on the contingency of the plaintiff being required to testify in the lawsuits. The plaintiff's duty as a citizen compelled him to appear as a witness, and give testimony without other pay than fees allowed by law, and he should not be permitted to evade that duty by the palpable excuse of a contract for a contingent fee.

Dying Declarations Obtained in Abortion Case as Condition to Rendering Aid

The Court of Criminal Appeals of Texas says, on the appeal of Jackson vs. State, that the Texas statute requires that a dying declaration, to be admissible in evidence, must be freely and voluntarily made. In this case it appeared that the girl on whom it was charged that a criminal abortion had been performed was suffering acutely, giving loud and vociferous exclamations of pain, and expressing the opinion that she was going to die. Under this condition of things, with her mind influenced in this way and by her pain, two physicians informed her that they would not do anything for her unless she told them about how her trouble came about and who performed the operation.

The testimony raised the issue that the dying declaration was not voluntary, but by overpersuasion, or duress, for that the evidence of the two physicians showed that they had declined to treat or relieve the declarant of what she thought was her dying condition, unless she gave the name of the party who had operated on her. This sufficiently presented the question, so as to require the court to submit the issue to the jury as to the condition of her mind at the time, and if they should find that she was under duress or overpersuasion, or not under a sense of impending death, then they should disregard her statement in arriving at a verdict.

In discussing parts of an instruction given to the jury, the court says that if the defendant appealing was guilty of a criminal abortion, there was no excuse for this, nor was there any justification; and certainly from no standpoint could there arise the question of "self-defense."

Defect in Registration Law and a Failure of Physician to Comply Therewith Not Punishable

The Supreme Court of Wisconsin says, in Brown vs. State, that the effect of chapter 469 of the Laws of 1907, now designated as section 1022, subdivisions 1 to 59, inclusive, of the Statutes of Wisconsin, was to create a state bureau of vital statistics, with local registrars, etc. The only provision for registering physicians to be found in the act is subdivision 19, which requires the registering to be done on or before Oct. 1, 1907, and contains no requirement whatever that a physician register thereafter, though by implication it may so permit. By the last section the act did not go into effect until after Oct. 1, 1907. There was therefore not until October 2 any "local registrar" in existence, and a compliance with the only command of the statute with reference to registration was impossible.

It is a most fundamental canon of criminal legislation that a law which takes away a man's property or liberty as a penalty for an offense must so clearly define the acts on which the penalty is denounced that no ordinary person can fail to understand his duty and the departure therefrom which the law attempts to make criminal. One can not be said to willfully violate a statute which is so contradictory or blind that he must guess or conjecture what is his duty thereunder. Under the pre-existing laws the relations of the physicians were with different local officers, largely with the register of deeds; in some cases the city clerks. Must a physician at his peril guess that when the legislature ordered him to file with a certain state officer, and he found that impossible, they meant that he should file with the register of deeds? The solution of such conundrums can not be imposed on individuals at the risk of criminality if they make a mistake. Because this statute made impossible compliance with the words of subdivision 19, and, while registration has been possible and permitted since, there is no word in the

statute requiring it, the court holds that the defendant (Brown) was not shown to have willfully failed or neglected to register in breach of the command of the statute.

Turning to the charge that the defendant willfully neglected to file such a certificate of birth as the statute commanded, the court is convinced that his conduct evinced no such state of mind as the word "willfully" in its legal meaning implies. The voluntary effort to perform his duty by making certificate on the blanks which had been supplied him by the public officer, and the offer to comply with new regulations implied by his request that new blanks therefor be sent him, together with other circumstances, made plain that there was mere inadvertent omission of a required act in the sincere attempt to perform his duty as he understood it.

Wherefore, the court reverses a judgment of conviction in this case for failure to register and to file a certificate of birth, remanding the cause to the trial court with directions to dismiss the complaint.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

March 27

- 1 *Three Hundred Cases Treated with a Culture of Lactic Acid Bacteria. C. E. North, New York.
- 2 Direct Blood Transfusion—Technic and Indications for Use. A. A. Berg, New York.
- 3 *The Roentgen Ray and the Etiology of Cancer. W. H. Dieffenbach, New York.
- 4 Two Unusual Cases of Influenza-Pneumonia. R. Floyd, New York.
- 5 Reduplication of the Tibia. J. B. Bissel, New York.

1. **Lactic Acid Bacteria.**—North reports the results of himself and about forty other physicians who have been trying the effects of the use of lactic acid bacteria in various forms of bacterial disease. This practice is based on the antagonism between lactic acid bacteria and some micro-organisms of the putrefactive and pathogenic species. The organism used was the *Bacillus bulgaricus*, cultivated in a medium of broth containing calcium carbonate. He describes the preparation of the medium and the cultivation of the bacillus. If necessary, the diseased surfaces are first cleansed with warm saline solution, but antiseptics must not be used. A syringe or spray is used, the broth culture being injected in its full strength. The dose varies according to the extent of the inflammation. The conditions in which it has been advantageously used are atrophic rhinitis, acute rhinitis (including coryza), ethmoiditis, disease of the antrum, chronic rhinitis, hay fever, cystitis, and certain surgical and dental conditions accompanied by suppuration. The effects were temporary in tuberculous sinuses, and in cystitis and leucorrhea were not uniform. In gonorrheal ophthalmia the results were good, as also in conjunctivitis, both pneumococcus and diplobacillary. North writes conservatively, but concludes that a few things have been learned by the work that may be more positively stated and seem to warrant a further study of the treatment. These things are that:

1. The bacillus of Massol can be grown abundantly in dextrose bouillon by the addition of lumps of calcium carbonate.
2. The use of these cultures as a wash or spray on inflamed surfaces or cavities often diminishes the discharge on such surfaces or cavities.
3. The use of these cultures often diminishes odor caused by putrefaction.
4. The treatment sometimes reduces swelling, especially in the erectile tissues of the nose.
5. Both acute and chronic inflammation caused by infections sometimes appear to be checked when their seat can be reached by an injection of these cultures.
6. The use of the cultures seems to be accompanied by no special danger and they cause no irritation.

3. **The Roentgen Ray and Cancer.**—Dieffenbach reviews the various theories as to the etiology of cancer and concludes:

Neoplasms are due to interference with normal cell reproduction induced through trauma, pressure, severe inflammations, or constant irritations; these factors act on cell proliferation by producing abnormal cells, which, in turn, if the original irritating status is maintained, again generate cells of their own kind.

If trophic nerve impulses are not interfered with, normal conditions may supervene when the irritation or inflammation subsides. If involvement of the trophic nerve takes place so that efferent and afferent impulses are interfered with or inhibited, riotous development of the new progeny of cells will be invited. If the trophic nerve supplying the part is severed or permanently inhibited, ulceration will supervene.

The above theory places the etiology of cancer formation on a rational basis, and permits us to guard against its increase by prophylactic measures which readily suggest themselves.

Boston Medical and Surgical Journal

March 25

- 6 *Surgery of the Bile Passages with Special Reference to the End Results. J. C. Munro, Boston.
- 7 *The Trend of the Clinician's Concept of Hysteria. T. A. Williams, Washington, D. C.
- 8 The Calcaneofibular Ligament and Its Neighborhood, Based on Dissections. E. A. Tracy, Boston.
- 9 Pseudohermaphroditism. W. L. Harris, Providence, R. I.
- 10 Hand Sterilization, (concluded). C. G. Cumstou, Boston.

6. Surgery of the Bile Passages.—Munro discusses the end results in 198 out of 300 operations and arrives at the following conclusions:

1. An analysis of the cases demonstrates that jaundice is present in a majority of all, even the simple gall-bladder cases, at some time, and that in a large majority of common duct cases there is jaundice.

2. The pancreas is not infrequently pathologic, as determined by examination of the open abdomen.

3. Adhesions are present in a large majority of cases, and may be the direct cause of symptoms rendering all medical treatment more than futile.

4. Pulmonary complications must be reckoned with in prognosis, but they are less frequent than anticipated.

5. Cholecystostomy is normally a more suitable operation than cholecystectomy, unless the gall-bladder is definitely functionless.

6. Recurrence of symptoms may be due to adhesions or a contracted gall-bladder as well as to overlooked stones.

7. Toxic cases are best treated medically until the acute state is passed.

8. Fatal capillary hemorrhage may be controlled to an extent not yet determined by the use of fresh animal serum.

7. Hysteria.—Williams considers that the disappearance of many of the supposed stigmata of hysteria is proof of their artificial nature. For ten years, neither Babinski nor Bernheim has seen a case of hysterical anesthesia except in patients whose sensibility has been previously medically examined. It is possible to create at will sensory stigmata contracture, motor palsy, etc., and doubtless in the past the stigmata were produced by unconscious suggestion. The hysterogenetic zones also can be determined and changed at the suggestion of the operator. Hysteria is called the great simulator, and hysterical patients are often believed to simulate deliberately and consciously, but the so-called hysterical simulation is only a variety of the perversity of imagination, termed mythomania, the main element of which is the love of playing a part and belief in that part; yet all hysteria must not be confounded with mythomania, or *vice versa*. These cases are allied psychologically to the self-accusers and self-mutilators. The fact that symptoms of hysteriform appearance may be engendered by emotional shock or moral commotion is not pathognomonic, for these causes may produce apoplexy in diabetics or subjects of Bright's disease, and tachycardia in Graves' disease or other cardiac susceptibility. Their rapid disappearance is not special, for tabetic gastric crises and hepatic or nephritic colics often stop abruptly. Variability is not a base for definite diagnosis, for syphilis, tuberculosis, gout, etc., are most variable. Neither is absence of organic change, for no such change is apparent in certain types of insanity and in psychasthenia. Suggestibility varies not only from individual to individual, but from time to time in the same individual, especially under fatigue, want of sleep, slight disorders of digestion, alimentary and chemical intoxications, those due to the slighter infections, and the climacteric. The subjective symptoms of the neurasthenic state may be acquired by suggestion, and many cases of so-called neurasthenia are purely imaginary. That the reflexes can not be influenced by suggestion is true, but few neurologists still believe them modifiable by hysteria. As to amnesia, which Janet lays stress on as distinguishing hysterical from psychasthenic crises, it must be remembered that conception comes before memory, and the nature of the perceptions forgotten must be taken into consideration. Incidentally, Sidis has shown that the alleged fallacious sense perceptions of hysterical patients do not depend on faulty

observations, but are derived from a desire to conform to the supposed intention of the observer. All individuals convey thoughts, often quite unconsciously by gestures, facial expressions, tricks of speech, and tones of voice. These pass unnoticed by observers whose minds are taken up with what appeals to the constructive intelligence, but to those incapable of complicated mental synthesis, the intellectual elements appeal less than these minor sources of expression. Suggestibility depends on such a lack of synthetic and critical quality of mind, and the hysterical person, too indolent to make an effort at synthesis and too abulic to inhibit an impression once formed, perceiving the externals only of intercourse and feeling, rather than formulating, acts on the sense of knowledge thus engendered from data not even in the cognizance of others. The fixed ideas of hysterical individuals are often produced thus, and the same applies to amnesia. The patient easily persuades himself that he remembers only what he believes he is desired to remember.

New York Medical Journal

March 27

- 11 External Roentgen Treatment of Internal Structures (Eventration Treatment). C. Beck, New York.
- 12 Intraaural Causes and Operative Treatment of Trigeminal Neuralgia. J. B. Deaver, Philadelphia.
- 13 *Painful Heels. I. D. Steinhardt, New York.
- 14 Double Dilator for Use in Obstetrics and Gynecology. J. J. Reutenwald, Pittsburg.
- 15 The Medical Mind. R. L. Pittfield, Philadelphia.
- 16 Metabolism of Certain Skin Disorders (concluded). J. C. Johnston and H. J. Schwartz, New York.
- 17 *Eucalyptus in Leprosy. H. T. Hollmann, Kalaupapa, Molokai, H. T.
- 18 Symbiotic Action of the Epithelial Cells of the Skin on the Cells of the Epithelium of the Kidneys. B. R. LeRoy, Athens, O.

13. Painful Heel.—Steinhardt writes of a type of severe pain and tenderness in the heel which refuses to yield to ordinary treatment. An acute inflammation of the os calcis is a common cause, and there is frequently a history of gonorrhea, gouty rheumatism, or trauma. Steinhardt has seen over 30 cases in the past two years. He quotes the pathologic report on a gonorrheal case in which brittle exostosis was found, showing a granulation tissue. The process was an ossifying periostitis and gonococci were found. In other cases different cocci have been found. Complaint is first made of general pain in the toes and foot, which, after a time, becomes localized in the heel, with tenderness, especially near the tubercle of the os calcis. An x-ray picture will show spicules of bone protruding from the os calcis, with a surrounding periostitis. The condition is curable by proper treatment—removal of the offending exostosis with post-operative treatment of the underlying cause. The technic of the operative part of the treatment is as follows:

1. Apply Esmarch bandage.
2. Usual cleansing of entire foot for operative procedure.
3. Apply tincture of iodine to line of incision.
4. Make an incision about two or two and one-half inches long terminating at a point about one-half inch behind the tubercle of the os calcis. This incision should be right down to the bone and in the middle line.
5. Insert retractors and locate exostosis at bottom of wound.
6. Chisel away exostosis with a grooved chisel and scrape the bone with a sharp spoon until the surface is smooth and seems healthy.
7. Wash out with sterile normal salt solution.
8. Close wound without drainage, with interrupted catgut sutures.

The patient should rest in bed for about three days, and then, if everything is going smoothly, may be allowed to sit up. At the end of two weeks, the feet may be put to the ground, and after twenty-one days, the patient should be around as usual, continuing, if still necessary, the postoperative treatment.

17. Leprosy.—Hollmann, in a second publication, confirms in the main his former statements as to the marked ameliorations in the clinical manifestations of leprosy effected at the leper settlement, Molokai, by the use of eucalyptus in medicated baths and taken internally. Eucalyptus has been used at the leper settlement for two years, and Hollmann states that the following effects have been noted: The skin glands are stimulated and the skin becomes softer and more pliable; the leonine facies is less marked; there is marked improvement in leprous neuritic pains; itch is cured; excoriations,

ulcerations, erosions, and abrasions of the skin and mucous membranes are healed; swollen head fever has largely disappeared, and leprosy fever is decidedly decreased. He modifies his previous statement that this treatment would overcome partially contracted fingers; it has not permanently done so. Stiffness is relieved only when treatment is continued regularly. He can not substantiate his previous assertion that this treatment will cause leprosy tubercles to disappear. In the two years, 275 patients have taken the treatment, with the result that the death rate of the leper settlement has been less than 5 per cent., of which less than 2 per cent. was due to leprosy. Every one of the 275 patients who have been helped has had the disease from 5 to 20 years. It is believed that patients in the incipient stage of the disease might possibly be cured.

Lancet-Clinic, Cincinnati

March 27

- 19 Neuroses and Psychoses of Women. C. D. Palmer, Cincinnati.
- 20 *Systemic Effects of Chronic Infections of the Throat and Nose. F. G. Stubbs, Chicago.
- 21 Progressive Pernicious Anemia. J. A. Witherspoon, Nashville, Tenn.
20. Abstracted in THE JOURNAL, Nov. 21, 1908, p. 1806.

Medical Fortnightly, St. Louis

March 25

- 22 Self-Limited Diseases. J. R. Buchanan, Nevada, Mo.
- 23 Atonia Gastrica, its Significance and its Therapy. A. Rose, New York.
- 24 Then and Now. W. F. Waugh, Chicago.

Virginia Medical Semi-Monthly, Richmond

March 12

- 25 Treatment of Hip Disease. H. Gibney, New York.
- 26 Neurasthenia. J. N. Upshur, Richmond.
- 27 Pulmonary Tuberculosis, 2,133 Cases Treated in the Asheville Climate from 1897 to January, 1907. J. A. Burroughs, Asheville, N. C.
- 28 Hydrotherapy. J. C. Walton, Richmond, Va.
- 29 Treatment of Whooping Cough—With a Plea for a Better Experience with Antitoxin. S. Harnsberger, Catlett, Va.
- 30 Gall-Bladder Operations. E. M. Magruder, Charlottesville, Va.
- 31 Hemlock and Cancer. W. Waugh, Chicago.

March 26

- 32 Mechanism of the Secretion of the Pancreatic Juice and the Question of Hormones. T. Hough, Charlottesville, Va.
- 33 Interdependence of Physicians and Surgeons. J. A. Hodges, Richmond.
- 34 Operative Treatment of Hyperthyroidism. C. H. Mayo, Rochester, Minn.
- 35 Antitoxin or Serotherapy in Treatment of Whooping Cough, Measles and Scarlet Fever. S. Harnsberger, Catlett, Va.
- 36 Importance of Early Diagnosis of Tumors. J. S. Horsley, Richmond.
- 37 Surgery of the Bile Tract. J. E. Cannaday, Charleston, W. Va.
- 38 Cancer of the Liver. O. F. Blankenship, Richmond, Va.
- 39 Amputation of the Knee Joint Under Local Anesthesia. C. S. White, Washington, D. C.
- 40 Treatment of Epithelial Cancer. J. T. Clarke, Mount Solon, Va.

American Journal of Surgery, New York

March

- 41 *Intestinal Resection: Preliminary Report of a Simplified Method. H. Lilienthal, New York.
- 42 Sigmoiditis and Perisigmoiditis. J. P. Tuttle, New York.
- 43 *Sacral Suspension of the Uterus—A New Technique. J. Van D. Young, New York.
- 44 *Cancer of the Breast. W. Meyer, New York.
- 45 Surgery of Foreign Bodies, Especially Those Occurring in the Skeletal Tissues, Including Description of a Localizing Method. W. M. Brickner, New York.
- 46 *Operation of Direct Blood Transfusion—Description of a Simple Method. J. A. Hartwell, New York.
- 47 *Avoidance of Hemolysis in Transfusion. M. Rehling and R. Weil, New York.
- 48 *Uterine Fibrosis and its Surgical Treatment by a New Method of Vaginal Hysterectomy. S. W. Bandler, New York.
- 49 Dislocations of Cervical Vertebrae. J. P. Warbasse, Brooklyn.
- 50 A Plastic Mastoid Operation: New Operation for Acute Mastoiditis. F. T. Hopkins, New York.
- 51 *A Modified Operation for Inguinal Hernia. A. E. Sellenings, New York.
- 52 Surgery of the Pericardium and Heart. H. B. Delatour, Brooklyn.

41. Intestinal Resection.—Lilienthal has been so satisfied with the results of the treatment of the stump in appendicectomy by simple ligation and carbolic acid cauterization of the mucosa, that he has applied the same method to the stumps in intestinal resection of various forms. In this preliminary communication he reports briefly six cases. He gives the warning to tie the ligature tight enough to crush the mucosa and to sterilize the stump with pure carbolic acid not followed by alcohol.

43. Suspension of the Uterus.—Young describes a method of suspending the retroverted uterus by the uterosacral ligament, for which he claims the following advantages: The supporting of the uterus in its normal position from the bony structure above; the body and especially the fundus are freely movable for all the functions of the body. This procedure does not distort but reproduces the curve of Carus. There are no artificial bands through which intra-abdominal hernia may occur. In the event of pregnancy there is no possibility of dystocia. It relieves the patient anatomically and symptomatically.

44. Cancer of the Breast.—Meyer says that while we know that the disease may be cured if treated early and radically, we have also learned that we can guarantee such a fortunate issue in no single instance. Early operation depends on early diagnosis. He discusses the early diagnosis of cancer of the breast with reference to scirrhus, adenocarcinoma, diffuse interstitial fibroma, and suppurative mastitis. In adenocarcinoma there is no apparent effect on the nipple. It is hardly possible to confound scirrhus with diffuse interstitial fibroma, which belongs to the borderland cases but needs prompt radical operation. Chronic suppurative mastitis usually develops three or four years after nursing, is diffuse, and yields pus on aspiration. Simple incision usually effects a cure. Meyer next describes the change made by him in his original technic for the removal of the breast. He makes the axillary part of the skin incision pass about two fingers' breadths above the lower border of the pectoralis major. This permits of a more effective shifting of the lower flap at the completion of the operation, covering a greater part of the resulting defect. He forms one large upper and one large lower flap, circumcising the base of the breast without regard for the skin, the defect being later grafted. He believes this technic can not be improved on, unless the future should show it advisable to resect the clavicle, to follow up the entire chain of glands into the supraclavicular space, extirpating them with the surrounding fat in one mass. The removal of the supraclavicular glands in all cases is still a moot point, but a recent experience which Meyer describes inclines him toward it. He is pleased with the use of Bier's suction cup as an adjuvant in the after-treatment of operating fields that can not be cleared of disease, even macroscopically. He insists strongly on extirpation of any accessory mammary glands, and the entire breast with them, and refers to two experiences that illustrate and emphasize this point. He quotes statistics of 80 patients treated by means of this radical operation. Of 16 operated on from 10 to 12½ years ago, 3 (18.7 per cent.) are alive and well 11 and 12½ years after operation. Of 27 patients operated on from 5 to 10 years ago, 6 (22.2 per cent.) were alive and well in May, 1907. Of 43 patients operated on between September, 1894, and April, 1902, 17 (39.5 per cent.) remain free from recurrence from 3 to 12½ years, and 13 (30 per cent.) from 5 to 12½ years. Of 20 patients operated on from 3 to 5 years ago, 10 (50 per cent.) were alive and well 20 months ago. Of 63 cases operated on more than 3 years prior to May, 1907, 28 (44.4 per cent.) lived from 3 to 12½ years after operation. Of Meyer's 80 patients 40, or 50 per cent., died within 3 years, 24 of these within 1½ years. No selection was made, and he has never refused the operation. With regard to borderland tumors, he is convinced that the only safe plan is to operate on every patient over 25 or 30 years of age, and not to wait for unmistakable signs of malignancy. End-results can only be improved by early radical operation based on early diagnosis; by educating the public to understand that the most painlessly developing tumor is the most dangerous one; by operating on circumscribed apparently benign tumors, which may develop malignancy; and by finding the cause of carcinoma.

46. Abstracted in THE JOURNAL, Jan. 30, 1909, p. 411.

47. Avoidance of Hemolysis in Transfusion.—Rehling and Weil describe experimental investigations which lead them to conclude that test tube reactions, in spite of the differences in conditions, appear to afford a reliable criterion of the re-

sults of the intended transfusion. This fact has been verified experimentally on dogs, and once on a human patient. It seems advisable, therefore, that every transfusion should be preceded by such tests.

48. **Uterine Fibrosis.**—Baudler describes this condition and says that the remedy which absolutely prevents the various combinations of symptoms is vaginal hysterectomy without removal of the ovaries. In this way unbearable hemorrhage is prevented; and the regular or irregular recurrence of the condition known as constitutional dysmenorrhea is at an end. He describes with numerous illustrations a method of simple vaginal hysterectomy which he has practiced in 110 cases without a fatality. The operation when done in a leisurely manner rarely takes more than 40 minutes, and the patient suffers scarcely any postoperative annoyance.

51. **Inguinal Hernia.**—Sellenings describes, with illustrations, a simplified operative technic, for which he claims the following advantages: (1) Rapidity of performance; (2) diminished period of narcosis; (3) no dissection of sac, and tissue bruising therefore eliminated; (4) preservation of nerve distribution; (5) absence of the sometimes troublesome venous hemorrhage; (6) no manipulation of the cord, its vessels or the testicle.

Annals of Surgery, Philadelphia March

- 53 *Intra-Abdominal Administration of Oxygen. W. S. Bainbridge, New York.
- 54 *Plastic Surgery of Blood Vessels and Direct Transfusion of Blood. I. Levin, New York.
- 55 *Nerve Involvement in the Ischemic Paralysis and Contracture of Volkmann. J. J. Thomas, Boston.
- 56 *Operating on the Cranial Vault. H. C. Masland, Philadelphia.
- 57 Surgical Treatment of Internal Hydrocephalus. R. S. Fowler, Brooklyn.
- 58 Operations Involving Free Opening of the Thorax. A. E. Rockey, Portland, Ore.
- 59 Value of the Leucocyte and Differential Counts in Appendicitis. G. N. Pease, New York.
- 60 Typhoid With Multiple Perforations, Repeated Operations Followed by Ultimate Recovery. A. J. Roberts, Bridgeport, Conn.
- 61 Angiorrhaphy. F. B. Lund, Boston, Mass.
- 62 Perforating Wound of the Knee Joint. G. Torrance, Birmingham, Ala.
- 63 Apparatus for the Introduction of Salines into the Rectum. G. J. Saxon, Philadelphia.
- 64 *The Sitting Posture; Its Postoperative and Other Uses. W. D. Gatch, Baltimore.
- 65 *Method of Splinting Skin Grafts. J. S. Davis, Baltimore.

53. **Intra-Abdominal Administration of Oxygen.**—Bainbridge after referring to a previous communication in the *New York State Journal of Medicine*, June, 1908, reports the results of continued tests of the utility of intra-abdominal administration of oxygen wherever indicated. It is now administered for the following purposes:

1. To lessen shock, hemorrhage, nausea, and vomiting.
2. To overcome negative intra-abdominal pressure after removal of large tumors.
3. To prevent the formation of adhesions.
4. For its effect on tuberculous peritonitis of certain types.
5. For its effect on pus-producing organisms and their toxins.

He details the method of administration and reports a supplementary series of cases illustrating its application. Bainbridge cautions as to the necessity of watching for failing strength after all the gas is absorbed and the administration has ceased. He gives the following tentative conclusions: 1. From Cases I to XVI, reported in his former paper and from Cases XVII to XXX, detailed here, it may be safely said that oxygen, intra-abdominally administered, has a distinct field of usefulness in lessening shock, hemorrhage, nausea and vomiting; in overcoming negative intra-abdominal pressure after removal of large tumors; in preventing the formation of adhesions, or, when broken up, lessening the liability of their return; and in influencing favorably certain types of tuberculous peritonitis. From Cases I to II (his own), and Cases III (Dr. Greene's), in which the gas was introduced into the peritoneal cavity in septic peritonitis, sufficient beneficial effect was noted to warrant the hope that further clinical experience may establish the efficacy of the gas as an adjuvant in the treatment of this condition.

54. Abstracted in *THE JOURNAL*, Jan. 30, 1909, p. 412.

55. **Ischemic Paralysis.**—Thomas, finding this condition apparently frequent, is surprised at the paucity of reported

cases. He does not think that tight bandaging or neglect is the only cause. He reports four cases which he has seen and reviews in tabular form the 107 cases which he finds reported in the literature. The study of the cases of ischemic paralysis and contracture reported in the literature shows very clearly that this condition varies greatly in severity in different instances, and that in many of the cases we are dealing with complications of the primary trouble from secondary involvement of some of the nerve trunks of the arm, which produce disturbances that can not be relieved by the treatment of the contractures only. The individual patient must be carefully examined, therefore, with the question of nerve involvement in mind, and this condition should be considered in determining the treatment. He discusses the pathology and treatment.

56. Abstracted in *THE JOURNAL*, Jan. 23, 1909, page 321.

64. **The Sitting Posture After Operation.**—Gatch describes a bed in use in Johns Hopkins Hospital which can be made by any carpenter at small expense. The advantages of the bed are that it is simple, that it permits the patient to lie flat or to sit at any angle of elevation desired; that it holds a patient in the sitting posture all the time and without any effort on his part; that it permits of continuous irrigation of the bladder, rectum, or adjacent parts without wetting the bed or the patient; and finally, that it readily adapts itself to the comfort of a large class of patients who need to sit up more or less of the time. The therapeutic uses of the sitting posture are: (a) Operative (1) to drain the peritoneal cavity; (2) to lessen the danger of lung complications; (3) to permit continuous irrigations; (4) to promote comfort and general well being. (b) Non-operative, in numerous cases of pulmonary and cardiac disease, incontinence of urine or feces, paralysis, etc.

65. **Skin Grafts.**—Davis uses a coarse meshed net, such as is used for curtains, for keeping skin grafts in position. The stiffening is washed out and the net is soaked in gutta serena 30 parts, chloroform 150 parts. It is sterilized by keeping in 1 to 1,000 solution of bichlorid of mercury. Of course no hot material must come in contact with it at any time. After placing the skin grafts, a piece of this web rather larger than the grafted area is pressed snugly down on it. Its advantages are that it splints the grafts without too much pressure, and is easy to apply and secure in place. It does not adhere to the grafts or to granulations. It allows the free escape of any secretions which may form, and thus prevents maceration. Any sort of dressing may be placed over it. The progress of the healing may be observed at any time without danger of displacing the grafts.

American Journal of Physiology, Boston March

- 66 *The Action of the Alkaloids of the Papaveraceæ on the Isolated Frog's Heart. W. Hale, Ann Arbor, Mich.
- 67 Action of the Alkaloids of the Papaveraceæ on the Motor Nerve Endings. W. Hale, Ann Arbor, Mich.
- 68 *Metabolism in Man With Greatly Diminished Lung Area. T. M. Carpenter and F. G. Benedict, Boston, Mass.
- 69 *Comparative Study of the Digestibility of Different Proteins in Pepsin-Acid Solutions. W. N. Berg, New York.
- 70 Chemical Studies on the Effects of Centrifugal Force on the Eggs of the Sea Urchin (*Arbacia punctulata*). J. F. McClendon, Woods Hole, Mass.

66. **Action of Alkaloids of the Papaveraceæ.**—The general result of Hale's work is that these alkaloids stimulate the heart in weak solutions and depress it in strong ones. In the case of cryptopin and sanguinarin there is no increase in the efficiency of the heart, although the rate is augmented by small amounts of these drugs. Thebain does not seem to be stimulant in any dilution. Heroin is more deleterious to the frog's heart than is codein or morphin. All the members of the series act as depressants of the motor nerve endings and it is shown that morphin and codein are clearly less toxic to the motor nerve endings than heroin, and that the latter in turn is less toxic than a number of the other members of the series studied.

68. **Metabolism in Man.**—Carpenter and Benedict experimented on a man whose respiratory area had been reduced

one-half by the total obliteration of one lung. Their conclusion from their work is that the reduction of the area for oxygen absorption and carbonic acid elimination in the lungs by about one-half has not materially altered the total metabolism.

69. **Comparative Study of Digestibility.**—Berg sums up the results of his experiments as follows:

1. Measured under uniform, or nearly uniform, digestive conditions, different proteins digest with unequal speed. The eleven proteins used in these digestion experiments divide themselves, with regard to their digestibility, into two groups, the first group consisting of 6 simple proteins, which were rapidly digested in pepsin acid solutions containing 10 mgm. of pepsin in 100 c.c. of solution; the second group consisting of 5 conjugate proteins, which were slowly digested in acid solutions containing from 50 to 500 mgm. of pepsin in 100 c.c. of solution. The order of digestibility, beginning with the protein which was most rapidly digested, is as follows: Edestin, myosin, alkali albuminate, acid albuminate, fibrin, coagulated egg albumin, ossein, nucleoprotein, tendo-collagen, elastin, tendo-mucoid.

2. The relative digestibility of an untried protein may be predicted only with uncertainty. That its digestive behavior will be similar to that of some other protein of similar chemical or physical constitution can not be assumed with safety. The question must be decided experimentally.

3. The relative digestive efficiency of the acid solutions used in these experiments was fairly uniform. For the first group of proteins the average order, beginning with the solution in which digestion was most rapid, is the following: Hydrochloric, nitric, oxalic, phosphoric, sulphuric, tartaric, lactic, citric, acetic, boric. For the second group of proteins (ossein excepted) the average order is the following: Hydrochloric, nitric, oxalic, sulphuric, phosphoric, tartaric, citric, lactic, acetic, boric.

4. In general, the greater the concentration of hydrogen ions in the digestive solutions used, other conditions being equal, the more rapid the digestion. While there was no exact proportionality, there was a general parallelism.

Journal of the Medical Society of New Jersey, Orange

March

- 71 *Development of the Navy Medical Corps to Meet the Modern Requirements of Specialization in Medical Practice. P. M. Rixey, U. S. Navy.
- 72 Salpingitis. J. W. Martindale, Camden.
- 73 Diagnosis and Treatment of Sarcomata. J. Tomlinson, Bridgeton.
- 74 Can the Nation be Perpetuated? Necessity for a National Bureau or Department of Health. D. Benjamin, Camden.
- 75 The Medical Profession and the Societies. D. E. English, Millburn.
- 76 What is Medicine? An Abstraction. G. K. Dickinson, Jersey City.

71. **The Navy Medical Corps.**—Rixey says that the medical corps of the Navy should be the equal of any organized body of medical military men in the world. The naval service, by virtue of its world-wide intercourse, is essentially aristocratic, requiring the instinct, discernment and conduct of a gentleman in its officers. The medical officer being on a plane of equality with the others, personal qualifications must enter into the determination of general suitability. The wide range in the character of the *clientèle* and responsibilities calls for professional ability and ready adaptability. The charge of financial interest demands strict integrity and capacity for handling an intricate and complex organization. The service presents fine opportunities for original work and initiative. Rixey discusses the place of tropical diseases in naval medical experience, the difference between naval surgery and military surgery, naval hygiene, the naval medical school, and the conditions of life and practice on a battleship. He urges that the service to-day affords as much in the way of pay, opportunities for the future, and satisfactory professional work for young men as any other public service.

Military Surgeon, Richmond, Va.

March

- 77 The Fleet Surgeon, His Position, Duties, Responsibilities and Training in Relation to the Fleet and its Sanitary Necessities. A Study in Organization. H. G. Beyer, U. S. Navy.
- 78 The Disposal of All Liquid Refuse of the Otis Excavators and of the Sanitary Carts, in a Maneuver Camp, by Evaporation on Heated Rocks. H. I. Raymond, U. S. Army.
- 79 Hypodermic Anesthesia (historical). W. T. Thackeray, Chicago.
- 80 The Mexican Wheeled Stretcher for the Transport of Wounded on the Battlefield. A. Ross, Mexican Army.
- 81 Militia Service Schools, With Particular Reference to the Medical Department. G. M. Muren, U. S. Army.

Illinois Medical Journal, Springfield

March

- 82 *Phagocytic Immunity and the Therapeutic Injection of Dead Bacteria in Endocarditis. Preliminary Report. E. C. Rosenow, Chicago.
- 83 *Hyperchlorhydria and its Treatment, Based on Animal Experiments. M. M. Portis, Chicago.

- 84 Throat Diseases in Children. H. G. Langworthy, Dubuque, Ia.
- 85 Differential Diagnosis Between Bronchopneumonia and Cerebrospinal Meningitis and Gastroenteritis in Their Early Stages. T. W. Gillespie, Peoria.
- 86 When Should an Operation be Performed for Strabismus (Squint or Cross-Eyes) in Children and in Adults? A. L. Derdiger, Chicago.
- 87 *Eye Defects in Backward Children. M. Frank, Chicago.
- 88 *Postoperative Nasal Hemorrhage. E. Pynchon, Chicago.
- 89 *New Method for Packing the Nostril. W. E. Casselberry, Chicago.
- 90 Report of the International Congress on Tuberculosis. A. E. Smith, Freeport.
- 91 Influenza and its Complications. J. W. Dunn, Cairo.

82. **Phagocytic Immunity.**—Rosenow refers, in a preliminary report, to investigations undertaken to answer the following questions: How do the micro-organisms in endocarditis of this mild type protect themselves in the blood and endocardium, and ultimately cause death, when they seem to be without virulence, while those in pneumonia with their high grade of virulence are usually destroyed and recovery is the rule? The object of this study was primarily to explain, if possible, the mechanism involved in these and other allied questions and to determine the effect of the therapeutic injection of dead bacteria in endocarditis. A full report of the experiments will appear later. His conclusions are as follows:

1. The blood culture in endocarditis is the best means of making an early diagnosis. It should always be made for the identification and study of the infecting organism, as well as for prognostic reasons. Barring accidents, the greater the virulence the more grave the prognosis.

2. The therapeutic injection of dead bacteria in endocarditis has very little influence on the disease until late in its course, when there is a temporary improvement following the injections.

3. A very close relation exists between the biologic character of these organisms and their ability to produce endocarditis in the class of cases observed.

4. The organisms isolated, while of practically no virulence to animals and susceptible to phagocytosis on cultivation, appear to immunize themselves against the antibodies produced by the host, and thus to overcome the resistance of the latter.

83. Abstracted in THE JOURNAL, June 13, 1908, p. 2016.

87. **Eye Defects in Backward Children.**—Frank's experience leads him to conclude that:

1. Refractive errors are unusually frequent among backward children.

2. The correction of these defects by the fitting of proper glasses is followed by remarkable improvement of the mental power and allows the apparently backward child to keep up with its mates.

3. It would be decidedly good policy to have the eyes of all children with real or apparent mental deficiency thoroughly examined as a matter of routine.

88. This article is also published in the *Lancet Clinic*, March, 6, 1909, *Chicago Medical Recorder*, March, and the *Journal of Ophthalmology and Oto-Laryngology*, March.

89. **Packing the Nostril.**—Casselberry, while recognizing the superior efficacy of the posterior plug over an anterior pack in postoperative nasal hemorrhage, takes note of the painfulness and even dangers attendant on it and its removal. He has devised a tampon composed of a rubber finger cot, or preferably of what might be called a club finger cot, which, after insertion into the nostril, is filled by means of a tubular packer with a strip of sterile gauze, 1¼ inches wide and a yard or more in length. He describes the apparatus and the method of its use.

Albany Medical Annals

March

- 92 The Crime, the Criminal, and the Police. C. G. Cumston, Boston.
- 93 Successful Demonstration of the Problem of Obtaining Sterile Cow's Milk. J. T. Howell, Newburgh, N. Y.
- 94 Ether Gas Anesthesia. C. R. Marsh, Oneonta, N. Y.

Kentucky Medical Journal, Bowling Green

March

- 95 Medical Defense. E. W. Hines, Bowling Green.
- 96 Idem. J. J. Moren, Louisville.
- 97 *Introduction of Tubes, Bougies and Metal Instruments into the Lower Bowel, with Radiographic Illustrations. G. S. Hanes, Louisville.
- 98 Apparatus and Technic Used in Making Radiographs. E. T. Bruce, Louisville.
- 99 Placenta Prævia, With Report of Two Cases of Placenta Prævia Centralis. E. Speidel, Louisville.
- 100 The Public Health. U. L. Taylor, Columbia.
- 101 Nasal Sinuses. S. J. Smock, Springfield.
- 102 Triumphs in Medicine. E. Morris, Sulphur.
- 103 Scarlet Fever. W. Blair, Glen's Fork.
- 104 Nitrous-Oxid Anesthesia—Report of Cases. J. W. Heim, Louisville.
- 105 Some Differences Between the American and English Physician. G. B. Wagner, Newport.

- 106 Uremia. D. O. Hancock, Henderson.
107 Stricture of the Esophagus. C. G. Lucas, Louisville.
108 Goiter. P. F. Eve, Nashville.
109 Etiology, Symptoms and Diagnosis of Acute Mastoiditis. W. G. White, Louisville.
110 Mastoiditis—Its Non-Operative and Prophylactic Treatment. G. A. Robertson, Louisville.
111 Operative Treatment of Acute Mastoiditis. I. A. Lederman, Louisville.

97. **Introduction of Rectal Tubes.**—Hanes gives the result of his observations on the behavior of rectal tubes and bougies when introduced into the lower bowel, in the hope of throwing light on the question of the passage of tubes high up into the bowel. His conclusions are as follows:

1. Soft rubber tubes and bougies rarely, if ever, enter the descending colon, unless they are carried well into the sigmoid through a sigmoidoscope.
2. Tubes of medium flexibility can be introduced further into the bowel than those that are very soft or rigid.
3. Long soft rubber tubes when forced into the bowel coil on themselves, press on the gut wall and stimulate peristalsis and straining, all of which serves to prevent the successful administration of enemata.
4. Enemata should be given with the hips elevated, and the water or solution allowed to pass in very slowly, and through a tube introduced into the bowel not more than three or four inches.
5. I have carefully measured the capacity of the rectum and found it to be much less than ordinarily supposed. The rectum in a boy thirteen years of age had a capacity of eight ounces. The rectum in a man five feet ten and a half inches in height had a capacity of only fourteen ounces.
6. I feel confident that, when as much as one quart of water is injected into the rectum, a portion of it passes to the upper limits of the sigmoid and doubtless into the descending colon.
7. There is scarcely any doubt that the liquid passes along the entire large gut into the cecum when large enemata are administered.
8. There is no reason why water can not be forced to the cecum. If the sphincter muscles remain contracted it can take no other course. Everyone knows how patients complain when solutions are rapidly thrown into the bowel, and, if a little time is given, how quickly the desire to evacuate the bowels is relieved. The interpretation is that the rapid distention causes the desire to evacuate, and as the water passes up into the gut the pressure is relieved.
9. The entire large gut, including sigmoid and rectum, is much shorter *in situ* than we have previously been led to believe.
10. My experience in the use of bismuth subnitrate does not correspond, by any means, with recent reports of others who have used it. At three or four different times from a half to one pound was injected without untoward results. Others have reported symptoms of poisoning when only two or three drams were injected.
11. My observations lead me to believe that there is no such motion in the rectum as reversed peristalsis.

Journal of Ophthalmology and Oto-Laryngology, Chicago

March

- 112 Symblepharon and False Pterygium From Fireworks Burn: Successful Operation. C. W. Hawley and J. F. Campbell, Chicago.
113 Foreign Body in the Orbit of Long Standing. Report of a Case. J. V. Clothier, Philadelphia.
114 Demonstration of Foreign Body in the Esophagus Removed by Esophagoscopy. H. Stoltz, Milwaukee.
115 *Postoperative Nasal Hemorrhage. E. Pynchon, Chicago.

115. See reference No. 88.

Wisconsin Medical Journal, Milwaukee

February

- 116 *Mobilization of the Duodenum for the Removal of Stones From the Common Duct. R. Elmergreen, Milwaukee.
117 Anatomy, Pathology and Operative Technique in Gall Bladder Surgery. H. A. Sifton and C. A. Evans, Milwaukee.
118 *Administration of Oxygen for Postanesthetic Nausea and Vomiting. R. P. Peairs, Milwaukee.

116. **Mobilization of the Duodenum.**—Elmergreen summarizes his article as follows:

1. The removal of a stone from the retroduodenal or transduodenal portions of the common duct, under unfavorable circumstances, remains a difficult and hazardous feat in surgery.
2. The mobilization of the duodenum to gain access to the common duct is a recognized procedure of incomparable value.
3. Thorough digital exploration of the deep biliary passages and good drainage are the secrets of success in common duct surgery.
4. The day of irremediable obstruction of the common duct has passed.

118. Abstracted in THE JOURNAL, Aug. 8, 1908, p. 524.

American Journal of Urology, New York

March

- 119 *Problems Relating to Prostatectomy. L. B. Bangs, New York.
120 Hematuria and its Treatment. J. W. Koehn, Chicago.
121 Serodiagnosis of Syphilis (concluded). G. A. DeS. Saxe, New York.
122 Neisser-Bacterin (Gonococcus Vaccine) in Gonorrheal Arthritis. W. J. Robinson, New York.
123 Removal of Large Renal Calculus: Recovery. H. B. Angus.

119. Abstracted in Society Proceedings in THE JOURNAL, Feb. 20, 1909, p. 657, and published in *The New York State Journal of Medicine*, March, 1909.

Journal of the New Mexico Medical Society, Albuquerque

March

- 124 Diet and Rest in Pulmonary Tuberculosis. S. G. Sewell, Albuquerque, N. M.
125 Postoperative Treatment of Abdominal Section. J. Vance, El Paso, Tex.
126 *Sequelae of Appendiceal and Puerperal Infections, With Notes on Appendicitis in Children. W. H. Burr, Gallup, N. M.
127 The Eosinophile and Opsonic Index. S. D. Swope, Deming, N. M.

126. **Appendicular and Puerperal Infection.**—Burr says that many puzzling cases occur in which patients develop sequelae that, in the absence of careful postmortem and microscopic examination, can not be explained as belonging to the ordinary classical sequelae of fatal appendicitis. He has no doubt that if every fatal case of appendicitis treated with or without operation were carefully examined by scalpel and microscope, it would be found that, even in patients operated on who succumbed, the operation contributed little or nothing to the fatality, which was the result of an infection already beyond surgical aid. The lesson to be learned is that there is no such thing as benign appendicitis.

Northwest Medicine, Seattle, Wash

March

- 128 Diffuse Septic Peritonitis. E. B. McDaniel, Baker City, Ore.
129 Injuries to the Eye and Adnexa (concluded). H. V. Würdemann, Seattle, Wash.
130 Gallstone Disease Complicated With Necrotic Pancreatitis. L. R. Markley, Bellingham, Wash.
131 *Relative Value of a Medical and Surgical Diagnosis of Obscure Intra-Abdominal Disease. R. C. Coffey, Portland, Ore.

131. **Diagnosis of Obscure Intra-abdominal Diseases.**—Coffey discusses the relation of the family physician, in dealing with obscure cases, to the specialist—internist, surgeon or other. He sums up the relative merits of the general practitioner, the internist, the surgeon and the laboratory man as follows: The general practitioner, whose time is taken up with the multitude of his duties, is not prepared to ferret out the intricate problems of the obscure abdominal cases. The internist is not always safe, for the reason that he takes great pride in his logic, based on too little experience from actual demonstration. The surgeon is apt to be rash, because of the ease and safety of an exploratory operation. The laboratory man is not safe when left alone, because of the many features of the disease which have weight, but which have not been shown in the laboratory. The key to the whole situation is a thoroughly reliable scientific laboratory, which is supported by the internist, the surgeon, the family physician, and the neurologist, and which should be independent of all. Coffey's conclusions as to obscure abdominal conditions are as follows:

1. A persistent and obscure chronic abdominal condition, which does not yield to treatment in a reasonable length of time, is out of the province of the average general practitioner or family physician and should be referred to a specialist.
2. The specialist will be either an internist, a surgeon, or a neurologist.
3. If the patient is below the usual cancer age (say 38) and presents no evidence of obstruction of any kind, it is safe to refer the case to the internist, who should call the surgeon if he fails to give relief or finds a surgical condition.
4. If the patient is in the cancer age (from 38 upward) and is gradually losing weight or presents symptoms of obstruction of any kind, the case should be referred to a surgeon, who should call an internist in consultation in case of doubt.
5. If the patient presents other nervous features aside from the abdominal trouble, the neurologist should be called.

Journal of the Michigan State Medical Society, Detroit

March

- 132 *Diagnosis and Treatment of Pleurisy With Effusion. F. Smithies, Ann Arbor.
133 The Layman Occupancy of Large Patches in the Field of Medical Practice. L. Connor, Detroit.
134 *Nerve Involvement in Fractures of the Extremities. C. S. Oakman, Detroit.
135 Diagnosis and Indications for Treatment of Cholecystitis. B. Holmes, Chicago.
136 Tertian Malaria Acquired in Michigan. W. M. Donald, Detroit.

132. **Pleurisy with Effusion.**—Smithies reviews this subject exhaustively, using for the purpose the case records of Professor Dock's service at the University Hospital, Ann Arbor. He discusses the laboratory findings and the phenomena on inspection, and insists on the importance of careful observations of external evidences of the movements of the diaphragm. The examination of 16 patients, while too small a

series to warrant absolute statements, suggests that the paravertebral triangle of dullness furnishes an important confirmatory sign in the diagnosis of pleural exudate. It is likely to be of special value when patients are too weak to submit to prolonged percussion of the back. Smithies lays considerable stress on the diagnostic importance of egophony. When one once gets the "aural picture" of what is really meant by egophony—the peculiar phonographic or telephonic, rather than bleating, quality of the spoken words—its presence, with other physical phenomena, warrants exploratory puncture. Smithies' cases have not shown that the variety of exudate—serous or purulent—markedly alters the degree of voice transmission. In the main, they bear out Baccelli's dictum, that the whispered voice is better transmitted through serous than through purulent exudates.

134. Abstracted in THE JOURNAL, Aug. 29, 1909, p. 785.

Laryngoscope, St. Louis, Mo.

March

- 137 Investigation on the Anatomical Structure and Relationships of the Labyrinth in the Reptile, the Bird, and the Mammal. A. A. Gray, Glasgow, Scotland.
- 138 Various Affections of the Voice and Their Local Causation. W. A. Wells, Washington, D. C.
- 139 Double Chronic Purulent Otitis Media With Extradural and Intradural Abscess, Recovery With Good Hearing. G. A. Leland, Boston.
- 140 Eruptive Conditions of the Nose and Throat From the Point of View of the Laryngologist. F. Cohn, New York.
- 141 Eruptive Manifestations in the Nose and Throat of Children, From a Pediatric Standpoint. L. Fischer, New York.
- 142 Rhinoscleroma. E. L. Kenyon, Chicago.
- 143 Atrophic Rhinitis. S. H. Large, Cleveland, O.
- 144 Suppurative Middle Ear Disease With Involvement of the Labyrinth Limited to the Right Cochlear Portion and to the Left Vestibular Portion. G. W. Root, Evanston, Ill.
- 145 Removal of Laryngeal Tumors by Direct Laryngoscopy. R. H. Johnston, Baltimore.
- 146 A Modified Tonsil Snare. J. R. Noyes, Brockton, Mass.

Texas State Journal of Medicine, Fort Worth

March

- 147 *Pathology of Old Age: Can it be Delayed? J. D. Covert, Fort Worth.
- 148 The Duties of the County Health Officer. J. M. Andrews, Wharton.
- 149 Starvation Treatment of Malignant Disease. E. H. Cary, Dallas.
- 150 Case of Congenital Dislocation of the Hip. O. L. Norsworthy, Houston.
- 151 Fibrosarcoma of the Brain. J. W. Rawls, Thornton.
- 152 *Treponema Pallidum*. M. A. Wood, Galveston.
- 153 Psychoneuroses. H. Taylor, Marshall.
- 154 Economic Problems in the Maldevelopment of the Upper Air Tract. H. B. Decherd, Dallas.
- 155 The Surgical Conscience. C. M. Rosser, Dallas.

147. Old Age.—Covert says that old age may be said to be the result of two great causes: First, the potential or inherited vitality of the tissues of the body: Persons coming from long-lived families, or other things being equal, have more inherited vitality than those coming from short-lived families. Their tissues are capable of standing the wear and tear of existence, are capable of assimilation and performing normal metabolism over a greater period of time. Thus a good constitution is of the greatest importance, if one is to live to an old age. Second, arteriosclerosis: i. e., all the degenerative changes in the arteries, other than those immediately due to syphilis. Man's heredity we can hope at present to modify only through popular education. Covert discusses arteriosclerosis and its causation, and holds that we must recognize an arteriosclerosis of senile origin, due to exhaustion of inherent potential vitality of the tissues. The first effect of this senile degeneration is to produce insufficiency of elimination. Proper attention to hygiene, diet and exercise and appropriate medication will correct the functional derangement, or rather assist in elimination, so that toxins will not be retained and thus the progress of the condition will be delayed. We are familiar with the arteriosclerosis of nephritis. Usually, the terminal stages of this condition are directly the result of it. It only emphasizes the importance of proper elimination through the kidneys at any stage of the disease, and especially so in its incipency, as it is then that we shall be able to influence the condition favorably. By a thorough appreciation of all the causative factors of arteriosclerosis and the early recognition of their action in any case it is possible to delay its onset and the accompanying senile state.

Atlanta Journal-Record of Medicine

February

- 156 Some Cases of Blood in the Urine. A. L. Fowler, Atlanta.
- 157 Acute Traumatic Tetanus Treated by Magnesium Sulphate. A. P. Heineck, Chicago.
- 158 "Tricks in All Trades but Ours." A. G. Hobbs, Atlanta.
- 159 Two Recent Cases of Gastroenterostomy. E. G. Jones, Atlanta.
- 160 Esthetic Alimentation. G. M. Niles, Atlanta.

Bulletin Johns Hopkins Hospital, Baltimore

March

- 161 *Multiple Hereditary Telangiectases Causing Hemorrhage (Hereditary Hemorrhagic Telangiectasia). F. M. Hanes, Baltimore.
- 162 *Place of Protozoology in the Medical School Curriculum. O. T. Schultz, Cleveland, O.
- 163 General Infection With *Bacillus Mucosus Capsulatus* Followed by an Areolar Abscess of the Liver and General Peritonitis. Autopsy. J. H. Hewitt.
- 164 Influence of Sewers and General Sanitation on the Prevalence of Tuberculosis. G. M. Kober, Washington, D. C.
- 165 *E. L. Trudeau, M.D.
- 166 Tuberculosis—A Plan of Study. W. L. Moss, Baltimore.

161. Hereditary Hemorrhagic Telangiectasia.—Hanes describes eight typical instances of a remarkable affection occurring in two unrelated families, reviews briefly all previously reported cases, and presents a general clinical picture. He defines it as "an hereditary affection manifesting itself in localized dilatation of capillaries and venules forming distinct groups, or telangiectases, which occur especially on the skin of the face, nasal and buccal mucous membranes, and give rise to profuse hemorrhage either spontaneously or as the result of trauma." Three factors seem of etiologic import, namely, heredity, repeated traumatism and the abuse of alcohol. The red spots are true vascular formations and not blood extravasations. They blanch on pressure and regain their color on removal. Hemorrhage, profuse and productive of anemia, is the one constant symptom and the source of all other symptoms. In most cases it is an epistaxis. Multiple telangiectases constitute the sole characteristic sign of the affection. A split pea represents approximately their maximum development. They are true developmental faults, beginning in childhood, being increasingly annoying in adolescence, and a menace to health in later life. There is no reasonable diagnostic difficulty. Destruction of the telangiectases by chromic acid fused on a probe is the treatment. The action of the acid can be checked by an alkali. The condition constitutes a definite malady, and as such deserves a name of its own. Hanes therefore suggests hereditary hemorrhagic telangiectasia.

162. Protozoology in the Medical Curriculum.—Schultz says that a review of general protozoan biology is of value to the student, not only because of the mental training that it may give, but also because many of the facts brought out by a study of the protozoa are applicable to other subjects with which the student must become familiar. Cellular pathology in so far as it is really cellular pathology and not tissue or organ pathology, is at a standstill and can advance little further by the methods at present in use by pathologic investigators. He discusses the training of the powers of observation, the pathogenic action of the protozoa, and outlines the course of protozoan biology in use at the Western Reserve Medical College.

165. Edward L. Trudeau, M.D.—This is a description of a volume of reprints presented by his pupils to Dr. Edward L. Trudeau on his sixtieth birthday.

Journal of Advanced Therapeutics, Rahway, N. J.

February

- 167 Electricity in Diseases of the Female Pelvic Organs. H. F. Pitcher, Haverhill, Mass.
- 168 Possibilities of Radiant Light (continued). T. D. Crothers, Hartford, Conn.
- 169 Cataphoric Operations as Modified by the Topographic Situation of Particular Neoplasms, With Detailed Report of Cases (continued). G. B. Massey, Philadelphia.

Chicago Medical Recorder

March

- 170 *Vaginal Hysterectomy for Carcinoma of the Cervix. H. T. Byford, Chicago.
- 171 *Postoperative Nasal Hemorrhage. E. Pynchon, Chicago.
- 172 *Psychotherapy From the Psychologist's Point of View. J. R. Angell, Chicago.
- 173 *Serodiagnosis of Syphilis and its Clinical Value. W. J. Butler, Chicago.

- 174 Some Fallacies in the Care and Treatment of Children. H. W. Cheney, Chicago.
175 Hydrotherapy in General Practice. W. L. Secor, La Grange, Ill.
176 *Sterilization of Criminals and Other Defectives by Vasectomy. W. T. Belfield, Chicago.

170. Abstracted in Society Proceedings in THE JOURNAL, Jan. 16, 1909, p. 243, and published in the *Southern Medical Journal*, March, 1909.

171. Published in the *Illinois Medical Journal*, March, 1909, the *Lancet-Clinic*, March 6, 1909, and the *Journal of Ophthalmology and Oto-Laryngology*, March, 1909.

172. Abstracted in THE JOURNAL, March 13, 1909, p. 916.

173. Published in the *New York Medical Journal*, Jan. 30, 1909, and abstracted in THE JOURNAL, Feb. 13, 1909, p. 588.

176. Sterilization of Criminals.—Belfield urges the impotence of legislation restricting marriage, and says that the only effective measures will be, not such as appeal to the minds, but those that take effect on the bodies. Criminals and defectives must be prevented from procreation. Belfield discusses the methods suggested for that purpose, viz., isolation by colonization, and operative sterilization. The colonization idea is mainly endorsed by those who see the necessity for some measures, yet hesitate at castration. This measure, though often discussed, Belfield thinks will probably never secure legal sanction, because it destroys the subject's sexual capacity. Vasectomy, on the other hand, sterilizes without the slightest impairment of sexual power or pleasure. It merely closes the minute canals through which the spermatozoa must pass from the testes to the organs which secrete the bulk of the seminal fluid and deposit it in the genital canal of the female. The absence of spermatozoa from this fluid does not impair the mechanism of erection and ejaculation. This is abundantly proved by the robust sexual health of thousands of men who have been unwittingly sterilized through bilateral epididymitis, and who never suspect that their procreative functions are not perfectly normal until their marriages prove barren; they are potent, but not fertile. That vasectomy itself is equally harmless to sexuality is shown by the experience of those on whom it has been performed. Among these, within Belfield's personal knowledge, are married men who chose this means, rather than criminal abortion, to prevent the transmission to offspring of their own hereditary taints, such as insanity and syphilis. Vasectomy, says Belfield, is an office operation; it can be performed in a few minutes under cocaine anesthesia, through a skin cut half an inch long; it entails no wound infection, no confinement to bed; it is less serious than the extraction of a tooth.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

March 13

- 1 Hernia Strangulated in the Foramen of Winslow. C. A. Morton.
- 2 *After-Results in a Series of Operations for Radical Cure of Hernia. R. W. Murray.
- 3 Strangulated Hernia Through the Foramen of Winslow. Operation, Recovery. T. Sinclair.
- 4 Case in Which Enterospasm was a Pronounced Feature, Necessitating Abdominal Section Four Times Within Ten Months. C. W. Dean.
- 5 *Diagnosis and Treatment of Chronic Ulcer of the Stomach and Duodenum. A. Thomson.
- 6 Primary Diffuse Pneumococcus Peritonitis: Treatment by Drainage and Pneumococcus Vaccine: Recovery. H. B. Robinson.
- 7 Incisions for Operations on the Upper Abdominal Organs. A. Don.
- 8 Intestinal Obstruction Produced by Enormously Distended Stomach. A. E. Maylard.
- 9 Physiology of the Female Genital Organs. III:—The Correlation of the Uterus and Ovaries. W. B. Bell and P. Hick.

2. Hernia.—Murray describes his after-results in a series of 217 operations for the radical cure of hernia; they are as follows: Twelve months or more after operation 193 operations had proved satisfactory; 12 patients were unaccounted for; 3 had relapsed and 4 had died. He uses these figures as an argument in favor of the sacular, or congenital, origin of

hernia. He describes separately his methods of operating in inguinal, femoral and umbilical hernia, and says that if results such as he records can be obtained by an operation which essentially and almost entirely consists in the complete removal of the sac, this surely is strong evidence in favor of the sac being the essential cause of the hernia, and is also an encouragement to surgeons to simplify their methods when operating, to pay less attention to repairing the abdominal wall and more attention to the complete removal of the sac.

5. Chronic Ulcer of the Stomach and Duodenum.—Thomson analyzes a consecutive series of fifty cases in which a chronic ulcer of the stomach or duodenum was not only diagnosed clinically but was subsequently demonstrated at operation. He discusses the site, sex incidence, age range, remissions, pain, relation of pain to taking of food, tenderness, vomiting, hemorrhage, the use of the test meal, constipation, visible peristalsis and hour-glass cases. While Thomson believes hyperacidity to be an essential factor in the production of an ulcer, he does not believe it to be the cause of the pain, which he considers due to the movements of that part of the stomach in which the ulcer is situated. The hunger pain of duodenal ulcer he considers due to the fact that as the stomach empties, the pylorus tends to move toward or even to the left of the middle line, thus putting traction on the duodenum and causing pain or discomfort in the presence of an ulcer. He discusses the diagnosis of chronic ulcer of the stomach and duodenum from gastric neuroses, carcinoma in the stomach, and carcinoma in the vicinity of the stomach. Chronic ulcer can only be cured by surgical means. Operation is recommended because the ulcer will not get well otherwise, because it causes suffering and prevents earning a living, and because it may become dangerous to life through starvation, hemorrhage, perforation or transformation into cancer. Resection has only a limited field; it is always difficult and dangerous. It was done in 3 cases with 1 one death. Gastro-enterostomy was done in 47 cases with 3 operation deaths. Of those who survived the operation, 1 was lost sight of, 5 died at various periods, from different conditions, and the remaining 38 are all under observation and their physicians in most cases speak in enthusiastic terms of the benefits derived from operation.

Lancet, London

March 13

- 10 *Disinfection and Disinfectants. R. T. Hewlett.
- 11 *Mechanism Underlying the Various Methods of Artificial Respiration. A. Keith.
- 12 Tabes Dorsalis with Unilateral Anesthesia: A Contribution to the Pathogenesis of the Disease. H. T. Thompson.
- 13 Hydrochloric Acid in the Gastric Contents in Cancer. S. M. Copeman and H. W. Hake.
- 14 Medical Ionization: Its Uses and Possibilities. N. S. Finzi.
- 15 *Primary Ovarian Actinomycosis. F. E. Taylor and W. E. Fisher.
- 16 *Method of Treating Fracture of the Clavicle. F. Romer.
- 17 Oligohydramnios with Partial Amputation of a Foot Occurring in a Uterus Unicornis. L. C. Blackstone.

10. Disinfection.—In the first Milroy lecture, Hewlett reviews the natural processes that bring about disinfection outside the body; dilution, desiccation, filtration, light, heat, crowding out and ammonia in the environment. His experiments show that the violet and ultraviolet rays have a germicidal effect on the *Bacillus prodigiosus*. He discusses dry heat and steam disinfection. Fumigation with sulphurous acid as usually practiced he considers of questionable utility. Formaldehyd, when properly applied, is probably more active than sulphurous acid, and chlorine gas still more so, though it is difficult of use. Spraying and washing with solutions he considers preferable to fumigation. He would like to see two groups of schools used for tests of the comparative value of disinfectants and spraying with water and washing. Disinfectant powders are chiefly of value as deodorants. He summarizes the requirements of an ideal chemical disinfectant as follows:

1. The substance must be cheap.
2. It should be relatively non-poisonous.
3. It should have no corrosive or other action on the ordinary metals and it should not stain linen, etc.
4. It should not separate into layers on standing, and should run freely from the containing vessel at all times.
5. It should possess high germicidal power.

6. It should be miscible with ordinary water in all proportions, to form a stable solution or homogeneous emulsion which should not separate appreciably into layers on standing.

7. It may with advantage have a solvent power for grease, for greasy surfaces have often to be disinfected.

8. Its germicidal power should not be markedly reduced in the presence of organic matter.

9. Heating to a moderate temperature should not affect it, so that it may be used hot if desired.

11. **Artificial Respiration.**—In the first Hunterian lecture, Keith reviews the methods of artificial respiration from 1774. He discusses the methods advised by the Royal Humane Society, those previously in use in England and on the continent, the experiments and recommendations of John Hunter, De Haen, Fothergill, Goodwyn, Kite, Brodie and Erichsen. He cites the recommendations of Cullen and the use of bellows and tobacco fumes; and describes the condition of the lungs in asphyxiation, contrasting inflation of the lungs with natural breathing.

15. **Primary Ovarian Actinomycosis.**—Taylor and Fisher say that only six cases for actinomycosis of the ovary are on record, and none of these are primary. They report a case of the primary disease. The patient had lived in London for 16 years, but in 1903 and 1904 was brought into contact with hay, straw and corn, the usual sources of actinomycosis, and it is noteworthy that the symptoms date from 1904. Since the ovary occupies a secluded position in the closed abdominal cavity, it can only be infected either by the direct extension of disease from an affected contiguous organ or by the blood stream. As in this case there was no evidence of disease in any adjacent organ, the streptothrix must have reached the ovary by way of the blood stream, the mode of entry into the body being, they suggest, some cryptogenic focus—e. g., the tonsil, through which it is well known micro-organisms may pass into the blood stream without producing any local lesion.

16. **Fracture of the Clavicle.**—Romer describes the following method of treating fracture of the clavicle without confining the arm to the side: "Three strips of firm adhesive plaster, each an inch and a half in width should be applied, from a point immediately above the nipple to a point below the angle of the scapula. The middle strip should cover the seat of the fracture and should be first applied; the lateral ones, slightly overlapping it, should extend about an inch and a half on either side. Each strip should first be made to adhere strongly in front, and, while it is supported and fixed by the fingers of one hand, should be carried over the shoulder by the other, with steady pressure, and made to adhere as it goes." It is advisable to apply another strip to encircle the shoulder joint, one end being brought diagonally across the scapula to below its angle. A thin layer of wool should be placed in the axilla. The strapping once applied the patient can dress in the ordinary way, the arm of the injured side being supported by a sling.

Clinical Journal, London

March 10

- 18 Aneurism. A. A. Bowlby.
- 19 Occult Primary Cardiac Hypertrophy. H. B. Shaw.
- 20 Intrathoracic Growths. C. Wall.

Medical Press and Circular, London

March 10

- 21 Present Position of Intravenous Treatment. F. Mendel.
- 22 Surgical Aid in Chronic Ulcer of the Stomach. J. A. Nixon.
- 23 The Feeding of Infants with Undiluted Sterilized Milk. F. Langmead.
- 24 Chronic Edemas Due to Local Degenerative Changes. F. P. Weber.
- 25 Ionization in Treatment of Skin Disease. E. G. Little.

Practitioner, London

March

- 26 Points in Diagnosis and Treatment of Derangements in the Knee Joint. A. E. Barker.
- 27 Dr. Marshall Hall and the Decay of Bloodletting. D'A. Power.
- 28 Uterine Hemorrhages. F. E. Taylor.
- 29 Acute Infection of the Kidney by the *Bacillus Coli Communis*. G. Wright.
- 30 *Injection of Broad Ligaments with Quinin for Prolapsus Uteri. J. I. Parsons.
- 31 Resection of Large Lengths of Small Intestine for Gangrene. C. P. Child.
- 32 Present State of our Knowledge of Pemphigus. J. M. H. MacLeod.
- 33 Retrospect of Otology. M. Yearsley.

- 34 Appendicitis in General Practice. G. McKerron and J. S. Geikie.
- 35 Treatment of Relapsing, Recurrent and Chronic Appendicitis. J. Allen.
- 36 Principle of Proportional Representation in Clinical Radiography. W. Cotton.
- 37 Hodgen's Splint in Private Practice. G. C. F. Robinson.

30. **Prolapsus Uteri.**—Parsons rejects the view that the pelvic floor and intra-abdominal pressure are chief factors in supporting the uterus. He considers the important factor to be, as stated by Dr. H. Savage, in 1882, the connective tissues running from the side of the pelvis with the vessels to the side of the uterus. The ideal treatment would be some method of strengthening these ligaments, rather than of creating a new one by attachment to the abdominal wall. From observation of the fact that subcutaneous injection of quinin in malaria produced effusion and caused a swelling that remained for months, it occurred to him to try the effect of irritating the cellular tissue of the ligaments with quinin, so as to produce an effusion of lymph that should form new connective tissue. He describes his technic as follows: Before the operation is performed, the bowels are thoroughly cleared out and the vagina is douched with a 1 to 2,000 solution of perchlorid of mercury. An anesthetic is advisable, although the operation takes only a few minutes. A bladder sound is passed and the extent to which it falls down on each side of the uterus is noted. A Sims speculum is then inserted, to hold down the posterior vaginal wall, and a retractor, to hold up the anterior vaginal wall; it should be wide enough to draw the bladder well up and out of the way. A straight sound is then passed into the uterus and held horizontally by the left hand of the operator, while the syringe containing the solution is held in the right hand. The injection is made with a needle 1 inch long on each side of the uterus through the vaginal wall at a distance of $\frac{3}{4}$ of an inch from the cervix, and a little below the level of the external os. If the cervix is much enlarged, which often happens in prolapsus, the point of injection should be nearer to the cervix. The aim of the operator should be to insert the needle exactly half way between the position of the normal cervix and the pelvic wall; then the nearest portion of the uterine artery and veins and the ureter lie to the right of the needle and above it. Another point is that, in the outer half of the broad ligament in this situation, there are no veins of importance. In cases of chronic procidentia, it is advisable to inject somewhat lower, on account of the tendency of the bladder to pouch down on each side of the cervix. The needle is apt to be corroded by the acid in the solution, and should therefore be tested before use, and thoroughly washed out afterward in warm water. A cup-and-stem rubber vaginal pessary is then inserted, and secured by tapes to a band around the waist. After three days it may be removed. The patient is instructed to lie on her face or side as much as possible. The bowels should be kept open every day, but free purging must be avoided. Cinchonism is rare. The exact solution is 12 grains of the ordinary sulphate of quinin, dissolved in 30 minims of dilute sulphuric acid, and 30 minims of distilled water. It should be made fresh for each patient. As the space on the left side is encroached on by the rectum, Parsons usually injects 10 minims less on that side than on the right. Repair of the perineum if necessary, adds very considerably to the comfort of the patient and also helps the ligaments. Taking all the easiest cases and also the most difficult, the latter forming by far the larger proportion, and including a great many cases of chronic procidentia, Parsons finds that in 75 per cent. the uterus has kept up permanently, 20 per cent. were greatly improved, and in 5 per cent. the measure failed.

Dublin Journal of Medical Science

March.

- 38 A Year's Mental Hospital Work. W. R. Dawson.
- 39 Some Cases of Gastric Surgery. W. Taylor.
- 40 *Upland Surface Water as a Carrier of Lead. H. English.
- 41 Hand Sterilization (concluded). C. G. Cumston.

40. **Upland Surface Water as a Carrier of Lead.**—English refers to the solvent-properties of water on lead piping, and points out that all waters, except those containing alkaline carbonates, phosphates, silicates or sulphates, possess this

solvent action. These salts, when present, however, combine with the dissolved lead, forming an insoluble compound, which coats the pipe and prevents further erosion. Upland surface water is rich in a material called humic acid, which is derived from decomposing vegetable matter in the collecting ground. This material aids the solution of lead from the pipes, and in one case a certain town consumed such water for a large number of years, with an average of no less than from 4 to 5 grains of lead to the gallon. English then discusses in detail the pathology, symptomatology and treatment of lead poisoning.

Journal of Tropical Medicine and Hygiene, London

March 1

- 42 Goundou in the West Indies. C. W. Branch.
43 *Etiology and Treatment of Beriberi. P. Van Andel.
44 Three Cases of Infection by *Schistosomum Japonicum*. E. C. Peake.
45 Hemogregarines of Snakes (concluded). L. W. Sambon.

43. Beriberi.—Van Andel's two points are: (1) That beriberi may be cured without removal of patients from the endemic area, and by attention to diet, a leguminous diet being recommended; and (2) that the induction by the use of drugs of cardiac irregularities suggesting beriberi, in areas where the disease prevails, is a possibility to be borne in mind.

Indian Medical Gazette, Calcutta

February

- 46 Tuberculous Diseases in India. G. A. Harris.
47 Gleanings from the Calcutta Postmortem Records. L. Rogers.
48 Ozona as a Water-Purifying Agent in India. D. Munro.
49 *Biliary Cirrhosis of Children, Otherwise Known as Infantile Liver. F. Pearse.

49. Biliary Cirrhosis of Children.—Pearse describes a peculiar disease of the liver in infants, attended with high mortality, that has been noted for some years in Bengal. Post-mortem, the kidney shows marked degeneration and shedding of the epithelium, and there are edema of the feet and legs, possibly of face and hands, and some fluid in the abdomen. All the tissues are bile stained. In early stages the liver is enlarged; later it is small; there is no perihepatitis, but the liver is tough and granular. In the interlobular bands many bile ducts are found. The degenerated liver cells lie loosely in a network formed by the intercellular fibers, and there is no evidence of syphilis. The disease is limited to children between six months and two years of age. Its onset is insidious, and seems to run in families. It occurs among rich and poor, and among infants fed both by the mothers and in other manners. It may last from one month to two years. There are enlargement of the liver, nausea, loss of appetite, vomiting, sallow complexion, thirst and fever. Edema occurs in the latter stages. The stools are clayey and the urine is deeply stained. The author concludes that it is a parasitic disease, but whether microbial or due to large forms there is no evidence to show.

Annales de Gynécologie et d'Obstétrique, Paris

February, XXXVI, No. 2, pp. 65-123

- 50 *Polyneuritis during Pregnancy. (Cas de polynévrite pendant la grossesse.) L.-A. Krivsky.
51 Two Cases of Vaginal Cysts Originating in the Wolffian Duct. Abadie and Rangé.
52 *Tuberculosis of Bartholin's Gland. L. Lecène.
53 Placental Polyp with Hyperplasia of the Decidua. J.-L. Fanre and L. Boidin.
54 The Antisepsis of Abortion. (Antisepsie de l'avortement.) J. Lucas-Championnière.

50. Polyneuritis during Pregnancy.—Krivsky relates a case of acute polyneuritis without fever, proving fatal in less than two weeks in a previously healthy young woman, eight months pregnant. The urine had been normal and there was no lead poisoning or other known factor in the etiology. The most plausible explanation seems to be that the trouble was due to autointoxication (Pinard) such as is encountered in uncontrollable vomiting, but in this case there had been only a little nausea and vomiting during a preceding pregnancy and almost none in the present one. Recent sorrow may have possibly contributed. He has found on record only 46 cases of this toxic neuritis in pregnant women, with 9 fatalities. Recent Russian medical literature has contained

a number of cases of Korsakoff's psychosis in pregnant women, including one in which the psychosis developed after uncontrollable vomiting. One of the authors, Alexandroff, insists that the same cause is responsible for both the vomiting and the polyneuritis. The symptoms recall those of phosphorus poisoning. The loss of the internal secretion of the ovary may entail the autotoxemia; under normal conditions, outside of pregnancy, it favors the oxidation of toxins containing phosphorus, etc. In the case related, in less than a week the uterus made efforts to expel its contents. Premature delivery was induced with the inflatable bag, after which there was slight improvement in the symptoms of paralysis. The paralysis had commenced with involvement of the motor nerves spreading to the pneumogastric and phrenic nerves but sparing the functions of the bladder and rectum.

52. Tuberculosis of Bartholin's Gland.—Lecène gives the details of 2 cases, the only ones of isolated tuberculous Bartholinitis of which he has knowledge.

Annales Générales de Médecine, Paris

February, LXXXIX, No. 2, pp. 65-123

- 55 Mesenteric Cyst. (Cas de kyste dit du mésentère.) B. Cunéo.
56 *Therapeutic Action of Adrenalin applied to the Skin. G. Sardon.
57 Previous State of the Health in Industrial Accidents. (L'état antérieur dans les accidents du travail.) E. Dabont.
58 Serodiagnosis of Syphilitic Nature of Certain Cases of Cirrhosis of the Liver. (Diagnostic de la nature syphilitique de certaines cirrhoses du foie par la séro-réaction de Wassermann.) C. Esmein and M. Parvu.
59 Post-traumatic Galloping Sound. (Bruit de galop post-traumatique.) P. Londe.

56. Local Action of Suprarenal Preparation Applied to the Skin.—Sardon summarizes out of a much more extensive experience in the last six years fifty-four cases to show the remarkable benefits that may be realized from the simple measure of painting the skin with adrenalin. Among the conditions treated were toxic erythemas, urticaria, acne, sunburn, bee sting, eczema, pruritus, nevus, contusion, inflamed chilblains, headache and congestion of the face from indigestion, sciatica without neuritis, arthralgia, arthritis, varices, etc. The adrenalin applied to the skin is rapidly absorbed and acts on the vessels in the region. Durable vasoconstriction is obtained by a moderate, graduated application of the adrenalin, renewed according to the effects produced. Too large a dose, at first, paralyzes the reaction. Hemorrhoids are benefited when moderate and recent unless they are the result of portal hypertension. The measure may also fail on account of sclerosis and paresis of the walls of the vessels. The effects of the adrenalin are similar to those of constriction hyperemia. There is no doubt that the adrenalin is able to act in the depths of the tissues and to aid their defensive efforts, or the adrenalin may arouse them to more effective resistance. Applied locally, it re-enforces the local defenses without waiting for general reactions, the outcome of which it is impossible to foresee.

Archives des Maladies du Cœur, etc., Paris

February, II, No. 2, pp. 65-127

- 60 Adams-Stokes Syndrome with Bigeminal Rhythm. E. Barié.
61 *Paralysis of Left Inferior Laryngeal Nerve in Affections of Mitral Valve. W. Osler.

61. Paralysis of the Left Laryngeal Nerve in Mitral Affections.—Osler has encountered three cases of laryngeal paralysis in the course of a mitral affection, and relates the details. The symptoms suggested the presence of an aneurism; in one case the stretch of the recurrent nerve compressed between the wall of the auricle and the aorta was whiter and more opaque than the rest of the nerve.

Archives de Médecine des Enfants, Paris

March, XII, No. 3, pp. 161-240

- 62 Human Contagion the Main Factor in Tuberculosis in Children. (Rôle de la contagion humaine dans la tuberculose infantile.) J. Comby.
63 Influence of Condition of Health of Dairy Employées on Healthfulness of Milk. (Influence de l'état de santé des laitières sur la valeur du lait alimentaire.) Monssu.
64 *Triangle of Dulness as Sign of Scrofulous Pleurisy in Children. (Sur le signe du triangle de Grocco-Rauchfuss-Hamburger.) J. Brudzinski.

64. **Paravertebral Triangle of Dulness in Pleurisy in Children.**—Brudzinski warns that the extreme elasticity of the thorax in children must be borne in mind in examining for this sign. Although it is not pathognomonic of serofibrinous pleurisy, yet its presence in connection with other signs and symptoms of pleurisy he regards as important confirmatory evidence. He cites a few typical cases to show the technique and theorizes to explain the causes which cooperate in producing the area of dulness.

Bulletin de l'Académie de Médecine, Paris

March 2, LXXIII, No. 9, pp. 265-293

- 65 **Rail Connection with Mecca from the International Sanitary Standpoint.** (Le chemin de fer du Hedjaz au point de vue sanitaire international.) A. Chantemesse and F. Borel.
66 **Hereditary Atrophy of the Papilla of the Optic Nerve.** F. Raymond.

Presse Médicale, Paris

February 27, XVII, No. 17, pp. 145-152

- 67 **History of Case of Facio-scapulo-humeral Atrophic Myopathy under Observation for 30 Years.** L. Landouzy and L. Lortat-Jacob.
68 **Treatment of Lupus of the Face.** De Beurmann and Degrais.
March 5, No. 18, 153-160
69 **Aneurism of Hepatic Artery.** T. Tuffier.
70 **Symptoms of, and Indications in, Abdominal Contusions.** Dehelly and Lagane.

Revue de Médecine, Paris

January, XXIX, No. 1, pp. 1-80

- 71 ***Granulation of the Erythrocytes. Staining Methods.** (Les hématies à granulations. Procédés de coloration. Valeur sémiologique.) N. Fiessinger and P. Abrami.
72 ***Congenital Family Cholemia.** (Pathogénie de l'ictère acholurique congénital.) W. Starkiewicz.

February, No. 2, pp. 81-160

- 73 ***Experimental Reproduction of Tuberculous Cirrhosis of the Liver.** H. Gougerot.
74 ***Interlobar Scrofulous Effusions in the Tuberculous.** (Les épanchements sero-fibrineux de l'interlobe.) C. Sabourin. Commenced in No. 1.

71. Reviewed editorially April 3.

72. This condition was discussed editorially in THE JOURNAL, March 6, page 776.

73. **Experimental Reproduction of Cirrhosis of the Liver.**—Gougerot states that he has succeeded in reproducing in guinea-pigs all the various processes of human tuberculous hepatitis. Some of them were reproduced to their finest details, especially the forms of cirrhosis with hypertrophy and atrophy. All the evidence presented confirms the rôle of the tubercle bacillus in the development of such affections in man. The tuberculous nature of certain forms of cirrhosis, formerly attributed to alcohol, is fully established by the research related in which he inoculated animals with pure cultures of the tubercle bacillus and cirrhosis of the liver developed in consequence, the series being too numerous to be ascribed to mere chance. The experiments show that the tubercle bacillus alone, without the aid of alcohol, is able to induce typical cirrhosis of the liver.

74. **Interlobar Effusion in the Tuberculous.**—Sabourin reviews his experience with fifteen cases of pulmonary tuberculosis in which an interlobar effusion developed. There seemed to be always a tendency to spontaneous reabsorption and to a cyclic course, suggesting a possible tuberculous embolism as the cause. Treatment can be only expectant, ready to remove the effusion if it causes symptoms or if absorption is too long delayed. The area of dulness is suspended, as it were, with resonance above and below, or it may be like a scarf crossing the lung area, narrow above and toward the median line, widening below and outward. Besides the usual symptoms of pleurisy, the area of dulness may be tender and the liver may be pushed downward and the heart toward and beyond the sternum.

Semaine Médicale, Paris

March 10, XXIX, No. 10, pp. 109-120

- 75 ***Phlegmonous Enteritis.** L. Cheinisse.
76 ***Arm and Eye Syndrome in Advanced Mammary Cancer, and Contraindications for Operation.** (Le syndrome brachio-oculaire dans le cancer du sein comme contre-indication de l'intervention chirurgicale.) I. Kiproff.

75. **Phlegmonous Enteritis.**—Cheinisse states that one Russian clinician reports five cases of this rare affection encountered since 1899, and he reviews this and other material from the literature describing the clinical picture in detail. The disease seems to have a predilection for the first part of the jejunum and for the duodenum, the regions unable to slide out of the way in case of external trauma or of excessive intra-abdominal pressure. Trauma affecting the abdomen is usually felt most severely in this region. Streptococci were isolated from the lesions in all the cases in which bacteriologic examinations were made, plus the staphylococci in one case. A preceding acute catarrhal enteritis was observed in some cases and in Moiseev's four cases there was a concomitant acute sore throat or gastritis. The clinical picture of phlegmonous enteritis is about the same as of phlegmon of the stomach, with the difference that the reaction on the part of the peritoneum is so prompt and so intense that it is liable to mask the phlegmon in the intestinal wall or even to precede its actual development. The peritoneal reaction is particularly rapid and intense when the phlegmonous inflammation is located in the jejunum. When a laparotomy fails to reveal any explanation of the symptoms in abdominal trouble, the possibility of this affection should be borne in mind. Treatment should be along the same lines as for phlegmonous gastritis.

76. **Arm and Eye Syndrome with Mammary Cancer.**—Kiproff describes a case of cancer of the breast in which the compression or involvement of the nerves was revealed by paralysis and sensory disturbances in the nerves of the forearm associated with ocular disturbances, ptosis of the lid, sinking in of the eyeball, dilatation of the conjunctival vessels and myosis. These symptoms reveal localization of the malignant process in the inner, deeper part of the supraclavicular fossa, and warn that metastases of the mammary cancer must be sought in this region.

Archiv für klinische Chirurgie, Berlin

LXXXVIII, No. 3, pp. 631-902. Last indexed March 13, p. 929

- 77 ***False Incarceration of Hernias.** (Die Scheineinklemmung von Brüchen.) P. Clairmont.
78 ***Suture of Arteries.** (Arteriennaht.) A. Smith.
79 **Suture of Stab Wounds of Lung.** (Naht bei Stichverletzungen der Lunge.) L. Stuckey.
80 **Review of 2,009 Cases of Fractures Treated at Berlin Polyclinic.** P. Bartsch.
81 **Case of Traumatic Aphasia with Right Hemiplegia in a Left-Handed Boy. Recovery after Trephining.** H. Miyake.
82 ***Extirpation of Tumors in Motor Area of Brain.** (Zur Extirpation der Gehirntumoren in den motorischen Rindencentren.) Id.
83 ***Tuberculosis of Spleen.** (Milztuberkulose.) H. Strehl.
84 ***Operative Treatment of Paraplegia in Tuberculous Spondylitis.** M. A. Wassiliew.
85 ***Carcinoma of Bladder in the Young.** (Das Blasencarcinome im jugendlichen Alter.) S. Hadda.

77. **Pseudoincarceration of Hernias.**—Clairmont, assistant at Eiselsberg's clinic at Vienna, applies the term *Scheineinklemmung* to the cases of hernia in which the symptoms of incarceration of the hernia persist after apparently successful reduction of the hernia. In ten such cases at the clinic seven terminated fatally. This experience shows the variety of affections which may lead to obstruction of the bowel. A hitherto free hernia may suddenly become irreducible, painful and tender, and may show less or increased tension. If symptoms of ileus develop at the same time, incarceration of the hernia is generally assumed and attempts at reduction may be made. If the taxis succeeds, the patient is supposed to be cured and no other cause is sought for the ileus. Or the hernia may resist reduction and unusual findings at the herniotomy may suggest the possibility of a second occlusion of the intestine at some other point. The dangers of these cases are so manifold that Clairmont devotes nearly 100 pages to the subject, summarizing from the literature all the similar cases he can find—a total of 107. In one group the ileus was the result of incarceration of a second hernia, internal or external, in other groups to compression from kinking, volvulus or invagination, a foreign body, benign or malignant stenosis or peritonitis from pancreatitis, appendicitis, trauma or extrauterine pregnancy. The prognosis depends on early differ-

entiation and correct surgical intervention. The cases of this kind in the literature are listed as "consecutive incarceration" or "consecutive strangulation," "combination ileus," "relative" and "pseudoincarceration," and his own term, "sham incarceration."

78. Suture of Arteries.—Smith gives an illustrated description of experimental research on the suturing of arteries, showing the points to be avoided and the development of the technic which he finally recommends.

82. Extirpation of Brain Tumor in Motor Area.—Miyake reports a case in which he removed an encapsulated glioma from the motor area for the left leg without injury of the brain, and the patient has been entirely cured with no appreciable symptoms during the three years since. He was a man of 27 and the first slight symptoms of the tumor were noticed six years before the operation. The outcome was equally good in a second case in which a gumma in the left central convolution was removed after fifty days of energetic antisyphilitic treatment had failed to induce any improvement. The patient rapidly recovered and is practically cured, only a few traces of the previous disturbances being still apparent. The symptoms in this case had been noted for two years, commencing with sudden paralysis of the right leg, slight syncope and intense headache, with Jacksonian epileptic seizures coming on after about twenty months.

83. Tuberculosis of the Spleen.—Strehl reports a case of isolated tuberculosis of this organ developing insidiously during twelve months and then attracting attention by the enlargement of the spleen and disturbances from adhesions between it and the stomach and abdominal wall, sensations of oppression in the region, loss of appetite, emaciation and weakness. Splenectomy has been done ten times for tuberculosis, with four deaths, but the fatalities should not be attributed to the operation. In one case on record the spleen was merely incised and sutured to the abdominal wound, the patient being completely cured by this simple procedure. Strehl adds that tuberculosis in other organs contraindicates splenectomy, but that incipient involvement of the peritoneum may retrogress, as it frequently does after nephrectomy for tuberculosis.

84. Operative Treatment of Paraplegia with Tuberculous Spondylitis.—Wassiliew has operated in six cases and the patients were cured in four of the five cases in which he opened up the prevertebral space. One patient lived nine years and another is healthy to date after four years. The best results were obtained with Ménard's "costotransversectomy"; this reaches the seat of the lesion better than laminectomy. The ends of one or two ribs and the attached transverse processes of the vertebræ are resected and access is thus obtained into the posterior mediastinum. Ménard does not lay much stress on curetting the vertebræ but restricts the operation to removal of pus, cheesy masses and sequesters, with subsequent drainage. Wassiliew operated as soon as the paraplegia developed when other vital organs were not involved, not waiting for conservative measures.

85. Carcinoma of the Bladder in Youth.—Hadda comments on the rarity of carcinoma in youth—only 0.42 per cent. occurring under 20 in 7,330 cases of carcinoma at fourteen clinics. In 5,006 cases of carcinoma at all ages, less than 1 per cent. were located in the bladder and none was in a patient under 20. He describes a case in a clerk, 19 years old, with bladder symptoms apparently cured by removal of a large concrement. There were no further disturbances for five years, but the symptoms then recurred and an inoperable carcinoma was discovered. The prognosis is more unfavorable the younger the patient.

Beiträge zur Geburtshilfe und Gynaekologie, Leipsic

XIII, No. 3, pp. 339-496. Last indexed March 20, p. 1001

- 86 Causes of Coagulation of Fibrin and Formation of Infarcts in the Human Placenta. (Genese der Fibringerinnungen und Infarktbildungen der menschlichen Placenta.) B. Huguenin.
87 *Endometritis. G. Schickele.
88 Streptococci in the Vagina. (Zur Vaginalstreptokokkenfrage.) E. Konrad.

- 89 Repeated Publotomy on Same Patient. (Wiederholte Hystereotomie.) O. Hoehne.
90 *Obstetrical Chair. (Ein Hängelage-Geburtsstuhl.) R. Pfisterer.
91 Metastases of Uterine Carcinoma in the Heart. (Metastasen im Herzen bei Uteruskarzinom.) H. Offergeld.
92 *Hemorrhage in the Eye in the New-born. (Blutungen ins Auge bei Neugeborenen.) M. Stumpf and von Sicherer.
93 Teratomas in Thyroid Region. (Teratome der Schilddrüsengegend.) H. Hunziker.

87. Endometritis.—Schickele comments on the frequent finding of normal mucosa when the uterus is curetted for supposed endometritis, and reaffirms that much that is taken for endometritis is in reality nothing more than the natural premenstrual congestion. At the same time he presents evidence to prove the existence in some cases of glandular changes which are really pathologic, and have nothing to do with menstrual congestion. In other cases, the mucosa may be chronically congested in consequence of displacement of the uterus or of inflammation in the adnexa, or is primarily affected. Chronic congestion in the uterus from inflammation in the adnexa leads to overnourishment of the glands and they become hypertrophied and functionate to excess, increasing the discharge, which thus is one of the most constant signs of endometritis. The menstrual flow comes on earlier and lasts longer than normally and may become irregular. In a recent case the patient presented phases of excitement alternating with periodical psychic depression, evidently traceable to vasomotor disturbances. Since she has been in this condition the menstrual periods have lasted longer and they come on irregularly, while the flow has been more profuse. Frequent curetting failed to modify the condition—the flow is becoming constantly more profuse, but the scrapings still show normal tissue. Curettement fails to benefit in such cases as this, or has merely a transient effect. It is important to curette once in all such cases, but if the primary trouble is not cured the same sequence of disturbances will occur again later. In conclusion, Schickele emphasizes the fact that the changes in the mucosa observed in many conditions of chronic inflammation in the adnexa with uterine affections and displacements and with general vasomotor disturbances are in reality secondary. Chronic hyperemia or lasting congestion in the interglandular tissue predominate here, distinct from changes in the glands themselves.

90. Obstetrical Chair.—The chair described is more like a table on which the woman lies with the region of the perineum at the apex of the obtuse angle formed by the legs slanting downward at an angle of 130 degrees. The hyperflexion of the front part of the pelvic ring in the sacroiliac joint is the main factor in the benefit derived. Between the uterine contractions the feet rest on a cross-bar and during the labor pain the woman grasps handles attached to the frame of the chair to aid in straining. He gives an illustration of the chair and reports two cases to show the convenience and help of the chair as it is in use at von Herff's clinic at Basle.

92. Hemorrhage in the Eye in the New-Born.—Stumpf and von Sicherer noted hemorrhage in the retina or optic nerve in 42 out of 200 children examined soon after birth. It seems evident that the stress of delivery is able to induce hemorrhage by the changes and congestion induced by the birth act. The trouble is generally the result of interference with the circulation, and he questions the after-fate of children with this hemorrhage in the eye, querying whether it might not lead later to the development of a glioma. The hemorrhage is probably the result of pressure on the head from the soft parts of the birth passage. It is particularly liable to occur in case of existing asphyxia or premature delivery, as in such cases the blood vessels are peculiarly fragile, not having reached their full development.

Berliner klinische Wochenschrift

March 1, XLVI, No. 9, pp. 381-428

- 94 Cardiovascular Symptoms with Golter. (Kropfherz.) W. Scholz.
95 Reform in Treatment of Placenta Prævia. L. Blumreich.
96 *Frequency of Tuberculosis in the Cadavers at the Berlin Pathologic Institute. (Häufigkeit der Tuberkulose am Leichenmaterial.) H. Beitzke.

- 97 Congenital Defects. (Zur Diagnose der kongenitalen Vitien.) J. Plesch.
- 98 Questionable Importance of the Ocular Reaction for Prognosis of Tuberculosis in Pregnancy. (Hat die Ophthalmoreaktion für die Prognosenstellung bei der Tuberkulose der Schwangeren Bedeutung?) S. Kammer.
- 99 *Constitution and Physical Development. (Konstitution und Körperform.) R. Lennhoff.
- 100 The Phagocyte Count as Means of Determining the Action of Tonics, etc. (Eine neue biologische Methode zur Bestimmung des Wertes von organischen Präparaten.) Piorowski.
- 101 Serodiagnosis of Syphilis with Active and Inactive Serums. (Die Wassermann'sche Reaktion bei "aktiven" und "inaktiven" Sera.) H. Boas.

96. Frequency of Tuberculosis in Hospital Cadavers.—Beitzke gives comparative tables showing the proportion of cases in which tuberculous lesions are discovered at autopsy in various cities. At the Berlin Pathologic Institute tuberculous lesions were found in 13.6 per cent. of 397 child cadavers, or, excluding the new-born, in 27.3 per cent. of 198 children, and in 41.8 per cent. of 703 adult cadavers. The general average thus for all ages is 13.9 per cent., or, excluding the new-born, 16.9 per cent. Naegeli's statement that nearly every adult has or has had tuberculosis, should be modified, Beitzke thinks, to refer only to the hospital material in large cities. It certainly does not apply to the population at large. It would be much nearer the truth, he is convinced, to say that about 50 per cent. of all adults have or have had some tuberculous lesion.

99. Tendency to Ptosis and Shape of the Body.—Lennhoff states that the distance between the neck and the symphysis, divided by the waist measure and multiplied by 100, to eliminate fractions, gives an index which is useful in studying the causes for visceral ptosis, predisposition to tuberculosis, etc. The range is between 60 and 115. The higher the index the greater the tendency to visceral ptosis, but the shape of the body alone is not enough to cause the ptosis. He gives a number of illustrations of modern and antique sculptors' models, with the index for each. The Venus of Milo has an index of 61, the Capitoline Venus 64, the Esquiline Venus 68; the index for twenty-four healthy young Samoan women ranged from 66 to 91, while for the contemporaneous sculptors' models it varied between 75 and 81.

Deutsche medizinische Wochenschrift, Berlin

March 4, XXXV, No. 9, pp. 377-424

- 102 Chronic Catarrh of Upper Air Passages. (Behandlung des chronischen Katarrhs der oberen Luftwege.) A. Hartmann.
- 103 *Serodiagnosis of Syphilis. F. Lesser. (Id. (Klinische Verwertung der Wassermannschen Reaktion.) A. Blaschko.
- 104 Antitrypsin Test in Anemia. (Die Kachexiereaktion in Vergleich zum Hämoglobingehalt und zu den Formelementen des Blutes bei Anämien und deren Beeinflussung durch natürliches Arsenwasser.) F. Brenner.
- 105 Etiology of Appendicitis. (Zur Entstehung der Wurmfortsatzentzündungen.) C. Haeblerlin.
- 106 Two Cases of Angioma of the Face or "Elephantiasis mollis angiectodes." (Zwei Blutgefäßgeschwülste des Kopfes.) A. Siegmund.
- 107 Examination of the Lungs in Apical Tuberculosis. (Zur Untersuchung der Lungen bei Spitzentuberculose.) G. Richter.

103. Serodiagnosis of Syphilis.—Lesser has applied the Wassermann test in more than 2,000 cases of syphilis and in hundreds of controls. He tabulates the findings under various headings, calling attention to the 100 per cent. of positive reactions in his 62 cases of progressive paralysis, and the change from positive to negative findings under energetic mercurial treatment while this never occurred under treatment with atoxyl. He obtained a positive response to the test in only 56 per cent. of his 61 cases of tabes; the syphilis itself may have long since been completely cured before the tabes develops, although the syphilis is the source of the process in the meninges which entails secondary degeneration of the nerve tracts with tabes as the outcome. One of the most interesting points learned in this research is that treatment must be more intense than is at present customary in order to transform the positive response to the test into a negative. The transformation of positive into negative findings was obtained only in 35 per cent. under ordinary dosage, and in a number of cases in which the reaction had become very faint under this dosage it had become positive again when the test was applied a few weeks later. He asserts

that it is necessary to continue treatment until the hemolysis in the test occurs promptly; as long as it is sluggish, treatment is required. He was never able to transform a positive into a negative reaction in children with inherited syphilis, and alcohol seems to interfere in the same way with the transformation of positive into negative findings. He succeeded in some cases in obtaining this transformation under potassium iodid. The proportion of positive responses obtained in the cases with primary sore was 69 per cent.; in the early phase with symptoms, 91 per cent.; without symptoms, 67 per cent.; in the tertiary phase with symptoms, 90 per cent.; without symptoms, 46 per cent.; in tabes, 56 per cent., and in paralysis 100 per cent. In reference to the question whether a positive response indicates that the patient has syphilis or merely has had it at some time, he points to the remarkable correspondence between the positive findings with the serum test in 46 per cent. of the syphilitics in the tertiary stage and the positive pathologic anatomic findings in 49 per cent. of all the tertiary syphilitic cadavers examined at the Moabite hospital during a period of several years. The positive response becomes weaker and weaker under specific treatment, but gradually increases again as treatment is discontinued, to be again attenuated by resumption of the treatment. This certainly seems to indicate that some agent, susceptible to the influence of mercury and iodine, is at work. He has also encountered six cases and Fleischmann three in which syphilitics presented no symptoms and the serum test was also negative, but the recurrence of manifestations of the syphilis was accompanied by positive findings with the Wassermann test. Still more instructive are cases like one reported in which on mere suspicion of syphilis specific treatment had been instituted three years before. On the basis of the positive response to the serum test another course was given, during which a typical syphilide developed. In another case treatment was advised on the basis of the positive findings with the test, and when the patient returned to commence the course, a few weeks later, he presented a number of typical syphilides on the arm, forehead and back. Lesser regards these last cases as supplying the keystone to the structure of the clinical importance of the Wassermann test. In conclusion he shows by his experience that in many cases in which the physician supposed he had given thorough treatment, in reality he had gone only half way to the desired goal. Too much stress has hitherto been laid on the cutaneous manifestations, as they were the only ones accessible. The new test permits insight into the depths.

Blaschko reviews the impressions derived from the test applied about 1,400 times in 1,000 cases. The findings were approximately the same in the syphilitics with and without manifest symptoms, and also in the early and the tertiary stages. He believes in continuing treatment, as a rule, until the reaction becomes negative, and also accepts the dictum that treatment should be instituted—even in the absence of clinical manifestations—whenever a positive response is obtained. This requires a longer course of treatment than those generally in vogue. He adds that the great achievements in medicine during the last few years render it necessary for syphilologists to go over the whole field anew by the light of the new discoveries.

Medizinische Klinik, Berlin

February 28, V, No. 9, pp. 309-342

- 108 Prevention of "Neglected Transverse Presentations"; Injection of Water to Restore the Fluid after Premature Rupture of Bag of Waters. (Zur Verhütung von "vernachlässigten Querlagen" und über Auffüllung des durch vorzeitigen Blasensprung wasserleer gewordenen Uterus.) H. Peters.
- 109 The Latest Anatomic Findings in the Heart and their Relation to Pathologic Conditions. (Die neueren anatomischen Befunde am Herzen und ihre Beziehungen zur Herzpathologie.) L. Aschoff. (Commenced in No. 8.)
- 110 *Advantages of Horseback Riding as an Exercise. (Einfluss des Reitsports auf den menschlichen Organismus.) Pickelbach.
- 111 *Relations between Skin and Kidney Affections. (Beziehungen zwischen Haut- und Nierenkrankheiten.) E. Nohl.
- 112 Latest Methods of Visual Inspection of Posterior Urethra. (Die neueren Methoden der hinteren Urethroskopie.) C. Praetorius.

- 113 Dangers of Electric Connection with the Ground. (Gefahren des Erdschlusses.) A. Schnee.
114 Determination of Viscosity of Blood. (Bestimmung der Viskosität des Blutes mittels der Apparate von Determann und Hess, nebst Beschreibung eines eigenen Viskosimeters.) E. Münzer and F. Bloch.
115 Tuberculin and Allied Remedies in Tuberculosis. F. Köhler and R. Lenzmann.

110. **Horseback Riding as an Exercise.**—Pickenbach lauds the advantages of horseback exercise. It acts on nearly every muscle in the body while the mind is interested and refreshed. He repeats in effect Oliver Wendell Holmes' remark that saddle leather would be preferable to sole leather if it were not for the financial objection, but he adds that those who can easily afford this form of exercise are the very ones who need it most and who suffer for the lack of some such stimulation of the oxidation processes. Automobiling is not a sport or exercise, he continues; it does not strengthen the body but has a debilitating effect while ruining the nervous system and injuring the general health. It can not be compared to horseback riding, much less take the place of the latter. He insists that riding outranks all other forms of physical exercise and should be regarded as a direct therapeutic measure for many habitual morbid conditions, especially for the debilitated, the neurasthenic and those with a tendency to melancholia.

111. **Relations Between the Kidneys and Skin Diseases.**—Nohl relates three cases of a peculiar infectious process localized mainly in the skin and kidneys. In the first and second cases the annoying skin affection occupied the center of the stage until examination of the urine revealed the superior importance of the kidney process, which in one case proved fatal. The urinary findings in these three cases emphasize the importance of systematic examination of the urine as a routine measure in erythema exudativum. He has observed a few cases of cystitis and pyelitis accompanying a simple rash in children.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XIX, No. 5, pp. 737-890. Last indexed March 27, p. 1072

- 116 *Experimental Research on Spinal Anesthesia. (Experimentelle Untersuchungen zur Spinalanästhesie.) H. Klose and H. Vogt.
117 *Spinal Anesthesia. (Rückenmarksanästhesie.) L. Rehn.
118 Formation of Agglutinins and Hemolysins under Action of Induced Hyperemia. (Ueber Immunkörperbildung unter der Einwirkung der Stauung nach Bier.) C. Kleiberger.
119 *Healing of Tuberculous Process in Lung under Therapeutic Pneumothorax. (Heilung des chronischen tuberkulösen Empyems mittelst künstlichen Pneumothorax.) K. F. Wenckebach.
120 Experiments with Exclusion of Small and Large Intestine. (Versuche über Ausschaltung von Dünn- und Dickdarm.) A. Albu.
121 *Importance of Gastric Hypersecretion from Surgical Standpoint. (Bedeutung des Magensaftflusses für den Chirurgen.) W. Anschütz.

116. **Local Effect of Spinal Anesthesia on Nerve Elements.**—The various findings in tests on 103 rabbits and dogs are reported in detail as observed during and after spinal anesthesia. They were similar to those reported by Spielmeyer last year from research on animals and from postmortem examination of thirteen individuals soon after stavain spinal anesthesia. In one case the stavain was regarded as the direct cause of death. In the experiments of Klose and Vogt the motor cells in some cases showed chromolysis or swelling of the cells with achromatosis—changes resembling closely those observed after severing of the axis cylinder. The cells affected were almost invariably the large motor cells of the anterior and lateral horns. When physiologic salt solution was injected, in place of the anesthetic, no such changes in the cells were apparent, demonstrating that they were not of mechanical origin. Direct injection of the anesthetics into the substance of the cord further confirmed their toxic action. The changes found were evidently reparable in most cases, but a few were encountered in which the nuclei showed such pronounced changes that restitution was manifestly out of the question. None of these changes developed during the first few days after the anesthesia; they were not found until after a few days or weeks. The literature on the sub-

ject is reviewed but only the articles of van Lier, Wossidlo and Spielmeyer dwell predominantly on the direct action of the anesthetic on the nerve elements.

117. **Spinal Anesthesia.**—Rehn's article was one of the addresses at the recent International Surgical Congress; he reviews the history and statistics of the method of spinal anesthesia first systematically used by Bier nine years ago. The experimental work reported in the preceding article was done in his clinic to throw further light on the circulation in the cerebrospinal fluid and absorption of drugs from the subarachnoid space and their action on the nerve fibers, and whether the spinal cord is more sensitive to spinal injection of an anesthetic in diabetes, tabes, suppurations, cachexia, etc. His conclusions are that spinal anesthesia is by no means an absolutely harmless measure. Individual differences are uncommonly far-reaching and important. In the elderly, the physiologic hardening of the tissues renders them less sensitive, so that spinal anesthesia is more dangerous the younger the individual. If there is anywhere a place of minor resistance—even latent—the danger is immeasurably enhanced. He summarizes the details of nine cases of severe collapse—one fatal—from Körte's service and three from Brentano's service, with also one fatality. In his own service there were two fatalities in 300 cases. He adds in conclusion that surgeons generally agree in regarding high anesthesia as dangerous and that it is best not to seek to realize it. Also that there is little prospect of localizing the action of the anesthetic in the subarachnoid space; further that spinal anesthesia is not to be recommended for the young, but the changes of age increase the tolerance so that this technic is indicated more for the elderly. It is strictly contraindicated by suppuration, advanced arteriosclerosis, disturbances in the central nervous system, and possibly, also, by widespread tuberculosis. The spinal technic should never be applied when local anesthesia or the first whiffs of ether would have sufficed. Rehn adds that Bier's new intravenous method will certainly limit still further the field of spinal anesthesia. To obtain a correct judgment of this technic a collective inquiry and statistics to include all countries are urgently required. These statistics should include all the circumstances which might prove of importance, even the so-called harmless by-effects.

119. **Treatment of Chronic Tuberculous Empyema by Artificial Pneumothorax.**—Wenckebach states that two out of the three cases reported display the remarkable benefit that may be derived from the simple measure of evacuating the pus and introducing air into the closed chest. The patients were in a threatening condition when he aspirated the pus in amounts up to 2 liters. The rubber tube through which the fluid was aspirated was closed with a stop-cock; the tube was plugged with sterile cotton, the stop-cock opened and air allowed to enter the chest. The patients breathed with a sigh of relief as the oppression and pain ceased. The puncture hole was then closed. The absorption of the air left a partial vacuum and the negative pressure resulting was sufficient to draw out the lung so that it expanded finally and the patients were practically cured. He commends this simple technic to every physician as often an effectual means of treating chronic tuberculous empyema, transforming the pyothorax into a pyopneumothorax, repeating the injection of air at intervals of from three to six weeks. By the end of eleven weeks in his first case there was no further trace of either the pyothorax or pneumothorax, as also after fifteen months in the other case. Air answers the purpose just as well as oxygen, and there is no necessity for complicated apparatus or a mutilating operation. In the third case the results were less favorable, and the experience with this case indicates that success depends on the lung being in contact at some point with the chest wall. He discusses in conclusion other conditions in which this technic might be applied; it seems to promise good results in chronic serous pleurisy and in protracted acute empyema under open treatment. It seems evident that if the wound were closed repeated puncture with admission of air would hasten the healing.

121. Importance of Gastric Hypersecretion from the Surgical Standpoint.—Anschütz discusses the influence on operations of chronic gastrosuccorhea with motor insufficiency, reporting four extreme cases and two of less intensity. Chronic hypersecretion without motor insufficiency is very rare. A gastroenterostomy can be recommended to patients who suffer from frequent recurring disturbances notwithstanding extreme care in the diet and it should not be deferred too long. The acute form of gastric hypersecretion, especially with periodical or intermittent symptoms, is of nervous origin in most cases. In acute dilatation of the stomach with intense hypersecretion a simple gastrostomy may give relief when all other measures fail; the indications are the same as for enterostomy in ileus. In one such case reported, this alone undoubtedly saved the patient. Hypersecretion injures further the already damaged function and deserves the attention of surgeons, especially in severe motor insufficiency and in acute or postoperative stomach disturbances. If excessive secretion is superposed on stenosis of the pylorus, the indications may be more radical than for the motor insufficiency alone. The details of nine of ten cases of hypersecretion interesting the surgeon are given in full.

Monatsschrift für Geburtshilfe und Gynäkologie, Berlin

February, XXXIX, No. 2, pp. 141-264

- 122 **Tabes Dorsalis in Women during Childbearing Period.* (Tabes dorsalis im Geschlechtsleben der Frau.) M. Penkert.
- 123 *Injuries of Intestines in Gynecologic Operations.* (Darmverletzungen bei gynäkologischen Operationen.) A. Barth.
- 124 *Intracellular Streptococci in Puncture Fluid.* (Ueber einen seltenen Befund von intrazellulären Streptokokkenketten im Spinalpunktat.) E. Sachs.
- 125 **Experimental Study of Treatment of Puerperal Fevers.* (Zur Behandlung des Puerperalfiebers.) W. Zangemeister.
- 126 *Indications for Operation in Chronic Inflammatory Affections of the Ovaries and Fallopian Tubes.* L. Prochownick.
- 127 *Unusual Metastases of Uterine Carcinoma, in Muscles, Ureters, Glands, and Mediastinum.* H. Offergeld.

122. Tabes During the Childbearing Age.—Penkert has found eight cases on record of pregnancy in women with tabes, mostly in an advanced phase, and has encountered a case in his own practice. His patient was a i-para of 27, free from acquired syphilis but with a possible paternal heredity. After the commencement of the pregnancy lancinating pains recurred regularly every two or four weeks, followed by ecchymoses on the legs and intense gastric crises. The pupil and knee reflexes were abolished. Penkert declares that every case of vomiting spells recurring at intervals of two, three or four weeks suggests possible tabes, and the physician should be very cautious about advising interruption of a pregnancy on this account as the uncontrollable vomiting is liable to continue afterward. In his case the distressing vomiting was the most prominent symptom and seemed to be ordinary hyperemesis gravidarum in a nervous hysterical woman. But hysteria could be excluded and the persisting healthy aspect in spite of the recurring vomiting suggested its special nature. Gastric crises have been noted in nearly 50 per cent. of the cases of tabes in women on record. The absolute absence of pains during the childbirth confirms the assumption that the most important nerves for the genitalia are the uterine paracervical and paravaginal ganglia. These autonomous ganglia do not atrophy in tabes and other affections of the spinal cord, and thus the functioning of the uterus is not interfered with. The pregnancy does not have an unfavorable influence on the tabes, and consequently there is no necessity for artificially terminating it. Some recent theses have reported experiences which show that the children born of tabetic mothers are apparently healthy and develop normally.

125. Treatment of Puerperal Fever.—Zangemeister thinks that the principle of drainage should be applied to the puerperal as to any other surgical wound. He has cured mice—which are peculiarly susceptible to streptococcus infection—by prompt removal of the focus in an infection otherwise inevitably fatal in two or three days. By increasing the resistive power by injection of antistreptococcus serum, the removal of the focus proved successful even at a much later period. In case of puerperal peritonitis, good results

may follow repeated evacuation of the pus from the abdominal cavity, not attempting continuous drainage. His research has shown the advantages of puncturing the abdomen at the first signs of diffuse peritonitis and rinsing out the abdominal cavity with several liters of warm salt solution, similar to lavage of the stomach or bladder, concluded by pouring into the abdominal cavity a pint of salt solution containing from 0.5 to 1 per cent. nuclein or a solution of adrenalin. He remarks that the estimation of the efficacy of any drug is particularly difficult in puerperal fever owing to its erratic course. "Brilliant successes" have been reported in puerperal fever with remedies which time has shown later to be absolutely worthless. No medicinal preparation should be tried on man, he reaffirms, until after extensive tests on animals.

Münchener medizinische Wochenschrift

March 2, LVI, No. 9, pp. 433-488

- 128 *Manifestations of Phosphorus Poisoning.* (Vorgänge der Zelldegeneration, der Entzündung und Neubildung bei den verschiedenen Arten der Phosphorvergiftung.) E. Harnack.
- 129 **Behavior of Heart and Lungs After Abdominal Operations.* (Verhalten der Lungen und des Herzens nach abdominalen Eingriffen.) A. v. Lichtenberg and L. Müller.
- 130 *Tubercle Bacilli in Cheesy-Chalky Glands.* (Gehalt käsig-kreidiger Lymphdrüsen an Tuberkelbazillen.) L. Weiss.
- 131 *Lymph Follicles in Bone Marrow of Children.* (Lymphfollikel im kindlichen Knochenmarke.) C. Oehme.
- 132 **Frequency of Tuberculosis in Children.* (Die Tuberkulosehäufigkeit im Kindesalter.) F. Hamburger and R. Monti.
- 133 *Etiology of Appendicitis.* O. Klauber.
- 134 *Bezold's Functional Tests of Hearing and Deafmutism.* F. Wanner.
- 135 *Pubiotomy.* (Beitrag zur Nebosteotomie.) H. Völker.

129. Behavior of Lungs and Heart After Abdominal Operations.—A recent compilation by Lichtenberg shows that complications on the part of the lungs were responsible for the fatalities after operation on the stomach in 29 per cent.; after operations on the biliary passages in 15 per cent.; in 25 per cent. after herniotomies, in 44 per cent. after operations for goiter, and in 20 per cent. after gynecologic operations. In order to understand the reasons for this he has been making a special study of the condition of the heart and lungs before operations and at various intervals afterward. The findings in 100 cases are tabulated under different headings. They show that postoperative complications on the part of the lungs are far more common than is generally recognized. It is almost certain that many a slight, brief increase in temperature in the first few days after aseptic operations is the work of these occult pulmonary complications. Physical signs of these pulmonary complications are evident as early as the second, third or fourth day; they do not amount to pneumonia but rather provide the soil on which pneumonia develops or they may retrogress entirely in a few days without inconveniencing the patient to any appreciable extent. His series included operations under chloroform, ether or both, local anesthesia and spinal anesthesia, but he never found evidence that any special mode of anesthesia had more influence on the development of postoperative pulmonary complications than the others. His experience confirms the extreme rarity of pneumonia due directly to the inhaled anesthetic; an embolic process is evidently responsible for the postoperative pulmonary complications in the vast majority of cases, but a hypostatic origin must be accepted in a few isolated instances. Pronounced heart disease seems to be less important as a factor than comparatively slight changes in the vascular system and myocardium, and these deserve more attention from this point of view. He adds that the difference in the outline of the heart during inspiration and expiration becomes somewhat modified in the presence of these occult pulmonary complications. The changes in the pulse curve are also important from the standpoint of therapeutics to tide the patient past the danger point, as this curve allows oversight of the condition of the organs of circulation.

132. Frequency of Tuberculosis in Children.—Hamburger and Monti give the tabulated findings of tuberculin tests applied to 509 children under treatment in the public hospitals for scarlet fever, diphtheria, typhoid, meningitis or trauma. The Pirquet cutaneous test was applied first; in

case of a negative response 0.1 or 1 mg. tuberculin was injected subcutaneously. Positive reactions were obtained in 271 children, and the proportion of positive responses increased from 9 per cent. at the age of 2 to 51 per cent. at 6; 85 per cent. at 10, and from 93 to 95 per cent. between 11 and 14. The cutaneous test was negative in a number of cases in which the subcutaneous test later induced a positive reaction. In every case with a positive reaction that came to autopsy, some tuberculous focus was discovered, although none of the affections for which the children were being treated had any connection with tuberculosis.

Therapie der Gegenwart, Berlin

March, L, No. 3, pp. 121-168

- 136 Arteriosclerosis in Light of Experimental Research. C. Benda.
137 *Pneumonia in Children. (Kinderpneumonia.) A. Baginsky. Commenced in No. 2.
138 *Dependence of Disease on Economic Conditions. (Abhängigkeit der Krankheiten von ökonomischen Verhältnissen.) F. von den Velden.
139 *Importance of Appetizers. (Grundsätze für den Genuss der Genussmittel.) W. Sternberg.
140 Treatment of Genu Valgum. G. Müller.
141 Pantoscopic Spectacles for the Elderly. (Korrektion der Alterssichtigkeit durch pantoskopische Augengläser.) E. A. Heimann.

137. **Pneumonia in Children.**—Baginsky refers to acute fibrinous pneumonia in which the task of the physician is mainly to watch over the curative efforts of Nature, restraining them within due bounds and guiding them in proper paths. In this form of pneumonia the dyspnea and pains are the expression of direct intoxication. Under the influence of the fever, antitoxins are generated which neutralize the toxins; the fever must only be kept from excess. This is accomplished by different physicians in the ways which experience and observation have taught them to be most efficient. Baginsky's own method is to refrain from drugs; a temperature of 104 to 106 F. for a few days is not alarming in a child, but the pain and dyspnea should be relieved, and for this he has found a local ice bag over the affected lung beneficial. A second ice bag is applied to the head. Only when delirium, stupor and continuous excessively high temperatures demand further measures he orders cold packs or cooling baths once or twice a day. He lays great stress on a nourishing diet, milk, eggs, bouillon and a little wine. He regards wine as the best tonic and stimulant that can be given to children, not on account of its alcohol content but for its effect as a whole. Under these measures pneumonia has come to be the most successfully treated of all the infectious diseases in his experience. In exceptional cases digitalis, camphor or saline infusion may be necessary. If the children are very anemic he also gives iron; in the progressive form he finds potassium iodid very useful. The elasticity of the heart in childhood obviates the danger of overfilling of the right heart with blood, and consequently there is less tendency to edema of the lungs which is so prevalent in pneumonia in adults. In the very rare cases in which this sequence is observed, prompt venesection may prove a life-saving measure. To do the right thing at the right time and not to do too much is the task of the physician in acute fibrinous pneumonia. In bronchopneumonia the indications are entirely different. Active measures are required to strengthen the patient and to equalize the temperature in the internal organs and the skin. During convalescence from both forms, special care must be taken to keep dust, smoke and foul air out of the lungs. He does not advocate measures at any time to "toughen" children, and regards them as actually dangerous after pneumonia.

138. **Dependence of Disease on Economic Conditions.**—Velden has been studying the statistics of the Gotha life insurance company and has unearthed some interesting facts. The mortality of the comparatively poor and very rich and all stages between is shown to be about the same, but tuberculosis and pneumonia seem to prevail almost exclusively among the less well-to-do, while the wealthier insured supply by far the largest contingent of mental affections, diabetes and acute articular rheumatism, kidney diseases and affections of the circulatory system. The findings in regard to acute articular

rheumatism seem to indicate that internal causes are the main factors—possibly congenital, possibly a lack of proportion between the food and the oxidations—instead of infection. Its prevalence among the well-to-do in these tables thus throws some light on its etiology. The table shows that every station in life has its injurious influences so that there is more of an equality in the destinies of men than is generally accepted. The figures related include 6,393 insured for the smaller amounts, 9,329 for larger and 4,258 for the largest sums.

139. **Importance of Appetizers.**—Sternberg's article is an energetic protest against the serious mistake of regarding food exclusively from the standpoint of the chemist. This one-sided view leaves out of account all the important reflex processes started by the senses of smell and taste. Drugs and food, he declares, should be regarded from entirely different standpoints. Food that pleases the palate stimulates the appetite. Not one of the artificial foods on the market is able to arouse the appetite and make the patient want to eat. These artificial foods should, therefore, be rejected on principle. If they were really so valuable a mode of nourishment as the manufacturers proclaim, they would be better adapted for the well than for the sick, as the well do not need so much to have their appetite coaxed. He adds that all drugs almost without exception, destroy the appetite. Among the numerous preparations there is scarcely one which stimulates the appetite; many of them even cause nausea and vomiting or at least depress the appetite. He adds that these views have the most important consequences for medical practice; the general practitioner obtains entirely new standpoints in regard to all substances used as additions to food, not in themselves essential, such as condiments, tobacco, spirits, etc. The question of abstinence for the sick and the well thus assumes an entirely different aspect.

Wiener klinische Wochenschrift, Vienna

March 4, XXII, No. 9, pp. 293-326

- 142 *Hyperemia of Liver During Menstruation. (Zur Frage der Beziehungen zwischen Leber und Drüsen mit innerer Sekretion.) F. Chvostek.
143 *Functional Diagnosis of Pancreatic Affections. O. Schwarz.
144 Treatment of Tuberculosis. A. Krokiewicz.
145 *Etiology of Dental Periostitis. B. Mayrhofer.

142. **Menstrual Hyperemia of the Liver.**—Chvostek has been having a large number of women examined in the course of research on the relations between the liver and glands with an internal secretion. He found in all but three of thirty women thus examined that the liver increased in size during the menstrual period, the lower margin of the liver showing an increase in size amounting to one or two fingerbreadths or even more. There was nothing in these cases to indicate pathologic conditions in the liver, kidneys or circulatory organs. In one case urobilin appeared in the urine during the menses although it vanished at other times, and the liver and intestines seemed apparently normal. These facts establish, he thinks, a close connection between the liver and the genital glands; probably the hyperemia in the liver is the work of the internal secretion of the ovaries at this time. This close connection between the liver and the genital glands throws light on the toxicoses of pregnant women, although mechanical or metabolic factors may cooperate in the general effect produced. The findings of the research reported also make more comprehensible the abnormal course of liver affections during menstruation and pregnancy.

143. **Functional Diagnosis of Pancreatic Affections.**—Schwarz reports from von Eiselsberg's clinic at Vienna about two dozen cases of various pancreatic affections in which comparative tests of the functioning of the pancreas were made with Sahli's glutoid test, Schlecht's trypsin test and Cammidge's reaction. He was impressed with the important information to be obtained by means of these tests for the diagnosis of direct or reflex influencing of the functioning of the pancreas. The Cammidge test proved especially reliable as the findings were confirmed by the ultimate course of the cases. His experience suggests that the Cammidge reaction is the expression of some disturbance in the functioning of

the pancreas in respect to carbohydrate metabolism, as the findings were invariably positive when the clinical and experimental findings revealed such. He comments further on the frequency of a positive reaction with a circumscribed tumor in the pancreas, the rarity of true diabetes in such cases and the negative findings after successful extirpation of the lesion in the pancreas. The experiences related confirm the influence of the nerves on the functioning of the pancreas; even small circumscribed foci are liable to injure the functioning of the organ by reflex action. In one case, the Camidge reaction was very pronounced, although the patient was apparently perfectly well; an operation had been done eighteen months before for incarcerated hernia in which nearly six feet of small intestine had been removed (5½ meters).

145. **Etiology of Dental Periostitis.**—Mayrhofer has found that streptococci can develop in the depths of a tooth when a layer of cotton and the filling above are sterile and airtight. He has traced the source of reinfection in these cases to streptococci lurking in the depths of the tubules of the dentine of the root. They escape in these sheltered nooks the action of even the most vigorous antiseptic cleansing of the cavity. He found them in more than 200 cases. Staphylococci seem to be unable to proliferate in these minute tubules as they grow in bunches, but the streptococci, proliferating in lengthwise chains, find conditions favorable for their development. They may lie latent for months and years until aroused by some lowering of the general resistive vitality from chilling or other cause. He suggests further the possibility that these streptococci lurking in the depths of the tubules in the dentine may be responsible at times for the development of puerperal fever, erysipelas, pyemia and sepsis, as well as of alveolar pyorrhea and bone processes. His article is based on research in 240 cases of gangrene of the pulp.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 14, XXX, No. 19, pp. 193-208

- 146 *Syphilitic Rabbit Cornea as Antigen for Serum Diagnosis of Syphilis. (Cornea sifilitica del coniglio nella reazione del Wassermann.) F. Simonelli.
147 *Hemorrhagic Purpura and Syphilis. (Il morbus maculosus Werlhof e la sua origine sifilitica.) G. Paronzi.

February 16, No. 20, pp. 209-216

- 148 *Familial Pleurisy or Myxedema? (Una famiglia di pleuritic o di mixedematosi?) E. Leonardi.

February 21, No. 22, pp. 225-240

- 149 Cocain Spinal Anesthesia. (Sulla rachicocainizzazione.) E. Morganti.

146. **Rabbit Cornea as Antigen for Serodiagnosis of Syphilis.**—Inoculation of the cornea of rabbits with syphilitic material results in the production of a typical parenchymatous keratitis, and Simonelli states that the extract of the infected cornea has the same specific action as material from syphilitic fetuses in applying the Wassermann test. He cites a dozen clinical cases in which serodiagnosis with the extract of syphilitic rabbit corneas, fresh or desiccated, gave results identical in every respect with those obtained with antigens from ordinary sources. The desiccated extract has proved fully as effectual as the fresh in his experience, and he advocates the use of the rabbit cornea as a readily accessible and reliable means of obtaining the antigen for the test.

147. **Syphilitic Origin of Hemorrhagic Purpura.**—Paronzi relates the details of a case of Werlhof's disease in a girl of 8 whose foster-mother had proved to be syphilitic. The child was given specific treatment at the age of 4 on account of ulceration of the gums, and when the purpura developed four years later it also yielded to vigorous external mercurial treatment with potassium iodid internally.

148. **Familial Pleurisy or Myxedema.**—Leonardi queries whether to refer to a pleuritic or myxedematous origin the familial tendency described. The pleura filled up at times with an effusion requiring several tapplings, but it was never accompanied by fever or pain and it left no after-effects. Three of the sons at puberty and the mother at the menopause and one sister presented this syndrome and it appeared

again in the second generation. None of the members of the family has developed tuberculosis. They all live in a deep narrow mountain valley and are pale, with a slightly jaundiced complexion and puffy eyelids. He is inclined to ascribe the tendency to defective thyroid functioning.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE PROBLEM OF AGE, GROWTH, AND DEATH. A Study of Cyto-morphosis Based on Lectures at the Lowell Institute, March, 1907. By Charles S. Minot, LL.D., D.Sc., James Stillman Professor of Comparative Anatomy in the Harvard Medical School. Cloth. Pp. 280, with illustrations. Price, \$2.50. New York: G. P. Putnam's Sons, 1908.

MANUAL OF OPERATIVE SURGERY. By John Fairbairn Binnie, A.M., C.M., Professor of Surgery, Kansas State University. Volume I. "Operations on the Head, Neck, Nerves, Trunk, Genito-Urinary System." Fourth Edition. Flexible Leather. Pp. 832, with illustrations. Price, \$3.50. Philadelphia: P. Blakiston's Son & Co., 1909.

MANUAL OF DISEASES OF THE EAR. By Thomas Barr, M.D., Lecturer on Diseases of the Ear, Glasgow University, and J. Stoddart Barr, M.B., Ch.B., Assistant to Lecturer on Diseases of the Ear, Glasgow University. Fourth Edition. Cloth. Pp. 477, with illustrations. Price, \$4.50. New York: The Macmillan Co., 1909.

THE THERAPEUTICS OF RADIANT LIGHT AND HEAT AND CONVECTIVE HEAT. By William Benham Snow, M.D., Author of "A Manual on Electro-Static Modes of Application, Therapeutics, Radiography, and Radiotherapy." Cloth. Pp. 119. Price, \$2. New York: Scientific Authors' Publishing Co., 349 W. 57th St.

A TEXT-BOOK OF MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS. By George F. Butler, A.M., Ph.G., M.D., Professor and Head of the Department of Therapeutics, Chicago College of Medicine and Surgery. Sixth Edition. Cloth. Pp. 708. Price, \$4. Philadelphia: W. B. Saunders Co., 1908.

A TEXT-BOOK OF MEDICAL CHEMISTRY AND TOXICOLOGY. By James W. Holland, A.M., M.D., Professor of Medical Chemistry and Toxicology, and Dean, Jefferson Medical College, Philadelphia. Second Edition. Cloth. Pp. 655, with illustrations. Price, \$3. Philadelphia: W. B. Saunders Co., 1908.

A SYSTEM OF OPHTHALMIC THERAPEUTICS. Edited and Chiefly Written by Casey A. Wood, M.D., C.M., D.C.L., Late Professor of Ophthalmology and Head of the Department, Northwestern University Medical School. Cloth. Pp. 926, with illustrations. Price, \$7. Chicago: Cleveland Press, 1909.

REFRACTION AND HOW TO REFRACT. By James Thorington, A.M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine. Fourth Edition. Cloth. Pp. 324, with illustrations. Price, \$1.50. Philadelphia: P. Blakiston's Son & Co., 1909.

THE HERTER LECTURES (NEW YORK, 1908) ON THE FLUIDS OF THE BODY. By Ernest H. Starling, M.D., F.R.C.P., F.R.S., Jodrell Professor of Physiology in the University College, London. Cloth. Pp. 186, with illustrations. Price, \$2. Chicago: W. T. Keener & Co., 1909.

HANDBUCH DER BIOCHEMIE DES MENSCHEN UND DER TIERE. Herausgegeben von Prof. Dr. Phil. et Med. Carl Oppenheimer, in Berlin. 14th installment. Paper. Pp. 240. Price, 5 marks. Jena: Verlag von Gustav Fischer, 1909.

PRIMARY STUDIES FOR NURSES. By Charlotte A. Aikens, Late Director of Sibley Memorial Hospital, Washington, D. C. Cloth. Pp. 435, with illustrations. Price, \$1.75. Philadelphia: W. B. Saunders Co., 1909.

NOTES AND THOUGHTS FROM PRACTICE. By W. J. Tyson, M.D., F.R.C.P., F.R.C.S., Hon. Physician, Victoria Hospital, Folkestone. Paper. Pp. 95. Price, 2 shillings. London: John Bale, Sons & Danielsson, 1909.

EPOCH-MAKING CONTRIBUTIONS TO MEDICINE, SURGERY AND THE ALLIED SCIENCES. Collected by C. N. B. Camac, A.B., M.D. Cloth. Pp. 435, with illustrations. Price, \$4. Philadelphia: W. B. Saunders Co., 1909.

BANCROFT TRAINING SCHOOL FOR MENTALLY SUBNORMAL CHILDREN. Haddonfield, N. J. Manual of the Course of Study. Arranged by Margaret Bancroft and E. A. Farrington, B.S., M.D. Paper. Pp. 120.

HANDBOOK FOR ATTENDANTS ON THE INSANE. Fifth Edition. Published by the Authority of the Medico-Psychological Association. Cloth. Pp. 390. Price, \$1. Chicago: W. T. Keener & Co., 1909.

FOURTH ANNUAL REPORT OF THE TRUSTEES OF THE RHODE ISLAND STATE SANATORIUM, at Wallace Lake, to the General Assembly at January Session, 1909. Paper. Pp. 90.

AN INTRODUCTION TO THE SCIENCE OF RADIO-ACTIVITY. By Charles W. Rafferty. Cloth. Pp. 208, with illustrations. Price, \$1.25. New York: Longmans, Green & Co., 1909.

VERHANDLUNGEN DER BERLINER MEDIZINISCHEN GESELLSCHAFT. 1908. Band xxxix. Paper. Pp. 505. Berlin: Druck von L. Schumacher, 1909.

ANNUAL REPORT OF THE LIBRARY COMMITTEE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, 1908. Paper. Pp. 8.

TWENTY-SEVENTH ANNUAL REPORT OF THE STATE HOSPITAL FOR THE INSANE at Warren, Pa. 1908. Paper. Pp. 121.

STATE OF NEVADA, BIENNIAL REPORT OF THE ORPHANS' HOME DIRECTORS, 1907-8. Paper. Pp. 28.

SEVENTEENTH ANNUAL REPORT OF BETHANY HOME OF RHODE ISLAND, 1908. Paper. Pp. 22.

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Address

THE DISCHARGE OF SEWAGE INTO TIDAL WATERS *

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NEW YORK

The necessity for taking steps to protect the sanitary condition of tidal waters arises chiefly from the plan, now almost universally followed, of employing water to carry off, through sewers, the excrement of the inhabitants of cities.

Originally intended for storm water only, sewers began to be extensively used for the water carriage of excrement about sixty years ago. At that time, and for years afterward, it was not anticipated that the capacity of rivers and harbors for sewage could be exceeded; the only problem seemed to be how to get the offensive material away from the houses and streets of cities and into natural bodies of water with the least inconvenience and expense.

With the progress of time and the growth of cities the amount of sewage disposed of in this manner has enormously increased. Rivers which once furnished wholesome supplies of drinking water and were a source of pleasure and health have become infested with disease germs and have produced some of the most intense epidemics of modern times. Some streams and tidal estuaries have become so overloaded with filth as to give rise to odors of great offensiveness and extent. In such cases fish life is impossible. The water is blackened and putrid. The paint of ships and buildings is discolored and bubbles of foul gases arise from the liquid, giving it the appearance of effervescence. This is the extremity of sewage pollution, but cases of it are not, unfortunately, difficult to find. The river Thames was in this condition between 1848 and 1855 and again in 1875. The river Seine below Paris is in a similar condition now. The Chicago River, the Buffalo River and the Passaic River are familiar examples in America. Many tidal harbors where sewage is disposed of in quantity are capable of affording an object-lesson of the unpleasant consequences which follow when the capacity of water is overtaxed.

EXAMPLES OF PROTECTED HARBORS

There are several cities in Europe and America which have found it necessary to protect their tidal waters against excessive sewage pollution. This is usually done by the construction of public works to divert and purify the sewage. London partly purifies its sewage with chemicals and ships to sea 7,500 tons of the resulting

sludge each day. The city of Glasgow treats its sewage in the same way. Dublin, Belfast and Hamburg all protect their harbors against excessive sewage pollution by public works which have cost large sums of money. In the United States the city of Boston and many municipalities in its vicinity have combined to carry their sewage far out into the harbor in order to prevent excessive pollution near the shores. The city of Providence purifies its sewage after the London principle. Baltimore, the latest American city to adopt a scheme of harbor protection, is constructing an elaborate system of sewage purification, including sedimentation, filtration and probably disinfection.

New York is the largest seaport which has no definite plan or policy with respect to sewage disposal. The liquid wastes of over 6,000,000 people are discharged into New York harbor without any purification or regulation whatever.

Not only are the waters of many of the greatest seaports protected from excessive sewage pollution, but works for purifying sewage or, at least, diverting it from points where it would become a nuisance, are becoming increasingly common for inland cities. Of the twenty-six cities of Europe and America which have populations of over 500,000, about one-half purify their sewage or follow some other carefully devised plan for disposing of it. Of the nine cities of 1,000,000 inhabitants or more, three purify their sewage; one carries it to a distance by an especially built canal and the remainder discharge their sewage into great bodies of water without any plan or concern as to its ultimate fate. Accurate statistics are not available to show how large is the aggregate sum of money invested in all the sewage disposal plants which exist, but some idea of the magnitude of these undertakings can be had from the fact that there are works for the purification of the sewage of not less than 18,000,000 people.

THE SELF-PURIFICATION OF HARBORS

The capacity of a harbor for assimilating sewage without offense varies according to its size and shape and situation with reference to the tidal currents which flow to and from the ocean.

In most harbors there is an oscillation of the main currents which causes floating matter to be carried back and forth on the same path, sometimes for many miles at each tide, before escaping to sea. In the port of London the tidal oscillation often has a range of ten miles or more. It has repeatedly been proved that it takes from twenty-five to seventy days for water to pass from the upper end of London to the North Sea by this course. In Dublin harbor, on the other hand, there are seaward-moving currents which carry the sewage away from the shore toward the Irish Sea at practically all stages of tide. In most instances the oscillating currents have a net seaward gain. This gain results from

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land water which flows into the harbor from streams near its head.

The sewage of some cities, as Boston and Hamburg, for example, is stored in reservoirs and discharged only on outgoing tides. When sewage is discharged on a rising tide the offensive matters are not only apt to be carried toward the land, but they are likely to be deposited on the shores. This is particularly true in long and narrow harbors. As is well understood by rivermen, rising stages of the water carry floating things ashore, falling stages draw them to the middle of streams.

The harbor of New York is peculiar in that it has two ocean entrances. At these entrances the tidal periods are different, high water occurring a little later at Hell Gate than at the Narrows. Owing to this difference, there seems to be a movement of sea water from Long Island Sound through the East River and upper bay southward through the Narrows in excess of the water which flows in the opposite direction. This excess may be very slight, but there is reason to believe that it exists. It is most important to be sure about this matter, for it may be that this harbor has been endowed by Nature with an automatic flushing arrangement which can be turned to good account in keeping the harbor clean. This subject is now being studied by the Metropolitan Sewerage Commission, and a full report on it may be expected within about one year.

In nearly all harbors there are places where the water does not circulate in such a way as to produce a sufficient flushing action, and under these circumstances trouble from sewage pollution often occurs. No better illustration of such conditions can be afforded than those which occur in some parts of the harbor of New York. The Gowanus Canal, Newtown Creek and Passaic River are notorious examples of arms of tidal harbors which are supersaturated with sewage. How to relieve the inhabitants of such districts of these insanitary surroundings without producing evils which will affect still larger numbers of persons is often a very serious problem.

When sewage is discharged into harbor water it flows away in a stream, which is more or less well defined, depending on the clearness and smoothness of the harbor water. Offensive conditions are often produced before assimilation takes place. These offensive conditions include unpleasant odors, discoloration of the water, the production of a greasy film and the appearance of solid matters, such as feces, paper, matches, corks, fruit and vegetable refuse, bread and similar refuse. Some solid matter is deposited, the sedimentation of solids taking place much more rapidly in sea water than in land water. The deposited solids often putrefy and give off large quantities of offensive gases. It is not uncommon to see the water about the docks of the New York metropolitan area effervescing with gas from the sewage pollution.

On the British coast the location of sewer outfalls is marked by flocks of gulls which feed on the scraps of rotting refuse which the sewage contains. In New York City gulls both feast on the sewage of the harbor and visit the reservoir of drinking water in Central Park.

It has been found by experience and experiment that harbor water has a large capacity for inoffensively assimilating sewage, providing most of the suspended solids are first removed and the sewage is added properly. Money considerations usually make it

necessary to take this assimilative capacity very carefully into account. Sanitary experts have given much attention to the question of the self-purification of water, and it is not strange that some believe it to be possible to state with exactness how much sewage a given quantity of water can assimilate.

One of the problems which engineers must consider when planning to discharge sewage into a tidal harbor is how to arrange the outfalls so that the sewage will become promptly mixed with the tidal water. It is important that the point of discharge should not be at the shore line, nor so situated that the currents or wind will bring the sewage to the shore. It is equally plain that no sewage should empty into a part of a harbor where there is not a net seaward discharge capable of carrying the refuse away. Discharge only on outgoing currents is less certainly necessary, but is probably wise policy under many circumstances. Very little is known concerning the effect of submerging the outfall to a depth below the surface of a harbor or dividing the discharging sewage into a number of neighboring streams, although it would seem that whatever tends to aid diffusion in this way would be beneficial. Diffusion is at the very heart of the question of utilizing the digestive power of a harbor for sewage.

THE ARTIFICIAL PURIFICATION OF SEWAGE

Engineers are agreed that there is no insuperable difficulty about purifying sewage, except the cost. It would not be beyond the range of practicability to collect all the sewage of New York and its neighboring municipalities, amounting to, perhaps, 500,000,000 gallons per day, and convert it into a harmless and inoffensive liquid. But the expense of building and maintaining the works necessary to accomplish this purpose would be enormous. Fortunately it is not always necessary to collect and purify all the sewage which is produced in the cities bordering on a tidal harbor, even when careful measures of protection are required—it may be enough to purify the discharge of some of the principal sewers. Similarly the highest degree of purification may not be necessary in every case, but only such improvement may be required as will make the sewage harmless when finally discharged into the tidal waters.

Contrary to general belief, the manurial ingredient of sewage can not be recovered in such a way as materially to reduce the expense of handling it. Theoretically the manurial value of sewage is \$1 to \$1.2 per capita per year, but there seems to be no city in the world which is handling its sewage at a profit. It is true that some large cities, notably Paris and Berlin utilize their sewage by irrigating farm land with it, but this requires great areas of territory and is profitable only where the soil is suitable and cheap or the sewage is useful for the water which it contains. Some kinds of land are entirely unsuited for this purpose.

A large part of the manurial ingredients can be extracted by passing the sewage through tanks, in which the solid particles can be made to settle out without the aid of chemicals. But this process requires the handling of large volumes of a bulky sludge containing 90 to 95 per cent. water. This sludge can not be utilized without drying or pressing, and these procedures are very expensive. If the sewage of New York were treated by precipitation with chemicals, it is estimated that about 14,000 tons of sludge would be produced each day.

The bacterial processes of purifying sewage which have been developed in the last ten years do not aim to recover the fertilizing ingredients. Their sole object is to dispose of the impurities in a harmless and inoffensive manner and with the least expenditure of time and money. Many of these bacterial processes are of much scientific interest. Considerable progress is being made in improving them. Very novel bacterial works for the disposal of sewage are now being constructed at Belfast, where it is expected that a certain amount of the organic matter will, through the action of micro-organisms, be driven into the atmosphere in the form of an inert and harmless gas. It is necessary in this case to keep even the usual mineral ingredients of purified sewage out of the harbor as far as practicable, lest they serve as a manure for the excessively luxuriant growth of sea lettuce which, under present conditions, constitute a public nuisance near Belfast.

If sewage is screened and passed through properly constructed settling tanks, the visible particles may all be removed. In connection with this treatment grease may also be extracted from sewage. Screening, settling and grease removing are extensively practiced in Germany, when sewage is discharged into rivers which are not used for drinking purposes. The cost of this work is comparatively small. The benefit, when regarded from the esthetic standpoint, is large. It is estimated that one ton of grease is produced for about every 125 of the population in the course of a year.

THE DANGEROUS POSSIBILITIES OF SEWAGE

If a sample of sewage is collected in a bottle and kept from the air, anaërobic fermentation sets in and offensive gases are produced. These gases are particularly unpleasant if the sewage is first mixed with a little sea water. Anaërobic fermentation is common in the more stagnant parts of tidal harbors. The gases consist largely of imperfectly oxidized sulphur compounds, sulphuretted hydrogen being the most prominent. These gases are disagreeable and nauseating, but are believed to be incapable of producing any specific infective disease.

If the sample of sewage in the bottle is thoroughly and repeatedly aerated it will not produce offensive odors. The organic matters will gradually decompose, but in this case the decomposition is a slow combustion. Oxygen is absorbed and carbon dioxide is produced. Nitrogen compounds are converted into ammonia and this, becoming oxidized, is transformed into nitrous and nitric acids. These acids immediately unite with the alkaline constituents of the water and become resolved into other harmless and inoffensive mineral substances. This process of decomposition is continually proceeding in Nature on land and in water, whether the organic matter which is being decomposed originates from sewage or from other sources. There is nothing offensive to the sense of smell or dangerous to health in this kind of fermentation. It is the best and only way in which sewage should be assimilated by tidal waters.

The capacity of a sewage-polluted harbor to produce disease depends on the chance that pathogenic microbes are present and that these may pass from the water into the bodies of persons susceptible to the diseases of which these microbes are the product. The sewage of a city like New York is always dangerous, for it contains the germs of every infectious disease which occurs there. To take the polluted water which flows about the docks of New York into the mouth, as do thousands who bathe

along the built-up waterfront in summer, is obviously dangerous. Fishing where the hands are continuously wet and may carry sewage matters to the mouth is also attended with some risk. The collection of driftwood for fuel also seems to be unsafe, for in this case the filth-impregnated wood is carried into houses.

Bacteriologists have not yet determined how long the various organisms of disease are able to live in tidal water, but a great deal of interesting work has been done in connection with this subject. The most definite results have been obtained in studying the circumstances under which the germs of typhoid fever may persist. The results have not always been in harmony, and it must be remembered that, at best, laboratory conditions can not always be made to represent accurately the conditions of Nature. But, as far as our information goes, it appears that when typhoid germs are mixed with harbor water a rapid reduction in numbers generally occurs at once. At the end of two or three days only a small percentage of the original number of bacteria are present. At the end of about a week a further slight reduction has occurred. Some survive for two or three weeks, and under exceptional circumstances it would seem that the vitality of typhoid germs might persist for months; evidence is on record to show that they have traveled eighty miles or more from their point of origin.

There is believed to be no reduction in the virulence of typhoid germs because of their existence in water. The most resistant survive, and these are apparently well qualified to multiply and produce typhoid in any susceptible person into whose intestinal tract they are taken. It seems a well-established fact that no pathogenic microbes are capable of multiplying in polluted harbor waters under circumstances which commonly exist.

PROBABLE AMOUNT OF DISEASE PRODUCED BY POLLUTED HARBORS

Contrary to what might be expected, there is little statistical evidence to show that a large amount of sickness is produced by polluted harbors. Repeated attempts to collect such evidence have been made, but without success. When the river Thames at London was giving off its most abominable stenches, prior to the construction of the present sewage disposal system, the vital statistics of the city showed no increase in the prevalence of any disease which the sanitarians of that day could ascribe to the odors. Inquiries into the health of wharfmen and boatmen indicated that their health was not visibly affected. When the river Liffey was being described as the most abominable nuisance in Ireland, efforts were made to ascertain the amount of sickness near the waterfront of Dublin, but no excess of illness could be found.

Much of the argument which for centuries taught that epidemic diseases were produced by vapors arising from ill-smelling substances has been shown by the cold light of modern science to have been founded on imperfectly observed facts. Offensive odors may aggravate, if not predispose to infectious disease, but they do not produce them.

The dictum of to-day is that bad smells should be prevented, because they are smells. What is disgusting and revolting to the sight must be kept from view. The higher standards of decency and order which prevail make it unnecessary to prove that insanitary con-

ditions breed pestilence in order to present sufficient reason to abate them.

Failure to discover an increase in specific disease does not, of course, prove that harm is not done to public health by the existence of insanitary conditions. The methods of inquiry employed in such investigations are too crude to detect the whole extent of the injury even if considerable harm is done. Only the most conspicuous evils, such as cases of specific intestinal diseases, are generally accepted as indicating the extent of the consequences. The more subtle effects, such as those which are produced by insufficient air, food, sunlight, exercise and rest, can not so readily be detected, measured and traced; therefore, when they are recorded against insanitary conditions at all, they are generally attributed to them in such a vague, uncertain way as to fail to convey a proper sense of their importance. That a very real impairment of vigor, and consequently health, may occur among persons who are compelled to dwell among insanitary conditions will be freely admitted by all. Disease aside, this impairment of health means impairment of efficiency in the capacity to do work.

The most convincing proof of a connection between polluted harbors and specific disease lies in the results of eating shell-fish. There have been more than enough cases of typhoid fever and gastroenteritis reliably ascribed to the eating of oysters, clams and other shell-fish derived from polluted waters to show the danger in this direction. Shell-fish taken from sewage-polluted water are polluted themselves. They are likely to cause typhoid fever if eaten raw. Cases have been known to arise merely from handling the shells. The total amount of sickness caused by impure shell-fish is not even approximately known. Only some of the most striking and most obvious cases are likely to be traced.

Within the last five years much attention has been directed to the absence of sanitary jurisdiction over the cultivation and handling of shell-fish, with the result that health authorities and others have been moved to abate some of the most dangerous practices. Improvements in the cultivation of shell-fish have been made in Europe and America, but a great deal remains to be done. In some harbors it would appear that the shell-fish industry must be given up. In others a careful management of the sewage will suffice. In view of the enormous value of the shell-fish industries, which now amount in the United States to over 50 per cent. of the total value of our fisheries, it seems incredible that the oystermen, many of whom are intelligent and of ample means, should be willing to continue to grow and handle their shell-fish in an insanitary manner. One would expect them to be the first to take the necessary steps for the protection of their business.

SANITARY JURISDICTION OVER TIDAL HARBORS

The form of sanitary jurisdiction which should be exercised over a tidal harbor must depend on the local circumstances. Over matters which are certainly of public health import, it is obvious that boards of health should have jurisdiction. Where questions affecting public comfort and well-being are alone concerned, some other form of jurisdiction is, at least, equally appropriate. The main authority in charge of the sanitary protection of the Thames is not a public health body. The various royal commissions on sewage dis-

posal of Great Britain have, with one exception, not been health boards.

The various rivers boards of England, which are doing good work for the sanitary protection of water-courses, are committees composed of local authorities and are charged with the special duty of preventing nuisances. The last report of the (temporary) Royal Commission on Sewage Disposal has recommended the creation of a permanent central authority which shall carry on suitable investigations and be ready to give expert advice to local authorities as to methods for the sanitary disposition of sewage.

In Germany the imperial board of health exercises jurisdiction over the streams only in so far as health is surely concerned. The sanitary improvement and protection of the rivers, so that they may be more suitable for the enjoyment and use of the public, devolve on other authorities.

In America, where there is no central health authority, the protection of the watercourses is left to the care of the individual states. Some states require that all plans for sewerage, as well as sewage purification, shall be passed on by the state board of health before they are carried out. American harbors are protected, where any protection exists, chiefly through works constructed by sanitary authorities, such as sewerage commissions, which have no jurisdiction over the matters of public health. The need and nature of such work are often determined by a special board of commissioners. This has been true of Boston and Baltimore. The preparatory investigation now being made to determine how best to protect the sanitary condition of New York harbor has been placed by the State of New York in the hands of a commission of four engineers and one physician, called the Metropolitan Sewerage Commission. The duties of this body are plainly specified in the act of the legislature which brought it into existence (Chapter 639, Laws of 1906, amended by Chapter 422, Laws of 1908).

17 Battery Place.

Original Articles

THE RESULTS OF DRUG TREATMENT IN FIVE HUNDRED CASES OF DELIRIUM TREMENS

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An attempt has been made in this investigation to determine, as well as may be by statistical method, the relative value of the various drugs commonly used in the treatment of delirium tremens. The conclusions reached as a result of a careful study of 500 cases may be summarized as follows:

1. In incipient cases the patients respond readily to treatment with chloral, ergot, bromids and whiskey, the drugs being mentioned in the order of their value.

2. Delirious patients are very resistant to treatment. In the cases studied the administration of the sedative drugs increased the mortality. This was most evident when scopolamin was used, that drug increasing the mortality 13 per cent. These unsatisfactory results with the sedative drugs were due to the large doses used. It will be shown that small quantities, for example, 15 to 30 grains of chloral in twenty-four hours,

may be given with good results, but that when larger quantities are given the death rate increases with the amount of sedative administered.

3. The only drug which reduced the mortality was ergot. By its use the death rate was decreased 21.6 per cent.

4. When whiskey was given the mortality was increased 1.8 per cent.

The 500 cases which serve as a basis for this paper are those of patients treated at the Cook County Hospital, Chicago, during a period of three years, extending from June, 1905, to August, 1908. This represents only a part of the total number of such cases in the hospital during that period. The cases developing in the hospital while the patients were under treatment for other conditions are not included in this series, because the histories of these cases were filed in the hospital records under the heading of the original maladies and were not readily accessible. The remaining cases, in which mania a potu was the chief evidence of disease, and whose histories were filed under the head of alcoholism, were the ones utilized in compiling the following statistics. It is believed that the relatively uncomplicated nature of these cases makes them particularly suitable for such a study.

It must not be supposed, however, that these 500 cases presented no complications, but rather that the complications were only of minor importance. The nature and frequency of the complications can be understood by a glance at Table 1. It will be seen that in a large number of the cases the complications were due to chronic alcoholism, and that serious conditions, like fractures and pneumonia, which are so commonly associated with delirium tremens, are relatively rare in this series of cases.

TABLE 1.—COMPLICATIONS

Complication.	Recov- ered.	Died.	Complication.	Recov- ered.	Died.
Acute dilatation of stomach	1	0	Hernia	1	1
Bronchitis	3	0	Hemorrhoids	1	0
Carcinoma	1	0	Infections, cellulitis, etc.	2	9
Cardiospasm	1	0	Influenza	1	0
Catarrhal jaundice	1	0	Morphinism	7	0
Cerebral hemorrhage	1	0	Neuritis	3	1
Cholecystitis	1	0	Nephritis	41	25
Cirrhosis of liver	9	6	Organic heart disease	13	6
Corneal ulcer	1	0	Pleurisy	1	2
Dementia	1	0	Pneumonia	4	10
Dislocations and sprains	1	3	Pregnancy	2	0
Enteritis	1	0	Prolapsed uterus	1	0
Epilepsy	6	2	Pulmonary tuberculosis	1	2
Exposure	1	0	Rheumatism	0	3
Fractures	4	9	Tabes dorsalis	2	0
Gastritis	11	0	Varicose veins	2	0
			Venereal diseases	6	0
			Wounds	12	13

In collecting the statistics the original history was examined in each case and the relevant facts transcribed to a library card. Each card was made to show the age and sex of the patient, whether the case was incipient or fully developed, whether it developed from the incipient into the delirious stage in the hospital, and, if so, after how long and under what treatment, and also to show each drug used, with the size and number of the doses, together with the results of the treatment and the complications. The cards could then be sorted and the cases classified according to any one of the points noted.

The cards were first separated into two groups representing, respectively, the incipient and the fully-developed cases. The incipient cases were those which showed only insomnia, restlessness and tremor. In the fully-developed cases the patients were noisy, delirious, with uncorrected hallucinations. In a number of cases the patients entered the hospital in the incipient stage and

later became delirious. These cases enter twice into the statistics—first as incipient, later as developed cases—and, as there were 147 of them, there appear to be 647 cases, instead of 500 represented in Tables 2 and 3.

Table 2 gives in detail the results of treatment by the various drugs in the incipient cases. These results are expressed in terms of the percentage of patients that became delirious. Table 3 shows the results of treatment of the delirious patients, and here the mortality is used as the index. Since the drugs were often used in combination, it was not possible to compare a series in which one drug was used alone with another series in which some other drug was used alone. Accordingly each drug was considered separately, and the series in which it was used compared with the series in which it was not used.

TABLE 2.—INCIPIENT CASES

BROMIDS used in	190 cases, delirium followed in	32.6%
BROMIDS not used in	156 cases, delirium followed in	52.8%
	Difference	20.2%
CHLORAL used in	86 cases, delirium followed in	20.6%
CHLORAL not used in	260 cases, delirium followed in	48.9%
	Difference	28.3%
MORPHIN used in	71 cases, delirium followed in	38.5%
MORPHIN not used in	275 cases, delirium followed in	42.5%
	Difference	4.0%
SCOPOLAMIN used in	39 cases, delirium followed in	36.0%
SCOPOLAMIN not used in	307 cases, delirium followed in	41.5%
	Difference	4.5%
WHISKY used in	110 cases, delirium followed in	28.1%
WHISKY not used in	236 cases, delirium followed in	48.3%
	Difference	20.2%
ERGOT used in	75 cases, delirium followed in	23.6%
ERGOT not used in	271 cases, delirium followed in	46.9%
	Difference	23.3%

TABLE 3.—DELIRIOUS PATIENTS

BROMIDS used in	198 cases, with mortality of	45.5%
BROMIDS not used in	103 cases, with mortality of	40.8%
	Mortality increased	4.7%
CHLORAL used in	145 cases, with mortality of	44.9%
CHLORAL not used in	156 cases, with mortality of	42.9%
	Mortality increased	2.0%
MORPHIN used in	150 cases, with mortality of	43.3%
MORPHIN not used in	151 cases, with mortality of	44.7%
	Mortality decreased	1.4%
SCOPOLAMIN used in	110 cases, with mortality of	50.9%
SCOPOLAMIN not used in	191 cases, with mortality of	37.9%
	Mortality increased	13.0%
WHISKY used in	131 cases, with mortality of	44.7%
WHISKY not used in	170 cases, with mortality of	42.9%
	Mortality increased	1.8%
ERGOT used in	80 cases, with mortality of	30.0%
ERGOT not used in	221 cases, with mortality of	51.6%
	Mortality decreased	21.6%

Among the sedative drugs the bromids were most extensively used in the treatment of these cases. It was customary to give equal parts of sodium, potassium and ammonium bromid in doses of from 10 to 30 grains each, or 30 to 90 grains of the mixture every four hours. Table 3 shows that the bromids were used in 198 cases with delirium, with a mortality of 45.5 per cent., and that in 103 similar cases treated without bromids the death rate was only 40.8 per cent. This increase in the mortality, amounting to 4.7 per cent., was apparently due to the use of bromids. We believe, however, that Table 4 will show that the increased mortality was due to too large doses too frequently repeated, and that

smaller quantities do good rather than harm. Better results were obtained with the incipient cases. In the 190 incipient cases in which the patients were treated with bromids, only 32.6 per cent. of the patients became delirious, while of 156 similar cases in which the patients were not so treated 52.8 per cent. of the patients became delirious. This represents a decrease of 20.2 per cent. in the patients developing delirium in the hospital.

Chloral was also extensively used in doses ranging from 10 to 30 grains, often repeated, every four hours, and frequently given in combination with the bromids. By reference to the tables it will be seen that chloral, as administered in these cases, is of no service after active delirium has set in. In fact, it seems actually to have increased the mortality by 2 per cent. It is in the treatment of the incipient cases that the great value of chloral is seen. It reduced the percentage of cases developing delirium in the hospital from 48.9 per cent. to 20.6 per cent., a decrease of 28.3 per cent. Chloral is of more value than bromids in the incipient cases because the patient can be put under its influence in a much shorter time.

Morphin is also practically useless in the cases with delirium, although instead of slightly increasing the mortality, as did chloral and the bromids, it reduced the mortality 1.4 per cent. This is probably to be explained by the fact that morphin was usually ordered in single $\frac{1}{4}$ -grain doses, and thus relatively small quantities were given, while the bromids and chloral were ordered in relatively larger doses, and these were repeated every four hours. Thus in a few days the patient would get enormous quantities of the sedatives. The same reasoning accounts for the poor results in the incipient cases in which morphin reduced by only 4 per cent. the number of patients developing delirium. In these incipient cases the patients should be held steadily under the influence of regularly repeated doses of the sedatives.

Scopolamin was also given in single doses of $\frac{1}{100}$ to $\frac{1}{50}$ of a grain, and the series in which it was given, like the morphin series, illustrates the futility of single doses of sedatives in controlling the incipient cases. It decreased the number of patients developing delirium by only 4.5 per cent. But, unlike morphin, scopolamin is extremely dangerous in the delirious cases. Even when its use was as restricted and as carefully regulated as it was in this series of cases, it increased the mortality 13 per cent.

It will be seen that in this series the sedative drugs increased rather than decreased the mortality. The question naturally arises whether the sedatives are harmful to the delirious patients when given in any quantity whatsoever, or whether the bad results in this series of cases was not due to the use of too large amounts.

In order to answer this question, the cases were again tabulated according to the total quantity of sedatives given. An arbitrary unit for twenty-four hours was chosen, as 60 grains of chloral, and this unit was considered as equivalent to 3 drams of bromids, $\frac{3}{50}$ of a grain of scopolamin, $1\frac{1}{2}$ grains of morphin, 60 grains of veronal, 6 drams of paraldehyd, 2 drams of sulphonal, 3 fluidrams of tincture of hyoseyamus, or 6 grains of codein. Thus whatever sedative or combination of sedatives was used in any case the total amount given could be calculated and reduced to terms of the unit chosen. In only 285 of the cases with delirium were the data complete enough for this analysis. For

each of these cases the number of units of sedative was calculated and the cases arranged according to the amount given. Table 4 shows the effects of various doses of sedatives:

Units for 24 Hours.	Equivalent in Chloral. Grs.	Number of Patients. Recovered.	Died.	Total.	Death Rate. %
0	0	10	14	24	58
$\frac{1}{4}$	15	43	12	55	21.8
$\frac{1}{2}$	30	13	5	18	27.7
$\frac{3}{4}$	45	11	5	16	31.2
1	60	29	22	51	43.1
2	120	21	28	49	57.1
3	180	13	27	40	67.5
4	240	12	20	32	62.5

It will be seen from Table 4 that when no sedative was used the mortality was high (58 per cent.) and that when small quantities (equivalent to 15 grains of chloral in twenty-four hours) were used the mortality fell to 21.8 per cent., and that the mortality increased rapidly as the dose was increased. The high mortality when no sedative was used is, in part, explained by the fact that a number of patients entered the hospital in a moribund condition and died in a short time, having received only stimulant drugs. I do not think that this accounts for the entire difference between the mortality of those patients who received small doses and the mortality of those who received none; for the majority of the patients who received no sedatives were treated on the homeopathic side of the hospital with homeopathic remedies. It seems clear, therefore, that small doses of sedatives equivalent to 15 grains of chloral in twenty-four hours favorably influence the course of the disease. It is certain that larger doses have a very unfavorable influence.

Whiskey was used rather extensively in these cases notwithstanding the fact that its use is condemned by the majority of writers. It seems to have been of decided value in the incipient cases, lowering the percentage of patients becoming delirious by 20.2 per cent. In the cases with delirium the mortality was raised 1.3 per cent.

The drugs so far mentioned have increased the mortality of the delirious patients, except morphin, and its effect was practically negative. We come now to a drug which has produced a marked decrease in the mortality. This drug is ergot. It was usually given in the form of the fluidextract, in dram doses, repeated every four hours, and often in combination with whiskey. In those cases in which ergot was used the mortality was only 30 per cent., while among those patients treated without ergot it was 51.6 per cent. This is a reduction of 21.6 per cent. in the mortality. This result is striking when considered with reference to the uselessness of other drugs. Ergot is likewise of value in the incipient cases, the percentage of patients developing delirium being reduced 23.3 per cent. by its use.

The importance of ergot in the treatment of these patients may justify a little digression from the strictly statistical line of argument. Its use in the Cook County Hospital in the treatment of delirium tremens dates from the spring of 1907, and so favorable have been the results that it is now generally employed for that purpose by the resident staff of the institution. The beneficial results of its administration has seemed to me to be clearly demonstrated in those cases which have been under my care. It seems not so much to shorten the attack as to render the delirium much quieter, thus preventing death from exhaustion before the natural crisis arrives. Any attempt to explain its influence

would be pure speculation. It is possible that it may be met by decreasing the cerebral hyperemia. By equalizing the circulation it may tend to prevent the edema of the brain and meninges, "wet brain," so frequently seen at autopsies on cases of delirium tremens.

Stomachics were used extensively, but were not taken into account in these statistics.

Stimulants were used very little, alcohol alone being consistently used. Other stimulants were used only when the patient was in a moribund condition. It would be interesting to know what would be the effect of a systematic use of digitalis, caffeine and strychnin throughout the course of the disease, but the series of cases under discussion does not furnish the necessary data.

It will be obvious from a study of the accompanying tables that drugs are not of such value in the treatment of these patients that other therapeutic measures can be neglected. This is especially true of the wildly delirious patients, for whom much more can be done by nursing than by drugs. But I can not here do more than emphasize the importance of proper methods of restraint, frequent administration of liquids and the use of sedative baths.

In the incipient cases much can be done with drugs. Large doses of the sedatives should be given, especially chloral and bromids, and these should be repeated every four hours and kept up for several days after all signs of the disease have disappeared. Whiskey should be given regularly. Ergot is also of value and may be given as the fluidextract, or in cases complicated with gastritis the aseptic preparations of ergot may be given hypodermically. In the hospital, dram doses of the fluidextract were given every four hours for a week and more without any bad effects. If a standardized preparation of the fluidextract were used, smaller doses would probably be equally effective. Stomachics are often indicated, especially capsicum. Stimulants, aside from alcohol, are unnecessary except in cases showing cardiac incompetence.

In the cases with delirium care must be taken not to overdose the patients. Sedatives may be used with care, not more than 30 grains of chloral or its equivalent in other sedatives being given in twenty-four hours. Scopolamin is dangerous and whiskey useless. Ergot seems to have been of the greatest value and certainly deserves an extended trial. It is a question whether stimulants should be given to all delirious patients, but when there are signs of failing heart action, of developing "serous meningitis," or when the patient is passing from delirium to stupor and coma, heart stimulants should be given hypodermically.

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TUBERCULOSIS

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It seems strange that after the many years of study devoted to tuberculous disease by the medical profession, in medical schools and text-books on the practice of medicine, the fact that this is a general constitutional disease has apparently been lost sight of; a good definition or a description of tuberculous disease as such is rarely, if ever, seen. Text-books all define pulmonary tuberculous disease and usually describe its etiology, pathology, symptoms and

treatment; casually mention in this connection the possibility of secondary infection of other organs and tissues, but describe these secondary manifestations of a general systemic infection under chapters devoted to such special organs or tissues. That this is illogical must be apparent to every thinking professional man.

Allow any patient afflicted with tuberculosis to go his way untreated and, sooner or later, secondary involvements are certain to manifest themselves. I have never seen at postmortem a single instance in which some such secondary lesion was not found in some organ or tissue, even though it had not been manifest clinically during life. I regret that this is not confined to untreated cases, for owing to our lack of knowledge in the past of the treatment of tuberculosis many patients have followed this course.

In all text-books this disease is usually defined and described along the lines laid down in a well-known text-book on the practice of medicine (edition of 1907), for the author of which I entertain the greatest respect and admiration, in which tuberculosis is defined in the following manner:

"Tuberculosis is a general or local infectious inflammatory disease, the result of the implantation and proliferation of the tubercle bacillus."

The first chapter considers etiology and discusses the tubercle. The disease is then classified under two divisions, acute and chronic tuberculosis, and these are subdivided as follows:

II.—Acute tuberculosis.

1. Diffuse general tuberculosis (acute miliary).
2. Pulmonary form of acute tuberculosis.
3. Tuberculous meningitis.

III.—Chronic tuberculosis.

1. Pulmonary tuberculosis.
 - (a) Chronic ulcerative phthisis.
 - (b) Fibroid phthisis.

The next chapter is headed:

IV.—Tuberculosis of lymphatic glands.

V.—Tuberculosis of the serous membranes.

- (a) Tuberculosis of the pleura.
- (b) Tuberculosis of the peritoneum.

VI.—Tuberculosis of the genitourinary organs.

VII.—Tuberculosis of the mammary glands.

VIII.—Tuberculosis of the heart and blood vessels.

Each of the chief foregoing chapters treats of the subject as if it were a distinct disease, giving definition, etiology, pathology, symptomatology, treatment and prophylaxis.

Among the chapters under the heading of tuberculosis we find no mention of that frequent pathologic condition, tuberculous laryngitis, but this important feature is considered under diseases of the larynx. Tuberculous infections of the serous membranes, and of the genitourinary tract, are considered as coming under the domain of the surgeon. Tuberculosis of the bones and of the joints is not mentioned, evidently being left to the text-books on surgery. Tuberculosis of the skin (lupus) is briefly mentioned in connection with the description of the tubercle bacillus.

I believe that, from our knowledge of tuberculosis, the definition above mentioned is manifestly wrong; tuberculosis is pre-eminently a disease of systemic infection, is constitutional in its character, and is never a local condition.

The classification into acute and chronic forms is not borne out by the facts; tuberculosis is never an acute process, but is necessarily a chronic condition pathologically: at times it does run a rapidly fatal course, but

this can not possibly cause it to be classified as an acute form of the disease, but rather, I would suggest, as a fulminating or pernicious type.

Under the heading "Chronic Tuberculosis" we find pulmonary tuberculosis, considered under the subdivisions, chronic ulcerative phthisis and fibroid phthisis; these are merely unfavorable or favorable phases of the same morbid process occurring in different patients, due probably, first, to a difference in the virility of the infecting organisms; second, to the greater or less resisting power of the respective patients (acquired or inherited); third, to environment and social condition; and, fourth, to the personal habits of the individual.

We have recognized four avenues through which the infecting organism may invade the human body, viz.: through the intestines, through the tonsils, by inspiration, and through wounds of the skin.

Heretofore it has been considered that the disease was the outcome of the implantation of the bacillus in these organs or tissues, and that it produced a pathologic change in the tissues so invaded, eventually giving rise to systemic infection.

For a long time I have believed that this view is incorrect¹ and that the primary lesion is seldom, if ever, produced in this way, but that the bacilli so introduced into the tissues first find their way into the blood or lymph, and here develop and multiply (period of incubation), eventually selecting the least resistant tissue, in which the primary pathologic lesion of tuberculosis is developed (incipient tuberculosis).

From this initial lesion the well-known pathologic and clinical features of the disease extend, and may eventually give rise to evidences of most profound systemic infection, and an increasing area of local involvement around the primary lesion, and in many instances (always so in advanced cases), of more or less numerous secondary involvements of other organs and tissues.

The theory that the above views are correct is amply substantiated by the work of Lustgarten and others, who found in the blood and lymph of syphilitics (evidently complicated by tuberculosis) a bacillus morphologically identical with and having the same staining characteristics as the tubercle bacillus, which at the time they thought to be the specific organism of syphilis, but which view, considering our present knowledge of the *Treponema pallidum*, was incorrect. The Lustgarten bacillus could not possibly have been the smegma bacillus, for this organism has never been found in the blood or lymph.

Having eliminated the possibility of the Lustgarten bacillus being either the specific organism of syphilis, or the smegma bacillus, the only probable acid-fast bacillus left for consideration is the tubercle bacillus, which I am convinced is identical with that found by Lustgarten and his followers.

The recent work of Rosenberger² is the strongest possible evidence of the correctness of the views which I have held and advanced from time to time. Clinical statistics are sufficient evidence of the fact that the primary lesion of tuberculosis is most often found in the right pulmonary apex, and though this primary lesion may occur in any organ or tissue, I am strongly inclined to the belief that, having its beginning as a purely general systemic infection, it makes its first pathologic changes manifest in the lungs with such frequency as to enable us to exclude primary tuberculosis

from any other organ or tissue. In the event of tuberculosis being clinically manifested in any tissue or organ other than the lungs, a careful examination of these organs by a competent physical diagnostician will usually demonstrate its presence in these organs.

Should this not be the case, I believe that the primary lesion was in the lungs but has healed, leaving behind no local evidence of its former presence.

The terms pulmonary tuberculosis, or tuberculosis of any other organ or tissue, are misnomers and are fundamentally wrong, because they are applied to diseases which do not exist in themselves, but are only local pathologic exhibitions of a constitutional or general systemic infection.

The following definition and classification, though necessarily faulty, I believe will fairly describe tuberculosis as we now know it:

Tuberculosis is a chronic, constitutional, infectious, granulomatous disease, produced by the tubercle bacillus, characterized pathologically by round-celled infiltration of the organs or tissues, and symptomatically by more or less evidence of systemic infection associated with symptoms relative to and characteristic of an inflammatory process in the organs or tissues locally involved.

CLASSIFICATION

Etiology: Described

Invasion: Avenues of, described.

Pathology: Described.

Stages: Incubation, incipient, moderately advanced, advanced.

Types: Latent, chronic, fulminating or pernicious.

SECONDARY MANIFESTATIONS DESCRIBED

The stage of incubation is that period between the invasion of the bacillus and the development of the primary pathologic lesion. It is of indefinite duration and probably produces a rapid pulse as the only symptom.

The incipient stage immediately follows the development of the primary lesion. There are symptoms of mild systemic infection associated with slight evidences of localized tissue involvement. The primary lesion is a tubercle, which may appear in any organ or tissue in which the infecting organism finds lodgment and a favorable field for growth. In most instances this is in pulmonary tissue (which is least resistant) and most frequently the right apex.

The moderately advanced stage is that in which the symptoms of systemic infection and of the local manifestations of the disease are more marked, giving evidences of increased area involved in the organ or tissue primarily affected, or of autoinfection of some other organ or tissue.

In the advanced stage there is evidence of profound systemic infection, with marked local involvement of one or more organs or tissues.

TREATMENT

From a year's experience with the administration of mercury by deep muscular injections associated with the general treatment advocated for this disease, I again assert the specific nature of mercury in relation to tuberculosis, and in support of this I submit the following statistics. (See next page.)

There were 3 additional deaths in the hospital during the year, 2 from typhoid and 1 following operation for appendicitis. Four of the 16 who died had typhoid in

1. Annual Report of the U. S. Naval Hospital, Las Animas, Colorado, for 1908: THE JOURNAL A. M. A., Nov. 28, 1908.
2. Am. Jour. Med. Sc., February, 1909.

August, and their deaths were undoubtedly indirectly due to this disease.

	No. of Patients Who Have Re- mained in Hos- pital Two or More Months.	Those Who Voluntarily Took the Mercury Treatment.	Those Who Preferred the Routine Treat- ment Solely.
Cured	8	7	1
Marked improvement ..	43	43	0
Improved	16	14	2
Slight improvement ..	17	10	7
Stationary	19	0	19
Failed	42	4	38
Died	16	5	11
Total number	161	83	78

Of those cured, 87.5 per cent. took mercury treatment; 12.5 per cent. took routine treatment.

Of those showing marked improvement, 100 per cent. took mercury treatment; none took routine treatment.

Of those improved, 87.5 per cent. took mercury treatment; 12.5 per cent. took routine treatment.

Of those slightly improved, 58.82 per cent. took mercury treatment; 41.18 per cent. took routine treatment.

Of those remaining stationary, none took mercury treatment; 100 took routine treatment.

Of those who failed, 9.52 per cent. took mercury treatment; 90.48 per cent. took routine treatment.

Of those who died, 31.2 per cent. took mercury treatment; 68.8 per cent. took routine treatment.

Combining the items cured, marked improvement, improved and slightly improved, under the heading improved; stationary as such, and combining the items failed and died under the heading failed, the following percentages pertain:

Of the 83 patients on mercury, 89.16 per cent. improved; none stationary; 10.84 per cent. failed.

Of the 78 patients on routine treatment, 12.82 per cent. improved; 24.36 per cent. remained stationary; 62.82 failed.

The above patients are classed as follows:

Ineipients (first stage)	1
Moderately advanced (second stage)	59
Advanced (third stage)	101

Total number 161

In the above cases the following secondary tuberculous involvements have been diagnosed clinically:

Brain, 1; larynx, 16 (13 ulcerative and 3 infiltrated); larynx and pharynx (ulcerative), 3; intestines, 9; stomach, 1; genitourinary tract, 3; general glandular infection, 4; ischio-rectal fistula, 6; bone infection, 3.

At postmortem in 19 cases tuberculosis of various organs and tissues have been found as follows:

Intestines, 13; left kidney, 9; right kidney, 6; spleen, 7; liver, 4; pancreas, 0; mesenteric glands, 14; heart, 1; left lung, 19; right lung, 19; larynx, 7.

Of the complications existing in these 161 cases, the following were found:

Cardiac hypertrophy, 1; mitral regurgitation, 3; tricuspid stenosis, 3; pulmonary stenosis, 2; arteriosclerosis, 5; chronic passive congestion of liver and spleen, 16—of the liver 19 and of the spleen 15; hypertrophic pharyngitis, 1; glaucoma, 1; exophthalmic goiter, 1; malaria, 3; appendicitis, 1; syphilis, 8; displaced kidney, 1; typhoid in 25 cases.

Since November, 1908, in this hospital we have been administering mercury in gradually increasing doses until the therapeutic limit is reached, after having established the maximum dose, it is then divided by two and the injections continued on this dose. During the intervals between injections the use of potassium iodid has been discontinued.

This procedure has increased the efficiency of the treatment in a decided manner.

In addition to the cures reported up to Dec. 31, 1908, there are now three officers and two enlisted men ready for duty, and about six additional men who will probably be ready for duty in from four to six weeks.

U. S. Naval Hospital.

MEDICAL EDUCATION

A PLEA FOR THE DEVELOPMENT OF LEADERS

GRAHAM LUSK, PH.D., Sc.D., F.R.S.E.

NEW YORK

It is related that an American officer, who was visiting St. Petersburg, asked the Russian officer by whom he was being conducted through the grounds of the palace why a certain sentinel, who was pacing up and down in the middle of the courtyard, should have been stationed in so unusual a place. The Russian was unable to answer, but promised to investigate. This led to the discovery that sixty years before, one of the little princesses had been walking in the courtyard with her father in the spring of the year and had found a snow-drop growing in the middle of the yard. She expressed a desire that no one pick it, and her father therefore ordered a sentinel to be placed on duty to protect the snowdrop. The order had never been rescinded, and for sixty years a guard had been pacing up and down in this position.

So it is in our hospitals; we find the Old Guard pacing up and down in defense of traditional snowdrops whose value neither they nor any one else are able adequately to explain.

Take, for example, the rotation in service. What would have been thought if Dr. Curtis, Dr. Austin Flint, Sr., and I had regularly exchanged laboratories after a service of four months each? You would have said that the scientific men had gone crazy, and you would have been right. There must be pride in one's own scientific habitat if there is to be success. Take another abuse, that of holding a hospital position and never visiting the hospital, but appointing some dependent to do it for one during the period of his good behavior. It is as though I still maintained the power of appointment to the chair of physiology at the Yale Medical School, where I was once professor. If I had such power, and with increasing age became more and more sensitive regarding any proposition to curtail it, and if by degrees I developed an egotism bordering on paranoia, you would then have in me as true an obstacle to proper progress as now abides in the Old Guard still marching up and down in the middle of the hospital grounds protecting the abuses of the past.

A well-known architect tells me that people from other parts of the country who come to New York return to their homes convinced that the architecture of residential Fifth Avenue represents the greatest existing achievements. We all know that it only requires visits to Oxford and Cambridge in England, to the Louvre and Notre Dame in Paris, to the palaces of the Italian nobility in Genoa, Venice, Florence and Rome to realize that Fifth Avenue represents architectural insanity.

If one is to understand one's own failings it will not do to limit one's horizon. It is necessary to travel. If one visits England one finds there is little improvement on our own medical methods. The same thing is true of France. If one passes to Germany, however, one finds there a set of medical men who have no counterpart in this country. Take Friedrich Müller, pro-

fessor of medicine at the University of Munich as an example. Müller was trained in problems of metabolism in Voit's physiologic laboratory. He then went to Berlin as assistant of the celebrated Gerhardt. He there accomplished work with Zuntz concerning the metabolism of professional fasters. He came into intimate contact with Emil Fischer, the world's greatest chemist. Passing to Marburg as professor of medicine, he became associated with Kossel, the physiologic chemist, and Hans Meyer, the pharmacologist. He was then called to Basel, where the breadth of his knowledge and the glow of his enthusiasm roused and dominated the group of able young men who there surrounded him. He was offered the chair of medicine in Munich, till then held by the great von Ziemssen. Later came an offer to take von Leyden's place in Berlin, but this was declined. Here one sees the lesson of how a struggling young privat-docent on small salary rises through the laboratories and his personal ability to a position of dominating power.

Von Noorden has attained his position through laboratory work of the most valuable kind, and he ranks as a master in his knowledge of the world's literature.

Minkowski, once a pupil of Schmiedeberg, and now professor of medicine at Greifswald, has by laboratory methods brought to light many secrets of gout and diabetes.

Professor Krehl of Heidelberg is another high product of German culture. He, too, refused an offer to take von Leyden's place in Berlin, and in recognition of this the Grand Duke of Baden-Baden, from his privy purse, gave him 250,000 marks (\$60,000) to spend as he saw fit.

We can only mention the names of Kraus, His, Magnus-Levy, and Moritz to further emphasize the members of this class of magnificent men whose counterparts do not exist in this country.

When I have spoken with distinguished and powerful clinicians about imitating the German methods, I have always been told that that kind of thing was impossible here. The attitude has always been one of *non possumus*.

But why can it not be done? The impossibility can be due only to one of three possible reasons: One is that we are all dollar-chasers; the second, that we are intellectually deficient; the third, that our system is rotten.

One finds that there are dollar-chasers in Germany also. As regards comparative intellectuality, Professor Voit once said to me, "*Ein Amerikaner kann ja alles machen*," and I believe it. The truth of the whole matter is that the system is rotten and reeking and cries out for drastic reformation.

The development of American surgery has been dependent on the efficiency of the anatomic laboratories.

The development of American medicine can come only through men who have a knowledge of modern chemistry, physiology, pharmacology and pathology; and medicine should be taught by men who have keen personal interest and personal first-hand information concerning these fundamentals on which medical science is based.

Where are such men? Aye, there is the trouble. You have not a great medical clinic because you have not properly educated men, and you have not properly educated men because you have not a great clinic. But there are young men here to-night who could develop the work, if they had the chance. Without referring to

any one in this audience, I may mention the names of Christian A. Herter and David L. Edsall as being men who have had the training suited to the development of a great clinic, if the system of the hospitals was modeled on a rational basis.

A scheme for the redemption of New York from reproach is this: Raise a fund of \$500,000. Pay the professor of medicine half the income, or \$10,000 a year, in return for which he shall spend half his day from 9 in the morning to 1 o'clock instructing students, making rounds in the hospital and supervising research work. He should have under him two assistants at \$2,500 per annum, who should be permanent resident internes of the hospital and men who can grow to be professors of medicine. The \$5,000 income remaining should be used for the expenses of research at the discretion of the professor.

But, you say, \$10,000 is a large salary. Yes, but you are paying for a big man. The first year I taught at the Yale Medical School, eighteen years ago, the total budget for the year was \$10,000. But here we are parochial again. If we pass to Germany once more, we find that the great clinical positions carry \$10,000 as a yearly income for similar work, and Osler received \$10,000 in Baltimore. It costs \$10,000 annually to heat and light the Anatomic Institute in Munich, a building larger than all the buildings of the Johns Hopkins Medical School combined.

We must get away from this idea of thinking that a scientific man should be able to get along on the salary of a chauffeur.

I am not at all sure that I have carried conviction into the minds of many who are present here to-night. But that I can not expect. Changes are rarely brought about through great popular uprisings. Take, for example, the introduction of pharmacology into the medical schools of New York. There was no demand for it on the part of the physicians, or on the part of any faculty, but Dr. Wallace was brought to New York by a fund which was raised by Dr. Herter, Dr. Dunham and one other. And Wallace trained Richards, who carried on the work at Columbia, and shortly Hatcher was appointed at Cornell.

Transformations are not brought about by the power of the mob, but by the power of the individual.

I have tried to raise this \$500,000. I have approached Mr. Carnegie and Mrs. Sage, and both refused to see me. But some time, some day, some man who has the power to raise the money and the intelligence to use it rightly will be able to confer the untold blessings on this community which would follow the establishment of a chair of medicine for the training of physicians in an atmosphere of developing research.

And, finally, when we consider medical education we should put the thought of our personal benefit in the background. We are dealing not with ourselves. We are dealing with the students who represent what is beyond. We must remember that for a little while into our hands has been entrusted the welfare of the future.

Throat Examination in Infants.—K. H. Goldstone emphasizes the importance of taking a culture from the throat of any infant with a dry metallic cough and a slight rise in temperature. Laryngeal diphtheria, he asserts, is much more common than is generally supposed.—*Jour. Med. Soc. of New Jersey*, February.

A STUDY OF THE BLOOD AFTER SPLENECTOMY FOLLOWING TRAUMA

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The aim of this paper is not to enter exhaustively on the proved or problematic relations of the spleen to the various blood elements either during embryologic life or during extrauterine existence under normal or pathologic hemie conditions; but rather to point out as concisely as possible the variation, or lack of variation, from normal, as found in a series of twenty-six complete blood examinations in a case of splenectomy following traumatic rupture of that organ. The cause for the splenectomy, trauma, afforded an excellent opportunity to observe what effect the removal of a spleen hitherto healthy would have on the elements of a blood unaffected by any hematopoietic disease.

The examinations, made during a busy surgical service, were made at first every day, later every other day, then every third day, each time as nearly at 8 p. m. as was possible. The patient left the hospital and the city on Sept. 3, 1907, but came back for observation on October 22 of the same year, when the last examination

of urine showed no lesion of the genitourinary tract. A mild cathartic was ordered for the patient, and it was suggested that he stay in bed. On the following day he felt well, but on the day after this, the second day following the injury, he complained of some pain in the left flank; there was a slight rigidity of the left hypogastric region and the boy showed some signs of shock. He was seen that afternoon by the attending surgeon, and it was suggested that hot packs be applied, a blood count be made and a careful estimate of his temperature and pulse be kept until the next morning. He grew decidedly worse that night, and the third day following the accident was brought to the hospital, with a tentative diagnosis of internal hemorrhage of some form, presumably of the intestine, for he had had no further bowel movement since the day of the accident. A low enema did not bring forth any results, and percussion at this time over the flanks, especially of the left side, gave dulness. The temperature was slightly subnormal, being 97 F., and the pulse varied from 90 to 100.

Operation.—On entrance to the hospital, as soon as preparation for an abdominal section could be made, the patient was placed on the operating table. The first incision (Dr. Albert Vander Veer) began at the umbilicus and extended downward for a distance of about three inches; some free blood was encountered, and it was then surmised that there was an extensive rupture of some one of the internal organs, presumably

BLOOD COUNT SHOWING VARIATIONS AFTER SPLENECTOMY

Date.	Red Corpuscles.	Hem. %	Color Index.	White Corpuscles.	Polynuc. Leucocytes (Neutroph.) %	Small Lymphs. %	Large Lymphs. %	Transitionals %	Large Monos. %	Eosino- philes. %	Eosino- philes. %	Tem- perature at.	Pulse.	Corrected Color Index.
July 16.....	5,250,000	70	0.66 +	28,320	86.0	8.4	3.6	1.4	0.6	..	..	101.4	140	0.93 +
July 17.....	3,030,000	70	1.1 +	23,333	87.4	6.2	4.8	0.8	0.8	..	..	100.2	100	1.58 +
July 18.....	3,460,000	70	1.0 +	18,600	81.6	12.4	4.6	1.0	..	0.4	..	100	84	1.40 +
July 19.....	3,575,000	70	0.98 +	16,500	84.0	8.4	5.8	0.2	..	1.6	..	100	90	1.34 +
July 20.....	3,560,000	70	0.98 +	17,800	71.0	16.0	8.2	..	..	3.8	..	100.6	100	1.35 +
July 21.....	3,610,000	70	0.96 +	17,600	70.2	13.0	8.4	2.8	1.8	3.8	..	100.2	88	1.32 +
July 22.....	3,705,000	70	0.93 +	19,811	63.4	25.0	6.2	1.0	0.6	3.8	..	100.2	88	1.29 +
July 24.....	3,800,000	75	0.98 +	16,200	58.4	24.6	7.8	3.4	3.4	2.4	..	99	76	1.34 +
July 26.....	3,820,000	75	0.98 +	24,100	69.2	13.0	9.6	1.6	2.6	4.0	..	99	78	1.34 +
July 28.....	2,980,000	75	1.27 +	16,600	69.4	19.2	8.2	1.0	1.6	0.6	..	100	80	1.72 +
July 30.....	3,235,000	75	1.17 +	20,800	71.0	17.2	9.2	0.6	0.6	1.4	..	100	100	1.60 +
Aug. 1.....	3,950,000	75	0.94 +	12,500	61.4	26.6	7.4	0.4	0.8	3.4	..	99.8	98	1.31 +
Aug. 3.....	4,520,000	80	0.88 +	14,600	63.6	22.4	5.4	0.8	1.4	4.4	..	99	90	1.22 +
Aug. 5.....	4,525,000	80	0.88 +	16,943	58.4	28.0	6.8	1.0	1.2	4.6	..	98.8	86	1.22 +
Aug. 7.....	5,105,000	80	0.78 +	15,600	42.0	43.6	9.6	0.4	2.6	1.8	..	98.6	86	1.08 +
Aug. 9.....	4,520,000	80	0.88 +	11,000	55.6	31.6	4.2	1.2	1.8	5.6	..	99.4	76	1.22 +
Aug. 11.....	4,860,000	80	0.82 +	15,000	57.2	30.4	4.8	1.8	0.6	5.2	..	99.4	84	1.12 +
Aug. 14.....	4,830,000	80	0.83 +	14,000	52.6	33.0	6.6	0.8	4.0	2.8	0.2	98.8	90	1.13 +
Aug. 17.....	4,850,000	85	0.86 +	20,100	65.8	22.6	6.4	1.4	1.0	2.2	0.6	99.2	78	1.19 +
Aug. 20.....	4,845,000	75	0.77 +	16,200	54.0	35.0	6.0	0.8	1.2	3.0	..	99.4	84	1.05 +
Aug. 23.....	5,840,000	75	0.64 +	10,000	48.6	31.4	10.4	0.4	4.2	4.4	0.6	98.6	84	0.87 +
Aug. 26.....	4,590,000	75	0.81 +	15,200	45.4	43.8	3.4	0.8	2.8	3.6	0.2	98.8	82	1.12 +
Aug. 29.....	5,450,000	75	0.68 +	18,000	49.0	42.6	4.6	0.2	1.8	1.4	0.4	98.8	92	0.93 +
Sept. 1.....	4,290,000	75	0.87 +	12,400	34.2	61.0	3.0	1.2	0.4	0.2	..	98.4	100	1.19 +
Sept. 3.....	5,190,000	75	0.72 +	28,400	78.2	18.0	2.0	0.6	0.8	0.4	..	101	120	0.98 +
Oct. 22.....	3,650,000	75	1.02 +	14,100	53.4	39.0	1.4	3.0	0.6	2.0	0.6	....	...	1.40 +

was made. In the estimation of the hemoglobin the Tallquist method was employed; in the differential count of the leucocytes 500 cells were examined. Wright's stain was used for microscopic examination.

For the opportunity and permission to follow the blood picture I wish to thank the attending surgeon, Dr. Albert Vander Veer.

HISTORY OF THE CASE (DR. J. N. VANDER VEER)

Patient.—J. X., aged 11, schoolboy, was brought to the Albany Hospital, July 15, 1907, at about 10 a. m. The family history and past history were negative.

Present Illness.—On the afternoon of July 11 the patient while on an outing climbed into a tree and fell about thirty feet to the ground, striking on his abdomen. Although experiencing some pain at this time, he lay on the ground watching the other children play until 5 p. m., when the family returned home. The patient went with them, and seemed to experience only a slight pain in his abdomen. At 8 o'clock that evening his family physician, Dr. Troidle, was called to see him, as the boy was suffering some pain in his abdomen, in the neighborhood of the umbilicus. He had had a good bowel movement. Physical examination at this time proved absolutely negative, as there was no rigidity of the muscles whatsoever, no dulness in the flanks, and a specimen

the liver or spleen. Examination of the intestines through this incision revealed that they were intact, with no injury whatever, and there were no signs of a peritonitis at this point. The incision was then extended upward around the umbilicus to the ensiform cartilage, when more free blood was encountered, and palpation on the left side showed that there was a rupture of the spleen. The incision was then extended to the left beneath the costal margin and the spleen brought into view, showing a stellate rupture on the internal surface, not large in character, and occupying a space which could easily be covered by a silver dollar. The spleen was quite movable, and it was an easy matter to throw a chromicized catgut ligature around the pedicle and tie it off *en masse*.

The patient recovered nicely from the operation; the drainage-tube which had been placed down on to the pedicle was removed at the end of the fifth day and a small gauze wick substituted. There were no resultant symptoms following the operation. Throughout there was a gradual recovery, save for two instances in which the boy was allowed to partake of food which had been smuggled in by overindulgent relatives. He left the hospital September 3, clinically in excellent condition, and has since (to Nov. 15, 1908) progressed as a normal boy in every respect.

The results of the examination can be seen *in toto* in the tabulations, which show the number of red blood

cells; the percentage of hemoglobin; the color indices, first estimated with 100 per cent. hemoglobin and 5,000,000 red cells as a basis, then calculated with 80 per cent. hemoglobin and 5,500,000 red cells at normal for a boy of 11 years; the total number of leucocytes with the percentage of the various forms, together with the pulse and temperature at the time of the examination.

The first count, taken on the evening of the day of the operation, showed a red-cell count of 5,250,000; the next day it had fallen over 2,000,000. The count then

and the normal percentage of hemoglobin as 100 per cent. But in a child of 11 the number of red cells is normally higher, 5,500,000, and the percentage of hemoglobin lower, only 80 per cent.¹ If the later figures are normal for a boy of 11, his color index should then be calculated from a basis which is his normal. Even with the first figures as a basis, a variable color index is seen with a few high figures. If the second figures are used as normal, a variable but very high color index is obtained, resembling that found in pernicious anemia; for here the percentage value of the red cells remains,

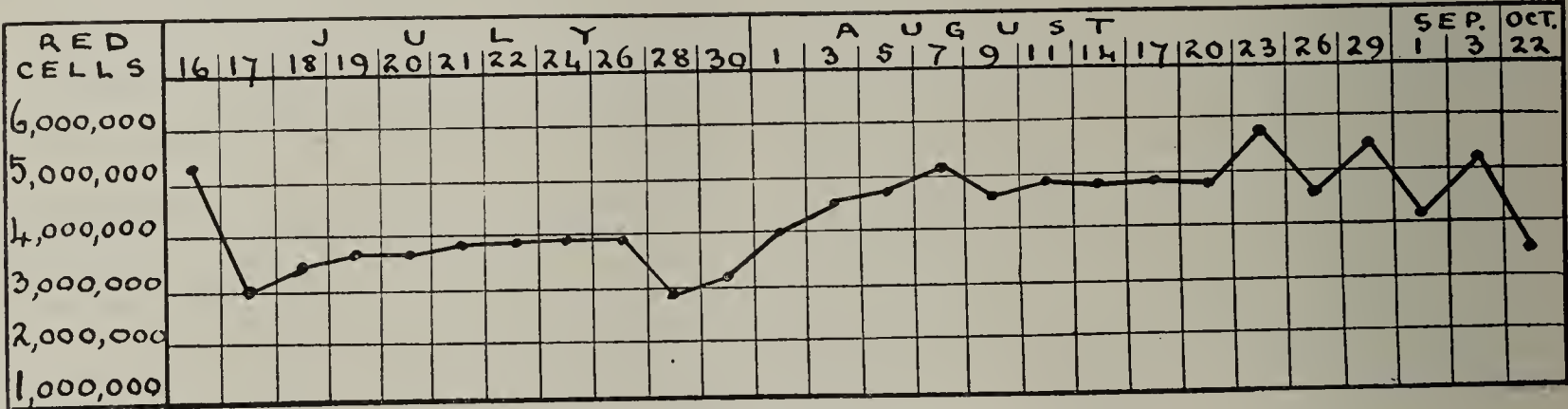


Chart 1.—Showing the great variability in the number of red corpuscles.

gradually rose until July 28, when there was again a sudden decrease of about 1,000,000 red cells. And so further there were rises and falls of 500,000 to 1,000,000 red cells in two or three days. On August 23 the count reached 5,840,000, the highest noted, only to drop to 4,590,000 on August 26; then it rose and fell with each successive count until, on the last estimation, October 22, the reds numbered only 3,650,000 cells. We have then a lessened number of red corpuscles, with a

with the exception of three instances, constantly far below the percentage value of the hemoglobin.

Unfortunately, no leucocytic count was made soon after the accident; accordingly we have no means of comparing the degree of leucocytosis previous to the operation with the first count of 28,320 on the evening of the day of the splenectomy. The leucocytosis remained high until August 23, when it was 10,000; it will be noted that it never fell quite to normal, the

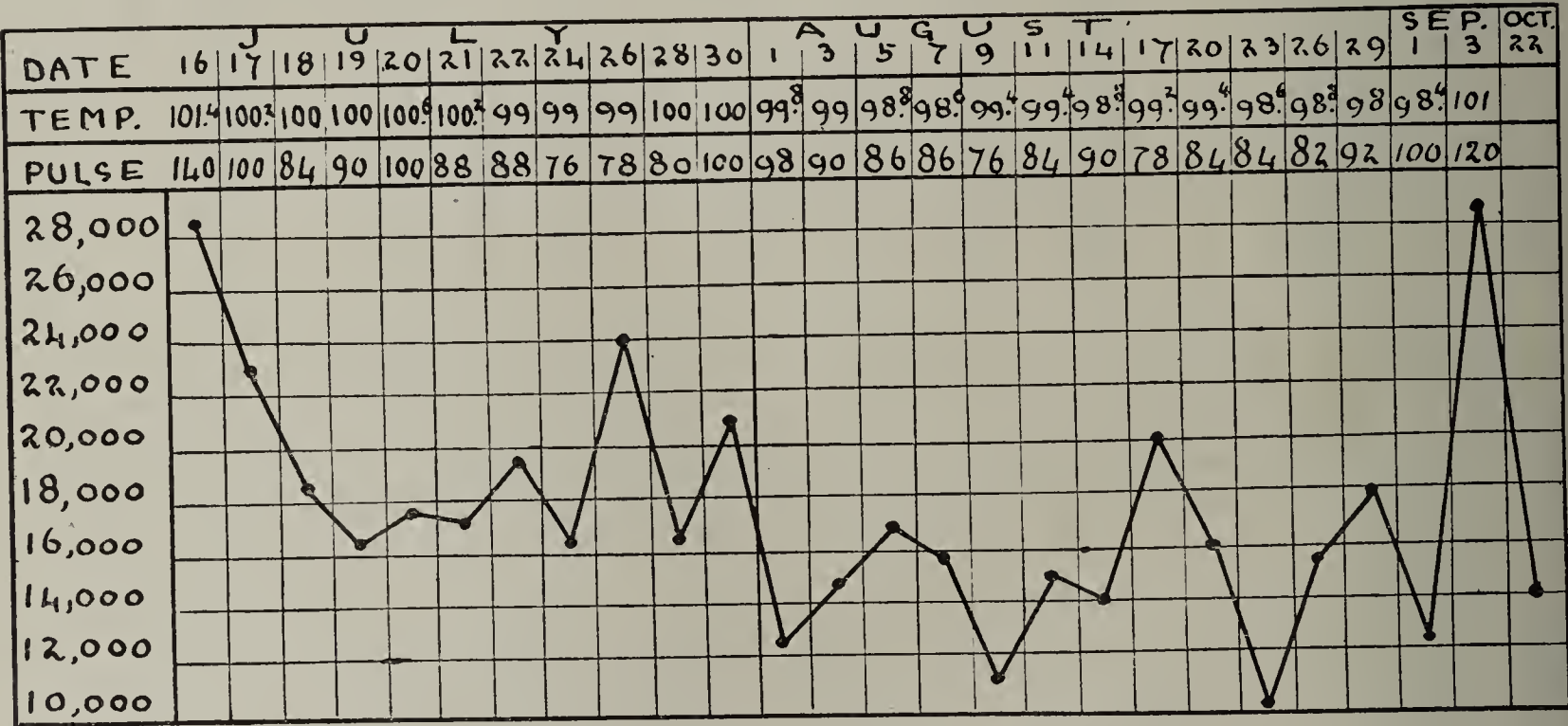


Chart 2.—Showing the variation of the leucocytes.

surprising variability from day to day, a fluctuation that apparently has no connection with the degree of leucocytosis or the temperature.

Microscopically, the red corpuscles showed at no time any evidence of even a moderate anemia. A few poikilocytes were found, but no nucleated forms were seen during the entire period.

In estimating the color index I took at first the normal number of red corpuscles in 1 c.mm. as 5,000,000

cause being a slight wound infection. The sudden rise to 20,000 on August 17 to 28,400 on September 3 is to be explained by attacks of acute gastritis due to the eating of an excessive quantity of fruit surreptitiously given to the patient by visitors on the ward. Examining the series of white counts we see that we have variations with the temperature, but that the count is per-

1. Blutkörperchenzählungen und Hämoglobinbestimmungen bei Kindern, Arch. f. klin. Med., 1889, xlv.

sistently above normal. Even on October 22, when the wound was entirely healed and perfectly closed, the count was yet high, being 14,100.

Examining now the different leucocytic elements, it will be noted that at first with a high leucocyte count there is a marked polynuclear neutrophilic hyperleucocytosis with a very evident hypolymphocytosis. But as the case develops, and even in the face of ordinary inflammatory processes, it is seen clearly that the lymphocytes (adding the small and large varieties together) are gradually gaining, until on August 7, with a total count of 15,600 white cells, there are only 42 per cent. of polynuclear neutrophilic leucocytes contrasted with 53.2 per cent. lymphocytes. A hyperlymphocytosis, absolute and relative, is surely developing; on September 1 there are 34.2 per cent. polynuclears and 64 per cent. lymphocytes. Still, when there was a sudden rise in the number of leucocytes, due to an intercurrent affection, as acute gastritis, the proportion of polynuclear leucocytes rises to normal or above, as, for example, on August 17, when the count was 20,000 as compared with 14,000 on August 14, the percentage of neutrophilic polynuclears rose from 52.6 per cent. to 65.8 per cent. Again on September

cytes of more than normal size, with no peripheral protoplasm and very deeply basic-staining nuclei; also early in the case there were seen on several occasions small lymphocytes with karyokinetic nuclei.

What, then, has been the effect of the splenectomy on the patient? Subjectively, none: the boy is as lively and as healthy in appearance as any other boy of his age. Objectively, note may be taken of two very interesting results as shown in the blood examination, and perhaps some conclusions may be drawn as to the functions of the spleen, which surely is not an organ absolutely essential to life, as is known both clinically and experimentally.

In the first place, we have the picture of the red corpuscles, which show a most amazing variability, while their hemoglobin content is normal or above normal, and the microscopic appearance shows no sign of even a moderate anemia. What the significance of this combination is must be problematic. We know that the spleen contains much blood pigment and disintegrating red corpuscles, both normally and in hematopoietic diseases. That this "graveyard of the red corpuscles" has some influence, through an internal secretion, on the circulating blood and the producing red

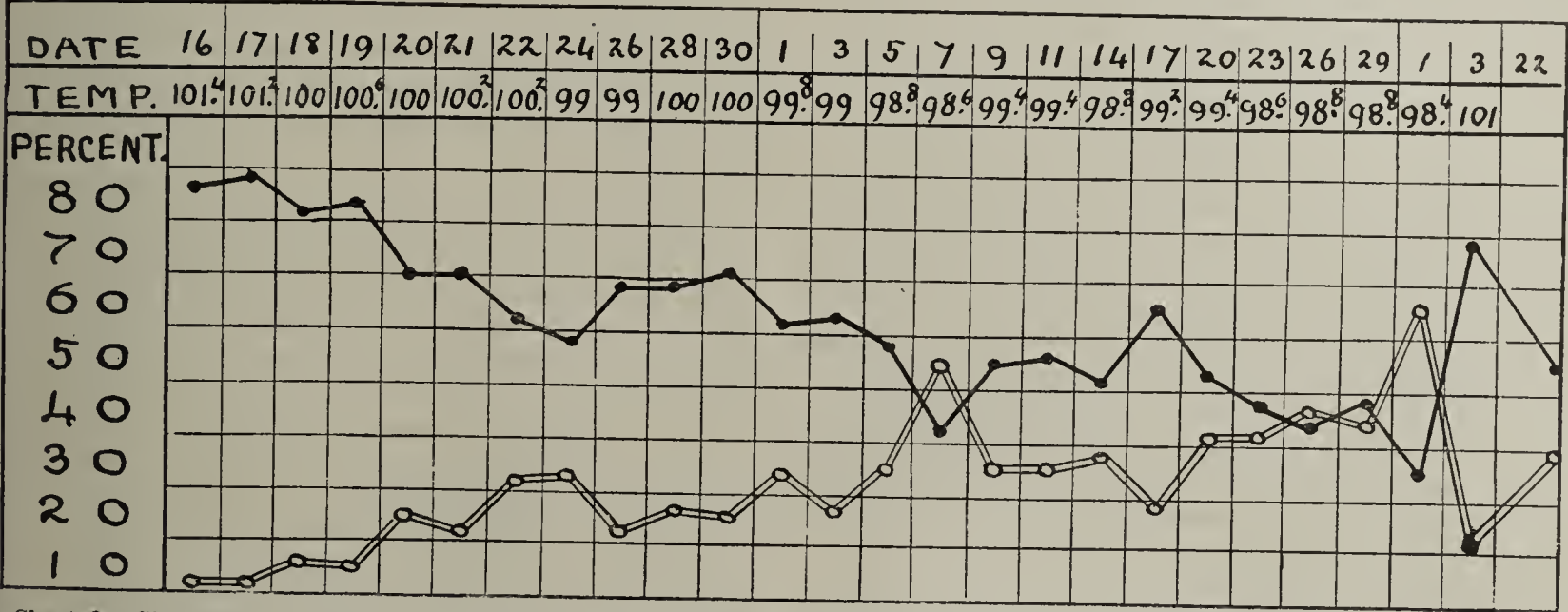


Chart 3.—Showing the variation of the polynuclear neutrophilic leucocytes and of the lymphocytes, and the gradual rise of the latter. Heavy line = polynuclear leucocytes; double line = lymphocytes.

3 the count was 28,400, rising from 12,400 on September 1; here is a sudden rise in neutrophilic polynuclears from 34.2 per cent. to 78.2 per cent. The last count, 102 days after operation, shows a hyperlymphocytosis of 40.4 per cent., with a high white count of 14,100.

The large lymphocytes are variable and do not bear any fixed relation to the percentage of small forms. They reach some high percentages of 8.4, 9.6 and 10.4 per cent., but at the end gradually diminish until we have only 1.4 per cent. The transitional cells show nothing important. The large mononuclears show increase at times, a phenomenon that occurs after experimental and necessary splenectomy, but at the end are only 0.6 per cent. The eosinophiles show at no time any great increase, the highest percentage being 5.6 per cent.; at the end 2 per cent. Probably if the case could have been followed there would have been found an eosinophilia, which is recognized as a regular occurrence after splenectomy.

As for the microscopic appearance of the various white cells, there were found fairly often large lympho-

bone marrow, whereby it regulates the supply of fresh red corpuscles, as well as the destruction of the old corpuscles in a normal organism, thus forming an equilibrium, is possible. This hypothesis would account for the lack of balance as shown in the variability of the number of red cells, while the hemoglobin remains consistently high to give the necessary supply of oxygen for carrying on the changes of metabolism.

In the next place, a hyperlymphocytosis is recognized after splenectomy following trauma or for experiment, but here, in the face of an ordinary inflammation, calling forth normally a polynuclear neutrophilic hyperleucocytosis, we have a persistently growing hyperlymphocytosis. But—and this is again of interest—when we have an intercurrent affection, as an acute gastritis, the polynuclear neutrophils again dominate, showing that the ordinary relations between inflammation and polynuclear hyperleucocytosis are still struggling to exist. That the removal of the spleen, which in embryologic life manufactures lymphocytes, gives a stimulus to the lymphatic apparatus of the body and thus causes a hyperlymphocytosis, is probable; that this

stimulus is very great is evidenced by the lack of neutrophilic polynuclear hyperleucocytosis where we should naturally expect it; that it is lasting is evidenced by the relative and absolute hyperlymphocytosis seen late after splenectomy.

COMPLEMENTAL OPPOSITION

C. F. HOOVER, M.D.

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I published some time ago a brief article¹ in which was described the method of employing a coordinated contralateral spinal reflex for differentiating between functional and genuine pareses of the lower extremities. This reflex was termed complementary opposition. Dr. Zenner, of Cincinnati, published later an account² of some clinical observations on genuine and functional pareses which confirmed my own observations. Dr. Zenner, however, said that he could not confirm my observations on normal subjects in detecting the contralateral opposition when the initial movement involved activation of the extensor iliofemoral muscles of one side; that is, if a patient lying on a couch is instructed to oppose one leg against the surface of the couch, thus activating the extensor iliofemoral muscles of that side, Dr. Zenner does not find complementary opposition manifested in the other thigh and leg.

It is true that the complementary opposition in response to an extensor movement is not as strong and never equals the initial resistance of the other side in vigor, but I always find under such circumstances that there is activation of the contralateral iliofemoral muscles. If the normal person is instructed to oppose one leg firmly against the surface of the couch we shall see either slight flexion of the opposite thigh on the pelvis; or, if the examiner's hand is placed under the tendo Achilles of the opposite side, he will perceive that the leg rests less heavily on the couch during the initial extensor movement and that sometimes the extended thigh and leg are lifted in the air.

Lhermitte³ gives additional evidence of the constancy of complementary opposition in pareses due to anatomic lesions and also evidence of its modification in functional cases as described in my original publication. He finds also that complementary opposition is modified in paresis of a lower extremity induced during hypnosis, just as it is modified in malingerers and hysterical subjects. But Lhermitte observed in one case of functional spastic paresis of a lower extremity that complementary opposition was present on the opposite side when the patient made an ineffectual attempt to lift the spastic paretic leg off the couch.

He concludes, therefore, that complementary opposition is manifested in spastic functional paresis as it is in paresis due to an anatomic lesion. But this is only one-half the sign, for Lhermitte's own observations are convincing of the functional character of his patient's paresis, viz., when the patient was instructed to lift the sound leg off the couch, then the paretic side exhibited much stronger complementary opposition than was manifested by the sound leg when the patient made an ineffectual attempt to lift the paretic leg. This incon-

sistency I should accept as quite convincing of the functional character of the paresis.

Since Lhermitte's publication I have not had the opportunity to study a case of functional spastic paresis of the legs, but the same behavior of the reflexes can be demonstrated in any normal person who will undertake to simulate alternately a flaccid and spastic paresis of a lower extremity. For my observations I employed physicians who did not know what manner of reflex was being sought.

When a flaccid paresis of one leg was simulated there was no complementary opposition on the opposite side during the feigned attempt at lifting the flaccid limb. But when a spastic paresis of the iliofemoral muscles was simulated, then complementary opposition was apparent on the two sides respectively, as Lhermitte describes it in his case of spastic functional paresis.

The behavior of the two legs under such conditions I regard as further proof that this synergic movement is purely a coordinated spinal reflex. In the case of spastic functional palsy the patient really activated the flexor iliofemoral muscles in response to the order to lift the leg in the air, and consequently the contralateral reflex in the form of complementary opposition was exhibited. The attempt to lift the leg failed because the patient arrested the reciprocal inhibition of the extensor iliofemoral muscles, but the initial excitation of the flexor iliofemoral muscles was not wanting as a basis for the contralateral reflex movement in the extensor iliofemoral muscles.

This clinical sign is a practical application of the experimental observations on the spinal dog which Sherrington published in his book, "The Integrative Action of the Nervous System." The following description is given of an experiment on a dog whose spinal cord was transected in the upper cervical region: "In the flexion reflex of the hind limb excited by noxious stimuli, e. g., a prick or a Faradic current, the limb itself is drawn up—if weakly, chiefly by flexion at the knee; if strongly, by flexion at the hip as strongly as at the knee. At the same time the crossed hind limb is thrown into action, primarily in extension, but this is soon followed by flexion, and alternating extension and flexion is the characteristic result. The rate of this alternation is about twice a second; that is to say, the foot which has stamped on a thorn is drawn up out of the way of further wounding, and the fellow hind limb runs away, and so do the fore-legs, when—which is more difficult to arrange, owing to the height of the necessary spinal transection—they also are included, fairly free from shock, within the 'spinal animal.'" By the "spinal animal" he means an animal in which the cord is separated from the encephalon by transection.

Sherrington finds that in the dog a strong flexion reflex in one hind leg nearly always brings out an extension movement in the opposite hind leg. But he further says (p. 162, loc. cit.): "In the spinal rabbit, on the other hand, and less often in the dog, the crossed reflex from one hind limb to the other is sometimes not an asymmetrical movement but a symmetrical one. This seems to stand in obvious relation to the hopping mode of progression of the animal."

From Sherrington we learn that the irradiation of reflexes results in synergic movements which expresses coordinated reflexes in the animal's external life. These coordinated reflexes are acquired; they are not congenital. We have but to watch a child learning to walk to see how the want of these coordinated reflexes defeats

1. A new Sign for the Detection of Malingerers and Functional Paresis of the Lower Extremities, THE JOURNAL A. M. A., Aug. 29, 1908, II, 746.

2. THE JOURNAL A. M. A., Oct. 17, 1908, II, 1309.

3. Semaine Médicale, Nov. 25, 1908.

the child's early endeavors. It is not until the synergic movements of both limbs are effected through coordinated spinal reflexes that the act of progression ceases to be attended with conscious effort. The act of walking, then, as it is finally learned, is dependent on the acquisition of adaptive coordinated reflexes. Although these coordinated reflexes express some purposive movement and comprise the integrative action of the nervous system, they are reflexes nevertheless, just as the simple tendon reflex or pupillary reflex which consist in the activation of three factors, viz., initiation, conduction and end effect. "The outcome of the normal reflex action of the organism is an orderly coadjustment and sequence of reactions."

This experimental view of synergic activity of skeletal muscles admits of very striking clinical application so far as the lower extremities are concerned. If complemental opposition is a purely spinal coordinated reflex, then in spinal diseases in which the "synapse" is affected or destroyed we must expect to find some modification of complemental opposition; and this I find to be a fact. In ataxic subjects who suffer from *tabes dorsalis*, and also in Friedrich's hereditary spinal ataxia, thus far I have always found that there is a disproportion between the strength of complemental opposition and the initial movement. If an ataxic subject is directed to hold one leg in the air against resistance we find that the other leg is opposed against the couch with much more force than is employed in the initial resistance; that is, the ataxic patient always overdoes the complemental opposition. This is true of patients with moderate degrees of spinal ataxia. But when the ataxia is extreme, when all kinesthetic impulses are interrupted, when the synapse is destroyed, we see quite another behavior. If such a patient is asked to close his eyes and then lift one leg off the couch there will be a symmetrical movement in the other limb; there is then no complemental opposition in such a patient when his eyes are closed. But if the patient is directed to open his eyes and then lift one leg off the couch, he will exercise complemental opposition in the other leg, but the opposition is stronger than the force of the initial movement. Such a patient with the aid of his sight behaves just as the patients in less severe cases behave with eyes closed or opened. An extremely ataxic patient with his eyes closed reacts similarly to the malingerer or hysterical patient, but for an entirely different reason. In the extremely ataxic patient complemental opposition is absent because of the loss of synapse, but in the hysterical subject complemental opposition is absent because of cerebral inhibition. If complemental opposition is a coordinated spinal reflex, then we should find it present in spastic spinal paraplegia; and this I find to be true.

The method of eliciting the initial activation of the flexor iliofemoral muscles of one limb is to give the patient a pin-thrust in the sole of the foot. If the paralytic patient is given a moderately strong prick with a pin on the sole of the foot the thigh is flexed on the pelvis and the leg is flexed on the thigh. If the pin-thrust is stronger, then the flexion reflex is stronger. Thus in genuine spastic paraplegic patients, or in those paraplegic patients in whom all reflexes are not lost, there is a constant relation between the intensity of the pin-thrust and the intensity of the flexion response. This would not be true in functional cases. Moreover, when the flexor reflex is elicited by the pin-thrust on one side we can feel that it is accompanied by activation of the extensor iliofemoral muscles of the other

side if the observer's hand is placed beneath the flexor tendons of the knee of the opposite side. The complemental opposition, it is true, is not strong; but neither is the initial reflex very strong, although the thigh and leg will be well flexed in a completely paraplegic patient if he is given a sharp pin-thrust in the sole of the foot. In a patient who had an acute myelitis with absolute paraplegia inferior with urinary and fecal incontinence and absolute loss of all sensations and all reflexes in the lower extremities, there was no such response to the pin-thrust in the sole of the foot for a very obvious reason.

Recently I employed this method of eliciting complemental opposition in a patient who suffered from paraplegia inferior after an injury. I shall mention only the facts which have a bearing on this sign. The patellar reflexes were both present, though diminished in intensity. There was absolute motor paralysis of both thighs and legs. To superficial stroking of the soles of the feet there was no response, but when firm pressure was employed in stroking the soles there was a dorsal flexion of all the toes, i. e., the response could be elicited through the protopathic paths but not through the epicritic paths. Directly after the accident the patient had priapism and marked disturbances in rectal and bladder innervation. When this patient was given a strong pin-thrust in either sole there was a good flexor response and it was accompanied by activation of the extensor iliofemoral muscles of the opposite side.

SUMMARY

To sum up the results of my observations: I think that we are justified in assuming that complemental opposition is a contralateral coordinated spinal reflex and is always present when the spinal synapse is not completely destroyed unless cerebral inhibition intervenes.

Moreover, we must observe in cases of functional spastic paresis of one limb (the iliofemoral muscles, inclusive) that the complemental opposition is present on the sound side because the patient activates his flexor iliofemoral muscles on the initial side, but through cerebral intervention he prevents the normal reciprocal inhibition of the extensor muscles of the affected side. Under such conditions the functional character of the spastic paresis is betrayed by the disproportion between the complemental opposition of the two sides respectively.

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CARCINOMATOUS POLYPOSIS OF THE COLON

WITH REPORT OF AN INTERESTING CASE

EDMUND A. BABLER, M.D.

Assistant Surgeon, Deaconess Hospital

H. J. NIEBRUEGGE, M.D., AND CARL FISCH, M.D.

ST. LOUIS

The very interesting character of the clinical manifestations and pathologic findings, combined with the apparent rarity of the disease in point, necessitate the presentation of our report before discussing the subject in detail.

AUTHORS' CASE

Medical Part: Dr. Niebruegge

History.—Miss A. M., aged 19, consulted me Aug. 1, 1908, complaining of a severe offensive, bloody diarrhea. The following data were elicited: The patient's mother's mother died from cancer of uterus. Parents were alive; mother healthy; father

had had intestinal trouble for a long time. There were six girls in the family; one died from insolation. There was no tuberculous history. Menses began at 13; painless and regular. The patient had always enjoyed good health until the summer of 1905, at which time her present illness began.

Present Trouble.—During the early part of July, 1905, the patient became nauseated, and vomited at frequent intervals. This continued throughout the remaining part of 1905. She was not sick enough, in her opinion, to consult a physician; she would vomit the greater portion of her food, hence did not eat very much. Gradually the nausea and vomiting disappeared. During 1906 she observed that her stools were occasionally bloody; she would have two or three stools a day, and about once every two weeks they were bloody. In November, 1906, the nausea and vomiting returned and continued at intervals until the spring of 1907. During the summer of 1907 the stools became more liquid in character, and practically always contained blood; they also became offensive. Tenesmus was never present. The patient suddenly felt a desire to go to stool; evacuation always brought satisfaction. Since January, 1908, the patient had been having six or eight stools daily; they were always offensive; sometimes a fairly well-formed stool was passed; stools always contained red blood; the patient never noticed that the stools were tarry. During the month previous to the consultation she had been feeling weak and tired out. She frequently felt nauseated and occasionally vomited. She craved a great deal of water; her mother stated that during the past two months she had been having an evening rise of temperature; she frequently felt very hot. At the time of consultation the patient felt exhausted, but ate whatever she desired. She had not had pain in the abdomen. The rectum felt very sensitive. The patient had lost weight; her appetite had always been good until recently.

Examination.—The very anemic and worn-out appearance of the patient was striking. Pulse was 90; temperature, 99.3. The respiratory tract was apparently normal. Musculature was good; the abdomen of normal contour. Nothing abnormal was found in the abdomen on palpation, except tenderness over the entire course of the colon from the ileocecal valve to the rectum. Rectal examination failed to reveal stricture or abnormal growth; it caused considerable pain. A specimen of stool was obtained. It was a reddish, brownish liquid and very offensive. On standing it quickly separated into an upper sanguinous, cloudy portion, and a lower thick, yellowish portion which looked like pure pus. The urine did not contain albumin or casts. Specimens of stool and of blood were sent to Dr. Fisch.

Diagnosis.—Patient was advised to go to the Deaconess Hospital and submit to a thorough examination under ether. Dr. Babler was asked to see her. The duration of the symptoms, the tenderness along the course of the colon, and the frequent offensive stools pointed to an ulcerative process in the colon. The age of the patient and the absence of tenesmus were confusing.

Surgical Part: Dr. Babler

Examination.—The principal finding was the marked tenderness over sigmoid and entire colon. Under ether the uterus and adnexa were found normal; the palpating hand could not find any abdominal tumor; the sigmoid and colon could be outlined without difficulty; digital examination found the rectum free from stricture and abnormal growth. The proctoscope was introduced; the mucosa was found intensely congested, and the seat of numerous small erosions; no tumor was visible. The sigmoidoscope was only partially introduced, because of the thickened, infiltrated condition of the rectum; we suspected an ulcerative colitis and were careful lest we caused hemorrhage or perforation. The mucosa was everywhere intensely congested; neither stricture nor polypi or other abnormal growths could be made out. Since the patient did not take the anesthetic very well, further investigation was discontinued.

Diagnosis.—I felt that Dr. Niebruegge's diagnosis was probably correct. The fact that the patient had never passed fleshy growths or noticed masses protrude from rectum, com-

bined with our failure to find rectal or other growths, seemed to strengthen the suspicion that she had chronic ulcerative colitis. We thought that Dr. Fisch would throw some light on the subject; the duration of the illness seemed to exclude tuberculous colitis. Dr. Fisch reported marked leucocytosis; absence of tubercle bacilli and parasites in stools, but presence of large quantity of pure blood, epithelial cells and pus.

Treatment.—The usual treatment for chronic ulcerative colitis was instituted; the colon was irrigated daily with silver nitrate solutions, or 3 per cent. argyrol solution (one quart); bismuth subcarbonatis and phenylis salicylas were given by mouth, and only the least irritating food was permitted. In spite of the fact that restricted diet usually acts badly in these cases of ulcerative colitis, we deemed it best in our case owing to the nausea. The treatment did not benefit the patient; her stools became less bloody and frequent but more painful; she began to vomit and feel worse; temperature fluctuated between 99.5 and 103.8; pulse between 90 and 132. At the end of a week or ten days an appendicostomy was proposed. On the evening preceding the day set for the appendicostomy, symptoms of acute appendicitis appeared; vomiting was present and there was also marked tenderness over sigmoid and cecum. The patient also complained of pain in both the right and left anterior superior spine of ileum.

Operation.—The abdomen was opened at 8:30 p. m., through the border of the right rectus. The cecum and sigmoid were found intensely congested and considerably distended. The appendix was found lying behind the cecum; it was six inches in length, intensely congested, considerably thickened, and curled on itself; it was bound down by a very short mesoappendix. The entire colon was found free from palpable growth; a constriction could not be found; the walls were considerably thickened; mesenteric glands were not perceptibly enlarged. The uterus and appendages were normal. After carefully considering the findings it was decided to excise the distal five inches of the appendix, then draw the stump through a supplemental gridiron incision at McBurney's point, suture the peritoneum to the cecum, and the appendix stump to the aponeurosis of the external oblique and to the skin. This was done as quickly as possible; linen sutures were used. The primary incision was then closed in layers without drainage. Dressings were applied and the patient put to bed.

Postoperative History.—Continuous normal saline solution per rectum was given according to Murphy's technic. The patient rallied better than we anticipated. On the day following the operation the artery clamp was removed from the tip of the appendix stump, and a large quantity of gas escaped. A quart of normal saline solution was introduced by means of a catheter in the lumen of the appendix stump. Two hours later the greater portion of it passed per rectum. These colonic flushings were repeated daily and seemed to benefit the patient. The appendicostomy wound served the double purpose of permitting gas (and occasionally feces) to escape through the catheter, and of allowing colonic flushings. Toward the end of the sixth day the patient began to fail; she felt nauseated and vomited; the stools again became very frequent and bloody; the patient looked very sick and exhausted. The temperature and pulse were markedly better until the sixth day. Gradually the patient became weaker and weaker, and died on the ninth day after the operation.

Autopsy.—The parents consented to a partial necropsy. The abdomen was opened one hour after death, through the primary incision at the edge of the right rectus. The peritoneum was everywhere pale and apparently normal. The appendicostomy wound had healed perfectly. The general peritoneal cavity was free from infection. The liver, stomach, kidneys and pancreas were apparently normal. The distal six feet of the ileum and the entire colon to the lower part of sigmoid were removed and opened. The entire colon from the appendix stump to upper part of sigmoid was thickened; polypoid growths of various sizes, from pea to small hickory-nut, were found scattered throughout the course of the colon. These growths were firm and seemed to be situated in the mucosa; the mucosa was everywhere congested and numerous submucous hemorrhages were noted. There were neither con-

strictions nor marked ulcerations present; in fact very few erosions were found. A few of the polypoid growths were of the long-stalked variety. The specimens were at once taken to Dr. Fisch, a summary of whose report is given below.

Pathologic Part: Dr. Fisch

A description of the microscopic findings in the material submitted to me, the macroscopic appearance of which is stated by Dr. Babler, would need far more space than is allowed for a clinical paper, in order to give proper weight to the great interest and pathologic importance of the condition. The detailed report will be published in a journal on pathology.

Microscopic Examination.—Microscopic sections revealed the carcinomatous character of the total number of the polypi; the type of this character was that of a malignant adenomatous state that resulted in invasion of the mucosa and submucosa, converting these tissues into a thick, hard layer, consisting of carcinoma tissue, all around the wall of the intestine. The upper layers of the submucosa and the mucosa were intensely



Fig. 1.—Portion of transverse colon (natural size).

infiltrated with inflammatory products, with plasma in preponderance. The intestine from the upper portion of the rectum to the distal part of the small intestine thus showed a uniform sheath of carcinoma between the muscular layers and the submucosal and mucosal layers. The two muscular layers were so far not involved, although in their lymphatic spaces many nests of carcinoma cells were present. The serosa was, as yet, intact; but considerably thickened. The condition obtained, too, for the appendix.

In no place of the whole tract could anything be found to suggest the presence of a primary tumor. The rectum, in its distal portion, was free from any tumor formation. All of the mesenteric glands examined were free from metastatic enclosures, and nowhere in the abdomen could a metastasis or tumor be found.

The uniform carcinomatous character of the glandular tissue has not been observed before, although partial foci of this form have been seen in a few cases of otherwise benign polyposis.

REMARKS: DR. BABLER

Carcinomatous polyposis of the colon must be regarded as of very infrequent occurrence. In carefully reviewing the available literature I have been able to find only a few cases. It must be admitted that carcinoma occurs more frequently during childhood and adolescence than we have heretofore appreciated. Phillips¹ has recently collected 390 cases of carcinoma during childhood. Creite² reported a case of cancer of penis at 2 years; Thompson's³ patient with adenocarcinoma of breast was only 11 years of age. The patient in Clair's⁴ historic first case of cancer of colon during childhood was 3½ years of age. Recently McWilliams⁵ collected 90 cases of primary carcinoma of the appendix; in 60 per cent. of 78 cases the patient was under 30 years of age. Simple intestinal polyposis is apparently a disease of childhood; carcinomatous polyposis of the colon is perhaps a disease of adolescence and adult life.

Pathology.—Hauser⁶ is a strong advocate of the theory that simple polypi of colon may become malignant. Meyer⁷ holds that intestinal polyposis is con-



Fig. 2.—Vertical section from a small polypus (Leitz. Eyepiece 4, Obj. 3).

genital; Zahlmann⁸ reported six cases occurring in one family; Cripps⁹ and others have cited similar cases. Doering¹⁰ has recently collected reports of fifty cases of intestinal polyposis; in 46 per cent. of the cases carcinoma was also present; in many of these latter cases the polypi were simple adenomata. In our case the polypoid growths were situated in the mucosa; all that were examined showed carcinomatous structures. In Petrow's¹¹ interesting case the patient presented symptoms of ileus; operation showed ileocecal intussusception apparently due to polypoid growths; at autopsy two additional intussusceptions were found;

1. Phillips: *Ztschr. Krebsforsch.*, 1908, v, 326.
2. Creite: *Deutsch. Med. Wchnschr.*, 1905, xxxi, 894.
3. Thompson: *Brit. Med. Jour.*, 1908, ii, 502.
4. Clair: *Oesterr. Ztschr. f. Kinderh.*, 1855, i, No. 2.
5. McWilliams: *Am. Jour. Med. Sc.*, June, 1908.
6. Hauser: *Deutsch. Arch. f. klin. Med.*, 1895, iv, 429.
7. Meyer: *inaug. Diss.*, Giessen, 1898.
8. Zahlmann: *Jahrb. über die Leistungen u. Fortschr. d. ges. Med.*, 1903, 1, 297.
9. Cripps: *Tr. Path. Soc. Lond.*, 1882, xxxiii, 137.
10. Doering: *Arch. f. klin. Chir.*, 1907, lxxxiii, 194.
11. Petrow: *Abstr. in Centralbl. f. Chir.*, 1896, p. 542.

the intestine was found studded with polypoid growths; the growths showed incipient carcinomatous changes.

Simple polypi of the intestine are found most frequently in the rectum. Doering and others have reported cases in which rectal polypi were operated on and the growths found to be simple adenomata; several months or years later the patient returned with a carcinoma of the rectum; many of the polypoid growths in ascending, transverse and descending colon were found to be pure adenomata.

A striking feature of carcinomatous polyposis is the absence of metastases and of involvement of the mesenteric glands. We have collected reports of nineteen cases in which carcinoma of the colon and intestinal polyposis were present in the same patient; also reports of five cases in which the polypi showed carcinomatous changes. Multiple primary carcinomata of the intestine may occur. Bunting¹² has reported one case of multiple primary carcinomata of the small intestine and collected reports of five others from the literature. Billroth held that, in order to be multiple primary carcinomata, the growths should satisfy the following conditions:

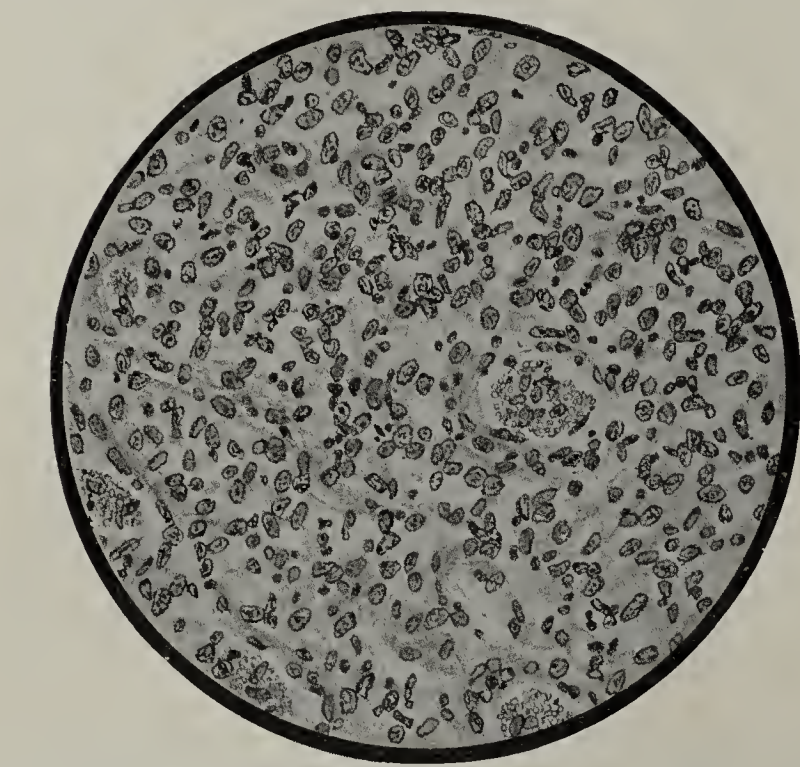


Fig. 3.—Portion of submucosal carcinomatous infiltration (Leitz, Eyeplece 4, Obj. 6).

1. Each must show a different histologic structure.
2. Each must be traceable histologically to the epithelium of its matrix.
3. Each must show its own metastases.

It is obvious that multiple primary carcinomata of the intestine will not conform to all of these requirements of Billroth, since they seldom or never produce metastases. In Bunting's case the nodules seemed approximately of the same age; each showed histogenic relation to the epithelium of the crypts of Lieberkuhn over it.

Symptoms.—Tuttle¹³ has very fittingly said that the clinical manifestations of cancer of the colon vary according to the site, character and state of development of the malignant growth. He says: "Diarrhea or frequent desire to go to stool with no effectual result is the striking early symptom of cancer of the colon." In our case of carcinomatous polyposis of the colon the

patient stated that evacuation of rectal content always brought comfort; tenesmus was never complained of. It must be obvious that the usual symptoms of cancer of the colon are not to be looked for in cases of carcinomatous polyposis of the colon, since the growths do not interfere with the normal outflow of intestinal content; they do not, as a rule, attain sufficient size to be palpable. The frequent, bloody, offensive stools, the progressive anemia, the gradual exhaustion, the age of the patient and the long duration of the symptoms seem to me to be very impressive. In Petrow's case the symptoms of ileus caused the patient to seek medical aid. Forster's¹⁴ patient died from tuberculosis; autopsy showed polypoid growths scattered throughout the course of the colon; the polypi showed carcinomatous change. In our case the afternoon rise of temperature was apparently due to absorption of septic material in the colon.

So few cases of carcinomatous polyposis have been reported that it is difficult to do more than cite the symptoms present in these reported cases.

Diagnosis.—The mere fact that a young person has had a bloody, more or less offensive diarrhea for months

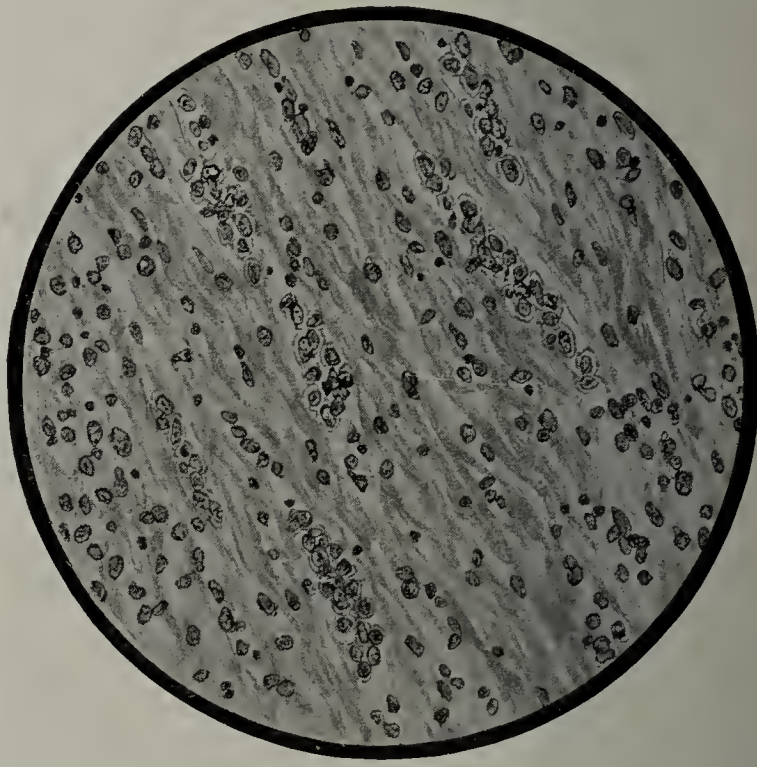


Fig. 4.—Section of circular muscular layer; nests of carcinoma in lymphatic spaces.

or years should at least arouse a strong suspicion of intestinal polyposis. The age of the patient and the long duration of the colitis are regarded as characteristic of intestinal polyposis. Frequent bloody stools and progressive anemia occurring in a young person should arouse suspicion. When the rectoscope and sigmoidoscope fail to clear up the diagnosis, and when the stools contain pus, intestinal debris and blood only, it is reasonable, after making a thorough examination under ether, to suspect malignancy. The diagnosis of carcinomatous polyposis of the colon may be practically impossible. In many cases, however, the finding of fleshy masses in the intestinal excreta will clear up the diagnosis. An exploratory laparotomy is preferable to prolonged doubt and delay. Bunting and others have shown that multiple carcinomata of the small intestine do not usually cause clinical manifestations. In tuberculous ulceration of the colon the symptoms do not

12. Bunting: Johns Hopkins Hosp. Bull., 1904, xv, 389.

13. Tuttle: N. Y. State Jour. Med., 1902, p. 169.

14. Forster: Rev. med. de la Suisse, Rom., 1903, xxiii, 362.

persist so long; the clinical picture differs quite materially.

Treatment.—If the diagnosis could be made before the patient is too exhausted, and if the growths were limited to the ascending, transverse and descending portions of the colon, it is probable that an intestinal exclusion would be advisable; the excluded portion could be excised at a second operation. Rotter¹⁵ did an intestinal exclusion in his case, but the patient was too exhausted and septic to survive. Margarini¹⁶ made a cecal colostomy, but the patient did not improve; he then removed as many of the rectal tumors as was possible, and closed the colostomy wound; the patient recovered; the polypi did not show malignant changes. Von Black¹⁷ was the first to call attention to the two-stage operations in cancer of the colon. Petermann¹⁸ has recently stated that primary resection of the colon with suture has a mortality of 50 per cent.

In our case an appendicostomy was performed, since we were of the opinion that the patient had chronic ulcerative colitis. Tuttle¹⁹ has recently collected reports of 77 cases in which an appendicostomy, as first recommended by Weir²⁰ in 1902, was performed. The results in chronic ulcerative colitis have been quite satisfactory. It does not seem possible that the operation could be of any great value in carcinomatous polyposis of the colon.

REPORTED CASES

Below will be found synopses of six cases which are somewhat similar to our case; in my opinion, Cases 3 and 5 are to be considered as especially so.

1. **BARDENHEUER'S CASE.**²¹—The patient, a man aged 48, had had pain in the abdomen for one year, and pain on defecation. Examination showed cancer of rectum. The growth was excised. Autopsy showed polypoid growths of various sizes scattered throughout colon. Microscopic sections showed all the growths to be carcinomatous. Bardenheuer questions whether the rectal growth or the polypoid growths were primary.

2. **HANFORD'S CASE.**²²—The patient, a woman aged 34, died of adenocarcinoma of the rectum. Autopsy showed metastases in liver; the colon was studded on its inner surface with polypoid growths of various sizes; about the middle of the transverse colon was a polypus the size of a walnut which had caused a stricture; the mesenteric and lumbar glands were not much enlarged. The polypi showed incipient malignant change. Hansford contended that his case demonstrated the possibility of simple polypi becoming malignant. (The growths were malignant adenomata.)

3. **PETROW'S CASE.**—The patient, a girl aged 20, had symptoms of ileus. Operation showed ileocecal intussusception. Resection was done and the patient died. Autopsy showed two other intussusceptions, one in the jejunum and one in the ileum. Polypoid growths were found in both small and large intestine. The intussusceptions were due to polypi. Microscopic sections of the polypi showed incipient malignant changes. There was neither stricture nor large carcinomatous mass present; metastases were not found.

4. **HAUSER'S CASE.**—The patient, a man aged 33, had had diarrhea and pain in the abdomen for eleven years. Stools were offensive. Examination showed cancer of the rectum. Autopsy showed polypoid growths of various sizes in stomach,

small and large intestine. The polypi were found to be malignant. Hanser contended that his case coincided with that of Bardenheuer. Hauser has cited two cases in which polypi and carcinoma were present in the same patient.

5. **FORSTER'S CASE.**—The patient, aged 23, died from tuberculosis. Autopsy showed circular cancer of colon and multiple polypoid growths in colon. The polypi showed evidences of malignant changes.

6. **DOERING'S CASE.**—The patient was a boy, aged 16, whose mother and uncle had died from a cancer of rectum. The patient had been complaining of painful defecation followed by protrusion of a fleshy mass. Examination showed polypi in the rectum. Doering removed as many of the polypi as was possible; he found that the sigmoid was also the seat of the growths. Microscopic sections of polypi showed them to be simple adenomata. Three years later the patient returned; examination showed cancer of rectum. An artificial anus was made; the patient died. Autopsy revealed carcinoma of rectum and of hepatic flexure; four carcinomatous growths in colon; polypoid growths of various size were also present in colon. Some of the polypoid growths were found to be simple adenomata converted into malignant adenomata; many of the polypoid growths were pure adenomata. In the rectal growth the conversion of simple into malignant adenomata seemed clear.

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PARALYTIC ILEUS

WITH REPORT OF TWO CASES SUCCESSFULLY TREATED BY OPERATION

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Every operator of much experience in abdominal surgery has met with the distressing postoperative condition of abdominal distention the degree of which may range anywhere from a mere accumulation of gas in the intestine, causing only slight distress, to a well-developed condition of ileus, with impending death. During the past eighteen months two patients with such conditions have presented themselves for operation on my service at St. Joseph's Hospital.

Before entering into a discussion of the two cases under consideration, it may be well to make a few remarks regarding the general subject of ileus. A review of the literature on this subject shows that volumes have been written, and that the term used without qualification leads to endless confusion, since it designates only a syndrome and describes no definite morbid condition. It will be well, therefore, in using the term to qualify it with some term which will, in a measure, at least, indicate the specific pathology. This paper deals with paralytic ileus, which may be divided into dynamic and adynamic forms. Paralytic ileus of both types is an interference with peristalsis caused by a disturbed innervation of the intestine, as opposed to mechanical ileus, which is a form of intestinal distention brought about primarily by some actual physical obstruction of the bowel.

Experimental investigation into the influences of the innervation on intestinal movements have proved uncertain, but Pflüger established, by a series of investigations, the following facts: The vagus nerve innervates the entire small intestine and the irritation of its fibers either causes movements throughout the small intestine or increases peristalsis. Irritation of the splanchnic nerve, on the other hand, tends to inhibit movements of this portion of the intestinal tract and also causes

15. Rotter: Arch. f. klin. Chir., 1898, lviii, 357.

16. Margarini: Clin. Chir., 1903; Refer. Hildebrandt's Jahresbericht, 1903, p. 556.

17. Von Black; Cited in Petermann: Arch. f. klin. Chir., 1908, lxxxvi, 52.

18. Petermann: Arch. f. klin. Chir., 1908 lxxxvi, 52.

19. Tuttle: THE JOURNAL A. M. A., 1906, xlvii, 426.

20. Weir: Med. Rec., 1902, lxii, 201.

21. Bardenheuer: Arch. f. klin. Chir., 1890-1, xli, 887.

22. Hanford: Tr. Path. Soc., Lond., 1890, xli, 133.

anemia of its blood vessels, while the division of these same nerves causes a hyperemia.

It would be interesting—in fact, of vital importance to surgeons and clinicians alike—to establish by a series of experimental investigations the relation between the effects produced on the central and sympathetic nervous systems by autointoxication following certain abdominal operations, on the one hand, and the pathologic conditions which occur in the intestinal wall, on the other.

The question whether paralytic ileus is caused by a disturbance in the anterior cornual cells and their corresponding sympathetic ganglia giving origin to the fibers of the splanchnic nerves, or whether the disturbance takes place in the sympathetic plexuses of Auerbach, Meisner and Billroth in the intestinal wall will furnish an interesting and important field of investigation.

I hope to throw some light on this subject by reporting at a later date the results of some experiments which are under consideration at the present time.

moderately inflamed appendix bound down by a few adhesions was found. In the folds of the mesenterium of the appendix was found a large mass of fat resembling a true lipoma, which is mentioned here because the operator had never before met with that condition. As the operation did not take more than thirty minutes, the hernia was repaired, the entire operation requiring not more than one and one-half hours. The patient was returned to her bed in good condition.

Second Operation.—The patient received the ordinary after-treatment for laparotomies; yet she continued in a tympanitic condition for the following thirty-six hours, at which time her symptoms became so alarming (her pulse going to 162 and her temperature to 103 degrees, with respirations at 46, and the beginning of stercoraceous vomiting) that it was very evident that she could live not more than a few hours unless the distention could be immediately relieved. After a hurried consultation with my brother I decided to operate at once. After a short preparation the old incision was opened, no anesthetic being given until the peritoneum was reached, when gas was administered followed by a few whiffs of chloroform. The peritoneum was quickly incised and the first loop of the intestine that presented itself was picked up. There were no signs of peristalsis, consequently only a small amount of gas



Fig. 1.—Loop of intestine clamped off and the four anchor sutures to the fascia in place.



Fig. 2.—Cut edge of the skin approximated to the bowel by means of a row of Lembert sutures.



Fig. 3.—Two rectal tubes introduced into the bowel, the upper into the proximal portion, and the lower into the distal

REPORT OF CASES

CASE 1.—Patient.—Mrs. R., a short plethoric individual, aged 49. The physical examination revealed the following condition: The abdomen markedly distended and as tense as a drum; there was a decided tenderness at McBurney's point; pulse was 110; temperature, 100 F. The abdomen showed a small ventral hernia which stood out very prominently in this tympanitic condition. There was a history of two distinct attacks of appendicitis, at which times the patient was seen by a competent surgeon who made that diagnosis. The patient was sent to the hospital with instructions that a movement of the bowels should be secured, if possible, before operation. At the hospital that night the patient was given a cathartic and an enema, and at 12:30 a. m. passed considerable gas as a result of the latter.

First Operation.—The following morning the patient was in better condition and it was decided to operate that day. This was done at 10 a. m. When the abdomen was opened in the median line below the ventral hernia and the field inspected, a

escaped when the bowel was opened. The technique of this operation follows later in the paper. Irrigation with salt solution directly into the bowel was begun immediately and was continued for thirty minutes. It was noted that gas and fecal matter continued to escape with the irrigation, consequently this treatment was repeated at intervals of two hours. The patient was returned to her bed and given the ordinary postoperative treatment.

Forty-eight hours passed before the bowel gained its normal peristalsis, then the patient made a very good recovery.

CASE 2.—Patient.—Miss G., entered the medical service of St. Joseph's Hospital, Nov. 5, 1908, with a history of gallstone colic, one attack having occurred two and a half years previously. The patient had been suffering from the present attack for eight days, and presented the following conditions on physical examination: marked jaundice; extreme tenderness over the gall bladder region; pain shooting to the back and radiating to the right shoulder; vomiting; temperature 103 degrees, and pulse 120. There was a marked leucocytosis.

First Operation.—It was apparent that an operation was imperative. Consequently the patient was sent to the operating room and no time was lost in opening the abdomen and exploring the gall bladder, which was found to be markedly distended, with walls considerably thickened. On account of the inflammatory adhesions between the gall bladder and the surrounding viscera some time was consumed in controlling the hemorrhage. This complication necessitated concluding the operation hurriedly as the patient was in a very weak condition. The gall bladder was opened in the ordinary way, no time being taken to explore the interior; and a large tube was inserted after the Mayo plan. The patient was then dressed and returned to her room in a fair condition.

Postoperative History.—She made a good recovery and continued in a good condition, the temperature and pulse being normal and the bowels moving every day for the following five days. Dr. Alice Hamilton, of the Memorial Institute for Infectious Diseases, Chicago, who is investigating the subject of typhoid carriers with special reference to the gall bladder infections, examined this patient on the fifth day after the operation and found the paratyphoid organism in pure culture in the blood. On the evening of the fifth day after the operation the patient had two chills with a rapid rise in temperature and pulse so that on the following morning she presented the picture of profound collapse. In this condition she remained until the evening of that day, during which time the abdomen gradually became markedly distended. Repeated attempts to move the bowels both by catharsis and enemas proved futile. At 6 o'clock that evening the patient seemed in a dying condition. Dr. Arthur A. Small was called in consultation and, after a hurried examination, approved the proposed procedure for the relief of the ileus. The clinical chart at this time showed the pulse to be 156 and the temperature 103.5. There was also stereoraceous vomiting. The patient was sent to the operating room and the operation was performed under cocaine anesthesia. The patient had an uneventful recovery, save the irritation occasioned by the fecal material passing out on the abdomen.

TECHNIC OF THE OPERATION

The choice of an incision depends somewhat on the site of the incision of the original operation. Under most circumstances the first incision may be used for entrance into the abdomen, thus lessening the pain and the shock to the patient. The location of choice, however, is in the median line midway between the umbilicus and the symphysis pubis, for in this region a loop of the intestine near the lower end of the jejunum or the beginning of the ileum can be most readily picked up.

In other words, the operator attempts hurriedly to select a point in the small intestine approximately midway between the pyloric end of the stomach and the ileocecal valve. The distended loop of bowel is brought up through the abdominal wall and the distention reduced by stripping the intestine either way and applying a rubber-mounted intestinal clamp at the upper and lower angles of the wound, thereby collapsing the intervening portion of the bowel and reducing it to a condition so that sutures may be affixed without perforation.

Experience in handling these two cases has demonstrated, contrary to the teachings of many text-books on surgery, that but little gas escapes when the bowel is opened. Consequently great stress is placed on the introduction of long tubes into the intestine, as by this arrangement the irrigating solution performs a double rôle. First, the solution by entering the bowel at a considerable distance from the opening mechanically forces the gas and fecal matter to escape. Second, the introduction of the saline solution into this portion of the intestine with its rich supply of lymphatics acts as an immediate and powerful stimulant.

The after-treatment in such cases consists in sustaining the patient by rectal feeding for one week, at which time this feeding is supplemented by liquid diet by mouth, and this form of treatment is continued for a period of several weeks until the patient has regained sufficient strength to undergo an operation for the closure of the intestinal fistula. The feeding by mouth is discontinued for a week previous to the operation and the intestine carefully irrigated with an antiseptic solution.

The operation for the closure of the fistula consists in the resecting of five or six inches of the intestine and bringing the bowel together by means of a lateral anastomosis.

The treatment of paralytic ileus accompanying typhoid fever by this method has been suggested because of the parallelism of that disease and Case 2 in this paper. From the bacteriologic investigation of cholecystitis it would seem logical to conclude that the paratyphoid organism isolated from the blood of this patient by Dr. Hamilton may have remained latent in the gall bladder from the time of this patient's first attack until the date of this operation, at which time the disturbance set up in the gall bladder by the operation caused the organism to invade the blood, producing paratyphoid septicemia which in turn, just as in typhoid fever, may have been responsible for the paralyzed condition of the bowels in this case.

CONCLUSION

This mode of treatment, *per se*, is attended with grave danger and should be resorted to only after every effort by medicinal means has proven futile, but is apparently indicated in extreme cases in which death seems impending as sometimes occurs in the following conditions: (a) paralytic ileus following operations; (b) abdominal distention caused by suppurative peritonitis; (c) extreme paralytic ileus accompanying typhoid fever; (d) injuries to, and diseased conditions of, the spinal column producing a paralyzed condition of the intestines.

100 State Street.

THE POLLUTION OF STREAMS BY DISTILLERY WASTE

WITH SPECIAL REFERENCE TO LEPTOMITUS LACTEUS *

MARSHALL LANGTON PRICE, M.D.

AND

WILLIAM ROYAL STOKES, M.D.

BALTIMORE

The pollution of streams by distillery waste is, in the United States, a comparatively recent problem. Changes in the condition of the liquor trade have brought about the concentration of distilleries around cities and thickly settled communities, where they give rise to nuisances, the character and severity of which are governed mainly by the process employed and by the size of the stream into which the waste is emptied. The pollution of water courses in one way or another is certainly one of the most serious and important problems with which the health authorities have to deal. This is probably the only sanitary problem in which public opinion and the law have kept pace with scientific progress. The riparian rights of owners have been jealously guarded by the common law for several centuries and

* Prepared for, but not read before, the Section on Hygiene and Sanitary Science of the American Medical Association, Chicago, June, 1908.

have been affirmed by statutes in many of the states of the Union.

THE LEGAL ASPECT

The common law proposes that the owner of riparian rights shall have guaranteed to him not only the quantity of water which is necessary for his purposes, but also that its quality shall be unaffected, or, as the law has affirmed on several occasions, "the right of a riparian owner to have the water of a stream come to him in the natural purity or in the condition in which he has been using it for purposes of his domestic use or of his business is as well recognized as is his right to have the flow to his land in its usual quantity."¹

An abstract from the opinion of Judge Magruder of the decision of the Court of Appeals of Maryland in the case of Wm. E. Woodyear vs. Henry Schaefer, April term, 1881, is worthy of quoting, as it specifically demolishes all of the ground on which the pollution of a stream is generally maintained. The following points are especially important: "There can be no prescription for a public nuisance." "Where any prescriptive right to pollute a stream has been gained it can only be maintained to the extent that it is shown to have injuriously affected the interest complaining." "It is no answer to a complaint of nuisance that a great many others are committing similar acts of nuisance on the stream; each and every one is liable to a special action and to be restrained." While this decision in the case of Woodyear vs. Schaefer holds the specific nuisance at



Fig. 1.—Sketch map of the North Branch of the Patapsco River (not drawn to scale), showing the R. Tannery, the M. Distillery and the town of Carrollton. The arrows and numbers indicate where specimens were taken.

issue, namely, a slaughter house, to be *prima facie* a nuisance, and it is held that blood running into a stream constitutes a nuisance that will be restrained, it is not held, so far as I know, in any court, that distillery waste is *prima facie* a nuisance, and it is necessary to show in any specific case that such waste does cause a nuisance.

The decisions quoted refer mainly to suits in equity or to injunction proceedings to restrain a nuisance. Evidently this is not sufficient, however, in the pollution of streams where so much serious damage to health, comfort or property may exist, and the laws of Maryland make the pollution of streams a misdemeanor, punishable by fine or imprisonment, and similar statutes exist in other states. These statutes do not specifically refer, however, in general, to distillery waste. Hence in the specific case which we describe it was necessary to show, first, that the stream in question was polluted and rendered unfit for drinking or domestic purposes; second, that the distillery waste in question was the cause of such pollution either in whole or

in part. With this review of the general legal principles involved in the pollution of a stream, we may pass to this specific case, which is of particular interest on account of the fungus growth causing the pollution and of its direct dependence on the distillery waste.

POLLUTION OF THE PATAPSCO RIVER

During May, 1907, the secretary of the State Board of Health of Maryland, one of the authors of this paper, received a petition from 124 residents of some two or three small towns along the bank of the Patapsco River of Maryland to restrain the M. Distilling Company and the R. Tanning Company (Fig. 1) from discharging their waste into the stream, alleging that a serious nuisance was being produced by these two corporations. An inspection of this stream was made about the 1st of May with the county health officer, beginning with the tannery and following the stream down about three miles through two or three small villages. The water beginning about one-half mile below the tannery became black from the lime and tan bark discharged from the tannery and continued so for a distance of two or three miles. At the site of the distillery a frothy white liquid ran into the stream without producing any perceptible change. About a quarter of a mile below this point, however, there was a very perceptible odor, which increased in intensity as we descended the stream. At a pond furnishing power for a flour mill a number of dead fish were seen on the surface, and at a small town, below, the fungus which we describe appeared in great quantity along the bottom and sides of the river and at the race leading into the flour mill.

The odor along the banks of the stream was perceptible for several hundred feet back and was almost intolerable at the flour mill. The fungus accumulated at this place and had to be removed with a rake or shovel, and there must have been 100 pounds removed daily. In the stream the fungus could be seen adhering to the banks or growing from sticks like sponges. The free filaments gave a beautiful feathery appearance to the growth when floating in the water. The specimens when removed collapsed in a gelatinous mass and gave forth the most remarkably putrid, acrid and nauseous odor which we have ever experienced. The specimens were taken from this point and sent to the bacteriologic laboratory for examination. An opinion was delivered on this nuisance to the county health officer on May 6, 1907. The following are the main points as regards the M. Distilling Company:

First, that the said firm or corporation is situated on the Patapsco River near Carrollton, and that it is engaged in the manufacture of rye whisky.

Second, that the firm, in the manufacture of rye whisky, causes a mash of rye and water with yeast or some other ferment to ferment in large tanks or vats to produce alcohol and other extractives, giving the whisky its essential flavor and properties.

Third, that the firm causes its mash when fermented to be distilled at a low temperature to produce whisky.

Fourth, that the firm causes the residuum of the mash remaining after distillation to discharge through an open drain into the waters of the north branch of the Patapsco river at a distance of about 100 yards.

Fifth, that the waste material discharged from the drain of the firm has a sour, penetrating and disagreeable odor.

Sixth, that the waters of the north branch of the Patapsco river have, at Carrollton, at some distance above and below a sour penetrating and disagreeable odor.

Seventh, that the M. Distilling Company has violated the provisions of Section 429 of Article 27 by permitting

¹Wood on Law of Nuisance, Sec. 677; Gladfelter vs. Walker, 40 Md. 1. Wood vs. Sutt Hiffe, 2 Sim N. S. 163; 8 Eng. Law and Equity 217; Stockport Water Works Co. vs. Potter 7, H. and N. 159.

offensive matters to flow from the distillery of the said company into the north branch of the Patapsco river, thereby causing pollution of the stream.

The following extracts are taken from the general opinion in regard to the nuisance:

That the waters of the Patapsco river have continuously, or at intervals, an offensive odor from a point a short distance below the plant of the M. Distilling Company to and below the town of Carrollton.

That the waters of the Patapsco River contain between the points specified in Section 2, a growth of the nature of algae of penetrating and offensive odor.

That the waters of the Patapsco river have been habitually used for domestic purposes until they became fouled and polluted and unfit for domestic use.

Representatives of the corporation and petitioners were heard before the State Board of Health on June 12, and on June 13 orders were issued to the M. Distilling Company, through the president and general manager, enjoining them and all other officers, agents, employes or stockholders of the body corporate against causing, allowing or permitting any of the waste from their distillery to flow, directly or indirectly, into the Patapsco River after June 23, 1907. The distilling company shut down about June 20, a few days before the order went into effect.

On July 5 we visited the distillery to determine whether the orders of the board had been complied with and also to investigate the condition of the stream since the polluting materials had been withdrawn. We inspected the stream for about two miles and took frequent scrapings from the bottom with a long rake. We found this particular fungus had completely disappeared in the short interval since the shutting down of the distillery plant. We found a few fungi of the common variety, mostly chlorophyl-bearing algae, without unpleasant odor excepting a slight fishy smell. Some of the peculiar characteristic odor remained in the deep scrapings from the bottom. The disappearance of algae was so complete that we were unable to obtain any specimens for examination. The citizens along the bank reported the stream free from odor.

NATURE OF THE WASTE

Distillery waste is a yellowish-white, opaque liquid with a spirituous or yeasty odor and slightly acid reaction, due to acetic acid. In about twenty-four hours the reaction becomes alkaline. As appears in the analysis, it contains a very large quantity of nitrogen and

ANALYSIS OF SAMPLE MARKED "X"——— DISTILLING COMPANY."

(All figures expressed in parts per million.)

Color	Yellow
Odor	Spirituous
Total solids	17.990
Ignited or mineral solids.....	1.896
Volatile and organic solids.....	16.094
Chlorin	20.5
Nitrogen as free ammonia.....	8.33
Nitrogen as albuminoid ammonia.....	18.76

shows that the organic matter has only partially been exhausted by fermentation. The chemical analysis does not show why this material should be so favorable to fungus growth and particularly to the *Leptomitius lacteus*. Apparently the conditions under which this fungus grows are more or less delicately balanced. Too great or too little a dilution will apparently prevent its growth. In this particular instance the fungus did not appear until the stream had flowed about one-quarter of a mile beyond the distillery outlet. Since the dilution progressively increases in any stream, we would expect to see the fungus appear in small streams

in some part of their course, but, on the other hand, if the waste was discharged at once into a large body of water the dilution would probably be too great to favor the growth of the *Leptomitius*. In a small stream such as this the only means that could be suggested would be to completely dry and dispose of the waste or by aseptic tank process carry the fermentation process to a complete stage of decomposition. Attempts to cultivate the fungus have been uniformly unsuccessful, though during June we attained partial success by some experiments carried on at room temperature. Evidently it was necessary in this instance to obtain corroborative evidence that the growth of the *Leptomitius* was dependent on the distillery waste and not on the discharge from the tannery or a mixture of the two



Fig. 2.—Photograph copied from *Jahrbuch. f. Wissenschaftliche Botanik*, vol. ii, 25, showing different conditions of *Saprolegnia lacteus*. m, nuclei at the joints; s, the constrictions; p, spore swarms at rest after evacuation from the Sporangium; p', young spores producing "Schlanchen" or hyphae. At e' (1) a few spores are seen in the sporangium. At s' (4) the nuclei close the constrictions and form the partition walls of the joints.

wastes. Experiments were made with two samples of tannery waste, Specimen 1 and Specimen 2, and with distillery waste, Specimen 3. Dilutions were made in ordinary fruit jars as follows: Tannery Specimen 1, two samples, dilution 1 to 500 and 1 to 5,000; tannery Specimen 2, same dilutions; Distillery Specimen 3, two samples, same dilutions. We then had six jars containing two different kinds of waste, diluted in proportions of 1 to 500 and 1 to 5,000. Six additional samples were then prepared by mixing equal parts of the 1 to

500 distillery waste with tannery Specimen 1 and Specimen 2 separately and with equal parts of the mixture of Specimen 1 and Specimen 2, the samples being in 1 to 500 dilution, and a similar set of samples were prepared in 1 to 5,000 dilution.

A portion of the fungus was removed by the point of a paper knife and washed off by movements of the

taining tannery waste alone or mixed with distillery waste showed any evidences of growth.

It appears, therefore, from this partially successful experiment that a high dilution is necessary and that the products of the tannery inhibited the fungus. It remains to explain the universal disappearance of the *Leptomitus* when cultivated *in vitro*. Either the fungus exhausts its own nutriment and in a very short time ceases to grow or else, which seems more probable, some of the products of growth are toxic to the fungus, and its reproduction ceases on account of a species of autointoxication. We believe that both of these conditions can be met successfully, and if we are able to secure any more of the fungus we propose to treat it by continuous irrigation with diluted distillery waste, allowing the material constantly to siphon into the jar and overflow. In this way we could reproduce very closely artificially the conditions in which the fungus is found in the streams. One of the interesting phases of the joint association of this fungus and distillery waste in streams is the destruction of fish. This generally appears to kill only a certain proportion of fish and not to destroy all of those in the stream. While we have obtained dead fish and subjected them to au-

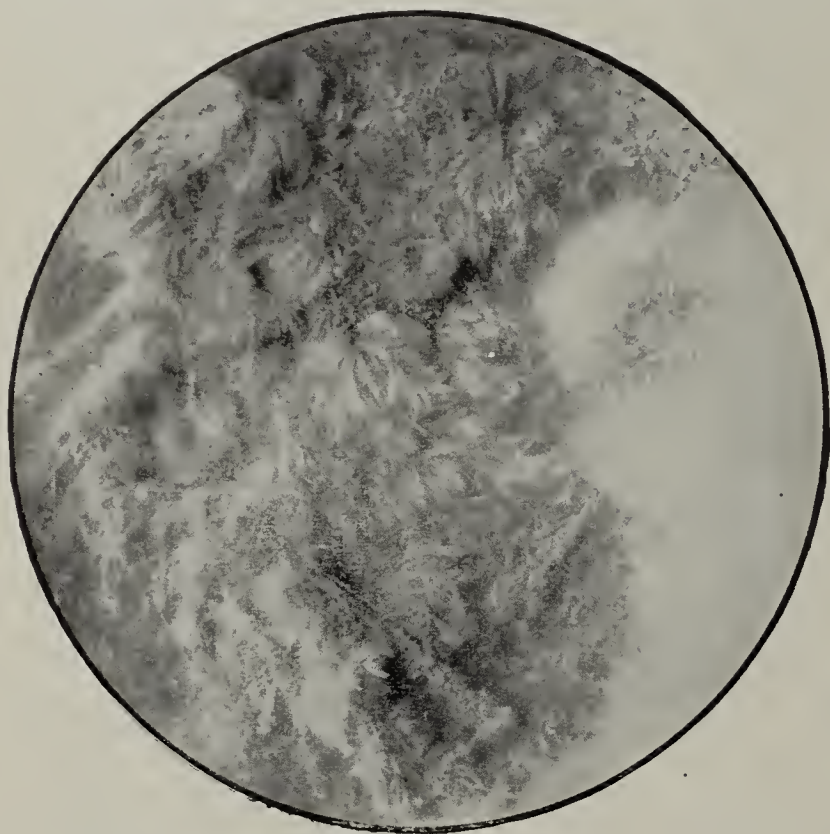


Fig. 3.—Photograph of gross specimen showing its shaggy, coarse, hair-like appearance.

knife in the fluid. The odor soon disappeared from the jars, excepting a slight leathery odor in those containing tannery waste. At the end of three days the characteristic odor reappeared in the inoculated jar

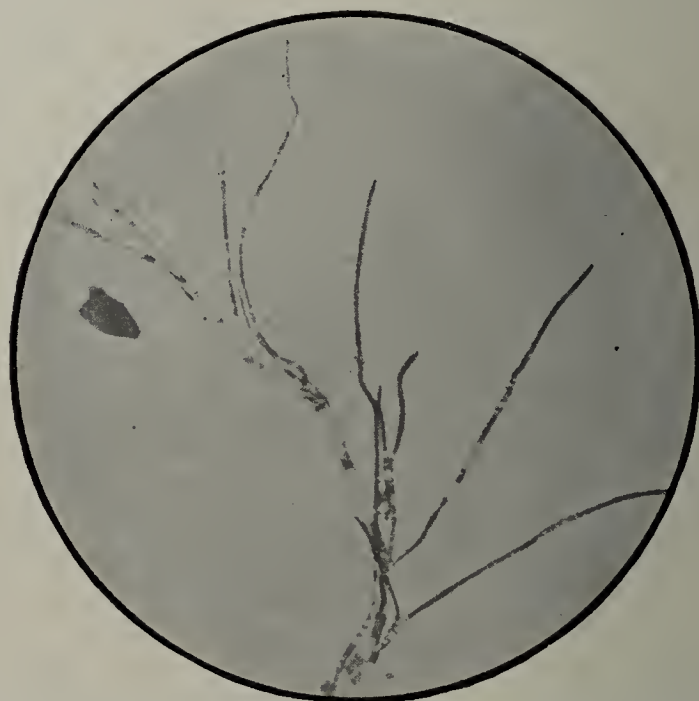


Fig. 5.—This shows a specimen dried and stained by hematoxylin. The dichotomous branching from the parent stem is clearly seen.

topsy, we have been unable to determine the cause of their death. Whether it is due to poisonous products of the fungus or its growth within or on some part of the fish, we have been unable to ascertain, but that it is due to the distillery waste in this instance can scarcely be doubted, as experiments *in vitro* with the tannery waste on living fish have been without result.

THE SAPROLEGNIE

According to Pringsheim² the *Saprolegnie* form a subdivision of the *Algae*. They are often found in water attached to animal or vegetable materials forming growths radiating from all sides of their host, their straight or branched hyphæ often penetrating deeply into the material, such as a stick or stone. Their protoplasm does not contain any chlorophyll or starch. Pringsheim thinks that they belong to the *Algae* since they form spore-swarms, and no true moulds do this, and the formation of generative cells and the alternating sexual and asexual generation places them in near relationship to the *Vaucheria* and *Conferva*.

Fig. 4.—The fungus under a low magnification, and the central large stem containing numerous smaller branches is well demonstrated.

containing the unmixed but diluted distillery waste. This was only plainly perceptible in the 1 to 5,000 dilution, and in this jar evidences of growth could be plainly perceived in new filaments springing off from the original material. None of the other samples con-

2. Jahrbücher für wissenschaftliche Botanik, Berlin, 1858., i. 284.

As mentioned above the *Saprolegnia* have a double cycle of development; a sexual and an asexual generation. The asexual growth begins by one of the hyphæ cutting itself off from the main stem by transverse fission and forming the so-called mother cell of the swarm of spores. The protoplasm divides into a large number of spores, which soon escape from the sporangium. Another hypha grows from the emptied spore-sac, and so the growth progresses. The spores are motile and have cilia which propel them through the water.

The most important part of the sexual apparatus of the *Saprolegnia* consists in the female sexual organ, or the oogonium, which forms the oöspores. These oogonia are developed from special branches which grow from the sides of the main hyphæ, and are later cut off and form the female organ. Certain clear spots appear in the protoplasm and the wall later is absorbed at these points and these orifices admit the spermatozoa.

Coincident with the changes just described a gradual separation of the contents of the oogonium takes place, which results in the formation of a number of masses of protoplasm which form the ova ready for fertilization. The protoplasm forms itself into globular shapes which form the daughter cells of the structure. In some of the forms of *Saprolegnia* branches grow out from the stalk of the oogonium, which grow around and even cling to the outside of the female sexual organ. These

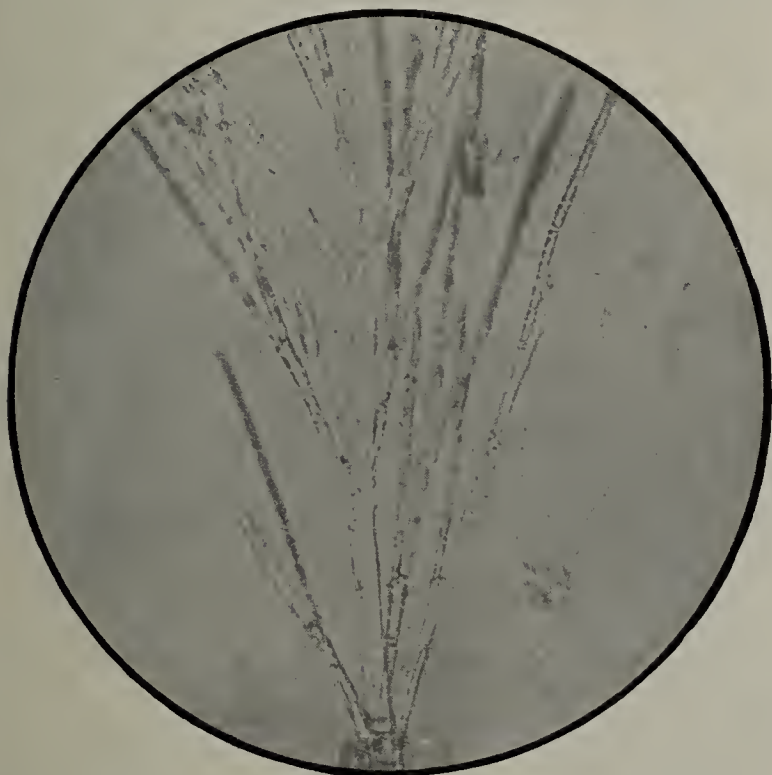


Fig. 6.—This shows the branching end filaments when photographed from a fresh specimen.

branches are called antheridia, and they penetrate the perforations in the wall of the oogonium and probably fertilize the immature ova by means of spermatozoa. These spermatozoa are embedded in the antheridia, surrounded by a mucoid material; after they have entered the protoplasm of the female element they appear as fine refractive bodies which soon mix with the substance of the protoplasm of the female element. Following this act the oöspores are formed which are the lasting seeds of this species.

In some species of *Saprolegnia* such as *Saprolegnia ferox*, these antheridia are not formed, and the spermatozoa are derived from egg-shaped cells which form at the end of hyphæ. A large number of small motile branches which rupture the mother cell become free later in the surrounding medium. They have cilia and are spermatozoa derived from these special antheridia. In summing up the characteristics of the *Saprolegnia* the following résumé is given by Pringsheim:

"The *Saprolegnia* are cryptogamic, colorless, parasitic water plants belonging to the division of the *Alge*. The vegetative parts are formed from a single many-branched mycelium. Many spore-swarms form at the ends of the cut-off hyphæ,

which spores have one or two cilia. Oögonia are formed from the thickened ends of short side branches which contain many openings. Antheridia are single-celled, and are formed by side branches from the stem of the oogonium. These antheridia contain many small rod-like spermatozoa. Oöspores are formed which later grow to hyphæ or form spore-swarms."

LEPTOMITUS LACTEUS

The organism which infected the stream is one of the *Saprolegnia*, and belongs to the genus *Leptomit*. Dr. Karl F. Kellerman, physiologist in charge in the Bureau of Plant Industry, U. S. Department of Agriculture, to whom we are indebted for a diagnosis, thinks that it is probably the *Leptomit* *lacteus*, and a brief description of this organism is therefore in order.

The *Leptomit* *lacteus* was first described by Agardh³ in 1860, and later by Pringsheim⁴ more thoroughly. According

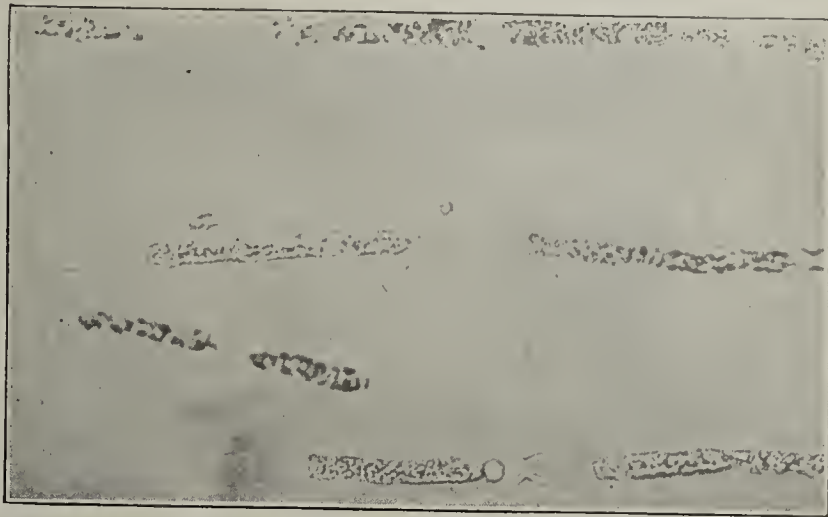


Fig. 7.—Two groups of three spores each, showing the granular protoplasm of the spores.

to this author this plant only occurs in the flowing water of small or large streams, occurring in winter as well as in summer. It forms either small or large masses of a dirty white material often spread over extensive areas. The filaments are often several inches long, and often cover the surface of the water, as well as every root or branch of a tree or large stone in the water. They form long, floating, slimy masses resembling wool spread over these various surfaces.

Under the microscope the plant shows dichotomous branching with slight constrictions which resemble joints. They are not true joints, however, and the entire plant is continuous and unicellular. Either one or several nuclei are often found near these constrictions. In young hyphæ the nucleus is

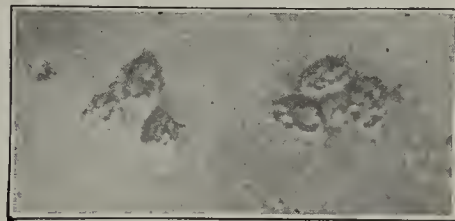


Fig. 8.—This shows the individual hyphæ under the high power. The constriction with the nucleus adjacent is quite apparent, and the granular protoplasm alternating with the clear hyaline contents of the filament is clearly indicated.

homogeneous, but in old ones it may show several concentric layers. New branches are formed by the growth from the point or end of a branch or by side branches. These younger branches are smaller than the parent branch at first.

The formation of sporangia is accomplished by a swelling of one of the end hyphæ, its protoplasm increases, and by transverse fission it cuts itself off and forms a complete single cell. This soon forms a sporangium in which the protoplasm begins to heap up in a manner similar to that described above in the other *Saprolegnia*. This process ends in the formation of

3. Syst. Alg., p. 50, Kützinger, Species Alg. p. 155, Dillhoyn's British Confervæ, 1809, Tab. 79.

4. Jahrbücher für wissenschaftliche Botanik, Berlin, 1858, ii, 205.

motile bodies which form swarms of spores. These spores measure $1/86$ of a millimeter in diameter and have two cilia, and hyphæ soon grow from these spores and thus continue the species.

The organism is very difficult to cultivate artificially, often dying out several hours after transplantation, but its life may be prolonged by adding insects to the water. Pringsheim could not observe the formation of sexual organs under these conditions. By supplying fresh water frequently he grew the plant for one week. He was never able to find oögonia or antheridia in this fungus. We obtained large quantities of the organism on two separate occasions from the stream, and on microscopic examination they both corresponded in all of their characteristics to *Leptomitus lacteus* as described by Pringsheim.

Figure 2 is a photograph of Table XXV from the *Jahrbüch. f. w. Botanik* showing the excellent drawings of the fungus by Pringsheim. The description at the bottom of the figure describes the plate in detail. The granular protoplasm of the hyphæ is well shown, and the nodes or constrictions are also seen at fairly regular intervals. The round, clear nuclei are usually placed near these constrictions, and the drawing also shows the true dichotomous branching of the mycelium. The spores singly, or in swarms, are clearly depicted, and the beginning of new hyphæ can be seen originating from the single spores. A few of these spores also show cilia, and Pringsheim described active motility of these spores. Figure 3 shows a photograph of the gross specimen as it appears when taken from the stream. The shaggy, coarse appearance of the threads resembles a bushy mass of hair. The specimen when fresh had a most penetrating, offensive odor, and this is still present after having remained about a year in formaldehyd solution.

Figure 4 is a photomicrograph of the fungus under the low power. A long central stem is seen from which smaller branches grow. These again branch into many terminal filaments. Figure 5 is a photomicrograph of a stained specimen.

The fungus was simply dried on a slide and stained by hematoxylin and it shows dichotomous branchings of the end branches, and also contains large clear areas without any granular protoplasm. Figure 6 shows the many branching end filaments when photographed from a fresh specimen. Some of these end hyphæ are said to separate from the rest by transverse fission, and form sporangia. The spores form in these sporangia, and later free themselves and become spore-swarms. Figure 7 shows two groups of three spores each. They are rather oval in shape, and contain coarsely granular protoplasm. Figure 8 shows individual hyphæ under the high power. Granular protoplasm alternates with clear areas, and the clear nucleus of one of the hyphæ appears adjacent to one of the constrictions.

From what has gone before we have concluded that the fungus corresponds in its properties with that described as *Leptomitus lacteus* by Pringsheim.

Clinical Notes

A NEW METHOD OF TAKING X-RAY PICTURES

P. S. O'DONNELL, M.D.

Skiagrapher to the Michael Reese Hospital
CHICAGO

The object of this paper is to demonstrate what I believe to be an entirely new method of taking x-ray pictures, the result of this process being to overcome the density. In this new method, as the illustrations show, two tubes or even three are used in the apparatus at the same time, one tube being placed above the subject in the usual manner, while the other tube or tubes, which we will call auxiliaries, are placed at a different angle.

An attachment is placed at the side of the subject, which for want of a better name I call a "cut off" or secondary diaphragm, which is placed one-half way or less, on one or both sides of the trunk or head, either posteriorly or anteroposteriorly, and the tube or tubes are so placed that the anode is exactly centered in the middle of the diaphragm, so that when the side tube or tubes are excited they will penetrate or throw rays laterally. Thus the auxiliary tube or tubes strike the subject midway of the trunk or head, by which means that portion is penetrated by the auxiliary tubes and offers less resistance to the tube placed above in the usual manner, the latter penetrating the part nearest the sensitized plate.

It is better to use a compression diaphragm or other apparatus, and especially a tube box that will condense the rays of all the tubes, so that the so-called S rays are cut off.

In this method a good many disappointments will accrue in the preliminary trials. It will be necessary to use two exciting apparatus, as I find it impossible to excite two tubes satisfactorily with

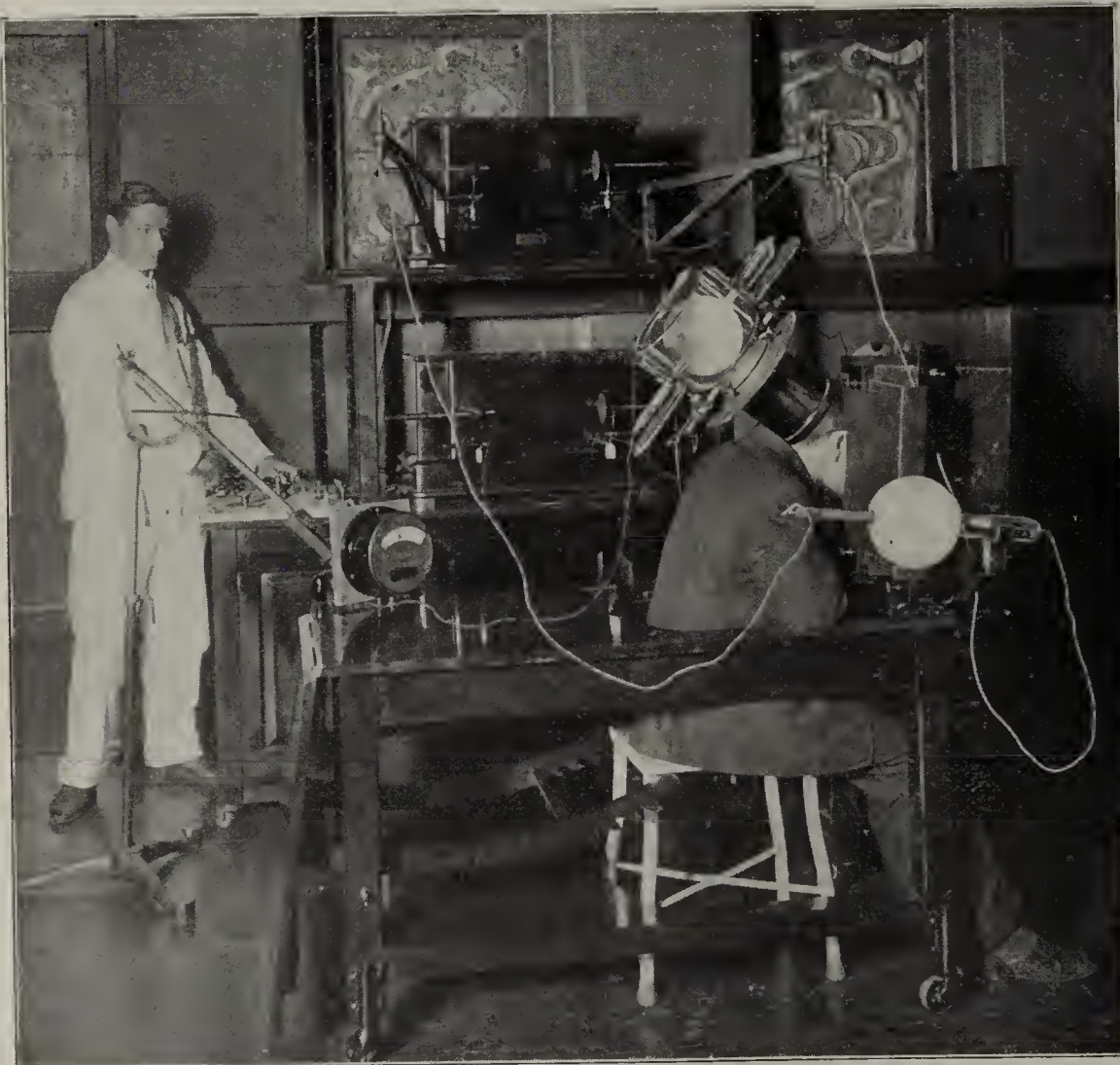


Fig. 1.—A new apparatus for reducing density, showing the working parts: the tube above takes the picture while the rays from the tube on the side passing through the subject in an oblique manner, allow the rays from the upper tube to pass more readily, thus giving greater intensity. An antero-posterior skiagraph of the head is being taken.

one coil in series or in parallel; therefore it will be better to use two coils of equal spark gap and connected in series with one multiple pointed interrupter. Again, it will depend on the density of the subject as to whether the principal or picture-taking tube or the auxiliary tubes shall be of the same or different vacuum. In a person of gross adipose tissue I use the auxiliary tube of very high vacuum, the top tube medium. For

head work, two tubes of medium vacuum will give the best results. But no rule or hard and fast law can be laid down. When once the radiologist has mastered this method of using two or three tubes on the same subject the results and the beauty of his negatives will more than compensate him for additional expense and labor, for the soft tissue skiagraph is of the greatest value, bone work taking a very secondary place.



Fig. 2.—Method of taking a trunk skiagraph in posterior position, the second tube being placed at the side of the patient, thus reducing the density of the abdomen or pelvic region.

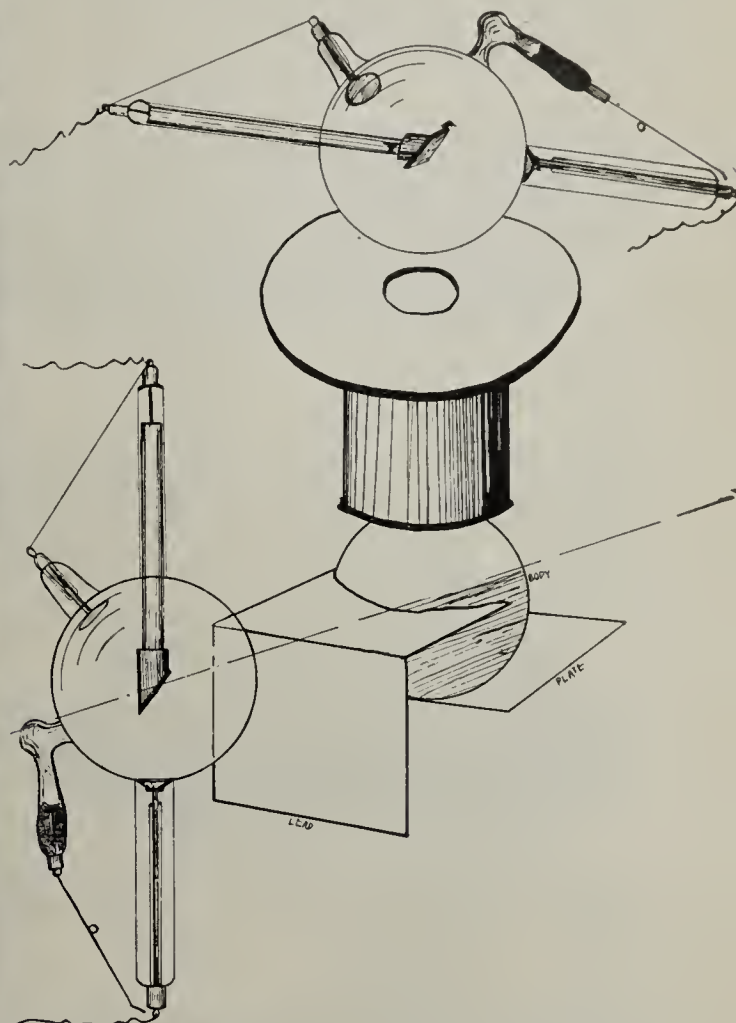


Fig. 3.—Arrangement of tubes, body and plate in improved skiagraphic method.



Fig. 4.—Skiagram of skull taken by new method. Note that left side of the face appears prominently while shadows from right side are exceedingly faint and hardly discernible.



Fig. 5.—Skiagram of renal calculi taken in three seconds by new method.

PROCTOCLYSIS IN THE TREATMENT OF PERITONITIS

J. B. MURPHY, M.D.

CHICAGO

The employment of proctoclysis in the treatment of the various forms of peritonitis, postoperative or otherwise, and general toxic conditions, is a very simple procedure, but unless given with appreciation of the principles involved the solution will not be retained by the patient. The continuous method is by far the most

been so surprising that it was at first feared they were accidental, but they are now so uniform as to amount almost to a mathematical certainty when the details are carried out, which are based on our knowledge of the physiologic and pathologic conditions of septic absorption, local and constitutional immunity, and the elimination of toxins.

The apparatus in its simplest form consists of a fountain syringe or can with a large rubber tube attached, terminating in a vaginal hard rubber or glass tip flexed at an obtuse angle two inches from its tip, having

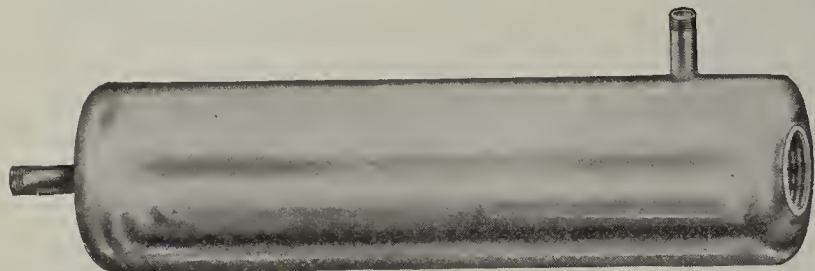


Fig. 1.—(One-third size.) Represents a metal heating chamber, block tin lined, with opening for electric heating unit and rubber tube connections for intake and outlet of saline solution.

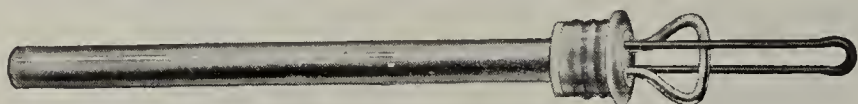


Fig. 3.—(One-third size.) Heat unit for alcohol or Bunsen burner flame with regulating piston. For use where electric current is not available. See Fig. 8.

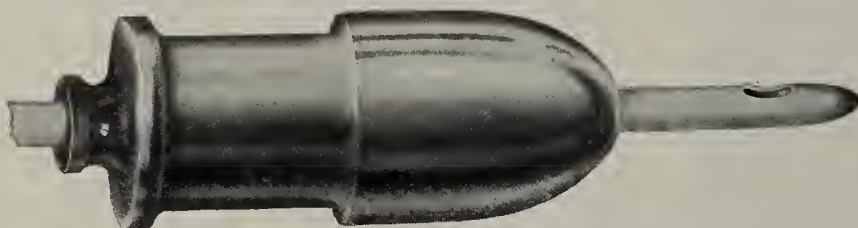


Fig. 4.—(One-half size of largest rectal tips.) Self retaining rectal tips on catheter showing how adjustment can be accomplished by merely drawing catheter through to desired length.

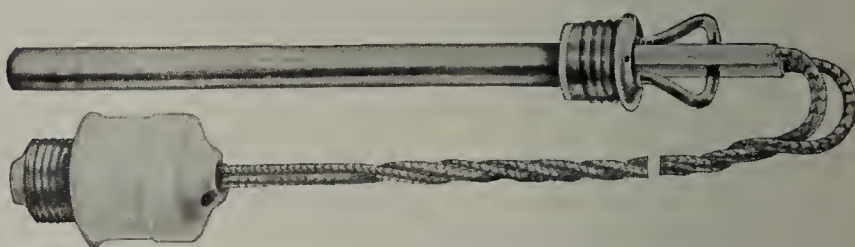


Fig. 2.—(One-third size.) Electric heating unit with socket connection and ten feet of cord. This unit can be used with either alternating or direct current 105 to 128 volts. See Fig. 7.



Fig. 5.—(One-half size.) Pinch cock used entirely to close flow or for drop method.



Fig. 6.—(One-third size.) Self-retaining rectal tips made in four sizes of hard rubber with opening through center to admit a soft rubber rectal catheter American size, No. 15. See Fig. 4.

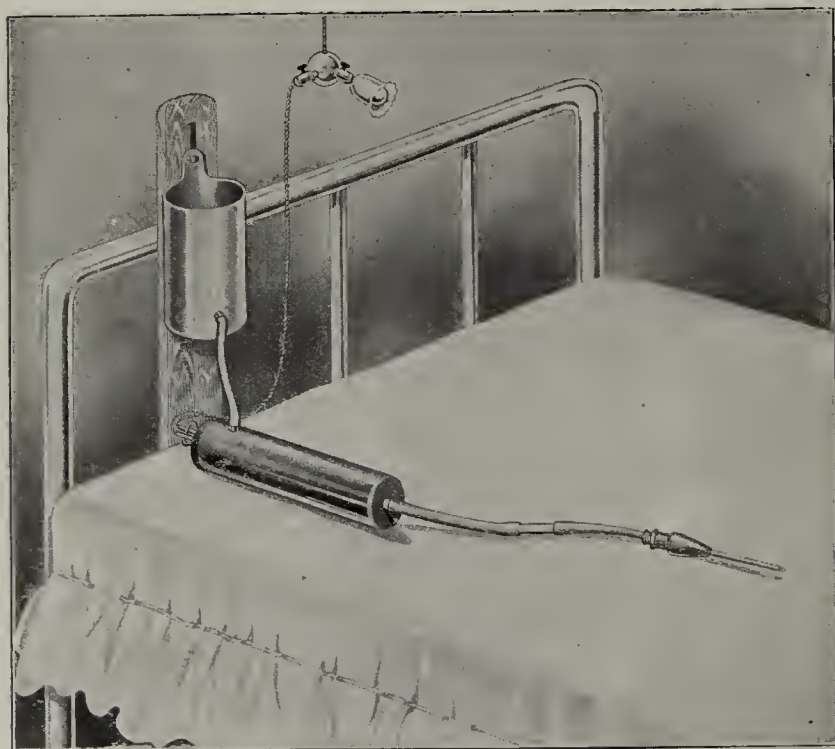


Fig. 7.—Electric heater in operation showing it properly connected. A short glass tube connects catheter to rubber tubing.

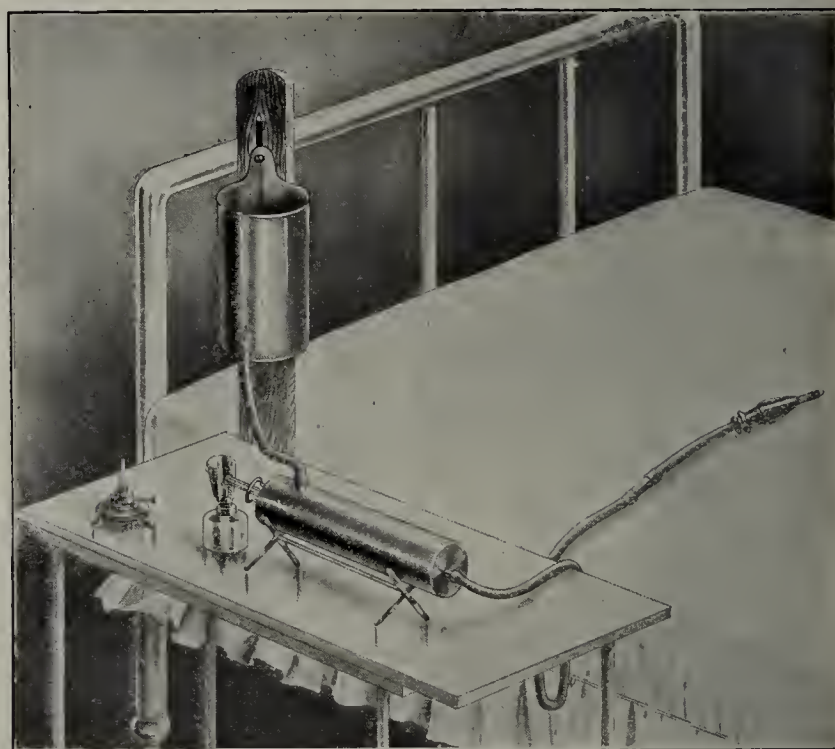


Fig. 8.—Alcohol or gas heater in operation, showing it properly connected. A short glass tube connects catheter to rubber tubing.

scientific and successful. The retention of fluid in the colon depends entirely on its method of administration. Moderate distention is the normal condition of the large intestine. Its mucosa absorbs water with great rapidity. If it is hyperdistended it causes spasm and expulsion of material. The results obtained by this treatment have

numerous openings in its bulbed end, or in the apparatus made by W. H. Grady & Co., shown in Figure 9. The tip should be inserted into the rectum so that the angle fits closely to the sphincter, and the tube may then be bound firmly to the thigh with adhesive strips so that it may not be expelled, as shown in the illustra-

tion in Kelly and Noble's "Gynecology and Abdominal Surgery," volume II, page 415. The bag or can is suspended from the foot of the bed so that its base is six inches above the level of the patient's buttocks. Once the irrigating apparatus is thus placed, it need not be disturbed for several days, unless to increase or diminish the speed of influx. The solution, consisting of a dram each of sodium chlorid and calcium chlorid to the pint of water, is now placed in the reservoir and kept at a temperature of 100 F. by applied heat in the form of hot-water bags, thermolytes or an incasing can of hot water, or by means of the apparatus described further on. The quantity administered depends on the severity of the case, the age of the patient and other considerations that will suggest themselves in the particular instance. The average, however, is eighteen pints in twenty-four hours; that is, a pint and a half every two hours. A quantity less than eight pints is, I believe, of little value. In a child of 11 as much as thirty pints have been administered in twenty-four hours without escape of fluid. The control of the flow should never be governed by knots in the tube, forceps clamped thereon, or small openings in the tip. The larger tube with many openings is used to provide for a sudden return of the flow into the can when the patient strains, wishes to expel fluid or void gas. If there be constrictions in the tube the fluid can not return into the can, but passes into the bed linen.

A more elaborate form of apparatus is that devised by Dr. O. H. Elbrecht, of St. Louis, and manufactured by the Meier Dental Manufacturing Company of that city, and illustrated herein. Dr. Elbrecht describes his apparatus as follows:

The proctoclysis heating apparatus illustrated was designed to meet a demand for an outfit that would heat saline and maintain it at a uniform temperature for proctoclysis. Many varieties of heating devices have been employed, but all are found wanting in that they fail to maintain a uniform temperature when heat is applied to the saline reservoir, for the saline is ever changing in amount as a result of absorption, and thus brings about ever changing temperatures. Then also there is a great loss of heat in the rubber tubing from the reservoir to the rectum. With most of the apparatus now in use the saline is cold by the time it enters the rectum. This makes the rectum irritable and less tolerant, and thus retards absorption; while if the saline is warm when discharged into the rectum it insures the greatest possible absorption and least discomfort.

The rectal tips shown in Figure 6 are made in four sizes, are self-retaining and admit a rectal tube through their lumen, as shown in Figure 4 (largest size used here for sake of plain illustration), and thus the saline can be discharged several inches into the rectum. They prevent leakage and the larger sizes are used for patients with relaxed sphincters, as in advanced peritonitis, shock, severe toxemias, etc.

Figure 5 shows a screw clamp which is placed on the rubber tubing behind glass tube connection to catheter, which permits easy disconnection for use of bed-pan and allows the rest of the apparatus to remain intact. It may be applied to any part of the tubing without disturbing the apparatus while in use, and is left wide open when the gravity method is used.

The electric heating arrangement is the cleanest and the most satisfactory, and it requires little or no attention when once started and can be placed in the bed with the patient. The same results can be obtained, however, by using a Bunsen burner or alcohol lamp in connection with the heating chamber, which is then placed on a small table alongside of the bed. (Fig. 8.) This permits the outfit to be used where electricity is not available, as in rural districts or in homes where only gas is at hand. All the parts, including saline tablets, are assembled in a box, which makes the apparatus portable and ready for immediate use in emergencies.

Dr. Elbrecht's apparatus works admirably in adults. It can be used with the angled vaginal douche tip as illustrated in my article just as well as with the bulb tip that is inserted into the rectum, and I would say it works better than the bulb, as the latter occasionally produces irritation and the patient insists on having it removed. For the maintenance of uniform heat the Elbrecht apparatus fulfills all the indications. It does not, however, allow the fluid to flow back when the patient strains. The holder of the Elbrecht apparatus may be inserted into the ordinary fountain syringe can containing hot water, and that keeps it at a uniform temperature and moderately warm for a long period of time.

The proctoclysis is usually continued for three days; rarely as long as five or six. It is best administered in the Fowler position. The best plan is to place a pint and a half of the saline solution in the container every two hours. The container should be elevated sufficiently to allow this all to flow into the rectum in forty to sixty minutes, giving the rectum a period of rest from the influx of fresh fluid for approximately an hour before it flows again.

It is surprising what a large quantity of fluid is taken up by the rectum and how little irritation and disturbance it produces, even in days of continuous use. If the patient is getting too much solution, after the third or fourth day he will show a slight edema of the ankles, hands and even of the face. Then it should be discontinued until his circulatory equilibrium is restored, when the treatment may be repeated if indicated.

In the toxemias of typhoid, scarlatina, and in the early days of pneumonia, before the heart has suffered from the intoxication, it appears to afford great relief. In the later stages of pneumonia it should be used with great caution.

I have been surprised in visiting hospitals to have my attention called to the proctoclysis treatment, in cases in which the patients were given six or eight ounces of fluid every two or three hours, or in which the fountain syringe was placed four to six feet above the level of the bed and the entire hydrostatic pressure thrown on the rectum, and the flow limited by forceps or other combination attached to the tube. In many of these hospitals the superintendent of nurses, the doctors and the nurses themselves complained of the fact that the patients did not retain the fluid. This was undoubtedly true, but the failure to retain it was because it was not properly administered. It should never have a headway of more than fifteen inches hydrostatic pressure, and it gives the best and most uniform results at four to seven inches.

The illustrations show the angle at which the hard rubber tube should be flexed to prevent its pressure

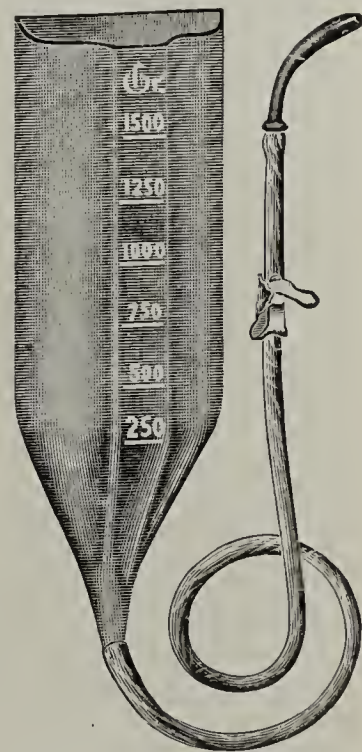


Fig. 9.—Proctoclysis apparatus consisting of fountain syringe, large rubber tube and vaginal hard rubber or glass tip.

against the posterior wall of the rectum when the patient is placed in the Fowler position. A straight hard-rubber tube often causes considerable irritation, while the flexed tube causes no inconvenience. The rubber tube should always be strapped to the thigh. This insures its retention and prevents traction or pressure on the sphincter. Frequent change of the tube annoys the patient greatly and soon produces an irritability.

100 State Street.

CONTINUOUS ENTEROCLYSIS

THE TWO-FUNNEL VISIBLE-DROP METHOD

SAMUEL E. NEWMAN, M.D.

ST. LOUIS

There have been many attempts to simplify the method of giving a continuous saline solution into

and most efficient method, has been discarded; "we can not make it work" being the usual excuse. All the substitutes that I have seen have been poor ones and unreliable makeshifts open to strong objections.

The simple device which is here offered meets every requirement necessary for the successful working of the method and possesses decided advantages.

1. The apparatus is elevated on the table at the side of the bed and need not be disturbed.

2. It is an open method, and any difficulty is easily located.

3. The drops may be fed as fast or as slow as desirable, by means of an adjustment.

4. The drops are visible.

5. The rubber tube is not compressed and distention of the bowel is avoided; any return flow from the rectum is facilitated.

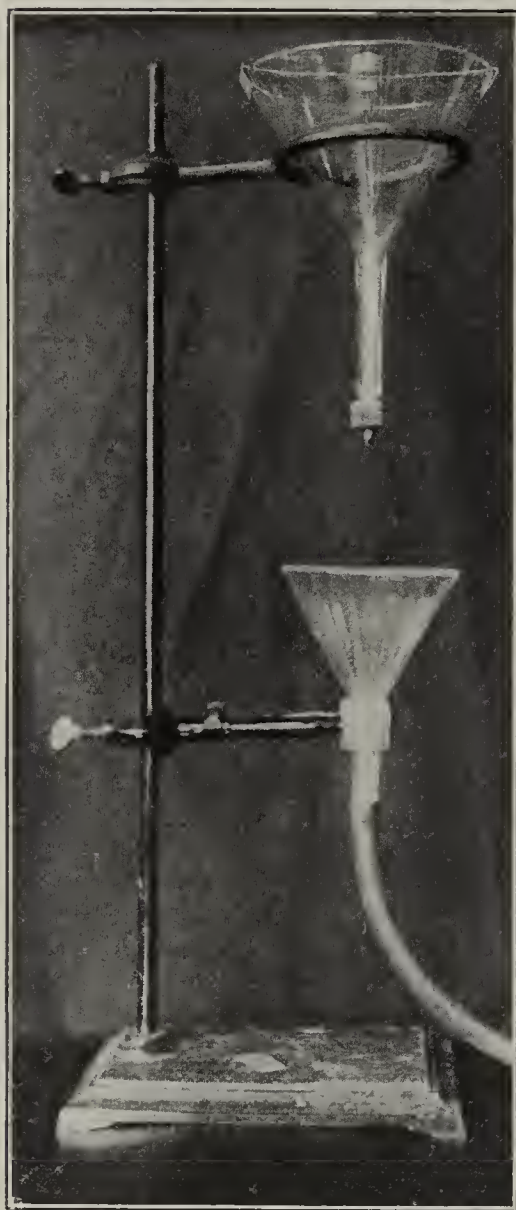


Fig. 1.—A laboratory stand with one large and one small iron ring; two glass funnels, the upper one large and the lower one small. A rubber tube attached to the lower funnel conveys the fluid to the rectum. The upper funnel is provided with a loosely fitting rubber plug at the tip and with a broad metal strip which is fastened across the top of the funnel. This metal strip has an opening at the middle and at this point the nut of a screw is soldered in place. This screw raises or lowers the rubber stopper by means of a wire or thin rod which connects the two.

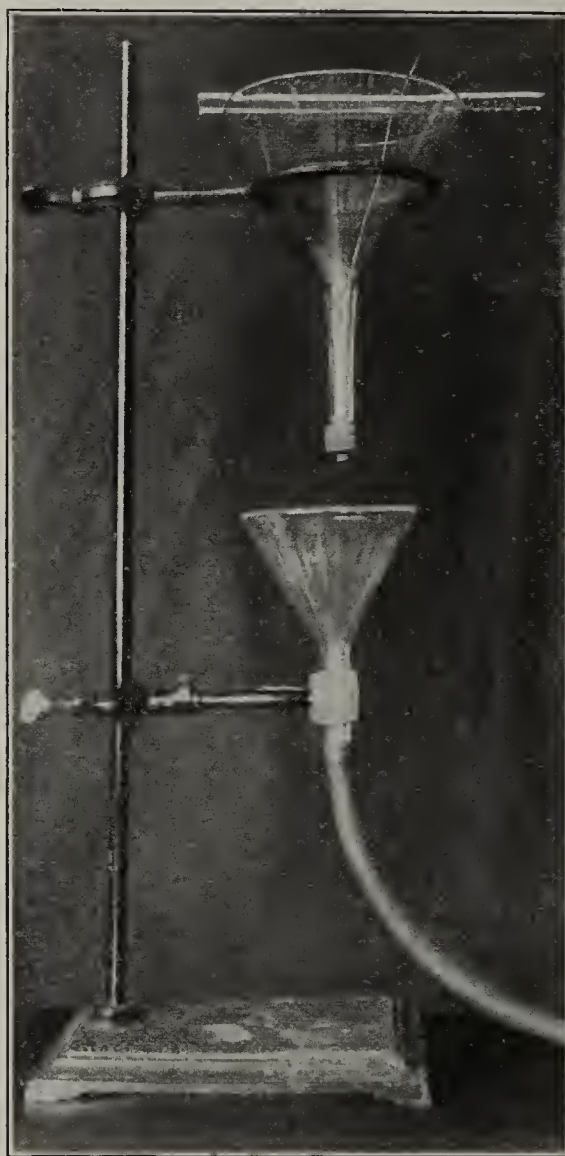


Fig. 2.—This is a home-made apparatus which can be easily devised. The upper funnel is provided with a rubber plug (the plunger of an antitoxin syringe has been used) to which a non-corroding wire is attached by means of a small shot. Another small shot is fastened on the other end of the wire, and this is held in the groove of a small piece of wooden board. Pushing the board toward the center of the funnel lengthens the wire and loosens the rubber plug while pulling the little board from the center of the funnel shortens the wire and tightens the rubber stopper. An incandescent light in the lower funnel will help to keep the saline solution from cooling.



Fig. 3.—A porcelain evaporating-dish is placed in the lower funnel, and an electric bulb rests in this little cup. The upper funnel contains cool saline solution. As the water falls from the funnel above to the funnel below it strikes the electric bulb, flows down its sides and collects in the evaporating dish. It is warmed and gradually displaced by the additional solution which drops from above. The water does not become too warm unless the drops are made to fall at very long intervals. The heat must be turned off when the upper funnel is empty or the flow from it has been checked.

the rectum, i. e., the Murphy treatment. Too much seems to depend on the close attention and frequent adjustment by the attendant. In many hospitals the original gravity plan, which is advisable as the simplest

6. Return flow from the rectum is seen and the drops may be fed slower or stopped entirely until the rectum has recovered itself.

I have attempted to solve the problem of maintain-

ing the solution at a lukewarm temperature. In the majority of cases the water which the patient receives is cool or entirely too hot.

The apparatus shown in Figure 2 is arranged for hot saline solution, and in Figure 3, a warm solution should be used in the upper funnel.

4900 Berlin Avenue.

AN APPARATUS TO KEEP ENTEROCLYSIS SOLUTIONS HOT

B. B. WECHSLER, M.D.

Obstetrician to Montefiore Hospital
PITTSBURG, PA.

This illustration shows an apparatus devised to keep at a proper temperature the solution for enteroclysis given by the Murphy drop method. This is difficult to accomplish by the usual method.

The apparatus consists of a glass irrigator encased in a jacket or nest made of copper for the outer wall and tin for the inner wall, having a space of half an inch between the outer and inner walls. An opening at the top fitted with an air-tight lid permits the filling



On the left, the glass irrigator and the jacket; on the right, the apparatus ready to use.

of the jacket with hot water, and a stop-cock at the base permits its removal when cold. The jacket is supplied with a handle for its support.

The irrigator protrudes about an inch at the base of the jacket, where the connection can be made. The apparatus is covered with a sterile towel when ready to be used.

Tests at the Montefiore Hospital of Pittsburg, Pa., showed the apparatus to work satisfactorily in every respect. The solution is put into the irrigator at a temperature of 130 F. and hot water used as the heating medium. After three and one-half hours the solution is still at about 110 F.

1401 Fifth Avenue.

Chorea Minor.—Forssner leans to the generally accepted opinion that the symptom-complex of chorea minor may be caused by various infections and possibly also other noxious influences. The results of his observations speak in favor of the tendency of the disease to attack especially individuals of feeble constitution. Many of those who in childhood suffered from chorea minor later acquire numerous chronic diseases.—*Hygiea Festband.*

DISLOCATION OF THE KNEE AND DISLOCATION OF THE FOOT

WALTER D. WISE, M.D.

BALTIMORE

A case of anterior dislocation of the knee and a case of backward subastragaloid dislocation of the foot with fracture of the astragalus were both seen at the Baltimore City Hospital in the service of Dr. A. C. Harrison, and are reported because of the rarity of the conditions.



Fig. 1.—Dislocation of the astragaloscaphoid joint and fracture of the posterior part of the astragalus.



Fig. 2.—Dislocation reduced.

Dislocations of the knee compose less than 2 per cent. of all dislocations. Of these about one-half are of the forward variety, and 20 per cent. of this type are compound. Up to this time there have been reported 270 cases of knee dislocations including all varieties, 113 of these being of the anterior type, this making the one hundred and fourteenth case to be reported.

Subastragaloid dislocations are even much more rare than dislocations of the knee, there being in the literature 86 cases. Of these 50 have been inward, 21 outward, 8 anterior and 7 posterior, this making the eighth case of posterior subastragaloid dislocation of the foot to be reported.

CASE 1.—History.—The patient, William W., aged 47, was sent to the hospital July 31 by Dr. K. While the patient was unharnessing a horse in a stable in the country, the animal had become frightened and had run out of the door. In his attempt to catch it, the patient stepped in a ditch, sliding down an incline, throwing his body forward, hyperextending his right leg so that his right foot was turned up on his left thigh. The leg was straightened out and a side splint put on and the patient sent to the hospital. The leg was said to be fractured, and the deformity made the diagnosis appear to be a plausible one without an examination, so the patient was anesthetized.

Examination.—The limb was extended and the lateral axis about normal, but the leg was on a plane anterior to the thigh, and the lower extremity of the femur could be plainly felt in the popliteal space. The quadriceps extensor was lax, the patella was freely movable and seemed to fall back into a large space.

Treatment and Result.—The diagnosis of an anterior dislocation of the knee could readily be made, and the reduction was easily brought about by extension and direct pressure on the femur and tibia, pushing the former forward and the latter downward and backward. A plaster cast from the upper part of the thigh to the foot was applied and allowed to remain on until September 10, a period of six weeks. The cast was then removed, a tight bandage applied, and gradual use of the leg begun. On October 4 the patient was discharged walking normally. A radiograph taken after the dislocation was reduced showed no fracture and the leg in normal position.

CASE 2.—History.—The patient, W. P. B., aged 33, was a brakeman on the Baltimore and Ohio railroad. This man was admitted to the hospital August 29. He had fallen from the top of a freight-car, striking on his feet. He felt the right foot give way, and was unable on account of pain to stand on it after that time.

Examination.—The foot was much swollen, very tender to the touch. The front part of the foot was shortened and showed in the midtarsal region a marked prominence, which was recognized as the head of the astragalus. An *x*-ray photograph (Fig. 1), showed a dislocation of the astragaloscaphoid joint with the head of the astragalus riding on the upper surface of the scaphoid, and a fracture of the posterior part of the astragalus, probably the external tubercle of the posterior surface to which is attached the posterior fasciculus of the external lateral ligament. Through the neck of the astragalus there was noted an incomplete seam fracture.

Treatment and Result.—Under anesthesia the dislocation was reduced without material difficulty by making direct pressure on the head of the astragalus, and at the same time drawing the anterior part of the foot strongly forward. The foot and leg were then encased in a snugly fitting plaster cast. A second *x*-ray photograph (Fig. 2) showed the dislocation reduced, and the fracture in satisfactory position. The patient was discharged October 4 with a very satisfactory result.

31 East North Avenue.

EXPERIMENTAL LUNG ANTHRACOSIS

PRELIMINARY NOTE

LEWIS SAYRE MACE, M.D.
SAN FRANCISCO

The intestinal origin of lung anthracosis was suggested in 1862 by Villaret,¹ but denied in 1885 by Arnold,² who asserted that the small amount of absorption which he had observed following the feeding of charcoal emulsions was not sufficient evidence on which to accept this theory.

In December, 1905, appeared the first of a series of articles by Van Steenburg and Grysez³ of Calmette's laboratory, in which they showed that particles of carbon when injected into the stomach or peritoneal cavity of adult animals were promptly absorbed by the lymph ducts of the mesentery and diaphragm, carried through the thorax to the veins returning to the right heart and finally deposited in the lungs. It was noted that with young animals this result was not obtained.

Following the work of Calmette, Van Steenburg, Grysez, Sommerville⁴ and others, Petit⁵ reported the results of his experiments with six children dying of tuberculosis and other diseases. To these he administered charcoal through a stomach tube and found on autopsy a more or less general anthracosis in the four who suffered from tuberculosis. He concluded that the presence of tuberculous infection rendered the subject especially liable to intestinally borne anthracosis.

On the contrary, Beitzke,⁶ Cohn⁷ and Schultz⁸ repeated the experiments of Calmette and his associates without confirming their results. They found that foreign matter injected into the stomach or peritoneal cavity was, in fact, taken up by the lymphatics, but that it was deposited almost entirely in the liver and spleen. Occasionally, it is true, they observed a pulmonary deposit, but this they attributed to the presence of a spontaneous anthracosis, which occurs in at least 10 per cent. of adult laboratory animals. To this fact or to accidental inhalation during feeding experiments they attributed the results of the French observers.

These contradictory results mean that this subject, so important in considering the origin of tuberculosis and other infections, is still an open one. I have therefore tried to devise methods which should eliminate the errors of former experimenters.

Work with charcoal or any black substance was soon discontinued, as it was found, as Beitzke and others had asserted, that a number of control animals showed the presence of a spontaneous black or gray deposit.

What was needed was a substance, not black, which should be easily recognizable on account of its contrasting color, non-toxic and not affected by the body fluids.

Ultramarine blue, one of the most stable of the blue, green or violet coloring matters, seemed to fulfill these requirements. It is chemically a very inert substance and is affected only by the strongest reagents. No substance resembling it could possibly be present as a spontaneous deposit, and its color is easily recognized on autopsy, which is not true of the red or yellow pigments.

The Treatment of Soft Chancre and Its Glandular Complications with Copper Salts.—Almkvist believes that the amidoacetate and lactate of copper have proved themselves more effective in soft chancre and its glandular complications than any other method which can be used in the ambulatory treatment of patients. The copper salts mentioned differ from the copper salts previously tried in this treatment by the fact that they do not precipitate proteins.

1. Villaret: *Cas rare d'anthracose suivi de quelques considerations physiologiques et pathologiques*, Paris, 1862.

2. Arnold: *Nebersuchung über Staub-Inhalation und Staub-Metastase*, Leipzig, 1885.

3. Van Steenburg and Grysez: *Ann d l'Inst. Pasteur*, xix, 786.

4. Van Steenburg and Sommerville: *Presse méd.*, xiv, No. 64.

5. Petit: *Presse méd.*, xiv, No. 82.

6. Beitzke: *Source of Anthracosis of the Lungs*, Virchow's Arch. f. Path. Anat., clxxxvii, No. 1.

7. Cohn: *Ber. klin. Wehnschr.*, xliii, No. 45.

8. Schultz: *München. med. Wehnschr.*, liii, No. 35.

This substance was mixed with milk and, after sterilizing, 5 c.c. of the suspension were injected into the peritoneal cavity of guinea-pigs and the animals killed from five hours to twenty-one days later.

On account of the frequent presence of a spontaneous deposit of insoluble matter in the lungs of animals and the uncertainty which on that account might follow a microscopic examination of the tissues, a deposit sufficient for macroscopic recognition was deemed necessary for a definite conclusion.

I shall not in this preliminary notice give all the details of these experiments. The results do not differ materially from those obtained by Beitzke, except that the deposit, the color of which precluded confusion with a natural anthracosis, did not appear to extend beyond the lymph glands.

The blue matter was regularly taken up by the lymphatics of the mesentery and of the diaphragm. The network of glands surrounding the spleen and the liver was heavily loaded, although none could be observed on section of these organs. The diaphragm was within a few hours colored blue and the lymph ducts of the anterior and posterior mediastinum, as well as the glands lying beneath the sternum, were colored blue and could be traced to the root of the neck.

The bronchial glands were in some cases stained blue and in others not. The lungs often showed a peculiar mottled appearance, but this could not be identified as due to the ultramarine blue.

The staining of the bronchial glands may perhaps indicate that the substance has been reabsorbed from the lungs, especially as the larger lymph vessels of the thorax were shown to be conveying the substance to the veins returning to the right heart, but it may also indicate merely that on account of abnormalities in the lymph ducts a closer relationship between the anterior and posterior ducts and the bronchial glands existed in these particular animals.

It was remarkable that, considering the large amount of ultramarine injected, so little could be recognized after it had left the abdomen. It regularly disappeared until finally, except for a few stained bronchial glands and a blue deposit coloring the diaphragm, none could be found.

This may be due to the relatively large dilution of the solid matter by the body fluids or to its rapid elimination or to chemical alteration of the substance after prolonged contact with the body fluids.

I have therefore decided to repeat the experiments, using a stable substance which can not possibly form the basis of a natural anthracosis and which can be easily separated unchanged and recognized.

Talc seems ideal for this purpose. Unchanged by high temperatures and extremely stable chemically, its separation from the organs becomes a matter of merely following out a certain technic and its recognition is simple and absolute.

By injecting weighed amounts of talc into the peritoneal cavity or alimentary canal and later separating the substance from the various organs and excreta by combustion, treatment with acids, etc., the amount of the deposit occurring in the lungs and other organs, as well as the amount eliminated, can be definitely settled. The result of these experiments will form the basis of a later paper.

240 Stockton Street.

A CASE OF OVARIAN PREGNANCY

N. S. MACDONALD, M.D.

HANCOCK, MICH.

The following condition is reported mainly on account of its comparative rarity and to substantiate further the claim made by many authorities that in certain cases of ectopic pregnancy rupturing into the free abdominal cavity the patient may recover if left alone.

History.—On March 27, 1908, was called to see a primipara, who presented the usual characteristic symptoms of ruptured extrauterine pregnancy. She had missed one period. A hot saline enema was given and the patient was removed to St. Joseph's hospital.

Operation.—Four hours later, her condition having improved somewhat, the abdomen was opened under ether anesthesia and found filled with clotted blood, but nowhere were there signs of active hemorrhage. On passing the hand into the cul-de-sac and along both tubes, the only unusual thing noted was that the right ovary seemed to be somewhat enlarged, of soft consistency and collapsible. On bringing the ovary into the wound it was found to be cup-shaped, of about three times normal size and hollowed out from above to the degree that only a thin layer of ovarian tissue remained to form the wall. The cavity within the ovary contained a small clot, after the removal of which slight oozing was noticeable. The ovary was removed on principle, the clots washed out and the abdominal cavity filled with hot saline solution previous to closure.

Result.—The patient made a good recovery and left the hospital within three weeks.

A SUGGESTION FOR MORE READILY DETERMINING INJURIES OF THE URETER DURING OPERATION

HENRY DAWSON FURNISS, M.D.

NEW YORK

Having within the past year been called on to use the cystoscope on three patients with injured ureters, it occurred to me that the following method might be of assistance in detecting these injuries at the time of operation. The surest method is to pass bougies or catheters into the ureters, but many times this is impracticable, both on account of conditions presented by the patient, and lack of experience on the part of the operator. Often the ureter may be cut, the cut portion inspected, and then there be doubt as to its identity. It is very easy to give a patient methylene blue by mouth before operation, or to inject into the gluteal muscles at the time of operation 20 minims of a 0.4 per cent. aqueous solution of indigo-carmin. These drugs will so color the urine that, should the ureter be cut and there be any leakage from it, the colored solution would be promptly recognized. If the ureter were cut on the distal side of a clamp or ligature, there might be enough discoloration so that it could then be recognized. It is fully realized that many injuries may occur to the ureter in which this procedure would be of no account, but it is so simple, and would at times be of such help, that I think it should be used often.

393 West End Avenue.

Macular and Perimacular Hemianopic Scotoma Following Knife Wound of the Occipital Lobe.—Henschen reports, in *Hygiea Festband*, a case of limited traumatic lesion of the occipital lobe causing a macular scotoma. He holds that the case proves that the macula has a distinct and limited center in the occipital lobe, which center he would designate as a cortical retina.

THREE CASES OF EXTRAUTERINE PREGNANCY

R. R. HUGGINS, M.D.

PITTSBURG, PA.

When a married woman, whose menstrual period has been regular for some time previous, misses or goes beyond her time for menstruation she will suspect pregnancy. If a flow from the vagina begins in a period varying from four or five days to three weeks after the regular time, continuing more or less regularly, accompanied by pains periodic in character located in the hypogastrium, or on either side, extrauterine pregnancy should at once be suspected by the physician, unless some other well-defined condition is present to account for it. This vaginal hemorrhage at times may be dark-colored, coagulated blood, at others a blood-tinged leucorrhea; in some instances it may be bright red. If it is profuse in quantity it is more likely to be bright red in color. It is usually described by the patient as being different from the normal menstrual flow and is, therefore, atypical.

There may be a number of severe attacks of pain lasting over a period of several weeks before the final rupture occurs. Not infrequently considerable blood escapes into the abdomen during these attacks, but not enough to produce serious symptoms. There are undoubtedly many instances in which the ovum escapes into the abdominal cavity with but moderate hemorrhage, becomes destroyed, and the woman recovers.

If in addition to these signs bimanual examination reveals an enlarged tender tube on either side of the uterus, extrauterine pregnancy should at once be suspected. This history and these symptoms are present in the majority of cases long before the final stage of rupture and collapse.

Recently three patients have been operated on whose histories show the symptoms referred to in a striking manner. In two of these women there had been considerable hemorrhage previous to the diagnosis. In Case 2 rupture of the tube had occurred. In Case 3 a large amount of blood had escaped from the fimbriated end of the tube. The ovum was attached within one inch of the uterus, and there was imminent danger of rupture at that point. In all three cases the history shows that menstruation had been regular for some months previous to the onset of symptoms.

The following symptoms and the signs elicited by careful bimanual examination are doubtless present in most cases of extrauterine pregnancy, and when present they are danger signals of the utmost importance: Period due on a certain date does not appear. Six, eleven and thirteen days later a flow from the vagina begins which continues irregularly and is accompanied by attacks of pain recurring at frequent intervals, at times being very severe and accompanied by symptoms of shock.

It is interesting to note the absence of any of the ordinary symptoms of pregnancy in these patients, as nausea, vomiting, or marked local signs, viz.: softening of the cervix and distinct enlargement of the uterus. That these signs seldom stand forth prominently in the picture of an ectopic gestation is my experience.

CASE 1.—Referred by Dr. Nealon.

Patient.—Mrs. C., aged 29, no labors, no miscarriages. Family history negative. She had had the usual diseases of childhood.

History.—The general previous history contains little of importance. She was married ten years ago. Menstruation began at the age of 14, and has been always regular, though she had suffered pain previous to and during flow for the last ten years.

Regular period was due Dec. 25, 1908. It did not occur, but on January 1 a flow began which was accompanied by severe pain. This flow continued at irregular intervals and was atypical in character, sometimes very scant and again rather free until her admission to hospital, Jan. 23, 1909. During this time there had been several attacks of severe pain. On one occasion she was found by her physician in a condition of shock. The pains have been irregular and much more severe than those due to miscarriage during the first four or six weeks. On pelvic examination a mass was found on the right side of the uterus, and the uterus was pushed toward the left. Any movement of the uterus caused great pain. There was no elevation of temperature.

Diagnosis.—Extra Uterine Pregnancy.

Operation.—Jan. 26, 1909: Incision revealed some free blood in the abdominal cavity and a considerable quantity of clots in the pelvis. The right tube which was distended with blood to one inch in diameter was removed. The ovum was located about one inch from the uterus and there was imminent danger of rupture at this point as there was an opening less in size than a pin point which was plugged by a small fragment of decidual tissue. Recovery.

CASE 2.—Referred by Dr. Clark.

Patient.—Mrs. C., aged 29; no labors, no miscarriages. Family history negative.

History.—Menstruation began at the age of 14 and has always been regular. She has been married seven years. Owing to her anxiety to bear children Dr. Clark introduced a stem pessary some months ago and this was worn until the development of symptoms incident to the present illness. The menstrual period was due January 2. It did not appear on this date, but on January 13, a flow began from the uterus accompanied by severe pains, much worse than had been customary at any time in her history. This flow continued somewhat irregularly until the morning of January 23. During this time there was more or less pain, which at times was severe. The patient described the pain as cramp-like and intermittent in character. On the morning of January 23 she was seized with a very severe pain which was accompanied by prostration. Dr. Clark was then called for the first time and it was necessary to administer morphin in order to control the pain. Later in the day I saw and examined the woman. From the history, condition and appearance of the patient the diagnosis of extrauterine pregnancy was made. The abdomen was everywhere tender and the presence of fluid in the pelvis was easily determined. Operation revealed a tube ruptured at junction of outer and middle third. Recovery.

CASE 3.—Referred by Dr. Dankrim.

Patient.—Mrs. H., aged 33, was admitted to the hospital Feb. 19, 1909. Family history negative. She had had the usual diseases of childhood.

History.—General health was good previous to marriage, eighteen months ago. She gave birth to a dead child nine months after marriage. Since this time she states that there has been pain at the menstrual period. The flow lasted from four to five days and always recurred at regular intervals—every twenty-eight days. January 25 was the expected and regular time. The flow did not appear on this date, but on February 7, thirteen days later, it appeared and was accompanied by more than the usual amount of pain. This flow did not seem normal to the patient and was described by her as more sticky in consistency than normal. Also at times was somewhat brighter in color. In short it was an atypical discharge and continued from February 7 until admission to the hospital February 19. During the last thirteen days there were several severe attacks of pain which she described as colic-like seizures. After the pain there would sometimes be an increase in the vaginal discharge. On February 18, the day before admission, an attack of pain occurred which was very

severe and referred to the epigastric region and was accompanied by symptoms of shock and prostration. The family physician thinking her symptoms serious, sent her to the hospital.

Examination.—On admission the patient showed very pronounced symptoms of loss of blood; pale mucous membranes and pulse of about 120. The abdomen was moderately distended and very tender over the entire surface. Peristalsis was markedly decreased and there was slight tendency to rigidity of muscles. These are, I believe, almost pathognomic signs of hemorrhage into the peritoneal cavity. The examination revealed an enlarged tube on the right side and bulging of the cul-de-sac from the presence of the fluid.

Operation.—The condition of the patient was such that she could safely withstand a short operation. This was done February 19, at 4 p. m. The abdomen contained a large quantity of fluid blood and the pelvis was filled with numerous clots. The right tube was removed, the pelvis cleared of clots, and the abdomen closed. The tube was distended with blood to $\frac{3}{4}$ inch in diameter throughout its length. The location of the ovum was almost one inch from the uterus and the decidua was well attached to the upper surface of the tube. The hemorrhage had escaped from the fimbriated end of the tube, and there were at least three pints of blood in the peritoneal cavity. Doubtless there would have been later a more serious hemorrhage had operation not occurred at this time. Recovery.

Fifth and Liberty Avenues.

KIDNEY CONDITIONS SIMULATING RENAL CALCULI

ERNEST F. ROBINSON, A.B., M.D.

Associate Professor of Surgery, University of Kansas
KANSAS CITY, MO.

The admonition of the elder Gross, "never operate for stone unless you have one in your pocket," seems especially applicable to renal calculi. The reason for this failure lies not only in the inability of the surgeon to find the stone when present (although this, I grant, at times occurs to the most experienced), but also because there are a number of pathologic conditions whose symptoms simulate stone in the kidney most accurately. Some of these I wish to present for consideration as exemplified by several typical cases:

The first case is one of infected infarcts of the kidney, with symptoms simulating renal calculus.

CASE 1.—History.—J. N. S., aged 47, thin and spare, by occupation a cattle speculator, had had for ten days previous to operation constant pain referred to the region of the loin and right kidney. The pain was so severe that morphin had no effect, although he was given large amounts. The twenty-four hours preceding operation it was necessary to give him chloroform every hour or two to relieve his pain. His temperature was normal and so was his pulse. The pain was never referred to the right shoulder but at times to the left testicle. An examination of the urine showed pus and red blood corpuscles in small amounts, with a few hyaline and one granular cast. A diagnosis of stone in the kidney was made.

Operation.—Nov. 10, 1907, at 11 p. m., at St. Luke's Hospital, Dr. Guffey and Dr. Trexler assisting. Ether was given and an oblique incision was made through the loin about five inches long. With some difficulty, owing to the position of the ribs, the kidney was delivered. Its capsule was stripped and the kidney opened through the cortex. It was deeply congested and probably one-third larger than normal. At three or four places on the cortex there appeared small irregular areas from size of a small pea to that of a nickel, that gave the kidney a yellowish mottled appearance. When cut into, they appeared to be spots of infection or infarcts. An examination of the gall bladder and appendix revealed nothing abnormal. The kidney was replaced in position, the wound packed with iodoform

gauze to control the hemorrhage, and a rubber drainage tube inserted into the pelvis of the kidney.

Postoperative History.—The patient reacted well from the operation, his pulse never going above 90 and his temperature 101. He left the hospital at the end of two weeks with the wound completely healed, except at the point of the drainage. On Sept. 1, 1908, the patient was seen again. He never had had a return of symptoms and had gained thirty pounds in weight. "Never so well."

Infection from the blood has been until recently thought to be an extremely rare occurrence, but the recent investigations of Cabot and Farrar C. Cobb in Boston, and the experimental work of Buxton and Torrey of Cornell, and Brewer of New York and others show unquestionably that such an infection is by no means unusual. It has been demonstrated, however, that some predisposing localizing cause must also be present before infection of the kidney will result. This *locus minoris resistentie* was produced by Brewer by bruising the kidney substance or ligating the ureter. In every subject so dealt with experimentally, bacteria introduced into the circulation produced septic nephritis. In my own case trauma doubtless was the localizing agent, as the patient's occupation—that of a cattle buyer—subjected him to frequent bumps or contusions, although he did not remember being severely injured just prior to the attack.

The extreme pain in this case and the lack of elevation of temperature, however, would lead me to believe that the infectious element was subordinate to the embolic process. There was no valvular disease of the heart, however, and consequently it is more reasonable to assume that the emboli were of bacterial origin. Unfortunately, no culture was made at the time of operation.

The second case is more frankly that of a hematogenous infection of the kidney.

CASE 2.—Patient.—Miss L., school teacher, aged 32, had been troubled with pain in the region of the left kidney, and symptoms of cystitis for the past five months.

Examination.—At the hospital, Sept. 15, 1908, The patient was a young woman, greatly emaciated, with a dry brown tongue, rapid and feeble pulse (112 to 120), temperature from 99 to 102.2. At this time she complained, chiefly, of frequent burning urination and severe pain in the lower part of the abdomen, which was constant but increased on voiding urine. Careful inquiry revealed the fact that the bladder symptoms had developed secondarily to those referred to the kidney. The first symptoms of which she herself was conscious were those of severe pain in the region of the back. This was a sharp, stabbing pain, radiating down into the groin and the labia. There was constantly a dull pain in the loin, and marked tenderness on pressure. A cystoscopic examination of the bladder showed marked cystitis, with so inflamed a condition of the mucosa that it was impossible to catheterize the ureters. An examination of the urine showed quantities of pus, some blood and many epithelial cells. A few hyaline and granular casts were present, and Dr. Trimble was able to isolate the colon bacillus and staphylococcus. A blood count showed a moderate leucocytosis. The symptoms pointed to primary infection of the kidney with secondary involvement of the bladder, but a positive demonstration of this fact was impossible.

Operation.—Owing to the increased pain and tenderness in the region of the left kidney, it was determined to operate on this side first, as clinically it seemed the organ most diseased. On September 15 the patient was anesthetized and an incision made through the loin. The kidney, which was considerably enlarged, was delivered and incised down through the cortex, exposing completely the renal pelvis. Nothing pathologic was found further than a greatly congested, swollen kidney whose cortex seemed much thickened. Owing to the pressure clamp that was applied at the hilus, the organ was so congested and

black from the stasis of the blood that, had there been minute infarcts or infectious emboli, it is extremely questionable whether they could have been demonstrated; at any rate no such pathologic condition could be positively shown. A drain was inserted into the kidney and retained in place by three plain catgut sutures, the organ replaced and the perirenal pouch drained.

Postoperative History.—The patient reacted nicely from the operation, and the wound healed kindly, although there was only partial subsidence of her symptoms. Although the bladder condition was treated most actively, yet it only grew worse; in fact, the patient did not tolerate at all any injections or irrigations of any sort. The application to the bladder of any of the silver preparations seemed only to aggravate the condition. After a period of two weeks her temperature rose and her pulse increased in frequency and became very weak. She soon developed uremic symptoms and died about three weeks after the operation.

In this case it is a question whether nephrotomy of the other kidney would have relieved the patient. In my opinion it would not, for I believe that she was generally septic, and that the right kidney was no more involved than the liver or bone-marrow. The fact that the bladder was so intolerant to the silver salts is suggestive, in my experience, of tuberculosis of the bladder. Dr Trimble, however, found only colon bacillus and the staphylococcus from the bladder, and also found the same organisms in the cultures he made from the body of the kidney at the time of the operation. Primarily, the history of the case points to an infection of the kidney, but the symptoms were those of a kidney stone.

The third condition I wish to discuss is that of an ascending pyonephrosis with infection of the kidney substance and cortex. It is exemplified in that of the following case:

CASE 3.—History.—C. P. C., a physician, aged 56, for some years had passed gravel and had suffered at these times with pain in the region of both the right and left kidney. He had an old cystitis. Recently he was seized with sudden, severe pain in the region of the left kidney, and after forty-eight hours passed a small gravel, attended with pus and blood in the urine. He improved slightly, but on the fifth day had a sudden chill, the temperature rising to 103; the pain in region of the left loin was severe and constant. The pulse was rapid and weak, 98 to 115. There was a cold perspiration and a slightly urinous odor to the breath. On the following morning the temperature was again above 103. A consultation was held with Dr. Taylor and Dr. Binnie and an operation advised. The *x*-ray gave a shadow in the region of the left kidney which was thought to be a stone.

Operation.—On the following morning, June 14, 1907, at Agnew Hospital, the left kidney was exposed through a long incision in the loin. Manipulation was difficult on account of the extreme amount of fat, the patient's failure to take an anesthetic properly and his extremely pendulous abdomen. On the kidney being incised a rather profuse hemorrhage was encountered and several ounces of fetid blood, pus and urine mixed together was evacuated. The odor of this was very offensive. A large dressed-drainage-tube was fastened into the pelvis of the kidney; the wound was properly closed, and the perirenal pouch also drained.

Postoperative History.—Recovery was slow but uneventful. The patient was seen Sept. 10, 1907, when the wound had completely healed; he had recovered his normal weight and expressed himself as being in the best of health.

The concluding case in this series which I wish to report was one seen in conjunction with Dr. John Outland.

CASE 4.—History.—G. E. M., a strong, robust farmer, Salina, Kansas, had had within the past year two attacks of sharp, severe, sudden pain in the region of the left kidney, radiating into the loin and left testicle. These attacks came on suddenly

at intervals of more than a month, and were so severe that they required large doses of morphin to relieve him. He had never passed any gravel, nor was there any appreciable change in the character of the urine. After each of these attacks the patient complained of a persistent soreness and tenderness on pressure in the left kidney region. Twenty-four hours after the last attack he came to the hospital. At that time his temperature was about 100, his pulse 90, respiration 20. There was pain in the region of the left kidney, and considerable rigidity of the left rectus muscle. He required several hypodermic injections of morphin before it subsided. An *x*-ray picture was taken, which apparently showed a small stone that was evident on both the negatives taken. The effort of going to the doctor's office started another attack of this renal colic, and the patient was given a hypodermic injection before he was able to return to the hospital.

Operation.—Owing to the fatness of the man, it was necessary to make rather a large incision. The kidney was freed and partially delivered through the incision. It was opened its entire length but no stone was found. There was, however, a small roughened, apparently calcareous area about the size of a buckshot at the apex of one of the pyramids. This was scraped away with the finger. It could not, however, be said to be a renal stone, but was made up of fibrous connective tissue. A close examination of this fragment convinces me that it was one of the "fibrous calculi" recently reported by Gage and Beal.¹ The kidney and perirenal pouch were also drained in this case. There has been no return of the symptoms.

This last case, like the others, was attended with very great pain, although the "calculus," if it could be called such, was not of such a nature as to lacerate the kidney or obstruct the ureter. If we can accept the opinion of Rainey, it was a stone in the process of formation before the fibrin or colloid of kidney necrosis had become infiltrated completely with urinary salts. But why in this case and the others detailed should pain have been so prominent a symptom? It is easy to conceive of a hard rough calculus becoming loosened and mechanically lacerating and obstructing the ureter. The latter condition might result, theoretically at least, from a "soft calculus" or obstruction from blood clot or pus, but in the cases here reported this explanation does not seem sufficient. In a hematogenous infection the process starts in the cortex and there is no chance for mechanical obstruction. Possibly infection beneath the capsule, with the inflammatory process thus confined, would explain the very great pain in these cases. Or is there an unknown chemical change—the result of a reaction between the urine and toxins produced by renal disease that accounts for it? The advocates of the chemical theory of disease have long suggested this; and until more information is at hand it seems worthy of consideration. Surely our findings at operation, and after autopsy, do not always satisfactorily explain these painful symptoms. We are beginning to discover that not all pain in the kidney is due to renal calculus or tuberculosis. This latter condition I have excluded from my discussion. Doubtless other pathologic conditions of the kidney also simulate renal stone.

Appendicitis, gallstones, gastric and duodenal ulcer have come in for their share of surgical attention, when a renal calculus only was at fault. But the four conditions mentioned, renal infarcts, hematogenous infection, ascending pyonephritis and "fibrous calculus," exemplified by the cases reported, are veritable kidney conditions that demand early and radical operation. Fortunately they respond just as surely to operation as does kidney stone.

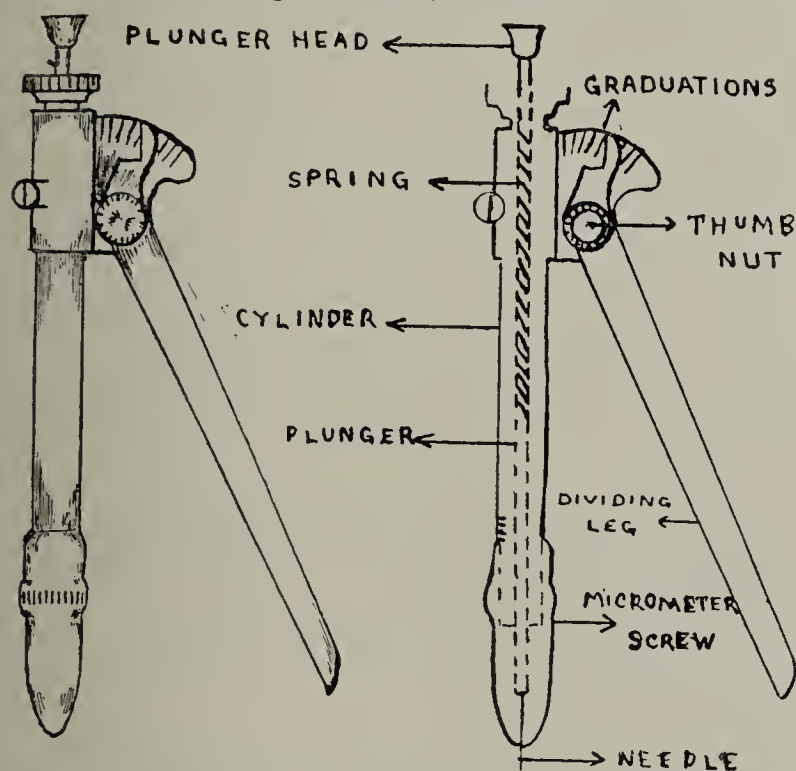
603 Bryant Building.

A NEW PRECISION ESTHESIOMETER *

ALFRED GORDON, M.D.
PHILADELPHIA

I have frequently observed that the usual test for sensations in organic or functional nervous diseases is not very reliable. Sometimes the results obtained by one man are diametrically opposite to those obtained by another man, and not infrequently it happens that the results obtained at one examination are different from those obtained at another. The reason appeared to me to lie in the degree of pressure exercised by each examiner while applying the end of a needle or esthesiometer to the patient's skin. For example, in examining two symmetrical limbs for touch and pain, it is difficult to retain in memory the exact amount of pressure produced on the skin of one limb while the needle is carried to the other limb. A slight or marked difference may happen, and inferences are drawn as to a loss or diminished sensation, and consequently errors of diagnosis are easily made.

Particularly when a necessity arises in a very delicate discrimination of pain sense, the needle or the sharp



Perspective and sectional views of the esthesiometer.

end of the ordinary esthesiometer can not serve its purpose.

It occurred to me that when the sharp end of the needle could be applied to the skin always with the same degree of pressure the results would be uniform. With this end in view I devised the instrument here described.

One leg of an ordinary esthesiometer is represented by a cylinder in which is placed a spring reaching about half-way of the cylinder. The spring is continued by a solid body (plunger), to the lower end of which a needle is attached. A micrometer screw surrounds the lower part of the plunger with the needle. By pressure on the plunger head the needle is lowered and protrudes from the cylinder. When the latter is done, the micrometer screw is placed by rotatory movements at the desired distance so that only a certain length of the needle projects. The exact position of the micrometer is then indicated by division lines immediately above. In this manner, no matter how much pressure is brought

on the plunger head, the same amount of needle will protrude and the same amount of pressure will be produced with the latter on the skin.

The instrument is light in weight, small and convenient for carrying in the vest pocket.

A STRANGE CASE OF NASAL OBSTRUCTION

F. L. ROGERS, M.D.
LONG BEACH, CALIF.

On June 22, 1908, a patient was referred to me for diagnosis and treatment.

History.—Girl, aged 9, of American birth and Italian parentage. Her general mental and physical development and family history were good. She had had the usual diseases of childhood, including diphtheria at the age of 4, for which antitoxin was successfully used. A year later she was examined by a specialist on diseases of the nose and throat in New York City, and was successfully operated on for adenoids. The parents were then informed that there were other troubles, the nature of which they did not understand, which might be corrected when the child was older. From early infancy she had had a mucous discharge from the nose, which after the adenoidectomy, continued from the right side only.

Examination.—External examination revealed the right nostril blocked with thick, ropy mucous over the discharge of which she had no control, but there was no evidence of pus or other inflammatory waste products. On irrigation of the nasal cavity no fluids passed into the pharynx on the right side and air inflation was equally unsuccessful in forcing an opening to the pharynx. The left side was normal. By digital post-nasal examination a smooth, well-developed, bony wall of the consistency of and continuous with the nasal septum attached to the posterior border of the inner margin of the palate bone was found. This extended across and was united to the descending wing of the sphenoid on a plane with it and the posterior margin of the vomer, thus forming a firm wall perfectly closing that side of the nose. The secretion from all the accessory sinuses developed at her age, including maxillary, ethmoid and sphenoid, had their openings in front of this anomalous partition. The nostril was otherwise normally developed and as the condition was considered congenital rather than acquired, we advised operation to restore the organ to normal function and to relieve the distressing nasal discharges.

Operation.—This was accomplished, through the nose, by the aid of a long handled nasal drill, a small, straight stiff-bladed nasal saw, and a Freer, angular bone-cutting nasal forceps. Using the left forefinger in the posterior nares as a guide, and with the assistance of the anesthetist and my regular office assistant, the operation was accomplished in twenty minutes. Ether was the anesthetic used. The greatest care was exercised to leave no rough bony projections or ragged surfaces about the margins of the opening made and that every particle of the false partition wall was removed. Two sections of soft rubber catheter, one above the other, were introduced into the nose, freely perforated for drainage along their entire length and extending well into the pharynx. To these were attached two heavy braided silk ligatures connecting each end of the tubes through the mouth. Over the bridge of the nose and well onto the cheeks was applied a 5/8-inch strip of adhesive plaster to a buttonhole slit in which the projecting ends of the drainage tubes were anchored by ligature for further security.

After-Treatment.—Alkaline nasal irrigations, principally weak normal salt and Dobell's solutions were used daily for three weeks when the tubes were loose and the wound in the nose healed.

Result.—The result is all that could be desired, as no difference in the caliber of the two sides can now be detected and all the former unpleasant symptoms are abated.

The case seemed sufficiently rare in the literature at my command to justify this report.

* Instrument exhibited before the Philadelphia Neurological Society, January, 1909.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK, "NEW AND NONOFFICIAL REMEDIES, 1909," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

DIETHYL-BARBITURIC ACID AND COMPOUNDS

DIETHYL-BARBITURIC ACID.—*Acidum diethyl-barbituricum.*—Diethyl malonyl urea. Malo-urea. Diethyl-barbituric acid, $\text{CO} \begin{array}{c} \diagup \text{NH-CO} \diagdown \\ \diagdown \text{NH-CO} \diagup \end{array} \text{C} \begin{array}{c} \diagup \text{C}_2\text{H}_5 \\ \diagdown \text{C}_2\text{H}_5 \end{array} = \text{C}_8\text{H}_{12}\text{O}_5\text{N}_2$, is 2, 4, 6-trioxy-5-diethyl pyrimidin, a uride derived from diethylmalonic acid, $\text{COOH.C}(\text{C}_2\text{H}_5)_2$, and urea, $\text{CO}(\text{NH}_2)_2$.

It may be prepared by the interaction of esters of diethylmalonic acid with urea in the presence of metallic alcoholates. (U. S. patent No. 782,739.) It is also obtained by condensation of diethylcyanacetic ester with urea by means of sodium alcoholate.

It is a white, crystalline powder, melting at about 188°C . (370.4°F .), odorless and faintly bitter. It is soluble in about 150 parts of cold water, and in about 12 parts of boiling water. It is quite soluble in ether, acetone and ethyl acetate; also slightly soluble in chloroform, petroleum benzin, acetic acid and amyl alcohol. It forms salts with alkalis which are soluble in water.

Prolonged heating with sodium carbonate solution liberates ammonia. Denninges' reagent produces a white precipitate; Millon's reagent produces in solution acidulated with nitric acid a precipitate soluble in an excess of the reagent.

Actions and Uses.—Diethyl-barbituric acid is quickly absorbed, especially when it is given in solution. In small doses it induces sleep apparently without any other effect. In larger doses the temperature falls and animals show marked trembling and restlessness in their sleep. In small doses it is a relatively safe hypnotic, but fatalities have followed its indiscriminate use.

It is used in simple insomnia, as well as in that accompanying hysteria, neurasthenia and mental disturbances.

Dosage.—0.3 to 1 Gm. (5 to 15 grains) in hot water, tea or milk, or, if in wafers or capsules, followed by a cupful of some warm liquid.

Proprietary Preparation:

VERONAL.—*Veronalum.*—A name applied to diethyl-barbituric acid.

Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany, and E. Merck, Darmstadt. (Farbenfabriken of Elberfeld Co., New York, and Merck & Co., New York.) U. S. patent No. 782,739. U. S. trademark.

Veronal Tablets, 5 Grains.—Each tablet contains veronal 0.33 gm. (5 grains).

SODIUM DIETHYL-BARBITURATE.—*Sodii diethyl-barbituras.*—Sodium diethylbarbiturate, $\text{Na}(\text{C}_8\text{H}_{11}\text{O}_5\text{N}_2)$ is the mono-sodium salt of diethyl-barbituric acid.

Sodium diethyl-barbiturate occurs as a white, crystalline powder, soluble in 5 parts of water at 15°C . and in about 2 parts of boiling water. The aqueous solution of the salt has a bitter alkaline taste.

The salt contains 11.18 per cent. sodium (Na) and should yield about 89 per cent. (theory requires 89.31 per cent.) diethyl-barbituric acid (JOURNAL, Jan. 23, 1909, vol. 52, p. 311).

Action and Uses.—The same as diethyl-barbituric acid, but claimed to act more rapidly on account of its greater solubility. Because of its solubility, administration by rectal injection and also subcutaneous injection has been proposed.

Dosage.—The same as diethyl-barbituric acid, which see. It should be administered in aqueous solution.

Proprietary Preparations:

MEDINAL.—A name applied to Sodium diethyl-barbiturate.

Manufactured by Chemische Fabrik auf Actien vorm E. Schering, Berlin, Germany (Schering & Glatz, New York). U. S. patent No. 780,241, 879,499. U. S. trademark applied for.

Medinal Tablets, 5 Grains.—Each tablet contains medinal 0.33 gm. (5 grains).

VERONAL-SODIUM.—A name applied to sodium diethyl barbiturate.

Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Farbenfabriken of Elberfeld Co., New York.) U. S. patent and trademark. (See Veronal.)

BROVALOL.—Brovalol, $\text{CH}_3\text{CH}(\text{CH}_3).\text{CHBr}.\text{COO}(\text{C}_{10}\text{H}_{17}) = \text{C}_{15}\text{H}_{25}\text{O}_2\text{Br}$ is the brom-isovaleric-acid ester of borneol. It contains 25.2 per cent. bromine.

Brovalol is obtained by esterification of borneol with bromisovaleric acid or its derivatives.

Brovalol is a colorless, oily liquid, having a slight aromatic odor. Under 10 mm. pressure it boils at 163°C . (325.4°F .). It is insoluble in water but soluble in alcohol, chloroform and ether.

Action and Uses.—Brovalol acts as an analeptic, antispastic and nervine. It is claimed to be well tolerated even in large doses and to possess greater sedative power than similar valeric acid derivatives, due to its bromine content.

Dosage.—0.25 to 0.75 Gm. (4 to 12 grains) several times a day. It is supplied only in capsules (pearls), each containing 0.25 Gm. (4 grains).

Manufactured by Chemische Fabrik auf Aktlen (vorm. E. Schering), Berlin, Germany (Schering & Glatz, New York). U. S. patent and U. S. trademark applied for.

ZINC PERMANGANATE.—*Zinci Permanganas.*—Zinc Permanganate, $\text{Zn}(\text{MnO}_4)_2 + 6\text{H}_2\text{O}$ is the zinc salt of permanganic acid. It should contain not less than 90 per cent. of zinc permanganate.

Zinc permanganate occurs in dark brown, nearly black, lustrous, deliquescent crystals, or crystalline masses. It is readily soluble in water (1 in 3), generally leaving a slight residue. Aqueous solutions decompose in air, but are permanent if kept in well-closed bottles, protected from light. When heated slowly it loses water of crystallization (25.46 per cent.) and oxygen, leaving a residue of zinc manganite. If heated quickly it gives off pink vapors, or, more properly, a fine dust of manganous trioxid. Zinc permanganate gives up oxygen more easily than does the potassium salt, hence great care should be taken in bringing it in contact with easily oxidizable substances.

Zinc permanganate should be almost completely soluble in water. The color of the solution is discharged by alcohol, hydrogen sulphid, ferrous sulphate, oxalic acid, or hydrogen dioxid, especially if the solution is first rendered acid with sulphuric acid.

Tests.—If 1 gm. of the salt is dissolved in 50 Cc. of water and 5 Cc. of alcohol added, a colorless solution must be obtained after boiling and filtering; if a small part of the latter acidified with nitric acid is tested with silver nitrate T. S. for chlorid and with barium chlorid T. S. for sulphate, not more than traces of either should be indicated.

To estimate its purity, 0.1 to 0.2 gm. of substance is weighed, dissolved in water, filtered through asbestos, the filtrate acidulated with 5 Cc. dilute sulphuric acid, warmed to about 60°C ., treated with an excess of tenth-normal oxalic acid V. S., and the excess of oxalic acid determined by titration with N/10 potassium permanganate V. S. Each cubic centimeter of tenth-normal oxalic acid V. S. consumed, indicates, 0.0040842 gm. zinc permanganate, $\text{Zn}(\text{MnO}_4)_2 + 6\text{H}_2\text{O} = 408.42$.

Action and Uses.—Zinc permanganate resembles the potassium salt in its oxidizing properties, but is more astringent. It is antiseptic. It is used chiefly in urethritis, either as an injection or as a urethral douche.

Dosage.—Locally 1 part to 4,000 (1 grain in 8 fluidounces). 1.3 gm. zinc permanganate is equal in permanganate content to 1 gm. potassium permanganate.

Non-Proprietary Preparations:

Zinc Permanganate, P-W-R.—Manufactured by the Powers-Weightman-Rosengarten Co., Philadelphia, Pa.

Zinc Permanganate, Merck.—Manufactured by E. Merck, Darmstadt, Germany (Merck & Co., New York).

Tablets Zinc Permanganate, 1 grain, Mulford.—Prepared by the H. K. Mulford Co., Philadelphia, Pa.

PHARMACEUTICAL PREPARATIONS ACCEPTED FOR N. N. R.

The following dosage forms of accepted proprietary articles have also been accepted for N. N. R.:

Agurin Tablets, 5 grains.
Acet-Theocin-Sodium Tablets, 4 grains.
Iodothyron Tablets, 5 grains.
Novaspirin Tablets, 5 grains.
Veronal Tablets, 15 grains.
Piperazin Tablets, 16 grains.
Citarin Tablets, 15 grains.
Hedonal Tablets, 8 grains.
Sajodin Tablets, 8 grains.

ARTICLES ACCEPTED FOR N. N. R. APPENDIX.

Birroughs Wellcome & Co., London and New York.

Tabloid Coffee Mint B-W & Co.*—Each tablet is said to contain: Sodium bicarbonate, 0.2 Gm. (3 grains); ammonium carbonate, 0.004 Gm. (1/16 grain); extract of coffee (obtained by extracting roasted coffee with water; the percolate is evaporated, dried and powdered), 0.032 Gm. (1/2 grain); cereum oxalate, 0.016 Gm. (1/4 grain); oil of peppermint to flavor.

The Maltine Company, Brooklyn, N. Y.

Maltine.—A preparation essentially equivalent to Extractum Malt U. S. trademark No. 44,556. U. S. P. and containing 3.88 per cent. alcohol.

Therapeutics

RESPIRATORY EDUCATION

Under the above title Dr. J. Madison Taylor, Philadelphia, in the *Dietetic and Hygienic Gazette*, February, 1909, urges a more careful consideration by the profession of the respiratory ability of patients who come for treatment.

It seems demonstrated that respiratory ability can be increased by exercise as surely as any part of the body can be muscularly developed, and Taylor believes that the chest never can attain its normal capacity unless encouraged. The crying of infants and young children is probably a physiologic necessity, and certainly tends to increase the respiratory ability. Older children, if well and so situated as to have the normal amount of outdoor exercise, undoubtedly play sufficiently hard to breathe properly. Still, it is of constant occurrence that the physician sees children of all ages, and especially in their early teens, who have an insufficient lung capacity. The shoulders droop, the anterior upper chest is more or less depressed, and the whole vitality of such children is far below normal.

Certainly the physician has not fulfilled his mission if he does not carefully examine every little patient who comes under his care to ascertain if the respiratory ability, in his opinion, is normal, and if not normal, to find the cause and remove it if possible. Such causes may be adenoids, improper clothing, improper ventilation in the bedroom, insufficient outdoor exercise, improper method of standing, walking, sitting and studying, and even the need of glasses for near work, as defective eyesight may cause a child to assume awkward positions in reading and studying, and, of course, the cause may be actual lesions of the lungs or heart.

It is not necessary to describe all the immediate and future disturbances, lesions and degenerations that may occur from improper and insufficient breathing, and when Taylor states that no part of the body can be properly developed or be in proper health with imperfect respiration, he states a truth. Fortunately, children up to the age of puberty can generally soon correct, by proper physical exercise, most of these respiratory disabilities, provided that serious spinal curvatures have not taken place and that no organic disease is present. And here it may be stated that spinal curvatures would be less frequently in evidence if children were taught to breathe properly.

In most cities there are admirable gymnasiums to which children with defective muscle ability and who have defective lung capacity can be sent to be properly developed under both medical and gymnastic supervision. However, not all children have the opportunity or the financial ability to take such special courses as are advisable, and the mothers should be told what is needed in the way of exercise, and the children should be taught how to perform the exercises needed to increase the chest capacity and the respiratory ability. Some of these exercises are described by Taylor in his article.

Mothers frequently make this serious error in dressing their growing girls. They either cause or permit too much constriction about the upper part of the chest. This is especially true of the early substitutes for corsets, the first corsets, and even some of the simple underwaists. Many and many a time one finds these so tight

over the upper chest and over the developing breasts as to prevent normal growth and to obstruct proper inspiration. Such treatment of the growing girl is absolutely inexcusable.

It is only the orthopedic surgeon and the physicians who make many insurance examinations who realize that the majority of adults do not know how to respire properly. It sometimes takes several minutes to instruct an apparently normal, well, and even intelligent individual how to take his deepest breath and show, even incompletely, his respiratory capacity. Also, many and many an individual can not be taught, even at several sittings, how to fill his lungs properly, and it is a constant source of wonder that such persons can go through life breathing so insufficiently.

Although these individuals may live for years, most of them never look well, and they rarely act well. Most of their functions are imperfect, although perhaps sufficient for a quiet, uneventful life, provided no serious illness attacks them. Moreover, every such individual has his prospect of longevity impaired and his expectancy of life diminished, while the man, woman or child who properly respire will not have so many colds, will not have so many infections, and is less likely to develop tuberculosis.

Taylor says that in most persons there are areas of lungs never developed, and it is certainly true that after several weeks of respiratory exercise the lung capacity can be greatly increased, and this with almost every individual who has not been taught such exercises. Of course with older individuals, or if there has occurred any damage to any part of the thorax, the improvement in breathing may not be great. But this only emphasizes the necessity of teaching all children how to respire.

It is hardly necessary to state that all breathing under exercise should be done through the nose, as the air is thus warmed before entering the lungs, is rendered freer of dust and germs, and is taken in slowly enough to allow the chest to expand normally.

Taylor quotes the physiologists as recognizing the subdivisions of air in the lungs as : "(a) the tidal, that which enters the lungs during ordinary respiration ; (b) the complemental, the air which can be forced in ; (c) the reserve, the air that can be expelled during forced expiration ; and (d) the residual, air that always remains in the alveoli or air spaces." The vital capacity is defined as the volume of air which can be "forcibly ejected by extreme expiration after a most complete inspiration."

Normal inspiration is shorter than normal expiration, and in teaching a patient to breathe Taylor advises that the inspiration should last three seconds and the expiration five seconds, and this should be gradually increased, second by second, until after some weeks twenty seconds are consumed in inspiration and twenty-eight in expiration, and he would have the full inspiration sustained for from two to ten seconds before exhaling. The number of respirations a minute normally vary from sixteen to twenty-four.

Taylor advises that in the beginning respiratory exercises should be taken while the patient is lying down, so as to start with thoroughly relaxed muscles. Later they should be done while standing, with the patient erect, the head thrown back, and sometimes with the hands clasped behind the back. His exact method can best be obtained from his own description.

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[For other information see second page following reading matter]

SATURDAY, APRIL 17, 1909

THE RELATION OF IODIN TO THE ACTIVITY OF THYROID PREPARATIONS

Struck by the similarity of the effects of iodine and thyroid in the treatment of goiter, Kocher, in 1895, suggested the desirability of examining the thyroid for iodine, but the tests made in Berne were negative. In the same year, however, Baumann, in Freiburg, discovered the presence of iodine in no inconsiderable amounts in the thyroid of man and other animals, but even now, over thirteen years later, we are still uncertain as to just what part the iodine plays in the physiologic activity and the therapeutic effects of the thyroid. Baumann, and Roos who first studied the action of the iodine-containing constituent of the thyroid, were of the opinion that the iodothyron was the active principle of the thyroid gland, but there were many who did not accept this view and looked on the iodine as merely an injurious substance which the thyroid had removed from the circulating blood. Others pointed out that not all animals have iodine in their thyroids, yet removal of such iodine-free thyroids has just as serious effects as removal of thyroids that contain iodine, and therefore it would seem that a thyroid can be functionally active even when it contains no iodine.

This question of the relation of iodine to thyroid activity has practical as well as theoretical interest, for, if the therapeutic activity of a thyroid preparation is in direct proportion to the amount of iodine it contains, we have a ready method for standardizing such thyroid preparations for commercial purposes. As the amount of iodine in sheep thyroids varies greatly, depending not only on differences in the breed of sheep, but also on the place in which they have lived, and on the time of year, it is very necessary to know how closely the iodine content and the physiologic activity correspond, so that we may know whether to be content with giving our patients a certain number of grains of desiccated thyroid at a dose, or to demand a dosage varying according to the amount of iodine present in each preparation.

The method of study which has been in common use in determining the effect of thyroid preparations has depended on the fact that thyroid administration causes loss of weight and increased excretion of nitrogen in the urine. By this method, Roos found evidence that thyroid preparations with low iodine content produced

less metabolic disturbance than did those more rich in iodine. Similar results obtained by Oswald, von Cyon, and Marine, added weight to the belief in the importance of the iodothyron for the effects of thyroid feeding, but the methods used did not permit of any direct quantitative estimations.

Recently, Reid Hunt has elaborated a physiologic test for thyroid preparations which seems to permit of rather surprisingly accurate measurement. It is based on the fact that feeding of definite quantities of thyroid substance to mice increases very greatly the resistance of the animals to a certain poison, acetoneitril, so that they can withstand many times the ordinarily fatal dose. In view of the fact that thyroid feeding has the opposite effect on rats, lowering their resistance to acetoneitril, and that both mice and rats are made less resistant to morphine by thyroid, this test would seem to rest on a most uncertain foundation, and could hardly be expected to give either constant or reliable results. Nevertheless, large experience has convinced Hunt of its accuracy, and, obscure as the explanation of this influence of thyroid on mice may be, the results of its application to a number of important problems seem to be distinctly valuable. A study of the question of the dependence of physiologic activity on the iodine content of thyroid preparations is reported by Hunt and Seidell,¹ the results of which seem to be conclusively in the affirmative. With very few exceptions, the power of thyroid tissue to protect mice against acetoneitril, or to render rats and mice more susceptible to morphine, closely parallels the iodine content. Indeed, by ascertaining the physiologic activity by this means it is possible to estimate with considerable accuracy the amount of iodine in a given thyroid preparation.

As thyroid tissue free from iodine, such as occurs in new-born infants and in the adult animals of some species, also possesses a small but distinct physiologic activity, it seems necessary to Hunt and Seidell to assume that the thyroid may possess a substance which is active independently of any iodine combination, but the activity of which is enhanced by the presence of iodine. Furthermore, when the iodine content of an animal's thyroid is increased by feeding iodides or iodoform, the physiologic activity of the gland increases in proportion to the amount of iodine it contains, indicating that the thyroid is able rapidly to convert iodine coming to it in the blood into the active iodine compound characteristic of the functioning thyroid.

PATHOLOGY AND HISTORY

Some interesting side-lights are being thrown on history through the growing recognition of the rôle that disease has played in human events. It is easy to understand that, in the past, imperfect knowledge of the

1. Hygienic Laboratory Bulletin No. 47, United States Public Health and Marine-Hospital Service.

nature and causes of disease has obscured the true significance of many serious affections and has led to mistaken conclusions. It would now be well for the historian, reviewing the events of the past, to make use of the knowledge of pathology that has been acquired in the last half-century. If the modern historian, with the aid of the pathology of to-day, does not succeed in changing the face of history, at least he can set the candle of another theory flickering in the haze of uncertainties that enshroud many a venerable historical mystery, and in some instances, perhaps, light the way to a probable solution. It has been suggested, for instance, that the decadence of Greece, which has been attributed to luxury and the instability of an overweening democracy, was largely influenced, if not directly caused, by the introduction of malaria into the Greek communities, as a consequence of some of the expeditions from Greece into countries where malaria existed.

The version which has come down to us of the climax of many a tragic story of the past might be materially different if contemporary historians had possessed the key to pathology furnished by modern surgery. It might be interesting to speculate, for instance, on how history might have been modified if appendicitis had been as well known in ancient and medieval times as now. Thousands of persons in every large city must have died mysterious and inexplicable deaths from this disorder—deaths probably attributed in most cases to poison. After all, the story of appendicitis, if one has not the key to it, reads very much like that of poison. The symptoms develop suddenly, not long after a meal; there is apt to be intense pain; general peritonitis develops, and the abdominal tenderness indicates some intense irritant within, which, of course, would be thought to be the poison at work.

Among the victims of necessarily unrecognized appendicitis were, no doubt, many celebrated personages of history. Britannicus, the son of Claudius, for instance, who might have become Roman emperor, died rather suddenly under circumstances which suggested poison to the ancient historians, but which might tempt a modern physician to think of some abdominal condition due probably to appendicitis in the first place.

Extrauterine pregnancy, too, must have caused many mysterious deaths. In the same class of causes would be rupture of the stomach due to ulcer. This last may have been the cause of the sudden death of that beautiful Duchess of Orleans, commonly known as Madame, who was the subject of one of Bossuet's great funeral orations. In this case, as in many others, the violence of the symptoms gave rise to the suspicion of poisoning, and popular sympathy for the untimely fate of the victim, combined with popular detestation for her supposed enemies, clinched the diagnosis.

Again, it might light up many dark places in history could we project into the past some of our recently ac-

quired knowledge of mental diseases. It may be that some pathologists and alienists have exaggerated the importance of the rôle that the aberrations of great men have played in history; yet there is no doubt that a sound contemporary knowledge of mental pathology might have furnished the clue to many now insoluble historical riddles.

Such are a few of the interesting hypotheses brought back from the dimmer byways of history, alongside of which stretch so many fruitful fields for conjecture. Those whose work lies in other provinces—physicians, for instance—may find profit and pleasure in a holiday spent in those fascinating, though speculative, fields.

THE NEED OF BETTER PROVISION FOR TREATMENT IN EARLY STAGES OF INSANITY

The attitude of the American public toward preventive medicine, until a rather recent date, might be expressed in a paraphrase of the celebrated remark of Pinckney: "Millions for cure, but not one cent for prevention." While something along preventive lines has been done in recent years, it has been in the way of isolated personal effort, and we do not believe that there has been as yet any widespread appreciation of the necessity for preventive rather than curative medicine, even among the more intelligent of the general public. Physicians, and others who come into contact with the sick, realize that there are at present two classes of patients whose plight is especially distressing, those with advanced tuberculosis, and those with incipient insanity.

It is undoubtedly true that some interest has recently been aroused regarding the problem of the insane or nearly insane. The remarkable work of Beers,¹ "A Mind That Found Itself," has stimulated public thought to some extent, a stimulation which is evidenced by the gift of Mr. Phipps to the Johns Hopkins University of a psychopathic institute. The formation, in Connecticut, of a "Society for Mental Hygiene" is another straw which shows the direction of the current of popular opinion. Still, it must be admitted that as yet there is no widespread public interest in the matter. Undoubtedly there should be, and equally without question every medical center should have its psychopathic hospital either in connection with a general hospital, or, if geographical situation permits of it, as part of one of the regular hospitals for the insane.

As Mosher² states, insane patients may be divided into two classes: those who become insane because of congenital defects in the nervous system, and those with relatively normal brains who break down under the stress and competition of modern life. Patients in the latter class frequently recover completely if treated early. The legal system of commitment operative in most states makes no distinction between these two

1. Reviewed in *THE JOURNAL A. M. A.*, April 9, 1908, 1, 1526 and 1546.

2. *Am. Jour. Insanity*, January, 1909.

groups of cases. Usually, on account of the legal red tape and the necessary publicity, the family of the patient puts off committing him until the mental symptoms are very pronounced, or the patient has shown evidence of suicidal or homicidal tendencies, or destructive delusion of some form. Often, under these circumstances, the lockup is the only place available for the temporary detention of the patient during the commitment proceedings. When the patient has reached this stage he has already long passed the incipient period.

Such a state of affairs is aptly compared by Mosher to refusal to treat a patient with pulmonary tuberculosis until cavity formation is apparent. If the methods of commitment are changed so as to allow of treatment in an institution without the usual legal formalities it will mean the establishment of psychopathic wards in connection with many general hospitals. At the same time, the hospitals for the insane should be reorganized, as some already have been. Any one who is at all cognizant of affairs in most of our public institutions for the insane knows that they are overcrowded with patients and undermanned with physicians. The study of the medical aspects of the cases often falls to the lot of the junior officers, or is relegated to second place by the demands of a necessary but vexatious routine, and the care of an excessive number of patients. All this must be changed. There must be special wards for acute cases of a curable type with as many physicians and nurses to the patient as in a general hospital. The results so far accomplished in the few psychopathic clinics in this country amply demonstrate that such a change is needed and is fully warranted.

TYPHOID FEVER AND SEWERAGE SYSTEMS

The connection between typhoid fever and water supply has been frequently pointed out by sanitarians and, we regret to say, illustrated all too frequently by deplorably concrete instances; that between the installation of a sewerage system and the same disease, although not unnoticed, has not received the same attention. It was observed, to be sure, that when the city of Berlin began to dispose of its house drainage by the water-carriage and sewage-farm system a fall occurred in the death rate from typhoid fever and that a like improvement occurred in Munich under similar circumstances, but in those days of animated controversies between the "*Grundwassertheoretiker*" and the "*Trinkwasserfanatiker*" the true explanation of such an occurrence was not easy to reach.

At present we are in a better position to understand the real significance of the beneficial effects which often follow the installation of sewerage systems. In the first place, we have learned that while the life of the typhoid bacillus in water is usually short, its life in contaminated soil and in accumulations of fecal matter, although by no means indefinitely prolonged, may yet

extend over several months. In other words, the mere suspension of the typhoid bacillus in water, as happens in any water-carriage system, accelerates its destruction. In the second place, infectious material containing typhoid bacilli, to put it roughly, which is gathered together from scores of houses and hospitals is easier to deal with than if typhoid bacilli are left scattered in widely separated localities in individual outhouses and privy vaults. Instead of several thousand or hundred thousand possible or potential foci of infection there is only the sewage to threaten us, and although the sewage problem itself is by no means a simple one, we at least know where the danger is, where the typhoid bacilli are localized. Finally, and this is perhaps the most illuminating point of all, the share of the house-fly in disseminating disease is now clear to us. The family privy vault furnishes an opportunity for this mode of conveyance which even the most rudimentary sewage irrigation system could not afford in anything like the same degree. It seems likely that the early autumnal incidence of typhoid fever noticed in many localities in the Northern Hemisphere is in large part to be accounted for by the time of seasonal advent of the house-fly.

Such facts certainly enable us to understand the diminution of typhoid fever which is seen to follow the abolition of the privy vault and box closet in such cities as Winnipeg, where recommendations made to the health authorities a few years ago were acted on with such vigor and discrimination that the disease, once a scourge, is now relatively infrequent. They also constitute cogent reasons for hastening the work of sewer construction in many small towns and villages where the open privy still holds sway. Typhoid fever to-day is largely a rural disease and, as we have seen, the reason is not far to seek. The old campaign slogan of European sanitarians, "*tout à l'égout*," might well be revived in view of such conditions as the casual railway traveler can all too clearly discern in hundreds of small cities and hamlets in this country. Sewerage systems should be installed wherever the density and resources of a community make it possible. Isolated farm buildings even can be provided with a rational system of sewage disposal at relatively small expense. The open privy must go with all its implications, its danger to the family, to the neighbors and to the public milk supply.

ECONOMIC ASPECT OF LENGTHENING HUMAN LIFE

The economic loss from preventable diseases constitutes a powerful argument for the extension of sanitary measures. According to statistics from the report on National Vitality submitted to the Conservation Commission for the information of President Roosevelt, the loss of life from the preventable cases of tuberculosis, diarrhea, enteritis, pneumonia, violence, typhoid fever and diphtheria amounts on the average to 7.3 years. Professor Irving Fisher, as a member of the Conserva-

tion Commission, concludes from a careful investigation of the ratios of preventable deaths from each of ninety principal causes of death in the United States, that over one-third of all deaths which now occur could be prevented. This would amount to a prolongation of the average life for over 15 years. It is difficult to estimate the influence of such a prolongation of life on industry and economic relations in general. There is one branch of business, however, which is vitally concerned in the prolongation of life and to which such decreased mortality would appeal most concretely as a great financial saving, viz., life insurance. In an address to the Association of Life Insurance Presidents¹ Professor Fisher made the proposition that life insurance companies should interest themselves in the extension of human life from financial, if not from philanthropic motives. He believes that the companies could well afford to devote \$200,000 a year to the purposes of life preservation, a sum which amounts to only one-eighth of 1 per cent. of present annual death claims. It was suggested by Professor Fisher that this fund be expended through the agency of the Committee of One Hundred on National Health and be used not for the establishment of hospitals or sanatoria, but for the sanitary education of the public and in stimulating municipalities, states and the federal government to greater efforts for the preservation of health. He argued that the money thus expended would, by awakening public interest, result in the expenditure by these governing bodies of much greater sums and in a general emulation in the care of health which would secure very desirable results. The proposition has already been acted on in a favorable way by the appointment of a committee by the Association of Life Insurance Presidents to consider the question. In appointing the committee an effort was made to select men representing the various branches in life insurance work, so that the different problems involved in the proposition, executive, actuarial, legal and medical, could be passed on by experts. It is to be noted that a prominent insurance company advertises a bureau of cooperation and information whose services are placed at the disposal of health officers, committees for the prevention of tuberculosis and social workers and offers the help of its agents for the distribution of pamphlets or other literature on hygiene and allied subjects. The cooperation of the insurance companies will unquestionably prove of great assistance in the campaign for better health conditions. There is little doubt that other industrial and commercial organizations would find it to their advantage to expend money for like purposes, even if the dividends on such an investment were less tangible than mere dollars and cents.

1. American Health Magazine, Supplement, March, 1909.

Infectious Pyelonephritis.—Ekehorn reports 35 cases. The operative treatment for the relief of pyelonephritis due to the colon bacillus is not to be directed against miliary and small abscesses in the kidney as such, but rather against certain mechanical conditions which predispose the kidney to infection and hinder healing of pyelonephritis, such as anchoring of the kidney in a dislocated position, retention in pelvis, obstruction of ureter, etc.—*Hygiea Festband*.

Medical News

ARKANSAS

Elections.—At the annual session of the Tenth Councilor District Medical Society, held in Fort Smith March 16, Dr. Frank B. Young, Springdale, was elected president; Dr. James G. Omelvena, Midland, vice-president; Dr. Dred R. Dorente, Fort Smith, secretary (re-elected); and Dr. Othello M. Bourland, Van Buren, treasurer. Siloam Springs was selected as the next place of meeting.—Mississippi County Medical Society, at its annual meeting March 9, elected Dr. S. A. Lowry, Luxora, president; Dr. Hugh F. Crawford, Jr., Wilson, vice-president; Dr. Oleander Howton, Osceola, secretary; Dr. Thomas F. Hudson, Luxora, treasurer; Dr. Henry C. Dunavant, Osceola, delegate to the state society, and Dr. D. C. Joyner, Joiner, alternate.—Saline County Medical Society, at its annual session, held in Benton, elected the following officers: Dr. J. M. Philips, Benton, president; Dr. James W. Walton, vice-president; Dr. Charles Prickett, Traskwood, secretary, and Drs. Charles J. Steed, Hurricane, and Dewell Gann, Benton, delegates to the state society.—At the annual meeting of Lawrence County Medical Society at Blackrock, Dr. John C. Land, Walnut Ridge, was elected president; Dr. James W. Morris, Denton, vice-president and delegate to the state society; Dr. Horace R. McCarroll, Walnut Ridge, secretary; Dr. John C. Hughes, Walnut Ridge, treasurer, and Dr. Benjamin R. Woodyard, Blackrock, alternate-delegate to the state society.—At the annual meeting of Jefferson County Medical Society, held in Pine Bluff, Dr. Camillus K. Caruthers, Pine Bluff, was elected president; Dr. Charles A. Glover, Pine Bluff, vice-president, and Dr. William T. Lowe, Morrell, secretary.

CALIFORNIA

Coming Meetings.—The Medical Society of the State of California will hold its annual meeting in San Jose, April 20-22.—The annual meeting of the California Public Health Association will be held in the same place, April 19. The sanitary demonstration car of the State Board of Health will be at San Jose, and demonstrations from it will furnish the basis of the work of the association.

Tuberculosis.—An association for the study and prevention of tuberculosis has been organized in Sierra Madre under the direction of Drs. George H. Kress and Titian J. Coffey, Los Angeles, and Fitch C. E. Mattison, Pasadena.—The bill providing for the compulsory registration of all cases of tuberculosis in the state, and for the fumigation of houses in which persons afflicted with the disease have lived, was passed by the legislature, March 15.

Will Not Keep Indigent Tuberculosis Patients.—The Charity Conference Committee of Los Angeles, March 16, sent official requests to kindred organizations that organized charities and physicians should not persist in sending patients in advanced stages of tuberculosis to Los Angeles, only to cause suffering to the indigents and a burden to the communities to which such patients have no ties, and giving warning that they will be obliged promptly to return such indigent patients to the places from which they had been sent.

Personal.—Dr. Walter Lindley, Los Angeles, editor of the *Southern California Practitioner*, and Mrs. Lindley have sailed for Europe.—Dr. Julius Rosenstirn, San Francisco, has gone abroad for a year.—Dr. George W. Dufficy, Sacramento, was operated on for appendicitis at the Sisters' Hospital, March 28, and is reported to be doing well.—Dr. Robert V. Day, Los Angeles, has been seriously ill, in the California Hospital, with septicemia, due to an operation wound.—Dr. E. C. Fabre-Rajotte, Lincoln, is said to be convalescent after a severe attack of septicemia due to an operation wound.

Society Meetings.—At the twenty-seventh semi-annual meeting of the San Joaquin Valley Medical Society, held in Fresno, March 9, Dr. Benjamin F. Walker, Stockton, was elected president; Drs. Robert W. Musgrave and R. Edmond Dixon, Hanford, vice-presidents, and Dr. Dwight H. Trowbridge, Fresno, secretary.—At the sixth annual meeting of the Central California Health Officers' Association, which was held in connection with that of the San Joaquin Valley Medical Society, Dr. Robert W. Musgrave, Hanford, was elected president; Dr. Samuel W. Langdon, Jr., Stockton, vice-president; and Dr. George A. Hare, Fresno, secretary-treasurer.

The Law's Decisions.—The suit of Arthur Martin, San Francisco, against Charles Sonntag and others identified officially

with the Ukiah State Hospital for the Insane for \$1,127,000 for alleged false imprisonment was decided in favor of the defendants in the United States Circuit Court March 27.—Judge Oster, in the Superior Court at Los Angeles, January 29, decided in favor of Dr. Thomas G. Devitt, Los Angeles, in the suit brought against him for complications said to have been due to vaccination, and for which \$5,000 damages were claimed.—Dr. Charles H. Carleton, Los Angeles, is said to have pleaded guilty of having used the mails to further illegal medical practices, and to have been fined \$1,500.

Hospital Notes.—The newly constructed Mission Emergency Hospital, San Francisco, was opened April 11, with a full medical and surgical staff, and equipped with all the facilities for treating emergency cases.—L. W. Hellman, San Francisco, has given \$100,000 to the Mount Zion Hospital in memory of his wife. This will be used for a new building to be called the Esther Hellman Building. A donation of \$5,000 is also reported from Mrs. Clara Glazier and Henry Glazier in memory of the late Simon Glazier.—The Marysville Hospital Company has been incorporated by Drs. Nelson C. Bissell, George B. Worthington, S. B. Swift, and James E. Taylor, with a capital stock of \$20,000.—The Mary Jesse Hospital and Training School for Nurses has been incorporated at Santa Rosa by Dr. James W. Jesse, Mary E. Jesse and Marie E. Necker.

Banquet to Dr. Blue.—The Citizens' Health Committee of San Francisco gave a banquet in honor of Dr. Rupert Blue, U. S. P. H. and M.-H. Service, March 31. The text of the evening was "San Francisco Cleansed, California's Fairest Daughter." Charles S. Wheeler acted as toastmaster and addresses were made by Governor Gillette, Mayor Taylor of San Francisco, Dr. Martin Regensburger, president of the California State Board of Health, Dr. Thomas W. Huntington of the San Francisco Board of Health, Dr. Philip Mills Jones, secretary of the Medical Society of the State of California, and others. Mayor Taylor, in behalf of the city, presented a gold watch to Dr. Blue, a handsome desk set to Dr. W. Colby Rucker, assistant to Dr. Blue, and in addition presented medals to all the assistants in the campaign undertaken against the bubonic plague.

FLORIDA

New County Hospital.—Through the efforts of Dr. George E. Welch, Edmund W. Warren, and others, Palatka, the matter of the taking up the fund of \$1,832.22 previously accumulated, and investing the sum in a permanent hospital for Putnam county, has been inaugurated. The trustees met and organized with Dr. George E. Welch, chairman; J. H. Haughton, secretary, and W. Ramsaur, treasurer. A site was purchased for \$3,150, the building on which has been rearranged, modern plumbing has been installed, and the walls have been made sanitary. The institution will soon be ready to receive patients.

State Medical Association Meeting.—The Florida Medical Association held its thirty-sixth annual meeting in Pensacola, April 7, 8 and 9. Dr. James D. Love, Jacksonville, presiding in the absence of the president, Dr. James F. McKinstry, Jr., Gainesville. Addresses of welcome were delivered by Mayor C. C. Goodman, of Pensacola, and Dr. Warren E. Anderson, Pensacola, president of the Escambia County Medical Society. To these addresses Dr. Love, the presiding officer, and Dr. J. D. Fernandez, Jacksonville, the secretary, responded. Jacksonville was selected as the next place of meeting. The following officers were elected: President, Dr. Henry E. Palmer, Tallahassee; vice-presidents, Drs. Cary P. Rogers, Jacksonville; Urban S. Bird, Tampa; and Horace L. Simpson, Pensacola; secretary, Dr. J. D. Fernandez, Jacksonville, re-elected; librarian, Dr. Charles E. Terry, Jacksonville, re-elected, and councilors, Dr. John McDiarmid, DeLand, and Dr. Ruff. A report of the proceedings will appear in a later issue of THE JOURNAL.

GEORGIA

State Society Meets.—The Medical Association of Georgia will hold its annual meeting in Macon April 20 to 23, under the presidency of Dr. Thomas D. Coleman, Augusta.

Personal.—Dr. William B. Summerall, superintendent of the Atlanta Hospital for Contagious Diseases, has been elected superintendent of the Grady Hospital.—Drs. John C. Olmstead, Michael Hoke and Cyrus W. Strickler have been elected delegates, and Drs. Willis B. Jones, J. Ross Simpson and George M. Niles alternates to the Medical Association of Georgia.

Dispensary Trouble May be Settled.—The dispensary of the Atlanta Antituberculosis Association, located on the top floor of the Gould Building, petition for the removal of which was made by the tenants of the building, has been investigated thoroughly by a special committee of the Fulton County Medical Association, and the protesting tenants have been asked to inspect the dispensary and then to decide whether or not they will withdraw their complaints. The institution is purely charitable, its educational value has been great, and it is believed by physicians to be in no way a menace to the adjacent tenants in the building.

ILLINOIS

Veteran Physician Injured.—Dr. Hartwell C. Howard, Campaign, one of the oldest and most esteemed practitioners of central Illinois, was struck by a speeding automobile, April 1, and seriously injured.

New Medical Society.—It is announced that a new medical organization is to be formed in McDonough county, to promote the general knowledge of surgery and pathology. Drs. Joseph B. Bacon, S. S. Allen and A. P. Standard, Macomb, are the incorporators of the organization, which is to be known as the McDonough Surgical and Pathological Society.

New Psychopathic Hospital.—The public charity service of Illinois signaled the opening of its fourth new psychopathic hospital at Anna, on April 16, when the new hospital building, erected in connection with the Illinois Southern Hospital for the Insane, was formally dedicated. This type of hospital is one of the concrete outgrowths of the campaign for hospital service, as against custodial service in the institutions in the insane group. This campaign was begun two years ago by Governor Deneen on the advice of the State Board of Charities. A \$100,000 psychopathic hospital has been opened to service in connection with the Illinois Western Hospital for the Insane, at Watertown, and two new hospitals, one for women and one for men, have been opened in connection with the Illinois General Hospital for the Insane near Peoria. These two hospitals cost \$100,000. The results have been a complete demonstration of the efficiency of hospital service, especially among certain types of the acute insane. The appropriation of \$25,000 for a similar institution at Elgin was insufficient, and an additional appropriation of \$15,000 is asked of the present General Assembly to complete a modern fireproof psychopathic hospital at Elgin. At Kankakee \$75,000 was appropriated two years ago for a hospital building, and this building, now nearly completed, will be rushed to completion and furnished, if the legislature passes an emergency bill allowing \$20,500 additional. This bill has passed the house and is now before the senate. At Jacksonville psychopathic work soon will be established in a new hospital wing and in an old wing which is being refitted. The hospital at Anna cost \$50,000. It is modern in every respect, built not as a monument to an architect, but for the specific purpose for which it is to be used. Included in the equipment is a complete hydrotherapeutic outfit. The service in all these hospitals is conducted along modern lines under the direction of the State Psychopathic Institute at Kankakee. The program for the dedication included "A History of the Anna Hospital," by Dr. William L. Athon, the superintendent; "The Charities of Illinois," by Governor Deneen; "The Law of Commitment," by Judge Monroe C. Crawford, County Judge, Union County; and "The Modern Treatment of the Mentally Ill and Mentally Defective," by Dr. Frank Billings, President of the State Board of Charities. Following this program there was an inspection of the psychopathic hospital and its formal dedication. The superintendents of all the state hospitals for the insane and members of the State Board of Charities were present.

Chicago

Money for Hospital.—By the will of the late Nelson B. Holden, \$5,000 is devised to the Presbyterian Hospital and \$10,000 to the Presbyterian Hospital Training School for Nurses.

Unlicensed Hospital Proprietor Fined.—Peter Rundberg is said to have been fined \$100 April 8, by Municipal Judge Fry, for conducting a hydropathic institution known as the "Ravenswood Sanitarium," without a license by the state.

Personal.—Dr. Jacob Frank has returned from a trip to Cuba.—Dr. Julius Grinker has been appointed a member of the consulting staff of the Cook County Hospital, vice Dr. Ferdinand C. Hotz, deceased.—Dr. and Mrs. William Cul-

bertson have returned from a visit to New Orleans.—It is announced that Drs. William A. Evans and Theodore B. Sachs are to be the first directors of the proposed Municipal Tuberculosis Sanatorium.

INDIANA

Academy Incorporated.—The Academy of Medicine, Elkhart, has been incorporated without capital stock for educational and social purposes by Drs. I. Wright Short, Fred N. Dewey, George W. Spohn, John C. Fleming and A. A. Norris.

Personal.—Dr. Fred A. Metts, Ossian, was operated on for appendicitis in Hope Hospital, Fort Wayne, March 23.—Dr. George F. Edenharter, superintendent of the Central Hospital for the Insane, Indianapolis, was re-elected for a term of four years, March 26, and the board adopted resolutions laudatory of his work.—Dr. Ephraim M. Folsom, Boonville, has been appointed professor of electrotherapeutics in Barnes Medical College, St. Louis.

Tuberculosis Colony.—The work of erecting cottages for the formation of a tuberculosis colony on the ground of the Indianapolis City Hospital began March 25, and the first patients have already been received for treatment. Four of the cottages are to be built by the Indiana Society of the American Red Cross and two by church societies. There are to be three two-room and three one-room cottages, and only patients in the incipient stage of tuberculosis will be received.

To Regulate Marriages.—The State Board of Health has determined to ask the next legislature to amend the law regarding marriage licenses, and make it even more stringent. It is planned to have marriage licenses issued jointly by the county health officer and the county clerk in order to reduce the minimum danger of transmission of disease through marriage. "It is believed by the state board that the economical solution of the problems of inebriety, insanity, epilepsy and other physical ailments is to be found in the regulation of the marriage relation. The simple law which we have now is operating to great advantage, but is not strong enough."

LOUISIANA

In Honor of State Society President.—Ouachita Parish Medical Society gave a banquet March 27, in honor of Dr. E. Denegre Martin, president of the Louisiana State Medical Association. Dr. James B. Woods of China was a special guest on the occasion, at which Dr. John H. McCaleb presided.

Extension Lectures at Tulane.—The course of extension lectures in connection with the Medical Department of Tulane University for April, includes a series of six lectures by Dr. F. Creighton Wellman, Washington, D. C., for a long time health officer in Portuguese East Africa, and an expert in the field of tropical medicine and natural history. This series of lectures is designed to present to the students of history, commerce, geography, economics and sociology and other educated persons those factors which have heretofore constituted a bar to the conquest of the tropics.

Personal.—Dr. J. Moore Soniat, New Orleans, has been appointed assistant inspector of communicable diseases.—Dr. William H. Taylor has been elected president and Dr. T. S. Jones a member of the board of health of St. Francisville.—Dr. Shelton I. Colvin has been elected mayor of Gibsland, and Dr. Andrew J. Pennington a member of the executive committee.—Dr. Stephen W. Stafford, New Orleans, has been made first assistant resident surgeon in the Charity Hospital, New Orleans.—Dr. P. T. Talbot has been appointed inspector of the State Board of Health and assistant in clinical laboratory work.

Annual Meeting of Hospital.—The Presbyterian Hospital, New Orleans, at its annual meeting, elected officers, a visiting medical board, consisting of Drs. John F. Oechsner, Edward L. McGehee, C. Jefferson Miller, David L. Watson and G. Farrar Patton, and a visiting staff consisting of Drs. John T. Halsey, G. Farrar Patton, Charles C. Bass, Robert J. Mainegra, Herman B. Gessner, William M. Perkins, Philip W. Bohne, Edmund L. Leckert, R. D. Schimmelpfennig, Clarence May, Hamilton P. Jones, E. E. Patton, Richard W. Salter and J. Phares O'Kelley. It was decided to start actively the collection of funds for a hospital site, as the present quarters on Carondelet street are not adequate.

MARYLAND

Baltimore

Lectures on Nutrition.—A course of lectures on "Nutrition" is to be delivered in the Women's College by Prof. William J. Gies, New York City; William H. Howell, Baltimore; H. P.

Armsby, Pennsylvania, and C. W. Stiles, chief of the division of zoology in the U. S. P. H. and M.-H. Service.

Sanatorium Nearly Ready.—The Pine Bluff Sanatorium Company has completed the main and tent buildings, which will be opened this month. The institution is intended for consumptives; is located on the Wicomico river, near Salisbury, is surrounded by pine woods, and will accommodate more than 100 patients.

In Memoriam.—A stained glass window has been erected in St. Timothy's Church, Catonsville, in memory of the late Dr. Charles G. W. MacGill, who was a vestryman of the church. The window, which was donated by Mrs. MacGill, depicts St. Luke, the beloved physician, standing in a garden bearing a scroll on which is written "One was given the gift of healing by the spirit."—A tablet in commemoration of Edgar Allan Poe was unveiled in the rotunda of the Church Home and Infirmary, in which the poet died. The tablet was presented by Dr. Thomas S. Cullen.

Blow at Cocain Law.—It has been decided by the courts that the state must present expert testimony in prosecution of the alleged violators of the cocain law, in order to get conviction. The case in point is that in which Dr. Ralph J. Schirman, West Baltimore, was alleged to have prescribed cocain for Annie Miller, and was heard April 6 in the criminal court. Evidence was adduced that the defendant had prescribed cocain, but for medicinal purposes, as the patient was addicted to the use of the drug. The judge stated that unless the state could prove beyond the peradventure of a doubt that the accused had not given the proper medical treatment, he could not find him guilty. The state had failed to do this and the judge dismissed the defendant. Five other similar suits against Dr. Schirman were postponed to allow the state to get the necessary evidence, and the defendant was released on his own recognizance.

MASSACHUSETTS

Medical Examiners Appointed.—The governor has appointed the following physicians medical examiners: Drs. Edward H. Baxter, Hyde Park; John Lowell Bacon, Southboro; and Charles S. Knight, Westboro.

Medical Club Election.—At the annual meeting of West Roxbury Medical Club April 1, Dr. Frances P. McKenna was elected president; Dr. Burt N. Bridgeman vice-president, and Dr. Edwin T. Rollins, secretary-treasurer. Dr. Edward W. Taylor delivered the address of the evening on "Quacks and Quackery."

Bequests.—By the will of the late Nancy Harding Forsdick, \$3,000 is bequeathed to the Floating Hospital, Boston, and \$5,000 to the Boston Dispensary, and \$5,000 to Dr. Robert A. Blood, Brookline.—By the will of the late Mrs. Margaret E. Langdell, \$10,000 is devised to the Cambridge Hospital, and the same sum to the Holy Ghost Hospital, Cambridge.

Personal.—Dr. C. A. Drew, medical director of the Bridgewater State Farm, has been appointed superintendent of the Worcester City Hospital, vice Dr. Thomas Howell.—Dr. Charles H. Morrow has been elected chairman of the board of health, and health officer of Gloucester.—Dr. John Parr, Methuen, has been appointed town physician.—Dr. David Cheever, Boston, who has been ill with bronchitis, is reported to be improving.—Dr. George S. Cahill, North Cambridge, charged with performing an illegal operation last June, was found not guilty by a jury in the Middlesex Superior Court, March 23.

MICHIGAN

Antituberculosis Society Organized.—The Delta County Antituberculosis Society was organized at Escanaba recently with Dr. J. Charles Girard as president and Dr. Oscar C. Breitenbach, secretary. The principal address was given by Dr. Breitenbach on "Sanitation and the Municipality."

Personal.—Dr. David J. Levy, secretary of the Kalamazoo Board of Health, has resigned.—Dr. George W. Lowry, Hastings, has recovered from a serious attack of septicemia due to an operation wound.—Dr. Archibald M. Walters, Detroit, who was arrested in Toronto charged with fraud in connection with a mining deal, was acquitted, March 26.—The perjury case against Dr. George A. Fritch was dismissed April 2, on motion of the prosecutor on account of insufficient evidence.

Banquet for Dr. Breakey.—The Ann Arbor Club and the Washtenaw County Medical Society, gave a banquet March 31 at the University Club, Ann Arbor, in honor of Dr. William

Fleming Breakey, clinical professor of dermatology and syphilology in the University of Michigan in celebration of the fiftieth anniversary of Dr. Breakey's entrance into the practice of medicine. Victor C. Vaughan presided as toastmaster. President James B. Angell spoke on "Dr. Breakey as a Teacher"; Dr. Ernest L. Shurly, Detroit, on "Dr. Breakey as a Friend"; Dr. James C. Willson, Flint, on "Dr. Breakey as a Classmate"; Dr. Meyer L. Heidingsfeld, Cincinnati, on "Dr. Breakey as a Dermatologist"; Dr. Junius A. Beal, regent of the university, on "Dr. Breakey as an Executive;" and Colonel Henry O. Dean, on "Dr. Breakey as a Soldier;" and the guest of honor made the last address of the evening. Dr. Breakey was presented with a silver loving-cup by his friends and colleagues of the Ann Arbor Medical Club, the Washenaw County Medical Society, and the profession at large, the presentation speech being made by Dr. Charles B. de Nancrede. In the afternoon the senior class of the university presented Dr. Breakey with a gold-headed cane, Benjamin P. Winfell making the presentation speech.

MINNESOTA

Sanatorium Assured.—The bill of Senator Dunne for a municipal sanatorium and industrial school for crippled children at Phalen Park was passed by the house under suspension of rules. The bill carries with it an appropriation of \$55,000. Citizens of St. Paul have contributed twenty-three acres of land for a site and \$5,000 in cash.

Physician Convicted.—Dr. William C. Van Damme, Minneapolis, charged with criminal practice in connection with the now famous "suitcase baby," is said to have been found guilty and sentenced to imprisonment for five years in the penitentiary. This is said to have been the second time he has been convicted for an offense of a similar nature in eight years.

Tax for Medicine Peddlers.—A bill to regulate the license of itinerant vendors of medicine, nostrums and appliances for the treatment of diseases has been introduced by Representative J. T. Johnson, Fergus Falls. The bill provides that licenses, the fee for which is fixed at \$100, must be obtained from the board of pharmacy and that applicants must satisfy the board that the articles are not dangerous to health or intended for any unlawful or immoral purposes.

Society Meeting.—At the annual meeting of the Brown-Redwood Counties Medical Society, March 30, the following officers were elected: President, Dr. Frank D. Gray, Vesta; vice-president, Dr. James L. Adams, Morgan; secretary-treasurer, Dr. William A. Brand, Redwood Falls; censor, Dr. Giles R. Pease, Redwood Falls; delegate to the state society, Dr. George F. Reineke, New Ulm, and alternate, Dr. Gilbert L. Gosslee, Wabasso.

Personal.—Dr. John Jackola, Duluth, sailed for Germany April 1.—Dr. Martin J. Taylor, Janesville, suffered an attack of cerebral hemorrhage March 27.—Dr. Charles C. May has been elected health officer of Adrian.—Dr. James A. Quinn, St. Paul, has been appointed a member of the State Board of Health, vice Dr. James B. McGaughey, Winona, deceased.—Dr. Arthur B. Ancker, St. Paul, has been re-elected superintendent of the City and County Hospital.

Physicians Exonerated.—The suit against Dr. Charles B. Lenont, Virginia, who conducts a hospital in that town, brought by Christ Christopherson, who alleged that his fractured arm was improperly set, was dismissed before Judge Dibell, who ruled that there had been no malpractice.—The jury in the Duluth District Court, March 24, decided that Dr. J. Hjalmar Jern, West Duluth, was not guilty of malpractice in his treatment of Hilding Gradine, who sued for \$25,000, claiming that Dr. Jern had made an erroneous diagnosis.—The school board of Swanville has dropped its case against Dr. Henry M. Bracken, secretary of the State Board of Health, who was arrested March 20 on a charge of assault and battery. The case arose from a dispute between the town health physician and the principal of the school regarding a recent epidemic of diphtheria in the village.

NEBRASKA

College Will Be Enlarged.—Creighton University has purchased for \$12,200, lots across the alley from Creighton Medical College, where an annex will be built.

Casualty Association Election.—At the annual meeting of the Physicians' Casualty Association in Omaha, Dr. De Witt C. Bryant, Omaha, was elected president; Drs. Dellizon A. Foote, Omaha, and Charles M. Schindel, South Omaha; Vernon

L. Traynor, Council Bluffs, Iowa; and Adam R. Ray, Fairfield, vice-presidents, and E. E. Elliott, Omaha, secretary-treasurer.

Gift to Medical College.—Gurdon W. Wattles, Omaha, has promised to give at least \$100,000 or more if necessary for the founding of the Orthopedic Hospital as a part of the enlargement of the College of Medicine of the University of Nebraska, to be built in Omaha. Two other Omaha men have signified their intention of giving fifty or seventy-five thousand dollars each toward the building of the institution. The legislature has passed a bill appropriating \$20,000 for a site.

Personal.—Dr. Brice A. Corbin, Schuyler, has retired from practice on account of ill health.—Dr. Percival has assumed charge as superintendent of the Norfolk Hospital for the Insane, vice Dr. Young, who is studying in Europe.—Dr. John B. Jack, surgeon for the Burlington Volunteer Relief, Omaha, has been promoted to a similar position with the organization in Chicago, and has been succeeded by Dr. C. M. Comlin, Omaha.—Dr. Harry D. Burchard has been appointed city physician and chief health inspector of Falls City.

Pathological Club.—The Pathological Club of the College of Medicine of the University of Nebraska, in its program for the year, takes up many subjects of deep interest to the profession, such as the Emmanuel movement, the plague, medical teaching, sanitary triumphs at the Panama Canal, etc. On April 1, the club gave a dinner in honor of Dr. T. Creighton Wellman, who delivered an address on "Tropical Diseases and Their Relation to Temperate Climates," in which he made especial mention of leprosy, bubonic plague and Asiatic cholera. He stated that the deadly African climate was not so deadly as was actually believed, as its diseases were well-known and definite means of guarding against them could be taken by the forewarned traveler.

NEW JERSEY

Personal.—The board of managers of the New Jersey Sanatorium for Tuberculosis has elected Dr. William S. Jones, Camden, president.—Dr. John H. Moore has been elected secretary of the board of health of Bridgeton.

Osteopaths Recognized.—On April 6, the Senate, after considerable discussion, passed a measure, known as the state medical society bill. This gives the osteopaths one member on the State Medical Examining Board and a legal status as practitioners.

Hospital Association Elects Officers.—At a meeting of the Physicians' Hospital Association of Vineland, April 1, the following officers were elected: President, Dr. Waldo F. Sawyer; vice-president, Dr. John S. Halsey; secretary, Dr. Morris R. Faulkner; and treasurer, Dr. George Cunningham.

Prescriptions for Liquor.—A committee composed of Drs. John W. Wade, Millville; S. Thomas Day, Port Norris; and David H. Oliver, Bridgeton, has been appointed by the Cumberland County Medical Association to investigate the charges that some practitioners have been writing indiscriminate prescriptions for liquor. The committee will try to convert the lawbreakers and induce them to join the association and discontinue their present evil practices.

Inebriates and Near-Insane.—At the request of Dr. Henry A. Cotton, medical director of the State Hospital for the Insane, Trenton, two bills have been introduced by Senator Levitt, one providing for the commitment of confirmed inebriates to the hospital and the other making provision for the admission into any institution for the insane for treatment of those on the border line of insanity or who believe themselves to be in danger of losing their reason.

NEW MEXICO

Sanatoria.—The Sunnyside Ranch, a tuberculosis sanatorium on the cottage plan, located a mile and a half north of Silver City, has been opened under the charge of Dr. LeRoy S. Peters.—A new sanatorium is to be built by the Sisters of Charity in Santa Fe at a cost of about \$100,000.—The United States government has authorized the expenditure of \$374,000 for improvements at the United States General Hospital, Fort Bayard. Of this sum \$214,000 is to be used for the construction of officers' and nurses' quarters and the balance for a steam laundry, power plant, and ward buildings for patients.

Society Meetings.—At the annual meeting of Bernalillo County Medical Society, held in Albuquerque, the following officers were elected: Dr. Walter W. Spargo, president; Drs.

Lucien G. Rice and Harry B. Kauffman, vice-presidents; Dr. John R. Haynes, secretary; Dr. Eligio Osuna, treasurer; Dr. Daniel H. Carns, censor, and Drs. Walter G. Hope and Charles A. Frank, delegates to the state society.—The Torrance County Medical Society has been organized at Estancia with an initial membership of 11, and the following officers: Dr. Christian J. Amble, Manzano, president; Dr. William A. Wilson, Willard, vice-president; Dr. Charles D. Ottoson, Willard, secretary; and Dr. William E. Sunderland, Estancia, treasurer.

NEW YORK

Dinner to Staff.—A dinner was given March 26, by the trustees of the Syracuse Free Dispensary to the physicians and surgeons of the staff of the institution, numbering about thirty.

The Woods Bill Signed.—The governor has signed this measure, which provides for the appointment of health officers through the state outside of cities by local health boards, instead of by the state commissioner of health, after nomination by local health boards.

Tuberculosis Mortality.—The mortality statistics of the department of health show 16,437 deaths in the state from tuberculosis last year. On the accepted basis of reckoning there are at least 150,000 living sufferers from this disease in the state of New York, and to receive these cases there are 1,256 hospital beds outside of New York City.

For the Improvement of the Human Race.—A bill has been introduced directing the State Health Commissioner to appoint two scientific experts to study the problem of improving the quality of the people of the state. Their duties include the investigation of the influence of environment on the quality of individuals, and the publication of recommendations warranted by their studies for the improvement of the human race in this state by means of proper birth and favorable environment. These experts are called on to suggest such limitations of marriage and childbirth as may raise the quality of the people.

Unique Bill Before the Legislature.—An important bill providing for the establishment of county or local hospitals for the care of persons suffering from tuberculosis was introduced in the senate April 1. One provision of this bill is that these hospitals may take private patients as well as those whose care is paid for by the county either entirely or in part. This hospital will be in charge of an administrative superintendent responsible to a board of managers, appointed by the board of supervisors. This bill was drafted by the State Charities Aid Association after exhaustive study of recent legislation, and reports of special commissions, both in the United States and abroad.

Personal.—The medical staff of Rome Hospital has elected Dr. Arthur A. Gillette, president; Dr. Gilbert N. Lehr, vice-president; Dr. Howard J. Teller, treasurer, and Drs. Eliza M. Ellinwood, Thomas P. Scully and Henry D. White, committee on attending staff.—Dr. William H. Beattie has been elected a member of the Utica General Hospital medical staff in the gynecological service, vice Dr. Willis E. Ford, resigned.—Drs. Charles E. Chase, Sands C. Maxon and Arthur R. Grant have been appointed a committee to consider the matter of a consulting staff for the institution, and Dr. John D. Jones has been elected a member of the executive committee of the medical staff to succeed Dr. Ford, resigned.

Hospitals Acquire Property.—Dr. Albert W. Ferris, chairman of the State Lunacy Commission, has announced that a site for the proposed Long Island Hospital has been purchased at Greenvale, L. I. This site consists of 548 acres of land, 75 per-cent. of which is tillable. The property was acquired in the face of bitter opposition on the part of wealthy residents of that part of Long Island. It is the intention of the commission to spend about \$2,570,000 on the entire plant. It is planned to lay out the land in the form of a park and the buildings will not resemble the monastic type so common in similar institutions.—The Matteawan State Hospital for the Criminal Insane has purchased about 130 acres of farm land out of the appropriation of \$15,000 for this purpose by the last legislature.

Society Meetings.—The Women's Medical Society of the State of New York, at its third annual meeting, held in Rochester, March 12, elected the following officers: Honorary president, Dr. Sarah R. Adamson Dolley, Rochester; president, Dr. Eliza M. Mosher, Brooklyn; vice-presidents, Drs. Mary B. Jewett, New York City; Evelyn Baldwin, Rochester,

and Jane Wall Carroll, Buffalo; secretary, Dr. Eveline P. Ballantine, Rochester; treasurer, Dr. Harriet M. Turner, Rochester, and councilors, Drs. Martha Wollstein, New York City; Anna Craig, Kings Park; Mary Gage-Day, Kingston; Julia Kimball, Amsterdam; Florence I. Staunton, Utica; Anna White Marquis, Norwich; Kathleen L. Buck, Rochester; and Maud J. Frye, Buffalo. In the evening the annual dinner was held, which was largely in celebration of the eightieth birthday of the honorary president. Dr. Helen C. Putnam, Providence, R. I., who delivered an address on "The Efficient Teaching of Hygiene and Morals in the Public Schools," was elected to honorary membership in the society.—At the annual meeting of the Utica Medical Club, held March 11, Dr. Charles H. Baldwin was elected president; Dr. William Moffat, vice-president, and Dr. John Groman, secretary-treasurer.

New York City

Preventive Medicine.—Lecture and laboratory courses in tropical medicine, public health and sanitation, including school and factory inspection, have been inaugurated at the New York Post-Graduate Medical School and Hospital, and will be given by officers of the medical corps of the Army and Navy.

Tribute to Dr. Michaelis.—The medical profession of this city, under the auspices of the Metropolitan Medical Society, visited the grave of Dr. Ludwig M. Michaelis April 11, planted a memorial laurel tree, and erected a bronze tablet to his memory. The Rev. Stephen Wise delivered the memorial address.

To Visit Every Baby.—The Bureau of Child Hygiene of the department of health has employed 140 nurses, one of whom will be sent into every home, after the receipt of the birth certificate, beginning April 15. As the summer progresses this number will be increased. If the mother is intelligent and the baby healthy, the first visit will be the last, but if either instruction or care is needed, the case will be assigned to the agency best adapted to give relief.

Will Support the Junior Sea Breeze Work.—John D. Rockefeller has authorized the New York Association for Improving the Conditions of the Poor to open Junior Sea Breeze Hospital at Sixty-fourth street and East River. Mr. Rockefeller has maintained this hospital for children for the past three summers. A larger staff of visiting nurses will be employed during the coming season and the hospital will be completely renovated. There will be day classes for mothers and children.

Changes at the College of Physicians and Surgeons.—Dr. William G. MacCallum of Johns Hopkins University will take the chair of pathology. At his own request, Dr. Walter B. James has been transferred from the Bard professorship, which involved the administration of the department, to a professorship of clinical medicine, and Dr. Theodore C. Janeway and Dr. Evan M. Evans have been promoted, the former to the Bard professorship and the latter to a newly-created professorship of clinical medicine.

Personal.—Dr. Linsly R. Williams has sailed for Europe, where he expects to make a study of the work carried on in the large milk depots of Germany for purposes of comparison with that done in this country.—Dr. Achilles Rose, whose efforts in behalf of a reform in medical onomatology are well-known, leaves New York April 20, and expects to spend the remainder of his life in Athens, where his labors as a philhellene will undoubtedly assure him a warm reception.—Dr. Thomas W. Burnette, ambulance surgeon of the New York Hospital, was seriously injured in a collision between the ambulance and a street car, March 27.—The consulting, attending and assisting staff at the Cumberland Street Hospital, Brooklyn, gave a testimonial reception March 30, to Dr. Charles B. Bacon, superintendent of the hospital, who has accepted the superintendency of the City Hospital, Blackwell's Island. A gold watch was presented to Dr. Bacon by Dr. Simmons in behalf of the staff of the hospital; the nurses of the institution presented him with a marine painting, and the employes gave him a pair of candelabra and a clock.—Dr. Russell Burton-Opitz, adjunct professor of physiology in Columbia University, has been appointed head of the department of physiology.

Buffalo

Pleads for Cancer Laboratory.—Dr. Harvey R. Gaylord of the New York State Cancer Laboratory, in his annual report to the State Health Commission, pleads for an appropriation of at least \$25,000 for the work of the laboratory.

Personal.—Dr. and Mrs. Edmond E. Blaauw have gone to Naples.—The civil service commission has reported that the following physicians have passed the highest examination for the surgeons in the police and fire departments: Drs. Edwin A. Bowermann, Herman K. DeGroat, Thew Wright, Thomas J. Walsh, Edward E. Haley, William T. Getman, and Carroll J. Roberts.

Choice of Two Sites.—The sub-committee on sites appointed by the commission which is considering plans for a municipal hospital for contagious diseases, has considered twenty sites, and from this has selected two, one opposite the German Roman Catholic Asylum which can be obtained for \$60,000, and the other containing six and three-quarters acres, which adjoins the present quarantine hospital, and can be purchased for \$28,000.

Asks Large Appropriation.—Dr. Julius Ullman has instituted a new element in the discussion of contagious diseases by declaring that the city should appropriate \$50,000 a year to combat scarlet fever and diphtheria. The German Hospital has proposed to the commission to furnish a site for a tuberculosis hospital providing the city will construct and equip a building to cost \$62,500, and to furnish accommodation for 50 tuberculosis patients.

NORTH CAROLINA

Society Meeting.—At the annual meeting of the Rutherford County Medical Society, Dr. Thomas B. Lovelaec, Henrietta, was elected president; Dr. Edgar B. Harris, Rutherford, vice-president, and Dr. William C. Bostie, Forest City, secretary-treasurer.

Dispensaries Open.—The Durham City and County Dispensary for the Treatment of the Throat and Lungs was opened April 1. Treatment is free to citizens of the county and city of Durham.—The Charity Aid Society of Greenville is perfecting plans to establish a free clinic in the Greenville Infirmary to be opened for two hours each day, for those unable to pay for medicine and medical advice.

Personal.—Dr. Addison E. Brentzer, Charlotte, who has been studying in Europe for two years, will soon return and locate in Charlotte.—Dr. Thomas Stringfield, Waynesville, has been reappointed inspector general of the N. C. N. G., with the rank of colonel.—Mr. J. L. Ludlow, civil engineer of the state board of health, has been reappointed chief of engineers of the N. C. N. G., with the rank of colonel.—Dr. Watson S. Rankin, Wake Forest, has been elected secretary of the state board of health, vice Dr. Richard H. Lewis, Raleigh, resigned.—Dr. Francis Duffy, Newbern, has been appointed director of the Central Hospital board, Raleigh.

OHIO

Revocation of License to Practice.—By unanimous vote the Ohio State Board of Medical Registration and Examination, at its meeting April 6, is said to have revoked the certificate to practice of Dr. Alphonso Eratus, Cincinnati, on account of unprofessional conduct and gross immorality.—Drs. Alexander B. Barker, Dayton, and Albert C. Goode, Cleveland, have secured injunctions against the State Board of Medical Registration and Examination to prevent the board from revoking their licenses.

Personal.—Dr. Albert V. Phelps, professor of anatomy in, and secretary of, the Medical College of Ohio, Cincinnati, has resigned both positions.—Edward Ness, Jr., Cincinnati, has been appointed a member of the Ohio State Pharmacy Board.—Dr. T. Addison McCann, Dayton, has been appointed a member of the State Board of Medical Registration and Examination by the governor to succeed Dr. Henry E. Beebe, Sidney.—Dr. Frank E. Fee, Cincinnati, sailed from New York for Europe, April 7.

PENNSYLVANIA

Nurses' Bill Passes the House.—The Nurses' Registration Bill was passed finally, April 9, by the House by a vote of 121 to 52. This is the second attempt of the Graduate Nurses' Association to secure legislation for the betterment of their profession. The bill provides a state board of examiners for graduate nurses. It does not prohibit unregistered nurses from practicing, but it makes it illegal for them to use the term "registered nurse."

Hospital Opened.—The formal opening exercises of the Oliver Annex to the South Side Hospital, Pittsburgh, were held March 25, which included an afternoon reception from 2 to 5, an evening reception from 7 to 10, and dedicatory exercises

at 8:30. The annex contains on the fifth floor an operating suite and 12 private rooms; on the fourth floor 20 private rooms; on the third floor wards for women and children and an obstetrical department; on the second floor, the men's medical ward; on the first floor the men's surgical ward, and in the basement, hydrotherapeutic, electrotherapeutic and x-ray departments. The institution now can accommodate 250 patients.

Personal.—Dr. H. M. Hiller, Chester, has been appointed Medical Inspector for Delaware county.—Dr. Franklin Hinkle, Columbia, the oldest living graduate of the Medical Department of the University of Pennsylvania in practice, celebrated, on April 3, his sixty-third anniversary as a practitioner. Dr. Hinkle graduated from the university on April 3, 1846.—Dr. John J. Light has been re-elected resident surgeon of the Good Samaritan Hospital, Lebanon.—Dr. John J. Beilheimer, Priceburg, who has been suffering from a fractured leg, has been obliged to have it refractured and reset.—Dr. Julius H. Comroe, York, has been elected a member of the staff of York Hospital.

Philadelphia

Testimonial to Dean Holland.—The students, associates, and friends of Dr. James W. Holland, dean of Jefferson Medical College for twenty-one years, have arranged to secure a suitable portrait of him and present it to the college, as a mark of esteem in which he is held by them. Subscriptions of not exceeding \$5 will be received by the committee in charge, and checks may be made to the order of H. Augustus Wilson, treasurer, or any other member of the committee.

Hospital News.—Dr. Joseph S. Neff, director of the Department of Health and Charities, awarded a contract for \$7,400, April 10, for the construction of a wood and glass tuberculosis hospital at Byberry, on the completion of which tuberculosis patients in the Philadelphia General Hospital will be removed to the new hospital.—The Frederick Douglass Memorial Hospital, which has been erected at a cost of \$100,000 and will accommodate about 100 patients, was dedicated with appropriate ceremonies, April 15.

Tuberculosis Exhibition for State.—Arrangements were made, April 10, to send the exhibit of the Pennsylvania Society for the Prevention of Tuberculosis to different towns throughout the state. Thus far, arrangements have been made for the exhibition to visit Quakertown, Perkasio, Sellersville, Telford, Souderton, Lansdale and other smaller towns. A similar display sent out last year by the society was visited by 154,732 persons. Those towns wishing to have the exhibit may make arrangements with Wallace Hatch, executive secretary of the society, Philadelphia.

Personal.—Dr. W. M. Late Coplin, medical director of the Jefferson College Hospital, was tendered a testimonial dinner by the visiting staff of the institution April 8.—Dr. Edward E. Montgomery was the guest of honor at the annual banquet of the Wilmer Krusen Gynecological Society of Temple University on April 10.—Dr. Joseph S. Neff was the guest of honor at the annual banquet of the Medical Club, April 16.—Dr. John B. Roberts, while on a recent visit to Pensacola, Fla., as the guest of Dr. Louis De M. Blocker, read a paper before the state medical society.

TENNESSEE

Commencement Exercises.—On April 26, a class of 24 will be graduated from the medical department of the University of Chattanooga.—A class of eight was graduated from the medical department of the University of West Tennessee, Jackson, April 8. The addresses of the occasion were delivered by Dr. Lloyd T. Miller, Yazoo City, Miss., and Rev. R. A. Adams.

Personal.—Dr. Louis Leroy, Memphis, has been appointed a member of the State Board of Embalmers.—Drs. Charles N. Cowden, Perry Bromberg, and Lueius E. Burch, Nashville, have been appointed by the Davidson County Academy of Medicine a committee to name a staff of physicians for the municipal free dispensary for tuberculosis.—Dr. James W. Reed has been elected mayor of Belfast.

TEXAS

To Establish Pasteur Institute.—Dr. Benjamin M. Worsham, El Paso, formerly superintendent of the State Insane Hospital, Austin, announces his intention of establishing a Pasteur Institute in El Paso at an early day.

Personal.—Dr. Thomas B. Bass, assistant superintendent of the Epileptic Colony, Abilene, has been elected superintendent, vice Dr. John R. Preston, and Dr. Manton M. Carriek, Dallas, succeeds Dr. Bass as assistant superintendent.—Dr. Judson M. Andrews, Wharton, has been appointed health officer and jail

physician for Wharton county.—Dr. Robert F. Williams, El Paso, has been appointed superintendent of the Virginia State Tuberculosis Sanatorium, the "Catawba Sanatorium."—Dr. Walter N. Vilas, El Paso, has been reappointed physician of El Paso county.—Dr. Garland B. B. Foscue, Waco, a member of the State Board of Medical Examiners, has resigned.

Sanatorium Bill Vetoed.—The governor, on April 1, vetoed the bill creating a tuberculosis sanatorium. His reasons for vetoing the bill were as follows: "I have carefully considered this measure and believe that the large expenditure contemplated with facilities for only 200 patients, taken from the thousands now suffering from this dread disease in our state, demonstrates the impracticability of dealing with this important question in the manner proposed and outlined by this bill, and it is therefore disapproved. The taking of so small a number into a sanatorium from the great number of sufferers from tuberculosis in this state would not meet the situation and would hardly justify the heavy expenditure required at this time, and incident to the maintenance of such institution hereafter."

Physicians Appointed on Boards of State Institutions.—The following physicians have been appointed by the governor as members of the board of trustees of state institutions: Drs. James W. McLaughlin, Austin, and Ashley W. Fly, Galveston, board of regents of the University of Texas; Dr. Goodall H. Wooten, Austin, board of trustees of the State Lunatic Asylum; Dr. Robert M. Wickline, Austin, board of trustees of the State Blind Institute; Dr. Lewis L. Lacey, Austin, board of trustees of the Deaf and Dumb Asylum; Dr. Luther A. Grizzard, Abilene, board of trustees of the State Epileptic Colony, and Drs. Edwin P. Beeton, Greenville; James D. Osborne, Cleburne; William B. Collins, Lovelady; Robert H. McLeod, Palestine; John J. Dial, Sulphur Springs; John D. Mitchell, Fort Worth; Marquis E. Daniel, Honey Grove; R. O. Braswell, Fort Worth; Thomas J. Crowe, Dallas; John P. Riee, Alpine, and J. F. Bailey, Waco, state boards of medical examiners.

WISCONSIN

Amsterdam Professor Lectures.—Dr. Frederiek Van Eeden, Amsterdam, who twenty years ago established the first clinic for the mental treatment of diseases, delivered a special lecture on this subject at the University of Wisconsin, Madison, March 23.

Personal.—Dr. Uranus O. B. Wingate has retired from the Fox Lake Sanatorium and will resume professional work in Milwaukee.—Dr. S. Breek Aekley, Oshkosh, on the eve of his departure to Waukesha, was presented with a diamond-studded gold locket and fob by the members of the Oshkosh Medical Club.

The Christmas Stamp Campaign.—According to the report of the Wisconsin Antituberculosis Association, the net proceeds from the sale of Red Cross Christmas stamps amounted to \$8,754.88. This money will be used for educational purposes, to send out pamphlets and traveling exhibits, and for lectures and demonstrations.

Campaign Against Plaster Specialist.—The physicians of Polk, Barron, Burnette, and Washburne counties are planning a campaign against John Till, a specialist of Almena, who purports to cure all diseases with certain ointments and plasters, the composition of which are secrets known to him alone. It is planned to institute criminal proceedings, alleging violation of the state law which prohibits the practice of medicine without a license.

GENERAL NEWS AND COMMENT

Librarians to Meet.—The twelfth annual meeting of the Medical Library Association will be held in Washington and Baltimore, May 12 and 13, under the presidency of Dr. George Dock, New Orleans. The association was founded in 1898 and has for its object the fostering of a medical library and the maintenance of an exchange of medical literature among its members.

Society Meetings.—The Society of Clinical Surgery met at Johns Hopkins Hospital, Baltimore, April 2 and 3, and elected the following officers: President, Dr. John M. T. Finney, Baltimore; vice-president, Dr. Rudolph Matas, New Orleans; secretary, Dr. James G. Mumford, Boston, and treasurer, Dr. Charles H. Frazier, Philadelphia.—The American Association of Pathologists and Bacteriologists, at its annual meeting in Boston, April 8, elected Dr. Frank B. Mallory, Boston, president; Dr. Philip H. Hiss, Jr., New York City, vice-president; Dr. Harold C. Ernst, Boston, secretary, and Dr. Her-

bert W. Williams, Buffalo, N. Y., treasurer. It was decided to hold the next annual meeting in Washington in May, 1910.

The Carroll Fund.—The following contributions to the Carroll Fund have been received since the publication of the list in THE JOURNAL, April 3:

Previously reported	\$2,504.95
Dr. Julius Noer, Stoughton, Wis.....	2.00
Dr. Francis Sehill, Jr., Johnstown, Pa.....	2.00
Dr. R. H. Ward, Troy, N. Y.....	5.00
Dr. L. C. Benkert, Columbus, Ohio.....	2.00
Dr. W. G. Christian, Gordonsville, Va.....	2.00
Dr. C. F. Hewins, Loda, Ill.....	1.00
Dr. E. C. Levy, Richmond, Va.....	5.00
Dr. M. G. Seelig, St. Louis.....	1.00
Dr. Arthur A. Small, Chicago.....	10.00
Dr. Charles H. Smith, Uniontown, Pa.....	5.00
D. E. W., Buffalo, N. Y.....	2.00
Dr. A. L. Wilson, Lynchburg, Va.....	2.00
Dr. Evangeline W. Young, Boston.....	2.00
Dr. Augustus A. Eshner, Philadelphia.....	5.00
Dr. Francis B. Harrington, Boston.....	10.00
Dr. Simon Flexner, New York.....	10.00
Dr. Harold Williams, Boston.....	5.00
Dr. James G. Fisher, Rossiter, Pa.....	5.00
Dr. Chas. J. White, Boston.....	5.00
Dr. W. E. Bestwick, Algonac, Mich.....	1.00
Medical Association, Canal Zone, Panama.....	100.00
Calumet Branch, Chicago Medical Society, Pullman, Ill., Dr. John McLean, Dr. Frederiek A. Bonthius, Dr. F. B. Moore, Dr. James W. Kelly, Dr. G. A. Post, Dr. Soren S. Noraman, Dr. R. C. Liberton, Dr. J. S. Kauffman, Dr. G. Seim, Dr. F. A. Maguy.....	10.00
Dr. Thomas J. Watkins, Chicago.....	5.00
Dr. Theodore Bratrud, Warren, Minn.....	5.00
Dr. Thos. C. Phillips, Milwaukee.....	5.00
Dr. Howard Lilienthal, New York.....	5.00
Dr. Douglas C. Moriaria, Saratoga Springs, N. Y.....	5.00
Dr. C. B. Burr, Flint, Mich.....	5.00
Dr. Warren Coleman, New York.....	10.00
Dr. Jas. A. King, Millsville, Mass.....	1.00
Dr. R. L. Randolph, Alexandria, La.....	5.00
A Physician of Louisiana.....	5.00
Dr. Anders Friek, Chicago.....	2.00
Dr. Hugh Mullarky, Manson, Iowa.....	1.00
Jefferson County Medical Society, Beaumont, Tex.....	16.00
Meeklenburg County Medical Society, Charlotte, N. C.....	10.00
Waseca County Medical Society, Waseca, Minn.....	10.00
Dr. H. H. Rightor, Helena, Ark.....	1.00
A Physician of El Paso, Tex.....	1.00
Dr. Emil Ries, Chicago.....	10.00
Dr. Charles O'Donovan, Baltimore.....	10.00
	\$2,808.95

Subscriptions will be acknowledged in subsequent issues of THE JOURNAL. There is still a balance of \$4,800 needed to raise the mortgage on this property. Surely the medical profession of the country will do this much for the widow of James Carroll. Secretaries of county societies are requested to bring this matter to the attention of their societies at the first opportunity. The letter below is published as suggestive in this connection:

To the Editor:—I want to tell you one result of your editorial in THE JOURNAL, April 3, appealing for funds for Dr. Carroll's widow and family. Last Sunday, in looking over THE JOURNAL, I noticed Major Ireland's letter and your editorial, both of which touched my heart deeply. The Rockland County (N. Y.) Medical Society held its quarterly meeting to-day and I moved that the chairman appeal for aid in response to the resolution presented in Major Ireland's communication, and that every man in the society subscribe \$1. A motion was adopted authorizing the treasurer to send a check for thirty odd dollars to Major Ireland at once. I trust that every county society will do likewise, and that physicians in Mexico, Cuba, Central and South America will also contribute.
S. W. S. TOMS, Nyaek-on-Hudson, N. Y.

Send all contributions to

MAJOR M. W. IRELAND,
Surgeon-General's Office, War Department, Washington, D. C.

Manila Medical Society.—The annual report of the secretary-treasurer of the Manila Medical Society shows that the average attendance at the monthly meetings was 23.2; that forty papers, cases and specimens were presented before the society; that during the year 22 members had left the islands and 43 new members had been received, making a total membership of 91. At the special cholera meeting, held in October, a resolution was passed addressed to the governor-general, stating it to be the sense of the society that the proper disposal of human excreta was the greatest single sanitary need of the Philippines, and asking that a special commission be appointed to make a practical study of the problems connected therewith.

Annual Report of the Public Health and Marine-Hospital Service.—In the annual report of the P. H. and M.-H. Service of the United States for the fiscal year ended June 30, 1908, Surgeon General Walter Wyman takes up successively the plague situation in San Francisco, and measures adopted for the sanitary rehabilitation of the city; the present pandemic of plague; scientific research and sanitation work undertaken; the supervision of vaccines, sera, etc.; investigation regarding tuberculosis, typhoid fever, hook-worm disease, rabies, leprosy, and pellagra; the relation of milk to disease; examination of water; identification of fleas; investigation of appliances advertised for the treatment of diseases; relations to the Pharmacopœia, and to the American Pharmaceutical Association. He states that one of the most important reforms in the history of American medicine has been accomplished through the work of the Council on Pharmacy and Chemistry of the American Medical Association, by which many frauds have been uncovered, unwarranted claims in advertisements have been given new light, manufacturers have been compelled to state the true contents of medicines exploited, and many other reforms have been inaugurated looking to the general uplift of the medical and pharmaceutical professions. During the fiscal year the activities in the hygienic laboratory have increased in scope. An addition to the building, for which \$75,000 was appropriated by Congress, is practically completed, and a further addition is needed to provide necessary space for experimental and routine work, and to afford room for classes of student officers of the Army and Navy medical schools. A special course of thirteen weeks for student officers has been inaugurated. The quarantine against Cuba, the insular quarantine in the Philippine Islands, and the foreign quarantine and fruit-port inspection service are then described. During the year 935,596 immigrants were inspected by medical officers of the service, of whom 10,902 were certified. Special attention is invited in the report to the sanitarium at Fort Stanton, N. M., for the reception of tuberculosis patients of the service, the leprosy station at Molokai, Hawaiian Islands, and the hygienic laboratory.

FOREIGN

Tuberculosis Dispensaries at Madrid.—Two well-equipped antituberculosis dispensaries have been opened at Madrid and placed in charge of leading physicians, with a numerous staff of assistants.

The Cornil Monument.—Subscriptions to the amount of 27,000 francs (\$5,400) have already been received toward the monument to the late Professor Victor Cornil of Paris. The monument is to be erected at Cusset, his birthplace, and will be a worthy memorial of the well-known surgeon.

The Swedish Medical Association Fund for Spa Treatment.—The *Svenska Läkarsällskapet* has a small fund at its disposal the income of which is given annually to some person of Swedish nationality to enable him or her to have the benefit of a course of treatment at the German watering-place, Aachen, better known as Aix-la-Chapelle.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 3, 1909.

Research on Tropical Diseases

The report of the advisory committee of the Tropical Diseases Research Fund for 1908 shows that the revenue for the year amounted to \$17,000, which was made up of contributions of \$5,000 from the imperial government, \$2,500 from the government of India, \$1,000 from the Rhodes trustees and \$8,500 from various colonies and protectorates. The money was distributed as follows: London School of Tropical Medicine, \$6,500; Liverpool School of Tropical Medicine, \$5,000; University of London, \$3,750; Cambridge University, \$500; Australian Institute of Tropical Medicine, \$2,000. Of the grant to the Liverpool School half was employed for the appointment of a lecturer in economic entomology and parasitology and of a lecturer in tropical medicine, both of whom are required to devote their spare time to research. The other half of the grant was used in part payment of the expenses of the "sleeping sickness expedition," sent by the school to Rhodesia. Out of the grant to the London School, \$5,000 was devoted to the payment of a teacher and investigator of protozoology and of a teacher and investigator of helminthology. The post of director of the Central Research Institute established in Southern Nigeria has been allotted to Dr. W. M. Graham, a medical officer of the Gold Coast colony. It is proposed to found an Australian Institute of Tropical Medicine at Townsville in North Queensland, which is within the

area of tropical diseases, and is the first port of call for vessels coming to Australia from the far east. The Queensland government has promised \$1,250 a year and the Commonwealth government \$2,250 toward defraying the expense. A proposal to despatch a scientific expedition to Papua, which in the committee's opinion offers a great field for important work, has been deferred until the new Australian Institute has been established.

Action for Alleged Infection from a Hospital

An action against hospital authorities has been brought under exceptional circumstances. The plaintiff lived in country district named Alton, in which an outbreak of diphtheria occurred. An isolation hospital was erected adjoining his land. One of his children, a girl aged 7 years, crept under a wire fence and approached the hospital. She also played with a kitten which had lived in the hospital. She contracted diphtheria, and the plaintiff alleged negligence on the part of the hospital authorities. Medical evidence was given to the effect that infection with diphtheria might have been brought about by infected children coughing on the grass where the child played. The judge ruled that there was no evidence of negligence to go to the jury, for the child might have become infected in a thousand different ways.

Workman's Claim for Compensation for Hysterical Paraplegia

As shown in previous letters, the Employers' Liability Act is giving rise to all sorts of unreasonable claims for compensation. The following case has occurred in Dublin: A laborer sued a firm of fertilizer manufacturers for injuries to his spine received while loading fertilizer in barrows. The accident was the result of a heap of fertilizer, 7 or 8 feet high, falling on him. He became unconscious and was treated in a hospital. His physician stated that he was suffering from an injury to the spine which prevented him from working. He moved about the court with the aid of crutches. On the other hand, medical evidence was produced for the defendants to show that the plaintiff had no organic disease of the spine, and that the only reason why he could not walk was that he had the fixed idea in his mind that he was unable to do so. Sir Charles Ball was asked to examine the plaintiff as medical assessor. He agreed with the evidence that there was no organic disease, but he did not think that the man was malingering, but that he was in a nervous and hypochondriacal condition and was not fit for work at present. The judge commented on the enormous advantage of the aid of a medical assessor in these cases. The important question was how far the accident could be held responsible for the man's mental condition as distinguished from physical injuries. He suggested that some agreement should be arrived at between the parties. By consent of both parties he made an interim order for payment of an allowance to the plaintiff and adjourned the case until next session.

Physician Dies from the Bite of a Patient

Mr. A. B. Wilson, house surgeon at the London Hospital, has lost his life under peculiar circumstances and has added one more name to the list of physicians who have died in the discharge of their duty. On March 19 he assisted in the treatment of a woman who had tried to commit suicide by taking laudanum. It was necessary to gag her to pass the stomach tube. As she did not want to live, she struggled violently to prevent the operation. She knocked the gag out of her mouth and seizing Mr. Wilson's hand she bit his thumb. Not much notice was taken of the injury at the time and nothing was done to the wound. On the following day he complained for the first time and he became so ill that he was admitted to the resident ward on April 24. The wound healed but septicemia supervened and he died April 31.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, March 30, 1909.

Election of Dr. Segond to the Academy of Medicine

At the last session of the Academy of Medicine, Dr. Paul Segond, professor of clinical surgery in the Faculty of Medicine and surgeon to the Hospital of the Salpêtrière, was elected, by 63 votes out of 75 voters, as an honorary member of the section on operative medicine, in place of the late Professor Berger.

The Abuse of Disinfection in Paris

At the last meeting of the Medical Society of the Hospitals of Paris, Dr. Comby, physician to the Hospital for Sick

Children, argued energetically against the compulsory notification of measles and the consequent disinfection. The floors and walls are washed, the furniture is sprinkled with antiseptic solutions, bed linen, etc., is sent to the sterilizer, etc. There is thus caused much annoyance to families as well as prejudice against them without any advantage. It is especially before the eruption and within wide limits—four days for the period of invasion and as much for the eruptive period—that measles is contagious, and the contagiousness lasts altogether eight days. When this period has passed one might sleep with a measles patient in full desquamation without contracting the disease. On the other hand once outside the organism the measles germ rapidly loses its vitality. It can not exist on floors, walls or furniture. Consequently the disinfection is useless. Some twelve years ago the lamented Professor Grancher prevented the Academy of Medicine from including measles in the list of compulsory notifiable diseases, but in 1903 during his absence the partisans of notification returned to the charge and the academy gave way. The result was for the public a real abuse of disinfection. Recently Dr. Courmont, professor of hygiene at the Faculty of Medicine at Lyons, after a study in Scandinavian countries, where measles is declared every month, but without individual notification of cases, demanded that this affection should be removed from the list of compulsory notifiable diseases. Dr. Lemoine, professor at Val-de-Grâce, is no less convinced of the uselessness of disinfection in measles. He goes even further and throws doubt on the value of place disinfection in the other contagious diseases. In Paris, municipal disinfection, which is very costly, has not kept its promises; it has not prevented the contagious diseases from spreading and even multiplying. Never, indeed, has there been so much scarlatina, measles, whooping cough, as during these latter years, and if diphtheria has declined, that is due, not to disinfection, but to the use of antitoxin. Dr. Comby concluded his communication by asking the Academy of Medicine to return to its superceded vote of 1903, and finally to erase measles from the already too long list of compulsory notifiable diseases.

Four Inaugural Addresses

Four new professors have recently taken possession of their chairs at the Faculty of Medicine, viz., Gilbert Ballet, Quénu, Hartmann and Chauffard. The inaugural address of each deserves notice, not only because of its weighty character, but still more because it constitutes a veritable profession of faith. After reviewing the career of his predecessor, Professor Joffroy, Gilbert Ballet criticized severely the bill concerning the insane, voted by the Chamber of Deputies, and intended to replace the law of 1838, which it was alleged, exposed the insane to arbitrary sequestrations. Far from sharing the current opinion, Ballet thinks, on the contrary, that the law of 1838 is one of the best conceived, the wisest, and the most practicable laws possible. If there have been arbitrary sequestrations, that is not because the law of 1838 was badly constructed, but because it was badly applied. The new bill gives, in spite of appearances, infinitely less security to the insane and to his family. It takes us back more than 100 years to the period before Pinel. It would render the situation of unfortunate psychopaths absolutely intolerable, because any access of mental confusion, maniacal excitement, or melancholia would necessitate the intervention of the court to attest by a judicial decision the misfortune which had overtaken them and to which this decision would impress a humiliating significance. It is to be hoped, then, that this bill will be carefully revised by the senate before being definitely adopted.

Professor Quénu devoted his inaugural address to a review of the predominating action of the men who have presided over the extraordinary surgical revolution of the last thirty years. In giving his audience the impressions of a student of 1871, Quénu described the work of Lister and the rôle played in the introduction into France of antiseptics and asepsis by Lucas-Championnière and Terrier, the first the personification of antiseptics, the second of asepsis. Reviewing next the social evolution of surgery, Quénu showed how the public has, little by little, come to believe that the resources of surgery are, so to speak, limitless, and consequently that every failure is necessarily the result of a fault of technic. He who would devote himself to surgery, therefore, must take notice of this change in the social atmosphere. More than ever, moral, scientific, and technical qualities are necessary in the practice of surgery. Moreover, Quénu holds that surgery should be reserved solely to surgeons by profession. He is

not in accord with those who consider that every practitioner who has passed the faculty's examination should be able to perform at least emergency operations.

Entirely different is the viewpoint of Professor Hartmann, who, in reviewing, in his inaugural address, the history of the chair of operative medicine and the practical instruction which accompanies it, insisted that every physician should receive an education sufficient to enable him to intervene in emergency cases, especially in districts removed from great centers.

The subject of Professor Chauffard's course was the history of tuberculosis; but the first lesson of this course was devoted to a more general theme, namely, the rôle of discovery in the history of medicine. Chauffard especially insisted that alongside of the great discoverers one must not forget also the promoters, those who sowed the first seed of the discoveries that have later transformed the medical sciences. It has been said that the history of medicine is the history of the errors of medicine; according to Chauffard, it would be more justly termed the history of its efforts.

Dr. Huchard Resigns

Dr. Huchard, physician to the Hôpital Necker, has tendered his resignation as member of the jury for the *concours* for the title of physician to the hospitals, of which he has been named president. This decision has caused a marked impression in the medical world. Not wishing to raise any talk, Dr. Huchard assigned as the cause that he is suffering from grippe; but in reality his purpose is a protest against the injustice and favoritism that prevail in the *concours*, and which he considers a necessary consequence of its mode of organization. The ten members of the jury have to designate ten physicians to the hospitals. Each one of the judges has his candidate, who is his pupil and who is sure to be appointed, even though there may be other candidates more deserving than he, but lacking a "patron" among the jury. It is no longer a *concours* in which merit alone should win, for as soon as the jury has been drawn by ballot, it is well known what candidates will be elected. The natural consequence of this procedure is, that on the fourth of March—that is to say, only a few days after the opening of the *concours*—a political journal published, from the composition of the jury, the names of the ten candidates who would be declared admissible. These ten candidates subsequently obtained in the written examination the maximum marks, namely, 20, while the other candidates obtained lesser marks, 17, 18, etc. It is on account of these facts that Dr. Huchard has resigned.

Congress of Physiotherapy

The second Congress of Physiotherapy of French speaking physicians will meet at Paris from April 13 to 15, 1909, under the presidency of Professor Landouzy, dean of the Faculty of Medicine of Paris. The commission of organization has received numerous acceptances, not only from France, but from Belgium, Switzerland and Canada. Questions to be discussed are: (1) The Dangers of the Exercise of Physiotherapy by Empirics; (2) Physiotherapy in the Treatment of Acne; (3) Physiotherapy in the Treatment of Varices and Varicose Uleers; (4) Physical Agents in the Diagnosis and Treatment of Infantile Paralysis.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Mar. 25, 1909.

Accident to von Leyden

A short time ago Prof. v. Leyden met with an accident in which he slipped on the street and fractured the neck of the femur. Considering the age of the patient, 77 years, not only is the prognosis as to the uniting of the fractured bone unfavorable, but there is reason to fear an unfavorable influence on his general health from confinement to bed. It is to be hoped that the unusually vigorous constitution of the scientist will stand him in good stead in this case.

Death of Professor v. Renvers

On March 22 our profession suffered a serious loss through the death of Prof. v. Renvers, who succumbed within a few days of the age of 55 to suppurative pyelophlebitis. While not especially noted as a scientist, v. Renvers was well qualified by his good diagnostic insight and his practical treatment, but not less by his marked intuition, his knowledge of men, his confident bearing and his great friendliness to secure quickly the favor of the public, and he won very soon an extensive practice, especially in the most prominent circles of Berlin.

Medical Congresses

The vacation between the winter and summer semesters of the universities is taken as the time for meeting of some of the medical congresses. Some meet annually in the same place, some go to a new place for each session. The German balneologic society has lately held its session. The German surgical society, the society of orthopedic surgery, and the Röntgen-Gesellschaft, meet in April. The congress for internal medicine meets in Wiesbaden and the pathologic society in Leipsic. An enormous amount of scientific material is presented at these meetings and serves to increase considerably the literature regularly published in our journals. For the surgical congress 110 papers have already been announced. I will report the proceedings of the congress for internal medicine in due time.

International Institute for the Study and Prevention of
Insanity

At the Second International Congress for the Care of the Insane (Milan, 1906), a Zurich psychiatrist, Franke, proposed the establishment of an international institute for the study and prevention of the causes of mental diseases. An international committee was accordingly formed. The King of Italy became the patron of the proposed institution and at the Third International Congress for the Care of the Insane (Vienna, October, 1908) a plan worked out by Professor Tamburini of Rome was provisionally accepted. Its organization is to be entrusted to a conference of delegates from various nations. The institute is to be located at Zurich. To secure reports on the causes of insanity from various countries and to ascertain the best means for their prevention, an international commission is to be appointed. Various national committees are to cooperate, and finally an international congress is to be founded for the same purpose. The necessary funds are to be obtained by the contributions of members, by bequests and by appropriations by the governments. The governments and those interested in the work of the institute will be kept in touch with its progress by reports in several languages. This is a comprehensive plan, and some skepticism is at present justifiable as to its realization.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, March 27, 1909.

The Impending War and the Medical Profession

The political situation on the southeastern frontier of the empire lately became threatening, and the military authorities had to arrange everything for a war. One of the most important branches, and the one which has received careful attention during the last few weeks, is the army medical corps. Only recently it has been admitted by the military circles that the number of surgeons, as well as their rank and influence, was not up to the requirements; but now, the proportion of surgeons to the men of the rank and file has been improved, so that there is one medical man for at least 200 men. In many places and regiments where the probability of conflict is nearer, the proportion is better still. In order to insure the required number of physicians, the practitioners who are in the army reserve have been called to their ranks in many instances. This means a serious interruption in the practice of many young physicians. Those between 28 and 32 years, who are building up a practice or who have just succeeded in doing so, have been hit hardest, although as much consideration has been exercised as was possible. The absence of physicians in country districts and hospitals will be felt keenly if a war should break out actually, as then a large number of medical men would be called up to fill their posts in the army; meanwhile, physicians joining the army of their own accord are paid well, and it is said that members of the Anglo-American Medical Association in Vienna have availed themselves of this opportunity to have extensive surgical practice on the battlefield (I could not ascertain whether this is founded on actual facts). Each company marching down to the presumptive field of action is provided with ample filtering apparatus; a well-equipped and trained staff of chemists and public health officers will accompany the army in order to deal with any problems of public sanitation arising out of the amassing of huge armies in an uncivilized country amid uncultured population. The canned food distributed to the soldiers has been subjected to regular inspection by the medical officers and special care is taken to provide for the men a varying menu with as little alcohol as pos-

sible, but with an ample supply of sugar and sweetened food. In another line, the threatening conflict will affect the position of the military surgeons. The old surgeons of the army are now discharged as quickly as substitutes are obtained for them, so that the younger men have a good chance of promotion; fresh blood comes into the somewhat antiquated body of the army medical corps, and the importance of the medical man is well demonstrated to the rank and file. If, as is the hope of hundreds of thousands, war can be warded off, the medical profession, at least, will have regained an ample influence and obtained the position due to it in the army.

Pharmacology

THE "BRACERS"

"Patent Medicines" Whose Sale Requires a Liquor Dealer's Tax

We have referred before to the admirable work done by the President's Homes Commission and the vast amount of data collected by it and published in its report. The report of one of its committees—that on social betterment—by its chairman, Dr. George M. Kober, contains information of more than ordinary interest to the medical profession. In the chapter on the "Alcohol Question," attention is called to the increasingly large number of what have been called "booze medicines" on the market—that is, alcoholic preparations sold under proprietary names as medicinal products. As a matter of fact, the amount of medicinal agents—aside from alcohol—contained in these "bracers," is so small as to be negligible. The Commissioner of Internal Revenue has published lists of these "medicines" which have been analyzed in his department, and found "insufficiently medicated to render them unsuitable for use as a beverage." The druggist is forbidden to sell these "medicines"—classed as "compound liquors" by the Internal Revenue Department—unless he "has already paid special tax as retail liquor dealer." In his report, Dr. Kober gives the names of over 120 of these "patent-medicine" drinks, together with the alcohol percentage as "ascertained from the Commissioner of Internal Revenue in a communication dated Nov. 28, 1908." We give below a partial list of these, omitting those quoted as having less than 20 per cent. of alcohol:

NAME OF PREPARATION	ALCOHOL PER CENT.	NAME OF PREPARATION	ALCOHOL PER CENT.
Angostura Aromatic Tincture Bitters	45.00	Gastrophan	26.10
Aromatic Bitters	42.14	Gentian Bitters	39.95
Atwood's La Grippe Specific	32.70	Gilbert's Rejuvenating Iron and Herb Juice	23.81
Augauer Kidney Aid	35.65	Ginger Tonic	25.31
Augauer Bitters	34.13	Glycerine Tonic (Elixir Pepsin)	39.72
Belvedere Stomach Bitters	20.32	Green's Chill Tonic	37.88
Bismarck Laxative Bitters	21.14	Jack Pot Laxative Bitter Tonic	24.95
Bismarck's Royal Nerve Tonic	20.67	Juni-Kola	22.89
Blackberry Cordial (Strother Drug Co.)	21.50	Juniper Kidney Cure	24.21
Blackberry and Ginger Cordial (Standard Chemical Co.)	25.62	Karlsbader Stomach Bitters	21.56
Black Tonic	44.62	Katarno	27.60
Bonekamp Stomach Bitters	20.34	K. K. K.	24.12
Bonekamp Bitters	37.03	Kola and Celery Bitters	20.68
Brown's Aromatic Cordial Bitters	42.14	Kreuzberger's Stomach Bitters	40.22
Brown's Vin Nerva Tonic	27.32	Kudros	29.33
Botanic Bitters	20.44	Lemon Ginger	28.88
Cinchona Bitters	27.44	Meta Multa	32.98
Clifford's Cherry Cure	35.90	Milburn's Kola and Celery Bitters	20.68
Clifford's Peruvian Elixir	24.77	Neuropin	32.02
Crescent Star Jamaica Ginger	42.65	O'Hare's Bitters	44.93
Cuban Gingerie	31.09	Old Dr. Jacques Stomach Bitters	40.02
Dandelion Bitters	30.15	Old Dr. Scroggin's Bitters	24.74
De Witt's Stomach Bitters	23.86	Our Ginger Brandy	26.24
Dr. Brown's Blackberry Cordial	29.04	Panama Bitters	32.83
Dr. Hoffman's Golden Bitters	26.30	Pepsin Stomach Bitters	34.96
Dr. Sterki's Ohio Bitters	21.67	Peptonic Stomach Bitters	23.12
Dr. Dade's Blackberry Cordial	28.84	Rockandy Cough Cure	23.85
Dr. Bouvier's Buchu Gin	39.83	Severa's Stomach Bitters	22.66
Dr. Fowler's Meat and Malt	33.70	Smith's Bitters	34.41
Dr. Worme's Gesundheit Bitters	27.92	Steinkohl's Stomach Bitters	32.05
Dr. Rattinger's Bitters	27.10	Tatra (Latra)	22.90
Ducro's Alimentary Elixir	23.01	Tolu Rock and Rye	30.08
Elixir Calisaya	22.96	True's Magnetic Cordial	26.09
Ferro China Biscal	32.10	U-Go	32.14
Ferro China Bissler	28.87	Uncle Josh's Dyspepsia Cure	30.06
		Westphalia Stomach Bitters	31.96
		William's Kidney Relief	37.00

FALSE CLAIMS FOR MEDICINES

The Awakening of the German Medical Profession to a Serious Abuse

AS THE JOURNAL has frequently shown, it is not unusual for the less reputable pharmaceutical houses to put out mere mixtures of well-known drugs under fanciful names as entirely new remedial agents possessing peculiar therapeutic virtues. In an address before the German Pharmaceutical Association, H. Thoms¹ condemned this form of dishonesty and called attention to the disfavor into which the German pharmaceutical industry is likely to fall in foreign countries through such unreliable preparations. He quoted the recent utterances of THE JOURNAL to show the feeling of the medical profession in America regarding the standing of firms which introduce and advertise such preparations.

The indifference of the German medical profession noted by THE JOURNAL is already passing away, and Thoms, referring to the article by E. Harnaek,² shows that there is an awakening among German physicians and pharmacists who begin to appreciate the extent of the evil.

As at present there is no legal means in Germany of correcting this abuse, Thoms urges the necessity of a law that shall require the actual composition of the preparation to appear on the label; this would work no hardship to the pharmaceutical and chemical interests involved. The law would not involve disputed points as to constitution, but merely the percentage composition of mixture as to its elements. The analyses made under Thoms' direction have shown that the compositions of remedies frequently differ radically from that given on the labels. To illustrate this point the preparations given below are said by Thoms not to fulfill the requirements of correct labeling in the particulars given:

ARHOVIN, claimed to be diphenylamin thymylbenzoate, is a mixture of diphenylamin, thymol and ethyl benzoate.

ASPIROPHEN is not a single substance as advertised, but a mixture of about 63 parts of monoacetylphenocoll and 37 parts of free salicylic acid.

CITROCOLL is a mixture containing phenocoll monacitrate.

EPILEPTOL is claimed to be condensed amidofornic acid, while in reality it is a mixture of formamid with a combination of formaldehyd with formamid containing a small quantity of hexamethylenamin.

ESTON, SUBESTON and FOMESTON contain aluminum sulphate, which is prejudicial to the best effect of the preparation.

FORMUROL is a mixture of hexamethylenamin and sodium, neutral and acid citrate.

IODOFAN contains far less iodine than should be present according to the formula.

IOD-VASOGEN contains no free iodine.

KEPHALDOL, while said to be a compound made under special conditions, analyses showed it to be a mere mixture of phenacetin, sodium salicylate and quinine.

NEW SDOXAL, said to be an inner anhydrid of quinic acid, showed 25 per cent. of free quinic acid.

PHAGOCYTIN, said to be a solution of pure nucleinate of sodium, showed the presence of about 5 per cent. of arsenic in organic combination.

PYRENOL, advertised as a chemical compound, and furnished with an impossible formula, was shown to be a mere mechanical mixture. According to its formula its analysis should show the equivalent of 29 per cent. of thymol and 10 per cent. of ash, when in fact it shows only 0.2 to 0.3 per cent. of thymol and 34-35 per cent. of ash.

In reviewing the proposals for the establishment of a central institution for testing secret and new remedies, Thoms insists that only a public official institute is really competent to assume the responsibility involved in such tests. He states that it should be under the control of the imperial government and not confined to any one state. If this were done and a law passed requiring the correct labeling of medicines, many of the evils connected with the manufacture and promotion of medicines might be reduced or entirely removed.

An Eighteenth Century Protest Against Twentieth Century Conditions

As a protest against the polypharmacy of his time and as foreshadowing the opinions of some who were to live more than a century later, the quotation that follows is of interest. It was written in 1774 by William Rowley, an English physician of eminence, who after distinguished service in the army, settled in London, where he acquired an extensive practice:

"On the effects of simple medicines we may form just inferences, but in compounds there is such confusion of substances, that we can not ascertain which relieved the disease, and consequently our conclusions may be erroneous. . . .

"If there was a possibility of reducing the materia medica to about twenty remedies, it would greatly improve the science of medicine. We should soon arrive at certainty on the effects of remedies in every disease. But, while there are some hundreds of insignificant substances constantly used on very precarious principles, and substances diametrically opposite enter the prescriptions of the learned, it is impossible to improve this noble art. The necessity of a reformation in this particular is evident; it might be accomplished by a few men of learning and spirit, of liberal and exalted sentiments."

Correspondence

Bismuth Poisoning

To the Editor:—With reference to the cases of bismuth poisoning reported by Drs. V. C. David and J. R. Kauffman in THE JOURNAL, March 27, I desire to report a personal experience which in the future may help to prevent a fatal termination, as happened in their Case 2.

In 1904 I operated on a boy aged 10, for a suppurative appendicitis. A small sinus (drainage tract) which never healed was injected by me in March, 1908, with Beek's 33 per cent. bismuth paste. The entire two ounces entered the sinus which terminated in some perineal pocket. Five days later, the stomatitis and the constant pain at the site of injection caused me to reopen the wound and remove the paste, when the symptoms promptly ceased. Later, the sinus was again repeatedly injected with half-ounce doses with resulting healing at the sinus.

In the report by Drs. David and Kauffman it is difficult to determine to what extent the operations performed in Case 1 December 7 and 13 with removal of some of the paste at each operation, prevented a similar termination in Case 2. Since the patient manifested cerebral symptoms as late as December 21, it would appear that the quantities removed helped materially in rendering the intoxication less severe.

In Case 2, 6 ounces were injected, a rather large initial dose, Beek recommends beginning 3 ounces (*Ill. Med. Jour.*, July, 1908).

In view of the facts that the clinical course lasted 27 days the symptoms increasing in severity till the end; that the patient's condition progressively grew worse, the skiagraph showing the paste in the joint; and, finally, knowing that bismuth is slowly absorbed, as demonstrated by Beek, often remaining in cavities for weeks, would the poisoning not have been arrested as in my case by opening the sinus and the joint freely and removing the paste as much as possible? This could have been done with Schleick's local anesthesia.

In conclusion: In cavities and joint opening on the body surface by long tortuous sinus or sinuses, the initial injection should be of a small quantity till the tolerance is assured. Should the symptoms of bismuth poisoning arise, the early removal of the paste is indicated.

VICTOR J. BACCUS, M.D., Chicago.

This letter was submitted to the authors of the article mentioned and Dr. David makes the following reply:

1. *Therap. Monatsh.*, December, 1908.

2. *Deutsch. med. Wchnschr.*, 1908, xxxvi.

In our article in THE JOURNAL, March 27, we stated that it was but a preliminary report, to be followed by another giving more detailed treatment of the two patients.

Dr. Baceus refers to cerebral symptoms in Case 1. In a case of years' standing as this one was, having institutional care, and exhibiting mental symptoms, it may be doubted whether the bismuth or other factors were responsible.

In regard to Case 2, the question of operation was discussed several times in consultation with several members of the staff and was deemed inadvisable because of the patient's poor condition; because a considerable amount of the paste had been previously removed by irrigation, etc.; because it was considered of doubtful value to open up a hip joint in presence of a secondary infection; and lastly, because the bismuth was shown by the skiagraph to connect with the diseased head of the femur and not to lie in the capsule of the hip.

Dr. Kauffman and I expect to read a report of these cases, with treatment, etc., before the surgical section of the Illinois State Medical Society at Quincy.

In conclusion I think Dr. Baceus is right in saying that early evacuation is indicated in cases in which the operation would be less harmful than the poisoning.

International Medical Congress

To the Editor:—I have received a letter from the secretary-general of the International Medical Congress to be held at Budapest, Aug. 29 to Sept. 4, 1909, an abstract of which I add: "Authors of communications have until May 15 to send in their papers. If not able to prepare their papers by that date they may present them at the time of the congress, with the difference that such communications will be published in the second volume of the Congress Reports."

J. H. MUSSER, Philadelphia.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

KARLINSKI'S NASAL SECRETION BACILLUS

To the Editor:—Kindly publish a description of the morphology, characteristics, identification, staining, etc., of Karlinski's nasal secretion bacillus.

A SUBSCRIBER.

ANSWER.—This question apparently refers to an acid-proof bacillus found by Karlinski in the nasal secretion of a 43-year-old Mohammedan and described in *Centralbl. f. Bakt.*, 1901, 29, p. 521. The organism is a short, rather plump, bacillus with pointed ends. In stained preparations of the secretion it appeared in groups of two or three cells, sometimes more. It was different from the bacilli of tuberculosis and leprosy in being of greater diameter. Karlinski succeeded in cultivating the bacillus on various glycerin-agar media, on which it developed grayish-yellow colonies; the growth was more rapid and luxuriant on media of slightly acid than on those of alkaline reaction. Development took place slowly, and after three weeks the colonies had reached a diameter of only 2 mm. The color of the growth changed gradually to orange-red and then to copper-red, the consistency of the growth was distinctly slimy. Alkaline meat broth was quickly clouded, no pellicle was formed, but a yellowish sediment was produced. All cultures emitted a distinct sweetish odor. On potato, a slimy, gray, tenacious film was formed. Although the temperature optimum was 37 C., growth occurred also at ordinary room temperature and even, although very slowly, on ordinary nutrient gelatin. Growth occurred in milk, but the reaction of this medium was not altered. The bacillus did not prove pathogenic for mice or rabbits, but killed guinea-pigs in from four to eight weeks when a broth culture was injected intraperitoneally. Nodules were produced, but giant cells were entirely lacking. Branched and swollen forms were never observed. When treated with acid or acid-alcohol, stained preparations of this organism resisted decoloration even more tenaciously than the tubercle bacillus. Karlinski holds that the morphologic, tinctorial and cultural characters above set forth differentiate without question this bacillus from the tubercle bacillus, the leprosy bacillus and other previously described forms,

but nevertheless he does not assign to it any pathogenic significance, and believes that its main importance lies in the possibility of its being mistaken for other bacteria, such as the leprosy bacillus, found in the nasal secretions.

WAR MORTALITY OF JAPANESE

To the Editor:—Kindly give the statistics of deaths in the Japanese army (a) from wounds, (b) from typhoid, (c) from diarrheal diseases, during the recent Russo-Japanese war.

L. B. MCBRAYER, Asheville, N. C.

ANSWER.—The exact information asked for is not available. The following statistics, however, are quoted from the report of Major Charles Lynch, U. S. Army, who was attached to the armies in Manchuria as a military observer for the United States:

JAPANESE CASUALTIES DURING THE RUSSO-JAPANESE WAR

Official Japanese statement to include the entire war.

Killed in battle	47,387
Died of wounds	11,500
Wounded, but recovered.....	161,925
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Total killed and wounded.....	220,812
Died of sickness.....	27,158
Sick, but recovered.....	209,065
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Total sick	236,223
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Total of killed, wounded and sick.....	457,035
Total of fatal casualties	85,045

These figures relate to the field only, not including cases among the troops in Japan or Formosa, and they may be slightly altered when all the reports of hospitals are compiled. Of those who succumbed to disease nearly three-fourths died in the field and one-fourth after reaching home. To find the total number of killed in battle and patients treated the following additions must be made:

Total of killed, wounded and sick in the field.....	457,035
Patients treated at home.....	97,850
Russian prisoner patients.....	77,803
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Grand total	632,688

The above figures do not include slight cases remaining with the Japanese regiments. In April, 1906, when these figures were published, the Japanese missing had been reduced to 3,000. In the Chinese-Japanese war cases of contagious diseases comprised 14 per cent. of the total number of patients, while in the recent war such cases occurred in but 3.7 per cent. of patients. In the former war 4.21 per cent. of all sickness resulted from frostbite, and in the latter 0.35 per cent. The improvement noted in the Russo-Japanese war in beriberi was not great, however. In peace only 0.44 per cent. of the army is afflicted with this disease; in the Chinese-Japanese war 18 per cent. suffered from it, and in the Russo-Japanese war 16 per cent.

REPORT OF THE PRESIDENT'S HOMES COMMISSION

To the Editor:—The references in THE JOURNAL to the interesting matter contained in the Reports of the President's Homes Commission, make me anxious to get a copy. As I have failed to secure one by applying to my congressman, I am anxious to know whether there is any other source through which this valuable work may be obtained.

C. P.

ANSWER.—We understand that, while the regular edition of the commission's report has been exhausted, a limited number of copies are at the disposal of the President's Homes Commission, which may be addressed at 923 H street, Washington, D. C. These books, we believe, will be distributed as long as they last.

FATAL BURN ON EVE OF DEATH FROM APPENDICITIS—AN ACCIDENT INSURANCE CASE

To the Editor:—The letter from Dr. Robert T. Morris in THE JOURNAL March 13 recalls an interesting case that occurred in my practice a number of years ago.

A man, aged about 50, with feeble digestion and far advanced in Bright's disease, developed recurrent appendicitis. I was advised not to operate, as the risks were too great. One evening I was called by the attending physician, who reported a typical case of acute appendicular perforation with shock. I hurried to the home of the patient, full of anxiety as to what might be surgically right and proper under the circumstances, only to find that in the meantime he had been fatally burned by the accidental explosion of a spirit lamp, which he had been in the habit of using to induce perspiration. On learning the facts I reported the case to the coroner. The victim of the accident carried \$15,000 accident insurance and only \$2,000 regular life policies.

While death in any event was only a few hours distant, there can be no question that he died by an accident, for which the insurance companies were responsible. The facts have not heretofore been reported.

C.R.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ended April 10, 1909:

McCulloch, C. C., Jr., major, relieved from duty with the Isthmian Canal Commission, and ordered to duty in the Philippine Islands.

Ashburn, P. M., major, assigned to temporary duty in the office of the Surgeon-General.

Glechrist, H. L., major, granted an extension of 10 days to his leave of absence.

Hoff, J. V. R., col., ordered to Forts Wayne, Mich.; Thomas, Ky., and Benjamin Harrison, Ind., on business pertaining to the Medical Department.

Carter, E. C., lieut.-col., granted leave of absence for 15 days.

Mcysinger, J. D., capt., granted leave of absence for 21 days.

McAndrew, P. H., capt., granted leave of absence for two months.

Murray, Alexander, capt., ordered to San Francisco, Cal., to sail May 5, for Philippine service.

Reno, W. W., capt., relieved from duty in the Philippines Division and assigned to duty as surgeon of the transport *Kilpatrick* on its next voyage to the United States.

Richards, R. L., capt., granted leave of absence for 10 days.

Nichols, H. J., 1st lieut., relief from duty in the Philippines Division deferred for three months.

Stockard, J. K., M. R. C., honorably discharged from the service, his services being no longer required.

Cutcliffe, W. O., M. R. C., granted leave of absence for two months.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended April 10, 1909:

Pickrell, G., surgeon, detached from the Bureau of Medicine and Surgery, Navy Department, and ordered to duty in connection with the fitting out of the *Solace*.

Wheeler, L. H., P. A. surgeon, detached from duty at the Naval Training Station, Narragansett Bay, R. I., and ordered to instruction at the Naval Medical School, Washington, D. C.

Foster, T. G., asst.-surgeon, detached from duty at the Naval Hospital, Narragansett Bay, R. I., and ordered to instruction at the Naval Medical School, Washington, D. C.

Olson, G. M., asst.-surgeon, detached from the Naval Recruiting Station, Pittsburg, Pa., and ordered to instruction at the Naval Medical School, Washington, D. C.

Riker, G. A., acting asst.-surgeon, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to the *Franklin*.

Ziegler, J. G., acting asst.-surgeon, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to duty at the Naval Hospital, Pensacola, Fla.

Harlan, T., acting asst.-surgeon, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to the Naval Recruiting Station, Pittsburg, Pa.

Clark, G. F., acting asst.-surgeon, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Narragansett Bay, R. I.

Taylor, J. S., surgeon, detached from the Naval Hospital, New York, N. Y., and ordered to the *New York* when commissioned.

Smith, C. W., asst.-surgeon, detached from duty at the Naval Hospital, Philadelphia, and ordered to the Naval Hospital, Norfolk, Va.

Strite, C. E., asst.-surgeon, detached from the Naval Hospital, Norfolk, Va., and ordered to instruction at the Naval Medical School, Washington, D. C.

Phelps, J. R., asst.-surgeon, detached from the *Yankton* and ordered to the *New York* when commissioned.

Cole, H. W., asst.-surgeon, detached from the Navy Yard, Charleston, S. C., and ordered to the *Yankton*.

Kerr, W. M., acting asst.-surgeon, detached from instruction at the Naval Medical School, Washington, D. C., and ordered to the Naval Training Station, Narragansett Bay, R. I.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended April 7, 1909.

Brooks, S. D., surgeon, granted 2 days' leave of absence en route to station.

Moore, Dunlop, P. A. surgeon, granted 30 days' leave of absence from April 3, 1909.

Salmon, Thomas W., P. A. surgeon, granted 2 days' leave of absence from March 8, 1909.

Herring, R. A., asst.-surgeon, granted 1 day's leave of absence in March, 1909, under paragraph 191, Service Regulations.

Fogarty, J. N., acting asst.-surgeon, granted 2 days' leave of absence from March 26, 1909.

Foster, S. B., acting asst.-surgeon, granted 7 days' leave of absence from April 19, 1909.

Grace, John J., acting asst.-surgeon, granted 2 months and 21 days' extension of leave of absence, without pay, from April 10, 1909.

Hough, J. S., acting asst.-surgeon, granted 30 days' extension of annual leave on account of sickness from Feb. 1, 1909.

Hough, J. S., acting asst.-surgeon, granted 30 days' leave of absence from March 3, 1909, and 4 months' leave of absence, without pay, from April 3, 1909.

MacCaffey, W. B., acting asst.-surgeon, granted 1 day's leave of absence in March, 1909, under paragraph 191, Service Regulations.

Smith, W. S., acting asst.-surgeon, granted an indefinite leave of absence without pay.

Wetmore, W. O., acting asst.-surgeon, granted 1 day's leave of absence, March 17, 1909.

Wetmore, W. O., acting asst.-surgeon, granted 7 days' leave of absence from March 22, 1909, under paragraph 210, Service Regulations.

BOARDS CONVENED

Boards of medical officers were convened to meet on April 5, 1909, for the purpose of making physical examination of applicants for the position of cadet in the Revenue-Cutter Service, as follows:

Milwaukee, Wis.: Surgeon J. O. Cobb, chairman; Acting Asst.-Surgeon W. E. Fox, recorder.

Wilmington, N. C.: Acting Asst.-Surgeon Thomas M. Green, chairman; Acting Asst.-Surgeon W. D. MacMillen, recorder.

Boards of medical officers convened to meet on April 15, 1909, for the purpose of making physical examinations of officers of the Revenue-Cutter Service for promotion, as follows:

New York, N. Y.: P. A. Surgeon C. W. Vogel, chairman; Asst.-Surgeon F. A. Ashford, recorder.

Norfolk, Va.: Surgeon C. P. Wertenbaker, chairman; Acting Asst.-Surgeon R. W. Browne, recorder.

Newbern, N. C.: Acting Asst.-Surgeon F. Duffy, chairman; Acting Asst.-Surgeon P. del V. Atilles, recorder.

San Juan, P. R.: P. A. Surgeon S. B. Grubbs, chairman; Acting Asst.-Surgeon P. del V. Atilles, recorder.

Boston, Mass.: Surgeon L. L. Williams, chairman; P. A. Surgeon T. W. Salmon, recorder.

Port Townsend, Wash.: Surgeon W. G. Stimpson, chairman; Acting Asst.-Surgeon L. T. Seavey, recorder.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 9, 1909:

SMALLPOX—UNITED STATES

California: Oakland, Jan. 7-31, 2 cases; Feb. 1-March 21, 3 cases; San Francisco, March 13-20, 1 case.

District of Columbia: Washington, March 20-27, 1 case.

Illinois: Danville, March 21-28, 7 cases; Springfield, March 19-26, 3 cases.

Indiana: LaFayette, March 22-29, 2 cases; South Bend, March 20-27, 1 case.

Kansas: Kansas City, March 20-27, 4 cases.

Kentucky: Covington, March 20-27, 5 cases; Lexington, 3 cases; Paducah, 1 case.

Michigan: Detroit, March 20-27, 1 case; Saginaw, March 13-27, 3 cases.

Missouri: Kansas City, March 20-27, 2 cases; St. Louis, March 20-27, 2 cases.

Montana: Butte, March 16-23, 3 cases.

Nebraska: South Omaha, March 20-27, 1 case.

New Jersey: New Brunswick, March 20-27, 2 cases.

Ohio: Cleveland, March 19-26, 1 case.

Tennessee: Fayette County, Dec. 1-March 2, 200 cases; Memphis, Feb. 20-March 27, 53 cases; Nashville, March 20-27, 1 case.

Texas: Houston, March 20-27, 4 cases; Galveston, March 19-26, 1 case; San Antonio, March 20-27, 2 cases.

Washington: Bellingham, Jan. 20-March 20, 3 cases; Spokane, March 13-20, 1 case.

Wisconsin: La Crosse, March 20-27, 3 cases; Racine, March 20-27, 5 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, Feb. 6-20, 7 cases, 1 death.

SMALLPOX—FOREIGN

Arabia: Aden, Feb. 14-22, 1 death.

Brazil: Rio de Janeiro, Feb. 14-28, 33 cases, 22 deaths.

Canada: Halifax, March 13-20, 6 cases.

France: Paris, Jan. 23-30, 6 cases.

Great Britain: Bristol, March 6-13, 2 cases.

India: Bombay, Feb. 23-March 2, 16 deaths; Calcutta, Feb. 13-20, 146 deaths; Madras, Feb. 20-26, 4 deaths; Rangoon, Feb. 13-20, 3 deaths.

Italy: General, March 7-14, 5 cases; Naples, March 6-13, 26 cases, 6 deaths.

Japan: Kobe, Feb. 27-March 6, 1 case, 1 death.

Martinique: Fort de France, Feb. 27-March 6, 2 cases.

Mexico: Mexico City, Feb. 6-27, 54 deaths; Monterey, March 14-21, 3 deaths; Veracruz, March 6-20, 4 cases.

Netherlands: Rotterdam, March 6-13, 1 case.

Southeast Africa: Lourenco Marquez, Jan. 1-31, 1 death.

Spain: Barcelona, Feb. 14-March 7, 12 deaths; Valencia, Feb. 27-March 12, 9 cases; Vigo, March 6-13, 1 death.

Straits Settlements: Singapore, Jan. 23-Feb. 13, 4 deaths.

Turkey: Bassorah, Feb. 27-March 6, present; Constantinople, Feb. 28-March 14, 6 deaths.

YELLOW FEVER

Barbadoes: March 6-27, 10 cases, 3 deaths.

Brazil: Manaus, Feb. 20-27, 1 death; Para, Feb. 27-March 6, 3 deaths.

CHOLERA—INSULAR

Philippine Islands: Provinces, Feb. 6-20, 271 cases, 178 deaths.

India: Calcutta, Feb. 13-20, 28 deaths; Madras, Feb. 20-26, 1 death; Rangoon, Feb. 13-20, 8 deaths.

Russia: Jarcalov, March 13, 7 cases; Rubinsk, March 13-20, 7 cases; St. Petersburg, March 12-19, 41 cases, 7 deaths.

Brazil: Rio de Janeiro, Feb. 13-28, 4 cases, 1 death.

Chile: Antofagasta, Feb. 28, 15 cases; Arica, March 9, present; Iquique, March 7-14, 32 cases in lazaretto.

Egypt: General, March 11-18, 5 cases, 5 deaths.

German East Africa: Dar es Salaam, Oct. 10-Jan. 7, 7 cases, 5 deaths.

India: General, Feb. 6-13, 3,803 cases, 3,162 deaths; Bombay, Feb. 24-March 2, 153 deaths; Calcutta, Feb. 13-20, 28 deaths; Rangoon, Feb. 13-20, 16 deaths.

Japan: Kobe, Feb. 20-March 6, 2 cases, 1 death.

Peru: General, Feb. 28-March 13, 65 cases, 33 deaths; Callao, March 1-14, 2 cases; Lima department, March 1-14, 13 cases, 3 deaths.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

Alabama, Medical Assn. of State of, Birmingham, April 20-23.
American Gynecological Society, New York, May 27-29.
American Neurological Association, New York, May 27-29.
American Pediatric Society, Lenox, Mass., May 27-28.
American Therapeutic Society, New Haven, Conn., May 6-8.
Association of American Physicians, Washington, D. C., May 11-12.
Arizona, Medical Association of, Prescott, May 19-20.
Arkansas, Medical Society of, Pine Bluff, May 18-21.
California, Medical Soc. of State of, San Jose, April 20.
Connecticut State Medical Society, Hartford, May 26-27.
District of Columbia, Medical Assn. of, Washington, April 27.
Georgia, Medical Association of, Macon, April 21.
Illinois, State Medical Society, Quincy, May 18-20.
Iowa, State Medical Society, Dubuque, May 19-21.
Kansas, State Medical Society, Emporia, May 5-7.
Louisiana, State Medical Society, New Orleans, May 4-6.
Maryland, Med. and Chir. Faculty of, Baltimore, May 13-15.
Missouri, State Medical Association, Jefferson City, May 18-20.
Montana, State Medical Association, Missoula, May 12-13.
Nebraska, State Medical Association, Omaha, May 4-6.
New Hampshire, Medical Society, Concord, May 13-14.
North Dakota, State Medical Association, Fargo, May 11-12.
Ohio, State Medical Association, Cincinnati, May 5-7.
South Carolina Medical Association, Summerville, April 21.
Texas State Medical Association, Galveston, May 11-13.

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS

Ninth Annual Meeting, held in Boston, April 9-10, 1909

The President, DR. HAROLD C. ERNST, Boston, in the Chair

Gross Blastomycotic Lesions of Bones and Brain

DR. E. R. LE COUNT, Chicago: Two years ago but eleven cases had been reported; now I know of thirty-three cases. This increase of 200 per cent. in two years is largely due to greater frequency of recognition by clinicians. The affection is mainly characterized by cutaneous lesions, but involvement of bone is important. The vertebrae are most frequently attacked, bones of the wrist and the ankle being next in order. Statements as to the site of lesions must be modified, however, by the fact that no instance of the complete examination of the skeleton of any one subject is on record. One type of brain involvement is in the form of minute nodules resembling tubercles, and it is possible that further resemblances to tuberculosis may be shown. Cultures of the blastomyces from the bones and other systemic lesions differ in no essential way from those of skin lesions.

Histology of the Sweat Glands in Chronic Nephritis

DR. HERBERT U. WILLIAMS, Buffalo: This study was undertaken because from the earliest ages faith has been placed in the efficacy of active skin excretion in cases of nephritis and because the excretion, even of urea by the sweat glands, has been described. Specimens from seventy cases of various types of chronic nephritis were examined, skin from the sole of the foot being examined as a routine measure with the addition, in half of the cases, of skin from the anterior abdominal wall. Alcohol fixation, paraffin embedding and hematoxylin-eosin staining gave the most satisfactory results. Various conditions were found, including desquamation of epithelium, cystic dilatation of tubules, moderate dilatation of ducts, atrophy of tubules and the presence in tubules of material resembling casts as found in the kidney. Thrombosis of arteries and veins and arteriosclerosis of the arteries of the skin were also present, the latter condition in fourteen cases. A condition that may be of importance was the apparent formation of two or three layers of cells in the tubules, or at least an increased number of cells if not in regular layers. The actual condition was difficult to determine, but the impression obtained is that the process is an actual multiplication of cells which does not, however, prove that there is a functional hypertrophy of the glands.

Chronic Inflammatory Enlargement of the Lymphatic Glands

DRS. C. W. DUVAL and C. P. HOWARD, New Orleans: The patient was a woman who had rheumatism for six months before the cervical glands began to enlarge. This enlarge-

ment became general, the spleen also being slightly increased in size. Tuberculin reaction was negative. There was secondary anemia with moderate leucocytosis, at first a lymphocytosis, later a polynucleosis. Removed glands showed the histology of Hodgkin's disease as described by Reed and Longcope. Nine months after the beginning of glandular enlargement, the patient died. Autopsy showed no evidence of tuberculosis. The spleen was still enlarged, microscopically showing chronic splenitis. The glands histologically showed four stages in the process: 1. A great number of mononuclear endothelioid and mononuclear giant cells, plasma cells and eosinophiles. The lymphadenoid hyperplasia described by Reed and Longcope was lacking. 2. Multinuclear giant cells were prominent. 3. There were a few multinuclear cells and fibrous tissue was increased. 4. There was almost complete replacement of gland by fibrous tissue. Bacteriologically, cultures from glands and inoculations into guinea-pigs were negative and sections of tissue contained no bacteria. The diagnosis, according to the common naming, was Hodgkin's disease, with neither tuberculosis nor lues as a possible etiologic factor. The histology indicated a chronic inflammatory process. A better term than Hodgkin's disease, which should be excluded because of its giving rise to controversy, is granuloma, or, as the cause is unknown, cryptogenic granuloma. The histology justifies regarding this as a distinct disease.

An Unusual Form of Amebic Dysentery

DR. HARRY T. MARSHALL, Charlottesville, Va.: The specimen shown was obtained from a male Filipino who died from intestinal hemorrhage after being ill but ten days or two weeks. The whole colon is studded with nodules up to 12 or 15 mm. in diameter, the tops of some being necrotic. Microscopically, the mucosa over the nodules is lost and fibrin and leucocytes extend into the submucosa. The nodules contain many amebas, but no bacteria. I have found no other specimen of this type, even in museums, and but few writers mention such a condition. I regard it as an early case which lacks the extensive necrosis and ulcer formation so commonly seen.

DISCUSSION

DR. W. T. COUNCILMAN, Boston: This appears to have been a typical case except as to its acuteness, which makes it specially interesting. The possibilities are that it was caused by amebas with unusual powers of multiplication or occurred in a person with but little resistance.

Reinoculation and Metastasis in a Rat Cancer

DRS. SIMON FLEXNER and J. W. JOBLING, New York: The tumor was not a rapidly growing one and reinoculations were not exceedingly difficult. A table giving the summary of inoculations in numerous rats, grouped in thirty-day periods, showed but little difference between reinoculations in those with metastases and in those lacking the secondary growths. In some features the results are contrary to those obtained by Ehrlich.

DISCUSSION

DR. F. P. GAY, Boston: Results in inoculation experiments must vary from time to time, as both the animals and the tumors vary. The individuals in one series can be compared much better than can those of separate experiments.

Functional Hyperplasia of the Mammæ Associated with Syncytioma Malignum of the Testicle

DR. A. S. WARTHIN, Ann Arbor: The subject was a man of 34, father of two children, with no evidence of mixed sexual characters. Following a blow, a tumor the size of a goose egg developed in one testicle. At the same time the breasts enlarged, appearing like those of a woman in early pregnancy. One was removed under the supposition that a new growth was present. After the testicle was removed the remaining breast diminished in size, but later enlarged again as tumor metastases developed. The man finally died. The tumor of the testicle was typical, with its Langhan's cells and masses of syncytium. Autopsy showed metastases in kidney, liver, lungs, brain, stomach and intestine, the immediate cause of death being hemorrhage from the ulcerated tumors in

the alimentary tract. In addition, in front of the aorta, between the kidneys, there was a tumor of the cystadenoma type found commonly in the ovary; this contained also some dermoid elements, but no syncytium. The breast removed at operation showed active growth of connective tissue, but no new acini; in some acini cells there was evidence of fat formation. The breast obtained at autopsy showed attempted acinic formation and fatty content of cells. Neither showed a complete functional condition, but there was evidently attempted function. Careful dissection of the sexual tract showed a hypospadias as the only anomaly. The question is, Was the case one of hermaphroditism?

DISCUSSION

DR. S. P. BEEBE, New York, asked Dr. Warthin why he associated the mammary hyperplasia with the tumor of the testicle instead of with the abdominal tumor which resembled those commonly found in the ovary.

DR. JAMES EWING, New York: A year ago I reported a complex tumor of the testicle, which, with those of other writers, I regard as teratomatous. In my case there was hyperplasia of the interstitial cells of the testicle, though this is not an essential feature. These tumors suggest the possibility of an ovatestis in man as well as in animals.

DR. A. S. WARTHIN: Coincidence of growth of mammae and testicular tumor, then subsidence in the remaining breast after removal of the testicle, and a second hyperplasia during metastases, led me to associate the two. All the curious tumors of the testicle are teratoid. The best explanation regarding my case is that it was hermaphroditism with an ovatestis.

(To be continued)

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, held Mar. 10, 1909

The president, DR. FREDERICK P. HENRY, in the Chair

Results Obtained by the Subcutaneous Injection of Sea Water

DR. THEODORE LE BOUTELLIER: The therapeutic use of sea water was suggested by the theory of the marine origin of life. This has been studied in France by many investigators, especially Quinton, who by experiments and chemical analysis found sea water solution to be almost identical with blood serum. Injected into the body, it acts as a tonic to the cells and assists in their resistance to bacterial infection; experiments have proved that it is superior to physiologic salt solution. Sea water obtained well out at sea and about forty feet below the surface is diluted with pure water one hundred and ninety parts to eighty-three parts sea water. This is filtered through a Berkefeldt filter, injected subcutaneously under the skin beneath the shoulder or hip in doses of from 10 to 100 c.c., according to age. The effects noticed were increase in appetite, improvement in digestion, the cure of insomnia, gain in weight, and marked improvement in the condition of the skin. The conditions treated included tuberculosis, pneumonia, nutritional diseases of infancy and childhood, chorea and eczema.

DR. R. MAX GOEPP: The work of Quinton on the marine origin of animal life, is said to have suggested the use of sea water for therapeutic purposes to the originator of the method, Dr. Robert Simon, of Paris. The dearth of experimental work on the comparative action of isotonic sea water and physiologic salt solution makes it difficult to arrive at any conclusion in regard to the rationale of the treatment. The dosage has not been determined. Working with adults, I have administered from 3 to 6 ounces three times a week, and in some cases as much as 10 and 12 ounces. In the 11 cases here reported, the patients were selected for the treatment on account of some nutritional disturbance, underweight, obesity (diabetic), constipation, diarrhea or other symptoms referable to the digestive system, or on account of a skin affection. The treatment was given for periods varying from 3 to 12 weeks. The results were inconclusive. No change in body weight (except a loss in the case of one patient who was under weight) or any other objective symptom was noted, one case of lupus

erythematosus being excepted in which some improvement was brought about by the treatment. I conclude that for the present the effects obtained all have reference to the patients' suggestive sensations, and can without difficulty be attributed to the suggestive action of a new and unusual therapeutic procedure.

Therapeutic Value of Physiologic Salt Solution

DR. HORATIO C. WOOD, JR.: In cases of circulatory weakness due to hemorrhage or shock or other vasomotor conditions the injection of salt solution is a valuable mode of treatment. When, however, the trouble is due to heart failure the increase in the quantity of fluid means an added strain on the heart and is therefore contraindicated. The use of saline infusion in cases of toxemia with the idea of increasing the rapidity of elimination is founded on an erroneous conception. When a poison is introduced into the system it unites to form new compounds with the cell protoplasm and this molecular union must be broken up before the poison can be eliminated. Salt solution is unable to do this. Experimental studies on the lower animals have demonstrated that salt solution has no specific action in either bacterial or vegetable poisonings. It has, however, a field of usefulness for the relief of certain symptoms, as circulatory failure, occurring in the course of some cases of infectious fevers.

Discussion on Use of Sea Water

DR. THOMAS S. GITHENS: If it be true that diluted sea water, when injected, has an effect different from that of normal saline solution, it is probable that this difference depends on the substances other than sodium chlorid which it contains. Sea water contains varying amounts of magnesium, calcium and potassium salts, each of which has a profound influence on the function and nutrition of the tissues. It has been found, for instance, that the isolated heart of the turtle will beat for only a short time in normal salt solution, but if placed in such a solution to which minute amounts of calcium and potassium salts have been added, it may continue to beat for several days. In some experiments in this direction which I am performing, I have found that very minute alterations in the amount of calcium or potassium will prevent the contractions in an active heart or renew them when they have ceased. I would suggest, therefore, that those who are doing this work have their samples analyzed, as some lots of sea water contain five or six times as much calcium and potassium as others, and should compare their results with those obtained by the injection of a solution of these salts in same proportions, and also with the results to be obtained from the injection of Ringer's solution, which is supposed to agree with the salt content of serum, and which contains sodium chlorid 0.8 per cent., calcium chlorid from 0.03 to 0.04 per cent., potassium chlorid 0.024 per cent. This would be very close to some of the analyses of sea water, if diluted to isotonicity. The statement that sea water is less beneficial if boiled certainly requires confirmation.

DR. JAY F. SCHAMBERG: When Dr. Robert Simon was in Philadelphia I saw a number of photographs illustrating a variety of conditions treated by him by this method, and the results were in many respects marvelous. It is possible that the use of sea water may stimulate the nutritional and reparative forces of the body and may be of distinct advantage in certain diseases, but it is too much to expect that we may find in this new measure a cure for a large variety of human ills. Regarding the psychic factor in cases of alleged improvement, I recall a case of eczema of the arms in which the patient declared herself to be improved from the first injection, and yet in which the appearance was distinctly and progressively worse.

DR. CHARLES E. DEM. SAJOUS: The important feature in all these conditions is the influence of sea water or the physiologic salt solution on osmosis. The case mentioned by Dr. Schamberg recalls to me a case of aphonia in which the electric current was applied to the larynx with the immediate restoration of the voice. After the patient, a young girl, had left the office, however, I found that there was not a particle of current, as my battery was not working.

Book Notices

BLACK-WATER FEVER. By Captain S. R. Christophers, M.B., I.M.S., and Dr. C. A. Bentley, (Officers on Special Duty). No. 35, of Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India, being the First Report of the Advisory Committee Appointed by the Government of India to Conduct an Inquiry Regarding Black-Water and Other Fevers Prevalent in the Duars, Boards. Pp. 239. Simla: Government of India Monotype Press, 1908.

This is an extensive monograph of 239 pages, giving a comprehensive view of the nature of blackwater fever, its distribution, theories concerning its cause, the larger part (all but the first 66 pages) being given over to the development of their own theory.

Four main theories are cited: First, that blackwater fever is a pernicious form of malarial attack. This has been shown to be incorrect by the fact that there is no evolution of the malarial parasites coinciding with the attack of blackwater fever. Second, that blackwater fever is quinin intoxication. Experience is altogether against the conception that quinin alone may be its cause. Quinin in non-malarial countries is not known to have such an action. Third, that blackwater fever is a distinct disease, due to some specific organism. No parasite other than the malarial, however, has been found in cases of the disease. Piroplasmas in particular have been sought for because of the part they play in hemoglobinuric fevers in other animals. Fourth, that blackwater fever is the result of an induced condition, brought about by repeated malarial infection lasting over a certain time. This view was first brought forward by Stephens and Christophers, and the investigations presented apparently are the outcome of this conception.

A great deal of evidence is given showing that the disease does not occur except in relation to malaria. It is held as possible that quinin may be influential in precipitating attacks "acting in conjunction with a condition induced by previous intense malaria."

In the course of their work the authors reduced the problem to two possibilities: the one, that blackwater fever is a special disease caused by an independent micro-organism; the other, that it is a condition induced by repeated attacks of malaria, but in itself is not malaria.

The first of these possibilities was discarded because no organism other than occasional malarial parasites could be found either in the peripheral or visceral circulation, and because of the general conditions which show the intimate relation of the disease to malaria.

Inasmuch as the most striking features of the disease are acute destruction of the blood, hemoglobinemia and hemoglobinuria, Christophers and Bentley instituted detailed studies, regarding blood destruction by different agents in and out of the body, and the resistance and tonicity of the red cells in malaria and blackwater fever.

They distinguish two types of blood destruction in the body: First, that in which the erythrocytes are destroyed by phagocytic cells, a process to which they give the name of "erythrokatalysis"; and, second, the solution of the cells in the plasma, to which they apply the term "lysemia."

In malaria the destruction of the blood may be so great as to amount to 1,000,000 per centimeter in one day, yet no hemoglobinuria results. The authors assume that this is because the process of blood destruction in malaria is one of erythrokatalysis exclusively, rather than lysemia. They speak of the "specially pronounced action of the malignant tertian parasite in bringing about erythrokatalysis" (p. 127). As an analogy they cite the observation of Levaditi and others, to which are added experiments of their own, that immune hemolytic sera cause anemia, not by destroying erythrocytes in the circulation, but by inducing their phagocytic destruction (erythrokatalysis). They were rarely able to cause hemoglobinemia and hemoglobinuria by the injection of hemolytic sera.

They come to the conclusion, therefore, that the essential method of destruction in blackwater fever is one of lysemia, in spite of the fact that extensive destruction by phagocytosis also takes place. If destruction were exclusively by means

of phagocytic cells, no hemoglobinemia or hemoglobinuria would result.

Through extensive experiments they seem to show satisfactorily that the lysemia does not follow because of an alteration of tonicity on the part of the erythrocytes, and that there are no changes in the osmotic pressure of the plasma to account for the blood destruction.

It seems sufficiently logical, in view of the work of the past decade on hemolysins, that the attention of the authors should be directed to the possibility that the prolonged blood destruction of chronic malaria may cause the body to form autohemolysins, which for some unknown reason assume activity at the time of the attack of blackwater fever. Unfortunately, they have not been able to adduce evidence of a direct character showing that this condition exists in blackwater fever. But through an extensive study of bloods and serums in health and in various diseases, the important fact was disclosed that normal bloods frequently contain a lysis (an isolysin) for some other human bloods. Christophers and Bentley speak of two classes of bloods, A and B. In A, which is blood from healthy individuals, the serum contains hemolysin (amboceptor and complement) for the erythrocytes of class B; but the erythrocytes of class A are not susceptible to the accompanying hemolysin, i. e., the hemolysin which is present in the serum of class A blood. In B the erythrocytes are susceptible to the isolysin referred to above, but the serum in this class contains none of the isolysin. On the contrary the serum in B contains "a powerful antibody, which appears to be of the nature of an anticomplement or anti-amboceptor directed against the complementophile group of the amboceptor."

The authors suggest that if, in accordance with the hypothesis, the hemoglobinuria of blackwater fever is caused by an autolysin, the attack may be precipitated by the sudden pouring into the circulation of a large amount of complement, through some unknown stimulus and from some unknown source, which may then activate a great quantity of amboceptors at once. Although the work leads to no positive demonstration of a causative agent for the disease, it is valuable as a basis for further studies.

It is to be hoped that the probable relation of quinin to the precipitation of attacks will be studied by these zealous investigators at some future time.

TONO-BUNGAY. By H. G. Wells. Cloth. Pp. 460. Price, \$1.50. New York: Duffield & Co., 1909.

In the past, Mr. H. G. Wells has been best known by his scientific romances and his sociologic essays. In the future he is likely to be remembered by a novel—his latest and biggest book, "Tono-Bungay." In reading this narrative, which is written in the first person, one feels that personal interest in the narrator that is inseparable from the perusal of "David Copperfield," while the author's philosophy of life recalls in many ways some of Olive Schreiner's finer passages in her "Story of an African Farm." Briefly, "Tono-Bungay" is the story of a "patent medicine" of that name and the life history of its inventor, Edward Ponderevo, who from being an unknown druggist in an obscure English village, became a Napoleon of finance. "Astraddle on Tono-Bungay he flashed athwart the empty heavens . . . like a stupendous rocket!—and overawed investors spoke of his star. At his zenith he burst into a cloud of the most magnificent proportions." George Ponderevo tells the story: "I was his nephew . . . I made pills for him in the chemist's shop at Wimblesbury, before he began. I was, you might say, the stick of the rocket; and after our tremendous soar, after he had played with millions, a golden rain in the sky . . . I fell again. . . ." The book traces the social trajectory of the two Ponderevos in their splendid passage from obscurity to obscurity.

It is said that Mr. Wells in his earlier days was a druggist, and his story indicates it. None but a druggist or a physician could gauge so clearly the inherent worthlessness of the average "patent medicine." Says the younger Ponderevo, when invited by his uncle to become a partner in the business

of exploiting "Tono-Bungay": "The stuff was, I perceived, a mischievous trash, slightly stimulating, aromatic and attractive, likely to become a bad habit and train people in the habitual use of stronger tonics and insidiously dangerous to people with defective kidneys"—surely a description that would fit many a nostrum possessing greater materiality than "Tono-Bungay." But Tono-Bungay became a vast success and on its much-advertised name other "specialties" were put out. "Tono-Bungay Lozenges" for cases of "fatigue and strain," were enormously popular and, says the nephew, "I really do believe there was an element of 'kick' in the strychnin in those lozenges, especially in those made according to our earlier formula. For we altered all our formulas—invariably weakening them enormously as sales got ahead." On the strength of these successes, "with barely a thousand pound's worth of stuff or credit all told," Ponderevo decided to float a company and went to the public to ask for £150,000. "One hundred and fifty thousand pounds—think of it!—for the good-will in a string of lies and a trade in bottles of mitigated water! Do you realize the madness of the world that sanctions such a thing?" But the public subscribed.

Another phase of the proprietary question—in foodstuffs, not medicine, this time—is incidentally touched on. In a conversation between the elder Ponderevo and his nephew's friend, the latter discourses jokingly on the use of horseradish as an adulterant for mustard. The idea of adulteration is not pleasing either to the friend or to Ponderevo, who remarks sententiously that it is "bound to be found out!" But adulteration is so unnecessary. "Why not do up a mixture—three-quarters pounded horseradish and a quarter mustard—give it a fancy name—and sell it at twice the mustard price?" The principle here involved will be recognized by physicians as having been applied to other things than horseradish and mustard, and in other places than the pages of a novel.

The story is a strong one. Mr. Wells' philosophy is a healthy one and the reading of "Tono-Bungay" leaves a pleasant taste in the mouth and the conviction that its perusal has been well worth while.

HEMATOLOGICAL ATLAS. With a Description of the Technic of Blood Examination. By Karl Schleip, M.D., Scientific Assistant in the Medical Clinic University of Freiburg. English Adaptation of Text by Frederic E. Sondern, M.D., Professor of Clinical Pathology, New York Postgraduate Medical School and Hospital. Half Leather. Pp. 256, with illustrations. Price, \$10. New York: Rebman Co.

As an atlas—and this is the real nature of the work—this book is valuable, not to the beginner so much as to the one who is already familiar with the technic of hematology and has had practical experience with it at the bedside. The plates are neat, clearly executed, well colored, artistic and yet true to nature. The descriptions of illustrations are terse yet plain, and brief case histories often add to the interest. The selection of blood preparations has been well made, showing the typical appearances of normal blood, the leucocytoses, the anemias, leukemias, etc., usually in the stained specimen, though occasionally in the unstained. Schleip prefers to make the examination of the unstained specimen between two films and in a hanging-drop chamber, with the blood diluted with physiologic salt solution. The erythrocyte under these circumstances crenates less and shows some peculiarities of form that he believes are more nearly normal than when examined in the ordinary manner. His preference in the way of stain is the Leishman modification of the Romanowsky stain. All the illustrations of stained preparations are from preparations made after this method. While speaking of Schleip's preferences in the way of technic, it may be mentioned that he uses the Sahli hemometer. Whether this accounts for the frequent high hemoglobin findings or not, certain it is that very often an unusually high hemoglobin is recorded as compared to his red corpuscle count. Repeatedly in secondary anemias his color index is more than one.

In general, the author is conservative when it comes to a consideration of mooted questions, yet shows that he has views of his own and is familiar with those of others. Some

of the most valuable plates are those in which blood cells of doubtful nature are shown, such as various mononuclear forms, "fragile cells," etc. He hesitates to accept the expression "granular degeneration" of the erythrocyte, feeling that the degenerative character of the granules is not proved. He makes a very positive statement, however—too broad, we think—that this basophilic granulation is invariably present in every case of lead poisoning (p. 105). He is inclined to accept Sternberg's leukosarcomatosis as a reality and to regard the cells found in these cases, which so closely resemble acute leukemia, as true tumor cells and not bone marrow cells. This question, as Schleip says, needs further investigation. The plates of malarial blood, as the one showing trypanosomes, are too few to add much value to the book.

The description of the technic of blood examination is good, so far as it goes, but it is altogether too meager to be of much help to the undergraduate or clinician who is desirous of learning the rudiments of hematology. But as an atlas for class demonstration, as a book of reference and as a valuable addition to the hematologist's library, the work is to be heartily commended.

A SYSTEM OF OPHTHALMIC THERAPEUTICS. Edited and Chiefly Written by Casey A. Wood, M.D., C.M., D.C.L., Late Professor of Ophthalmology and Head of the Department, Northwestern University Medical School. Cloth. Pp. 926, with illustrations. Price, \$7. Chicago: Cleveland Press, 1909.

Dr. Wood has combined the knowledge of the specialist with the functions of the editor to make a work which should be welcomed by specialist and general practitioner alike as serving their needs in a special manner. The volume is chiefly the work of Dr. Wood, but he has availed himself of the services of several collaborators for the presentation of special topics. Such collaboration has been secured in the articles on electricity in eye diseases, the examination of school children, and of railway and other corporation employes, the treatment of general conditions affecting the eye and the nervous diseases that may affect the eye. The first part of the volume presents an ophthalmic materia medica which is remarkable for its completeness and which is not confined to medicines merely, but presents an account of apparatus and devices useful in securing the proper application of remedies to the eye. Then follow special chapters on the various diseases in which the proper medicinal treatment is thoroughly described with numerous cross-references to the sections dealing with materia medica. The preparation of the patient for operation and the induction of anesthesia are described, but other matters relating to operation are excluded by the plan of the book. The book is thoroughly up to date, including references to articles as recent as November, 1908.

The treatment of general and nervous conditions affecting the eye enters a field distinct from the specialty of ophthalmology, and while the advice given is good, the question arises whether devoting 120 pages to what is essentially a treatise on general medicine is not somewhat out of place in a special text-book.

The book is evidently the result of an immense amount of work, is exhaustive and will be a standard for many years to come. It will be a guide to the medical treatment of diseases of the eye on which the general practitioner may depend.

HELPS TO MEDICAL DIAGNOSIS. (A card system.) By J. T. Asbury, M.D. Price, \$2.50. Wabasha, Minn.: J. T. Asbury, 521 Main St.

These cards are intended to serve the general practitioner as a ready means of review in differential diagnosis, not only in home study, but on occasions of doubt in practice. For this purpose it is pointed out by emphasized type that "they can be carried in a pocket case or bag and referred to at any time or place." While this phrase is consonant with the laudable ostensible object of the cards, there seems to lurk in it a sinister suggestion that nefarious possibilities in the examination room are one reason for the existence of such an aid to diagnosis. The cards, 75 in number, are of different colors, according to the classes of diseases which they treat, so that the desired card may be easily selected. Their arrangement seems convenient. The innumerable errors of

spelling, however—often of a very serious nature—constitute a great blemish and call for careful re-editing.

CANAL RECORD, Sept. 4, 1907, to Aug. 26, 1908. Vol. 1, with index. Cloth. Pp. 416. Ancon, Canal Zone: Isthmian Canal Commission Printing Office, 1908.

This volume contains much interesting reading, particularly for physicians. The fall of the death rate in the Canal Zone from 76 per thousand in July 1906, to 34 per thousand in July, 1907, is significant of the splendid work of the sanitary department. Besides the official reports and circulars, the volume contains notes on social life in the zone, in which clubs for men and women, entertainments, libraries, fraternal organizations, medical societies, public schools and church matters of various denominations figure largely. This information should dissipate from the public mind the belief that the zone is a deadly place, out of the world, to be shunned like the plague. It is now rather a place where life can be spent and work accomplished in fair comfort and enjoyment. This fact is further emphasized by interesting excerpts describing conditions on the isthmus under previous régimes. A recently discovered report by Surgeon Charles S. Tripler, U. S. Army, of a transit of the isthmus made in 1852 by the Fourth Regiment of U. S. Infantry, in which a severe outbreak of cholera occurred, is particularly interesting. The Captain Grant referred to in the report ultimately became General U. S. Grant. The book is carefully edited and well made, and does credit to all concerned in its production.

TRANSACTIONS OF THE AMERICAN MICROSCOPICAL SOCIETY. September, 1908. Vol. xxviii. Twenty-ninth Annual Meeting Held at Ithaca, N. Y., June, 1906. Paper. Pp. 236.

The papers included in this pamphlet will be of interest to biologists generally, and some are of special importance to medical men. The president's address traces in an entertaining way the evolution of the projection microscope, beginning with the making of spectacles in the thirteenth century, since spectacles were the predecessors of other optical instruments. This historical study is accompanied by full bibliographic references, much enhancing its value. The first article of special interest to the physician is a list of invertebrates noxious to man collected by F. C. Wellman in Portuguese West Africa. The list includes protozoa, worms and insects, the two last classes not being strictly microscopic, but requiring that instrument for their identification. J. H. Powers, in "Further Studies in Volvox," touches the question of sex-differentiation for the study of which he regards this animal as especially suited. "Data for the Determination of Human Entozoa," by H. B. Ward, is a paper of practical clinical importance, especially to the expert in tropical medicine who must keep himself informed on the constantly widening field of intestinal parasites. The pamphlet is well printed and excellently illustrated.

PRACTICAL POINTS IN ANESTHESIA. By Frederick-Emil Neef, B.S., B.L., M.L., M.D., New York City. Cloth. Pp. 46. Price, \$0.60. New York: Surgery Pub. Co., 1908.

This little book presents the impressions derived from the experience of a practical anesthetist, and as the title states, is made up of practical points. Among the most useful points noted are the maintenance of the surgical plane of anesthesia, reflexes, obstructed breathing, indications for stimulation, postoperative distress, and a differential table of the cases which require superficial, moderate and profound narcosis.

AIDS IN OSTEOLOGY. By Philip Turner, B.Sc., M.B., M.S. (Lond.), F.R.C.S., Demonstrator of Anatomy, Guy's Hospital. Cloth. Pp. 187. Price, \$1.25. New York: William Wood & Co., 1908.

Turner states that his desire has been to prepare a concise compend on osteology for the use of students. The text comprises a description of the various bones of the body together with the articulations, muscular attachments, etc., the matter being largely a compilation from standard text-books. There are no illustrations. The compact arrangement and convenient size of the volume will commend it to medical students desiring a manual for constant reference.

BLOOD EXAMINATION IN SURGICAL DIAGNOSIS. By Ira S. Wile, M.S., M.D., Cloth. Pp. 161, with illustrations. Price, \$2. New York: Surgery Publishing Co., 1908.

This book attempts to enumerate briefly the interpretations possible from blood examinations, particularly that of

the white cells. In the first part of the work there is a somewhat elementary discussion of the methods employed. A rather clever classification of anemia is given, but one which, in our opinion, is not quite sharp enough. The discussion of the interpretation of the leucocyte count is very good. The necessity for knowledge of the differential counts is strongly emphasized. Besides the blood findings in surgical affections and allied conditions, those in some medical diseases are discussed. With a few exceptions, the illustrations are fair.

THE AMERICAN TROPICS. By William Thomas Corlett, half cloth, boards, top edge gilt. Pp. 221, with illustrations. Price, \$1.50. Cleveland: The Burrows Brothers Co., 1908.

Dr. Corlett has presented in an entertaining manner the daily record of a voyage through the West Indies. The book is well printed and illustrated and makes a volume worth reading and keeping. The reader receives the impressions that Dr. Corlett would make an agreeable traveling companion and that the cruise through the American tropics is full of interest.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

McCormack in Virginia

Dr. J. N. McCormack devoted the last two weeks of March to work in Virginia, speaking in eleven cities as follows: Fredericksburg, March 22; Petersburg, March 23; Norfolk, March 24; Danville, March 25; Roanoke, March 26; Lexington, March 27; Lynchburg, March 29; Charlottesville, March 30; Staunton, March 31; Harrisonburg, April 1, and Winchester, April 2. Both in attendance and in interest and enthusiasm the meetings were the most successful of any which Dr. McCormack has yet held. Both the profession and the public have been greatly interested and thoroughly aroused, as shown by the following comments:

Dr. E. L. McGill of Petersburg writes: "His talk was most instructive and made a great impression on the physicians. I trust that we shall derive much benefit from it."

The Roanoke *Evening World*, beside an extended account of the meeting, devotes a column to editorial comments, saying, among other things:

Thousands of Roanokers missed an opportunity last night to hear one of the best addresses on health and public and private methods for promoting health that has ever been given in Roanoke. The Y. M. C. A. Hall was crowded full to hear Dr. McCormack. . . . There ought to have been such a crowding of the Y. M. C. A. building and the street outside that the Assembly Hall would have been brought into commission. Instead of the 500 who did hear the address, about three-fourths of whom were women, there ought to have been at least 5,000 and half of them men. The Women's Civic Betterment Club and the Academy of Medicine are to be congratulated on bringing Dr. McCormack here. . . . Dr. McCormack told many things which the public ought to know, and while not all of the citizens of Roanoke were enabled to hear him, there will be few who will be without excuse for not reading his address, which is found in another column.

The Lynchburg *News* says:

The Y. M. C. A. auditorium was filled with a thoroughly representative audience of Lynchburg's leading citizens who listened attentively to Dr. McCormack during an interesting speech lasting nearly two hours, during which he was frequently greeted with applause. The address was full of matter calculated to make those who heard it think and think so deeply as to lead to action for the general betterment of the community.

Dr. V. V. Anderson of Lynchburg writes:

I have been instructed by the medical profession of this city to extend its thanks to the American Medical Association

for the privilege of having Dr. J. N. McCormack in our midst. Never in the history of the medical profession has so much interest been manifested in medical matters. Dr. McCormack has opened the eyes not only of the public, but of the physicians to the sacred trust imposed on the medical profession. . . . That the public is willing and anxious to know these things and to better existing conditions is evinced by the remarkable enthusiasm which greeted his address in the evening. Leading men asked why physicians had not told these things sooner, saying that the public was willing and anxious to concede everything their physicians wanted. A committee was appointed to arrange for frequent meetings between physicians and the public. . . . The good which Dr. McCormack has done us here in Virginia simply can not be estimated. He has certainly opened our eyes to duties that we have for years neglected, either through ignorance or indifference. His departure will leave a more thoughtful, a more active and a far wiser medical profession.

The *Staunton Daily Leader* devotes two columns to an account of the meeting, saying that:

For two solid hours last evening Dr. J. N. McCormack addressed a tremendous audience of Staunton's representative men and women at the Beverly Theater on vital questions bearing on the public health, and not for a moment during the lecture was there a sign of restlessness or disinterestedness on the part of the audience.

Under the heading, "A Modern Crusader," the *Leader* publishes a column editorial, showing such broad-minded appreciation of the efforts of the medical profession as represented by Dr. McCormack, that it is quoted herewith in full:

Dr. J. N. McCormack, who lectured on the prevention of disease at Beverly Theater Wednesday night, is one of the greatest exponents of the gospel of good health that this country has ever produced, and a man better equipped to disseminate the propaganda of sanitation could hardly be found the world over.

The immense audience which heard his lecture recognized this and deplored the fact that all their kith and kindred were not within sound of the speaker's voice.

Dr. McCormack is interesting because he speaks the truth—because he talks entertainingly and convincingly with the facts behind his arguments; because he strikes out fearlessly, exposing sins of omission and commission, hitting a head wherever he sees it; and then pours the oil of his kindness and humanity on the wound he is compelled to make. His object in exposing faults and showing up the fallacies of human acts is not merely to criticize, but primarily to correct. His lecture of over two hours covered a field as broad and expansive as humanity itself. He went over the different professions and pointed out the envy and jealousy of individual members of those segregated, that militated against harmonious action and barred the way of progress. Happily, he said, the medical profession had passed through the worst of this slough and was being wafted to the brighter shore on a reform wave, the like of which has never been seen before in the history of the world. Doctors are organizing and working together for their own advancement, and for that of the cause of humanity, and the science of the prevention and the cure of disease is going forward by leaps and bounds. Physicians recognize this. So do thousands of laymen; but the great men at the head of public affairs, whether they recognize it or not, are slow to admit it, or give their influence to the furtherance of the crusade. The result is that while the Federal Government is spending three out of every four dollars of its revenue on the Army and Navy pensions, for the slaughter of humanity, it spends not one cent for the preservation of human life by the prevention of disease. It spends millions of dollars for the preservation of trees, the promotion of animal husbandry, for the cure and prevention of diseases of plant life, and the dissemination of literature on all these subjects, yet it has appropriated not one single cent for the crusade against the dreadful diseases which are decimating the rank and file of the nation, men, women and children alike. Millions it spends for the preservation of its inanimate flora and fauna and not one cent for the preservation of human life—and this because it has no faith in its doctors and will not heed their warning voice. The United States of America, says Dr. McCormack, the greatest of the great among the nations of the earth, is the only nation of any importance which has no national health bureau, and as a result of this, the little brown men of Japan, a nation classed

among the heathen, have a far lower death rate than we, and the health of their army and navy in actual warfare so far outclasses ours that it was a shame and disgrace to this country.

In closing his address, Dr. McCormack advocated the formation of national, state and local health departments, and the frequent public discussion of preventive measures. He is a great crusader, and the memory of his good advice should remain with us and bear fruit to the everlasting benefit of ourselves and our posterity.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month—Third Weekly Meeting

EPILEPTIC INSANITY

GENERAL CONSIDERATIONS.—Mental symptoms of epilepsy; mental attitude of the epileptic. Classes of insanity induced by epilepsy.

PSYCHIC DEGENERATION.—Somnolence following attacks becomes more marked; weakens intellectual processes, memory, attention, speech, judgment, concepts, etc. Irritability of temper, hypochondriacal depression, hallucinations, etc.

EPILEPTIC DEMENTIA.—Gradual progress, course, terminations.

ACUTE TRANSITORY EPILEPTIC INSANITY.—Sudden onset, ecstatic or terrifying hallucinations and delusions, disturbance of consciousness, stuporous condition, impulsive acts, dream states, amnesia, abrupt termination; tendency to recurrence.

CHRONIC EPILEPTIC INSANITY.

DEMENTIA

Definition, epileptic, alcoholic, etc., secondary to acute or chronic psychoses, paralytic, senile, primary, etc.

SECONDARY DEMENTIA.—Symptoms: Defective memory, deficient ideation, feeble judgment, incoherent speech, hallucinations, delusions (emotional), depraved habits, automatic movements. Types, apathetic and agitated. Chronic course.

SENILE DEMENTIA.—Heredity, age, sex, strain, cardiovascular disease.

Symptoms: Failure of memory, lack of judgment, negligent in habits, terrifying hallucinations and illusions, persecutory delusions, increase of symptoms at night. Physical symptoms, general senile changes, tremors, aphasic and paraphasic attacks, at times hemiplegia and monoplegia. Complaints of pain over body, vertigo, tinnitus, etc.

Pathology: Changes in cranium, meninges, cortex, blood vessels, ventricles and ependyma, cerebrospinal fluid, ganglion cells and association fibers.

PRIMARY DEMENTIA.—Etiology: Age, heredity, physical and mental stress.

Symptoms: Gradual onset, inhibition of thought, idea associations and memory; senses fail to respond to stimuli, becomes physically and mentally expressionless, no excitation whatever, immobile. Physical symptoms. May be complicated by melancholia, stuporous paranoia or neurasthenia.

Course, duration, terminations.

DEMENTIA PRÆCOX (Kraepelin)

ETIOLOGY.—Frequency, age, sex, heredity, acute infections.

GENERAL SYMPTOMS.—Mental symptoms: Enfeeblement of mind, hallucinations and illusions, orientation, memory, attention and interest, verbigeration, judgment, delusions, emotional deterioration, stereotypy, negativism, automatism. Physical symptoms: Syncope, general and local spasms, transitory paralyses, aphonia, choreiform movements, aphasia, exaggerated reflexes, vasomotor disorders, pulse and temperature, anemia, changes in weight.

TYPES.—Hebephrenic, catatonic and paranoid; symptoms characteristic of each.

Miscellany

Mr. Bernard Shaw on the Medical Profession and the Competitive System

At a meeting of the Medico-Legal Society in London recently, Mr. Bernard Shaw opened a discussion on the socialist criticism of the medical profession. The following report of his remarks is abridged from the account given in the *Lancet*, Feb. 27, 1909:

Mr. Shaw said that he belonged to a generation which began life by hoping more from science than perhaps any generation ever hoped before and possibly might ever hope again. The doctor of the present day had been practically driven into the position of a private tradesman. Nowadays almost all the old professional pretensions and delicacies had been dropped. A doctor gave an opinion and the patient asked him what he owed as boldly as one would a shopkeeper in the street. He could remember the time when one did not do that. This position had never really been recognized, but it must be realized and admitted that as competition in ordinary trade and business had been shown by elaborate theoretic demonstration to be the best thing in the world, medical affairs could form no exception. The idea of a doctor being a tradesman was abhorrent to any thoughtful person, and therefore considerable restrictions were imposed. Advertising in the ordinary way was a thing forbidden. When a professional man had become so successful that he wanted to "weed out" his poorer patients and keep his richer ones, he raised his prices, and also gave up the power forever of recovering his fees in the county court, which was what the ordinary practitioner very largely had to do at the present time. There being no systematic state organization of his profession, naturally the doctor was forced by circumstances—however repugnant to his feelings—to go into the commerce of healing and to become a professional "medicine man"—a professional healer—who sold "cures" because that was what the public went to him for. The great mass of the medical profession had to get what they could and be very glad to get it. One result of competition in the medical profession was that the average doctor of the present day was an abjectly poor man. Four out of five of the adult male population of Great Britain were laborers working for weekly wages. They generally had the benefit of the very best medical advice, went to the hospital, and were operated on by the most skillful surgeons. But a large class went to the clubs. If a doctor had a large club practice and could not afford an assistant, one of the things that would happen to him was that he would give up ever taking off his clothes. The night bell of such a practitioner never stopped. Doctors always had to give a good deal of gratuitous advice, and when their actual work was stopped through illness or anything else, their earning power stopped. The man of business and ordinary tradesman had a great advantage in that respect. Doctors had also appearances to keep up and incurred a great many expenses really for the sake of their patients. It was therefore clear why many of the medical men who were in a tolerable practice were much poorer than they appeared to be, and why the great mass of doctors had to be described as miserably poor men.

The attitude of socialism toward the poor man was always that the poor man was necessarily a bad and dangerous man. The attitude of the man who was not a socialist toward poverty was that poverty was a very good thing, that it developed character, and in other particulars had a beneficial effect. But the really sensible man always regarded poverty as a bad thing and held that the poor man was always dangerous, and that the doctor was a specially dangerous man when poor. The doctor's poverty at the present time drove him necessarily into doing things which he would not do if he were independent. He was—like most men—as honest as he could afford to be. The carrying out of all the various hygienic measures which doctors knew to be scientifically necessary would be enormously expensive, and the slightest attempt to force them on patients or to let patients know that the absence of them was dangerous would cost a man his

practice and his livelihood. What the great mass of patients really needed, at the present time, was not medicine or operations, but money, better food and better clothes—and more frequent changes of the latter—and well-ventilated and well-drained houses; but what was the use of prescribing those things to unfortunate people who could hardly keep body and soul together? The patient, not being able to afford scientific treatment, demanded cheaper "cures," and the result was that the doctor had to gratify him in a way. The doctor depended on his patient for his livelihood, and therefore was dependent on the patient's ignorance, and finally had to flatter all his worst delusions. A doctor was like a servant trained in one of those big charitable institutions that train servants. He obtained his training at the hospitals, when he had nurses and antiseptics, and so on. He was placed in a building wonderfully and beautifully built, with no right angles, but beautifully rounded corners; and then, after all that (exactly like the servant), he was suddenly pitched into a poor district and had to go through life in surgically dirty clothes and do his work in surgically dirty rooms with surgically dirty people who could not afford medicines or anything, and he got a sort of skill at it. Mr. Shaw contrasted the position of the ordinary doctor and that of the medical officer of health, with his independent salary, and his position irrevocable by the local authorities. The medical officer of health was in an ideal position—the socialist position—the position in which socialism wanted to place all doctors.

A doctor at the present time was expected to do everything connected with his profession. That did not apply to the other professions. The judge sentenced a man to be hanged, but he was not expected to be the hangman. If he were the doctor he would be expected to act as hangman. There were men of extraordinary dexterity as operators whose whole time should be reserved for the most difficult cases, but instead one found those men poulticing whitlows and doing trumpery dressings that should be done by the nurse. They were found prescribing for ladies who had the same reason for asking for tonics as the charwoman had for asking for gin. In order to get the maximum of hygienic influence and the greatest economy in using the skill of the profession, it was necessary to get medical men organized, so that different grades did different work, and that the mere routine should not be left to the best men to do. Such organization was altogether impossible while private practice was the rule. It could be done only if the profession was organized publicly by the state. A private practitioner could not get ahead of the prejudices of his patient, and one of the things from which the doctor ought to be released was that abject dependence on his patient. Public opinion would be the final arbiter all along, but it was important to get every doctor in favor of educating the public scientifically, whereas now the doctor had the very greatest interest in preventing the patient from knowing anything at all. The medical profession must really be socialized, for the reason that medical men were finding themselves more and more driven to claim powers over the liberty of the ordinary man which could not possibly be entrusted to any private body whatever. If these things were going to be done and if scientific opinion was going to compel people on such a scale, then there must be democratic control. It would be intolerable tyranny unless it were controlled by the people. They were coming more and more to the point of giving the doctor the power of saying what was to be done with the child and denying that power to the parent. It was a curious step and one that would be fought energetically. It was impossible to leave the body in the hands of a private practitioner.

"You must make up your minds," concluded Mr. Shaw, "that the inevitable result is the socialization of the medical profession. As to what will happen when you have the doctor in the responsible, dignified and independent position of a public servant, instead of a private tradesman—as to what will happen to the surviving private practitioner I do not know. If a doctor finds himself in the position of depending on the caprice and ignorance of patients he will always, under

socialism, be able to get an independent position in the public service, and if he elects to continue in private practice he will not be compelled to make the humiliating concessions and the treacheries to science that he has now to do. Having the alternative of public service, he will be in as independent a position as if he were a public servant, and, on the other hand, the patient will always have the choice of getting public attendance; and so he, having the alternative, will be as well off with the private doctor as he will be with the public doctor."

Treatment of Nephritis with Tincture of Cantharides.—Lancereaux of Paris has been using this drug since 1892 in a number of cases of nephritis characterized by irritation of the epithelium of the uriniferous tubules with almost complete anuria. The anuria being the result of obstruction of the tubules by the swollen and degenerated epithelium, it seems logical to combat it by a drug which acts directly on this epithelium. Tincture of cantharides has a destructive action on the epithelium in large doses, but in small amounts merely modifies it in the desired direction. In one of the typical cases described in his communication read before the Academy of Medicine lately a child of 8 with scarlatinal nephritis, relative anuria with 2.5 per cent. albumin and much sediment consisting of blood corpuscles and epithelial tube casts, with menacing uremia and great depression, was restored to health by ten drops of tincture of cantharides given in syrup in the course of five days. The urine increased from 200 to 600 gm. within twenty-four hours after the first dose of a single drop of the tincture. He remarked that the effect of this single drop shows that it does not take much to save a life, for there was not a shadow of doubt as to the impending peril in this case. The practitioner may well meditate on this, he added, never forgetting that a medicine given at the right time and in the right dosage may be followed by almost miraculous results. In three other cases in young men the symptoms of epithelial nephritis developed after excess in river bathing, etc. After failure of the ordinary measures, Lancereaux gave five drops of the tincture, increasing to twelve drops in the course of a week and the output of urine rapidly returned to normal. He gives the tincture in a mucilaginous vehicle and always uses a freshly made preparation for each case as an old tincture soon loses its properties. In differentiating the type requiring this treatment, the tint and density of the urine, the presence of epithelial tube casts and cells are important diagnostic aids besides the tendency to anuria. They reveal the primarily epithelial nature of the disturbances which justifies this treatment with tincture of cantharides. Nephritis affecting especially the arteries and connective tissue is not benefited by it, as he has demonstrated in a number of cases. In these cases diuretics do wonders, supplemented by a drug to act on the connective and vascular tissue, such as potassium iodid.

Factors Which Determine Growth and Activity of the Mammary Gland.—C. Foa (*Arch. di fisiol.*, v, 520) gives the results of many experiments undertaken to determine the factors which influence the growth and activity of the mammary gland. Subcutaneous or intraperitoneal injections of extracts of calf embryos into adult female dogs gave negative results if the extract was first heated to 110 C. Similar results were obtained on injection of heated extracts of embryonic thymus and thyroid glands. Unheated extracts gave positive results. A watery extract of calf embryos injected daily for twenty days into a dog (non-lactating) produced perceptible enlargement of the mammary glands after fifteen days. After thirty-five days a fluid was squeezed out of the nipple which microscopically looked like milk, and which reduced Fehling's solution. Injection of embryonic extracts into a lactating dog produced no change in the mammary secretion. Transplantation of mammary glands gave negative results. Transfusion experiments were negative. The blood of a lactating goat produced no change in the mammary gland of a non-lactating goat, and *vice versa* no change in the

secretion of the lactating gland. The change of a resting gland to the lactating stage is due to the influence of a hormone secreted by the embryo. This hormone is not specific for the individual animal or to a given species. It is not clear whether extracts of embryos have an influence on the mammary glands of pregnant animals. A mammary gland which has greatly developed under the influence of the embryonic hormone is capable of secreting milk.

Solid Ovarian Teratomas.—Sjöval, in *Hygiea Festsband*, published by Svenska Läkaresällskapet in celebration of the centennial of its existence, points out that the term ovarian teratoma is a collective one including tumors of different histologic types. He regards the so-called secondary malignant degeneration as without basis in the structure of the tumors. Solid ovarian teratomas may be divided into two classes—malignant and non-malignant. In the first class the malignancy may be that of sarcoma, neuroepithelioma or ordinary carcinoma. This group gives the same unfavorable prognosis as ordinary malignant tumors. The second group falls into two sub-groups; (a) the tissues all tending to maturity; (b) all or some of the tissues persisting at an early embryonal stage.

The Coagulation Time of the Blood of Man.—T. Addis (*Quart. Jour. Exper. Physiol.*, 1908, 1, 305) describes a new method of estimating the coagulation time. This involves rather elaborate apparatus, devised by Addis, to meet the "four conditions which must be fulfilled by any method which is to yield results which can be relied on:" (a) A uniform method of obtaining the blood; (b) constant temperature during an experiment; (c) the same amount of contact with foreign bodies; (d) a clear and definite end point of coagulation. All previous methods are discussed and pronounced unreliable. It is found that temperature has a great effect on the time of coagulation. The variation in time is most marked with the lower temperatures. Thus from 3 C. to 7 C., there is a diminution of time of more than 30 minutes (from 63 minutes, 20 seconds to 32 minutes, 45 seconds). "At about the normal temperature of the body the coagulation time is shortest, 1 minute, 25 seconds, becoming gradually longer at temperatures above 40 C. and below 36 C." In over 300 observations there was an absence of the supposed diurnal variation in the coagulation time of the blood. "For twenty days the coagulation time of my own blood and that of certain other persons was taken every hour or two, and in no one of the charts prepared from these observations do any variations occur which are outside the limit of experimental error." Addis also concludes that calcium and citric acid, when given by the mouth, have no influence on the coagulation time.

Prevention of Anesthesia Asphyxia and Postoperative Pneumonia.—The accompanying illustration, reproduced from the *Lyon Chirurgial*, March, 1909, page 573, shows the advisability of emptying the stomach as a routine measure before any operation on this organ. The case was one of stenosis of the pylorus with much vomiting and almost incessant hicough. The usual preliminary lavage of the stomach was omitted on account of the incessant vomiting and the possible shock from the lavage and for the additional reason that it is difficult to prevent fluid from the lavage finding its way into the air passages. The patient was tranquil under a small amount of the Billroth mixture, but vomited as soon as the surgeon commenced the gastroenterostomy. A few moments later threatening asphyxia required artificial respiration, under which the operation was concluded, but recurring asphyxia proved fatal. The larynx and trachea were found plugged with grape skins and seeds. Since this experience, Goullioud, who reported the case at a meeting of the Lyons *Société de Chirurgie*, makes a practice of lavage of the stomach the day before the operation, as he believes that stenosis of the pylorus is peculiarly liable to entail such accidents, although vomiting in the course of the anesthesia at any operation may have similar results. Vomiting occurs more readily when the anesthesia is not deep enough to abolish the reflexes.

It would have been better in the case reported, he says, to have used more of the anesthetic or none at all. Latarjet reported a case in 1905 in which the patient was suffocating from aspiration of clots during resection of the jaw, and he aspirated out the clots through a rubber tube with a hydrocele syringe. Goullioud suggests the possibility of preventing such accidents during operations by applying a clamp to the cardia, shutting it off from the stomach proper. In two cases recently he used a Doyen stomach forceps and found that the desired purpose was thus attained without the slightest inconvenience. The measure may be found useful in cases



Trachea and bronchi filled with grape skins which were aspirated after vomiting during anesthesia and which caused fatal asphyxia.

contraindicating lavage for any reason or in which it has been omitted. He adds that this clamping of the cardia may aid in reducing the number of cases of postoperative pneumonia—the more extensive his experience the more he is convinced that these postoperative pneumonias are in reality due to matters finding their way from the esophagus into the air passages—"deglutition pneumonias."

Marriages

WILLIAM HENRY LUEDDE, M.D., to Miss Nettie Belle Shryock, both of St. Louis, Mo., March 24.

ADOLPH B. SMITH, M.D., Woodstock, Ill., to Miss Olive Branche Alexander of Chicago, March 10.

WILLIAM J. RICHARDSON, M.D., Greensboro, N. C., to Miss Annie Lewis Faulkner of Danville, Va., March 17.

HARRY FLETCHER WHITE, M.D., Wachapreague, Va., to Miss Sarah Elizabeth Cottrell, at Richmond, Va., March 24.

WILLIAM B. CARR, M.D., Washington, D. C., to Miss Eleanor McGill of Jersey City, N. J., in Washington, March 19.

JOHN FRANKLAND ROWLAND, M.D., Hot Springs, Ark., to Miss Lillian Driver of Osceola, Ark., March 25.

Deaths

Henry Tucker Percy, M.D. University of Virginia, Charlottesville, 1872; a member of the American Medical Association; medical inspector U. S. Navy; who entered the naval service in 1873, and during the Spanish-American war was surgeon of the U. S. *Charleston*, and later on duty on the *Olympia*, and at the Norfolk and Washington Navy Yards; in command of the U. S. Naval Hospital at Yokohama, Japan, in 1905 and 1906; died at the Naval Medical School Hospital, Washington, March 31, from uremia, aged 59.

Letchworth Smith, M.D. College of Physicians and Surgeons, New York City, 1898; who served in Porto Rico during the Spanish-American War; director of laboratories at the Hospital College of Medicine, and later at the University of Louisville; chief inspector of milk in the Louisville Health Department; organizer of the Babies' Milk Commission; and the Tenement House Commission; died in his home April 7, from organic heart disease, aged 39.

Charles Joseph Adrien Le Claire, M.D. University of the Victoria College, Coburg, Ont., 1887; a member of the Connecticut State Medical Society; once president of the Windham County Medical Society and of the French National Congress of Connecticut; a member of the local board of U. S. Pension Examining Surgeons, and of the school board of Killingly; died at his home in Danielson, April 1, aged 45.

Charles Wright Huff, M.D. University of Pennsylvania, Philadelphia, 1874; a member of the Michigan State Medical Society, and the Kalamazoo Academy of Medicine; United States pension examining surgeon for the district; for several years president of the board of trustees of Gobleville; died March 31, at his home, aged 59.

John Hudson Thompson, M.D. College of Physicians and Surgeons, New York City, 1852; of Goshen, N. Y.; surgeon of the One Hundred and Twenty-Fourth New York Volunteer Infantry, and later brigade and division surgeon, during the Civil War; died in Middletown, N. Y., April 3, from senile debility, aged 82.

Robert Crane, M.D. Yale University, New Haven, 1843; town clerk and postmaster of Middlebury, Conn., for several years, and in 1857 a member of the house of representatives; and later assistant assessor of internal revenue; died suddenly at his home in Waterbury, Conn., March 31, from senile debility, aged 87.

John Jacob Eargle, M.D. University of Nashville, Tenn., 1888; a member of the American Medical Association; and formerly health officer of Comanche county, Texas; died at his home in Proctor, March 16, 1908, from cerebral hemorrhage, aged 51.

David E. Bruton, M.D. College of Physicians and Surgeons, San Francisco, 1902; of Austin, Nevada; died in his office, Nov. 20, 1908, from the effects of a gunshot wound, believed to have been self-inflicted with suicidal intent, while despondent, aged 35.

Albert Groves Ellinwood, M.D. University of Buffalo (N. Y.), 1848; of Attica, N. Y.; a member of the American Medical Association; local surgeon of the Erie Railroad; died in a hospital in Buffalo, March 26, after a surgical operation, aged 84.

Robert Eleazer Ensign, M.D. (N. Y.) Medical College, 1857; a member of the Connecticut State Medical Society and a veteran of the Civil War; for 20 years medical examiner of Berlin, Conn.; died at his home, March 29, from heart disease, aged 75.

Milton LeRoy Somers, M.D. Medico-Chirurgical College, Philadelphia, 1897; a member of the Atlantic City (N. J.) Academy of Medicine and secretary and health officer of Atlantic City; died at his home, April 3, from tuberculosis, aged 38.

Jacob Theodore Simmons, M.D. Tulane University, New Orleans, 1883; a member of the American Medical Association; of Simmonsville, Miss.; died in the Hôtel Dieu, New Orleans, February 22 from disease of the heart and liver, aged 55.

J. Orpheus Jolley, M.D. Sioux City (Iowa) College of Medicine, 1904; of Dixon, Neb.; a member of the Nebraska State Medical Association; died in St. Vincent's Hospital, Sioux City, Iowa, April 1, from traumatic tetanus, aged 37.

Stephen M. Gonzalez, M.D. Kentucky School of Medicine, Louisville, 1886; assistant surgeon in the Army during the

Spanish-American War; died in a hospital in Pensacola, Fla., March 27, from pneumonia, aged about 45.

Perry David Goldsmith, M.D. University of the Victoria College, Coburg, Ont., 1868; L.R.C.P., L.S.A., M.R.C.P., Eng., 1887; M.R.C.S., London, 1892; of Toronto; died in Belleville, Ont., April 5, from heart disease, aged 64.

Willard Southard Whitney, M.D. Homeopathic Hospital College, Cleveland, 1868; a pioneer practitioner of Big Rapids, Mich.; died at the home of his daughter in Pontiac, April 2, from senile debility, aged 90.

Joseph Clifford Moore, M.D. New York Homeopathic Medical College, 1866; a member of the New Hampshire Senate in 1880; died at his home in Laconia, N. H., March 19, from cerebral hemorrhage, aged 64.

James Valentine Pope, M.D. St. Louis Medical College; assistant surgeon in the army during the Civil War; died at his home in Forest Grove, Ore., Aug. 2, 1908, from chronic disease of the intestine, aged 72.

J. Edward Moyler, M.D. Medical College of Virginia, Richmond, 1864; assistant surgeon in the Confederate Army and Navy during the Civil War; died at his home in Petersburg, Va., March 27, aged 67.

Arthur W. G. Farrar, M.D. Leonard School of Medicine, Raleigh, N. C., 1893; of Richmond, Va.; died in the Central State Hospital, Petersburg, from valvular heart disease, March 3, aged 39.

Joshua T. Wesley, M.D. University of Louisville (Ky.), 1865; a member of the American Medical Association; died at his home in Middleburg, Ky., March 24, from pneumonia, aged 69.

Thomas S. Foley, M.D. Hospital College of Medicine, Louisville, 1884; of Pineville, Ky.; a member of the American Medical Association; died in Louisville, March 25, from meningitis, aged 47.

William Worrick Holmes, M.D. Barnes Medical College, St. Louis, 1903; of Harrisburg, Ark.; died recently in St. John Hospital, St. Louis, from organic heart disease, aged 47.

Charles C. Hummel, M.D. College of Physicians and Surgeons, Chicago, 1899; of Ransom, Ill.; died in the Oakes Home, Denver, March 15, from pulmonary tuberculosis, aged 39.

Lester H. Luse (license, Ohio, 1896); for twenty-five years secretary of the Lake County (Ohio) Pioneer Society; died at his home in Willoughby, Ohio, April 1, aged 71.

Alexander Rixa, M.D. Rush Medical College, Chicago, 1884; of New York City; died in Lebanon Hospital, New York City, March 16, from carcinoma of the rectum, aged 65.

Newton Clark Stevens, M.D. University of Maryland, Baltimore, 1875; a member of the Louisiana State Medical Society; died at his home in Ama, January 28, aged 62.

Ammi Ruhamah Hahn, M.D. Harvard Medical College, Boston, 1869; a member of the Massachusetts Medical Society; died at his home in Boston, March 30, aged 67.

Joseph W. Rhoades, M.D. Medical College of Georgia, Augusta, 1872; died at his home in Jewell's, near Sparta, Ga., March 26, from heart disease, aged about 60.

J. Harvey Guthrie, M.D. Starling Medical College, Columbus, 1898; formerly of Farmington, N. M.; died in Urichville, Ohio, March 14, from tuberculosis, aged 37.

Roy S. Blackburn, M.D. Keokuk (Iowa) Medical College, 1898; a member of the Illinois State Medical Society; died at his home in Low Point, March 28, aged 36.

C. L. Clawson, M.D. Medical College of the State of South Carolina, Charleston, 1843; died at his home in Richburg, S. C., March 27, from septicemia, aged 89.

Ernest F. G. Horst, M.D. New York University, New York City, 1876; died at his home in St. Paul, Minn., March 26, from an overdose of chloroform, aged 55.

Charles W. Harwood, M.D. Jefferson Medical College, Philadelphia, 1883; died at his home in Worcester, Mass., March 26, from disease of the liver, aged 52.

Orrin Hart Boynton, M.D. Dartmouth Medical School, Hanover, N. H., 1861; of Lisbon, N. H.; died at the home of his son in that city, March 27, aged 74.

Samuel Friedlander, M.D. Minnesota Hospital Medical College, Minneapolis, 1885; died at his home in Minneapolis, Feb. 21, from arteriosclerosis, aged 68.

Edwin Charles French, M.D. Hospital College of Medicine, Louisville, 1899; died at his home in El Paso, Texas, March 23, from typhoid fever, aged 38.

James H. Wilson, M.D. Jefferson Medical College, Philadelphia, 1885; of Hazelton, Pa.; died in a hospital in Pittsburg, February 4, from pneumonia.

George W. Bronson, M.D. Rush Medical College, Chicago, 1881; died at his home in Streator, Ill., March 31, from cerebral hemorrhage, aged 55.

Charles B. Jared, M.D. Hahnemann Medical College, Chicago, 1905; a lecturer in his alma mater; died at his home in Chicago, April 5, aged 52.

Luigi Galvani Doane, M.D. University of Michigan, Ann Arbor, 1871; died at his home in New York City, April 4, from heart disease, aged 59.

David W. Moore, M.D. College of Physicians and Surgeons, New York City, 1855; died at his home in Waupun, Wis., January 23, aged 83.

Daniel Wixon Winters, M.D. Jefferson Medical College, Philadelphia, 1873; died at his home in New Danville, Pa., February 13, aged 61.

William Clay Frew, M.D. Long Island College Hospital, Brooklyn, N. Y., 1869; died at his home in Coshocton, Ohio, April 2, aged 64.

John H. Brooke, M.D. Starling Medical College, Columbus, Ohio, 1864; died at his home in Newark, Ohio, April 2, from nephritis, aged 78.

Mary Eudora Farnham Whitney, M.D. Boston University School of Medicine, 1893; died at her home in Medford, Mass., March 30.

Allen P. McCullough, M.D. University of Nashville, Tenn., 1857; of Milton, Tenn.; died at his home, March 13, aged 73.

Allen A. Webster (license, Neb., 1891); died at his home in Mills, Neb., recently, from general paresis, aged 75.

Allen Burdick, M.D. Harvard Medical School, Boston, 1882; died at his home in Boston, March 29, aged 52.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

FLORIDA: Tallahassee, May 19-20. Sec., Dr. J. D. Fernandez, Jacksonville.

GEORGIA: Regular: Capitol Bldg., Atlanta, April 30-May 1. Sec., Dr. E. R. Anthony, Griffin. Homeopathic: Atlanta, May 1. Sec., Dr. R. E. Hinman, 153 Whitehall St.

LOUISIANA: Regular: New Orleans, May 20-21. Sec., Dr. Felix A. Larue, 211 Camp St. Homeopathic: 919 St. Charles St., New Orleans, May 3. Sec., Dr. Gayle Aiken, 1102 St. Charles Ave.

MASSACHUSETTS: State House, Boston, May 11-13. Sec., Dr. Edwin B. Harvey, Room 159, State House.

MISSISSIPPI: State Capitol, Jackson, May 11-12. Sec., Dr. S. H. McLean.

MISSOURI: Kansas City, May 17-19. Sec., Dr. J. A. B. Adcock, Warrensburg.

NEBRASKA: State Capitol, Lincoln, May 25-27. Secretary, Dr. E. J. C. Sward, Oakland.

NEVADA: Carson City, May 3. Sec., Dr. S. L. Lee.

NEW YORK: Albany, May 18-21. Dr. Charles F. Wheelock, Albany.

University of Missouri Adopts Higher Requirements

The University of Missouri will increase the requirements for admission beginning Sept. 1, 1910, to two years of liberal arts' college work, including specified courses in physics, chemistry, zoology and modern languages. One year of such work has been required since 1906.

Leland Stanford University's New Medical Department

The announcement of the Department of Medicine of the Leland Stanford Junior University, formed by the union of Cooper Medical College with that university, has just been received. It is stated that three years of preliminary college work, including one year each of physics, chemistry and physiology or biology with laboratory work and a reading knowledge of French or German will be required for admission. The work of the first three semesters of the medical course is to be given in Palo Alto and the work of the last five semesters in San Francisco.

Medical Education and Nostrums, Sixth Letter

The following is the sixth of a series of letters issued jointly by the Council on Medical Education and the Committee on Medical Teaching of the Council on Pharmacy and Chemistry:

To Medical Teachers:—This letter contains a few suggestions for the departments of materia medica and pharmacy. These departments, and those of pharmacology and therapeutics, are the most directly interested in the conditions which we have described. On them has been placed the entire blame for these evils. This charge is certainly exaggerated; but they should do their utmost to deprive it of any basis.

Materia Medica.—The classical course in materia medica is the very antithesis of the nostrum business. For this very reason, perhaps, there is some danger that the forest may be hidden by the trees. Every occasion should be taken to impress on the student the general superiority of the standard, established drugs (see O. T. Osborne: "The Sufficiency of Official Drugs," THE JOURNAL, Oct. 31, 1908, p. 1477); the fact that these have been studied and tested by a quantity of clinical experience which vastly exceeds that available for any of the novelties; the fact that they have already undergone the expurgation of the survival of the fittest, while the new remedies are continually being discarded as useless. The history of digitalis, or the classical example of venesection, may be cited as object lessons in overconfidence in such superficial observations as are now used to bolster up the status of the nostrums.

The ordinary course of materia medica often fails to place sufficient emphasis on these points of superiority, or on the fact that it is rarely necessary to use other than official remedies. It should insist that the prescriber, in using unofficial remedies must take on himself the responsibility of deciding whether these have been thoroughly tested under proper experimental conditions, by independent investigators, and not merely by the paid agents of the manufacturers.

To render this teaching effective, however, the course in materia medica should discard those official substances which experience has shown to be superfluous.

Pharmacy.—This department can teach to the student the scientific superiority of simple pharmaceutical preparations over nondescript mixtures. By the demonstrations of official products, and by a little individual practical work on the part of the student, it can impress the fact that pharmacy is not a mystery controlled exclusively by the nostrum houses. By a little practice in dispensing, it can teach to the student the feasibility of extemporaneous prescribing for the individual patient. In the same way it can help to remove the weak dread of incompatibilities.

Medical Education and Nostrums, Seventh Letter

This is the seventh of a series of letters issued jointly by the Council on Medical Education and the Committee on Medical Teaching of the Council on Pharmacy and Chemistry.

To Medical Teachers:—This letter contains a few suggestions for the departments of pharmacology and therapeutics.

Pharmacology.—This department should teach the student how the actions of medicines must be investigated. If it is successful in creating a taste for high standards in experimental work, it will have done its full share toward eradicating the nostrum evils. The latter, however, furnish excellent object lessons of how experimental work should *not* be done. The value of pharmacology can be greatly emphasized to the student by analyzing the claims of almost any proprietary mixture, or by incidentally comparing the evidence for any of the new products, in quality or quantity, with that of the official substance with which it competes. The claims for eactin or for isopral would furnish instructive examples. (Studies of the actions (?) of eactin may be found in THE JOURNAL, Sept. 21, 1907, p. 1023, and March 21, 1908, p. 956.)

Toxicology.—This department can draw some of its best illustrations of acute and chronic poisoning by morphin, heroin, cocain, chloral, atropin, arsenic, acetanilid, phenols, and the synthetics, etc., from the nostrum literature, and thus emphasize the danger of prescribing little-known mixtures and drugs; the danger of adding to the work of the asylums or of the coroner.

Therapeutics.—This department should be particularly careful to inculcate a sound conservatism, both by precept and example. The deceptive nature of superficial clinical observa-

tions, the danger of confounding *post hoc* and *propter hoc*, the temptation of making far-reaching deductions from slender data—these should all be emphasized as an incidental part of the ordinary teaching. Here again examples from the nostrum literature furnish the most striking object lessons.

It is also necessary to combat the false statement that extraordinary virtues are developed in ordinary remedial agents by mysterious methods of combination, or by the addition of inactive substances. This might seem superfluous; but constant reiteration gradually gains credence even for the greatest absurdities. Many examples of this deception might be given, but Anasarcin and Anedemin (THE JOURNAL, May 4 and 11, 1907, pp. 1535 and 1641) are among the most flagrant.

This department should also emphasize the foolishness of discarding through the employment of secret or semi-secret mixtures the therapeutic data, positive and negative, so painstakingly accumulated by preceding generations of physicians, and thus the foolishness of the argument that the physician is not concerned with the composition of a remedy, but only with its actions.

The practicing therapist also has superior facilities for observing numerous cases of the abuse of "ethical" proprietary remedies by the laity. The incidental relation of a few personal experiences of this sort can not fail to be profitable to his students.

Prescription-Writing.—No single factor has played so powerfully into the hands of the nostrum-maker as insufficient drill in prescription-writing. "Drill" is what is needed. The principles and practice of prescription-writing can only be acquired effectively by frequent practice. This should teach not only the minutiae of the technique of this important art, but also the individual study of the conditions of the case; the special adaptability of the different preparations of the official materia medica, the methods of administration, the proper vehicles and flavors, and the avoidance of incompatibilities. The manufacturers of pharmaceutical "specialties" say that their richest harvest is gathered from those physicians whose education in this department has been neglected.

Alabama January Report

Dr. W. H. Sanders, chairman of the State Board of Medical Examiners of Alabama, reports the written examination held at Montgomery, Jan. 7-10, 1909. The number of subjects examined in was 10; total number of questions asked, 66; percentage required to pass, 75. The total number of candidates examined was 27, of whom 7 passed, including 2 non-graduates, and 20 failed, including 13 non-graduates. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Medical College of Alabama.....	(1890)		78.
University of Michigan.....	(1907)		75.
University and Bellevue Hospital Medical College...	(1905)		84.
University of Pennsylvania.....	(1907)		76.
Vanderbilt University	(1903)		84.
FAILED			
National Medical University, Chicago.....	(1907)		52.1
Boston University	(1900)		65.8
Leonard School of Medicine.....	(1905)		52.3
Meharry Medical College.....	(1907)		41.1
University of the South.....	(1907)	39.7,	56.8
University of Nashville.....	(1907)		38.1

District of Columbia January Report

Dr. George C. Ober, secretary of the Board of Medical Supervisors of the District of Columbia, reports the written examination held at Washington, January 12-15, 1909. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 15, of whom 7 passed and 8 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
George Washington University.....	(1902)	78.2; (1906)	82.9, 84.1
Georgetown University	(1906)		80.2
Howard University	(1908)		75.3
University of Michigan.....	(1903)		77.9
University of Toronto, Canada.....	(1895)		84.7

FAILED			
George Washington University, (1907)	24.8,*	47.9, 70.1; (1908)	66.8; (1907)
Howard University	(1907)	57.8, 62.7, 69.	

* Completed three papers only.

Connecticut March Report

Dr. Charles A. Tuttle, secretary of the Connecticut Medical Examining Board, reports the written examination held at New Haven, March 9-10, 1909. The number of subjects examined in was 12; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 13, of whom 8 passed and 5 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Yale Medical School.....	(1906)		80.7
Tufts College Medical School.....	(1902)		78.4
Cornell University Medical College.....	(1899)		87.2
Long Island College Hospital.....	(1908)		79.2
University and Bellevue Hospital Medical College..	(1907)		75.8
Columbia University College of Physicians and Surgeons	(1906)		78.1
University of Vermont.....	(1907)		76.8
University of Toronto, Canada.....	(1904)		84.3
FAILED			
Georgetown University	(1908)		74.3
Maryland Medical College.....	(1908)		71.6
Baltimore Medical College.....	(1908)		74.1
Western Pennsylvania Medical College.....	(1907)		64.4
University of Naples, Italy.....	(1905)		72.6

Medicolegal**Habitual Drunkard's Case Treated Like One of Permanent Personal Injury**

The Supreme Court of Nebraska holds, in *Acken vs. Tinglehoff* and others, that in an action by a wife against licensed liquor dealers to recover damages for non-support by her husband, who was made an habitual drunkard either wholly or partially through the defendants' traffic, it is competent to introduce the Carlisle Tables of Mortality as evidence of the husband's expectancy of life when a sufficient foundation therefor is laid by evidence tending to show that the husband's habitual inebriety has permanently impaired his earning capacity. It is said in the opinion in the case that evidence of expectancy is usually introduced in damage cases for personal injuries or death. The case under consideration is not, strictly speaking, a personal injury case. It is permitted by the statute and did not exist at common law. It is, however, very similar to a personal injury case in so far at least as the amount of recovery is measured by the same rules. Every reason for permitting such evidence of expectancy in personal injury cases exists in this case. While it is true that drunkards may reform, yet the probability of any particular one doing so is a matter for argument, and not for presumption. It is improbable that any person could have special knowledge which would permit him to testify to a certainty as to whether or not an habitual drunkard would reform or be restored to health, regain his natural faculties, and perform the duty of supporting his family. Such testimony would not strengthen the plaintiff's case. It is for the jury to determine from the evidence of the husband's habits and condition whether his failure to support the family will be permanent.

Incompetent Evidence to Discredit Physician as Witness—Damages for Injury

The Court of Civil Appeals of Texas says, in *Missouri, Kansas & Texas Railway Co. of Texas vs. Bailey*, a personal injury case brought by the latter party, that a physician testified in behalf of the plaintiff that he had treated him since soon after he was injured, that he had made several examinations of him, and that his opinion was that the plaintiff's left limb was permanently paralyzed. On cross-examination the witness testified that he remembered a man named Lynch, and that he had stated as a witness on the trial of a suit brought by the said Lynch against this same company that in his opinion the said Lynch was paralyzed and would never be able to walk again. The company then offered to prove by another witness that he saw Lynch about three weeks before the trial of the present case, and that he was able to walk without the assistance of any crutch and prac-

tically as well as he ever could. This testimony was objected to, and it is held that there was no error in excluding it.

It was not competent, the court thinks, to discredit the physician, who had testified as an expert, in the manner attempted. It is a well-settled general rule that all questions tending to raise collateral issues and all evidence offered in support of such issues ought to be rejected. It is said that one of the reasons why a collateral question should not be entered in the trial of a case is that it would add to the trial so much consumption of time and confusion of issues as to be intolerable. The admission of the testimony excluded in this case would have introduced into the case a collateral matter, the investigation of which would have unduly prolonged, it would seem, the trial and doubtless resulted in a confusion of real issues.

Again, while particular instances of a lack of qualification, wherever a special qualification is required for testimony to a certain fact may be brought out by questions to the witness himself, yet particular instances of mistake or error indicating a lack of expertness are, ordinarily, not provable by extrinsic evidence. This seems to be specially true of questions relating to prior instances out of court. Putting it in the strongest light for the company, it would seem that proof of such particular instances by other witnesses is only admissible at the discretion of the court when it deems it useful.

Nor does the court think that a verdict in the plaintiff's favor for \$20,000 damages was excessive, the evidence showing that he was 35 years of age at the time he was injured; that he had been an industrious and capable man who was earning \$50 a month at the time of his injury; that he was knocked unconscious and had been confined to his bed, not able to walk a step, from the date of his injury up to the date of the trial, a period of about nine months; that he was paralyzed and had suffered continuously; that his condition was permanent; and that he would probably continue so to suffer.

Construction of Portions of Wisconsin Medical Practice Act and of Terms "Physician" and "Reputable"

The Supreme Court of Wisconsin says, in the case of *State vs. Schmidt*, that chapter 264 of the Wisconsin Laws of 1897 provided for a state board of medical examiners and required all beginning to practice medicine or surgery in Wisconsin after July 1, 1897, to first procure a certificate of qualification from such board. It did not deal in any respect with members of the profession in actual practice in Wisconsin, on such date.

Chapter 87 of the Laws of 1899 enlarged the scope of the board's jurisdiction by making the privilege of every person who was a resident practicing physician in Wisconsin July 1, 1897, to continue in such practice contingent on his obtaining a certificate of qualification from the board within a prescribed time and becoming duly registered with the board. The law prescribed, as a condition of granting the certificate, that the application should be made therefor and the applicant submit in support thereof his "diploma or other credential or evidence of qualification" and be a "reputable resident physician or surgeon of good moral character who was on the first day of July, 1897, in the actual practice of medicine or surgery in the state of Wisconsin." In mandatory language the board was required, on such application being made by a person competent, as provided in the law, to make it, and supported by the evidence of qualifications prescribed—to grant the registration and certificate.

Chapter 422 of the Laws of 1905 gave the circuit courts of Wisconsin jurisdiction to annul any certificate obtained as aforesaid, in case of the issuance thereof resulting from error of the board or fraud or perjury.

From the foregoing it will be seen that the board of medical examiners in acting on the defendant's application, was required to decide, by the exercise of quasi (semi) judicial authority, first, whether the defendant was, July 1, 1897, a resident physician or surgeon and actually engaged in prac-

tice in Wisconsin; second, whether he was, at the time of the application, a reputable physician or surgeon; third, whether he was a man of good moral character.

The board was left free to prescribe its own rules of procedure, governed only by the requirement that the applicant should submit the evidence of his qualification. That, in the broadest sense the language can be reasonably viewed, related to all of the three matters of fact mentioned. It might possibly be held more restrictive, but for the purposes of this case the broader view is taken to be the correct one.

Manifestly, the Legislature conceived that it was dealing with the entire class of persons known as physicians, in the broadest sense of the term, not in any narrow sense, which would favor those claiming, and perhaps entitled to superior distinction. The purpose was very far from that of creating a monopoly in favor of special schools of medicine. The term was evidently used in its proper sense, that of including any person of whatever school, and whether belonging to any known school, engaged in good faith, in treating human ills by any remedy, or remedies, however simple, so as to be known among the people as a physician.

What has been said as to the legislative meaning is so manifest, in the court's judgment, from the very fact alone that it was dealing with an existing condition which it did not intend to disturb except to the extent of weeding out disreputable and immoral characters. But that is placed beyond all reasonable doubt by the fact that the law of 1897, to which the law of 1899 referred, expressly defined the term, making it include every person "who shall for a fee, prescribe drugs or other medical or surgical treatment for the cure or relief of any wound, fracture, bodily injury, infirmity or disease."

The court must also appreciate that the act of 1905 did not contemplate a new trial of the questions presented to the board. Aside from whether it was imposed on by fraud or perjury, the scope of the trial was limited, by the act, to the question of whether the board committed error. Just what the legislature intended by the use, unexplained, of the word "error" may admit of some doubt, but the court is constrained to believe that the term was used in the sense it is ordinarily understood as applied to trials in courts before juries. That is, while, aside from jurisdictional errors in the limited sense of such as would render the decision void, it is confined to such absence of evidence in support of the board's decision that, in no reasonable view thereof, could its decision be justified, or prejudicial refusals to admit or exclude evidence, or other prejudicial misapprehensions of law; error which might properly be denominated "jurisdictional," as regards trials before quasi judicial bodies—errors which, in the general sense are purely judicial, in the sense that a decision is binding on all concerned, till set aside by some proper proceedings for that purpose.

The board was not in error in its construction of the term "physician," as it was evident that it did not understand that term, as applied to persons practicing the healing art July 1, 1897, referred only to such as possessed that technical knowledge of the human system and knowledge of drugs and other remedies and how to administer them, commonly supposed to be possessed by members in good standing of the great schools of medicine.

Did the board commit error as to the meaning of the word "reputable?" Here was the state's bone of contention. The claim is not new, that a physician or surgeon, however learned in fact, is disreputable, unless he belongs to some incorporated medical society or holds a diploma from some reputable medical school. This court has said, and other courts have said, that the term "reputable" as used in the statute has no such legal and technical meaning as counsel claimed for it. Therefore, until the legislature shall have unmistakably used it in such sense, no such meaning can be given thereto by judicial construction.

The word "reputable" has a plain ordinary meaning having reference to general character for some honorable work. Whether one is reputable or not, means whether he is worthy

of praise or not in the particular line under consideration. If one is regarded as honorable and praiseworthy as a member of the medical profession, of whatever school, or whether classed with any particular school, by reason of the character of his work and his conduct professionally, he satisfies the statutory essentials of reputability as to his particular line, though he may never have crossed the threshold of a medical college or been a member of any medical society.

Whether as a matter of fact, as an original matter, the defendant possessed the qualifications one would expect to characterize a physician or not, as before indicated, was not for the Circuit Court, nor is it for this court to decide. The board had full authority to inquire into the matter.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

April 3

- 1 *Theories and Problems of Heredity (continued). J. Wright, New York.
- 2 Exophthalmic Goiter. C. A. McWilliams, New York.
- 3 The Third Tonsil. H. Parrish, Philadelphia.
- 4 *Cesarean Section. W. L. Harris, Providence, R. I.
- 5 *Id. B. Van Sweringen, Fort Wayne, Ind.
- 6 Nature and Treatment of Neurasthenia. S. T. Rucker, Memphis, Tenn.
- 7 Diagnosis of Diseases of the Kidney. R. H. Greene, New York.
- 8 Two Unusual Cases of Typhoid. F. W. White, Philadelphia.

1. **Theories and Problems of Heredity.**—In this, his third paper, Wright discusses the affiliation of cancer with the fundamental theories of heredity.

4. **Cesarean Section.**—Harris discusses the various measures for emptying the uterus when the pelvis is deformed. Craniotomy he dismisses unless the child is dead. Symphyseotomy and pubiotomy do not insure adequate room, are as difficult of performance as Cesarean section, convalescence is slower, and the mortality for mother and child is high. The induction of premature labor might solve the difficulty if we could be sure of the right time; but if brought about too soon, we imperil the infant's life; if we wait too long we have to face the original danger of a difficult labor. The secret of success in Cesarean section lies in operating at the opportune moment. Postponement until after the high forceps has proved useless, results in an exhausted patient and consequent impediment to success. The harm wrought by the forceps is beginning to be recognized. Harris gives the indications for Cesarean section as follows:

1. When the conjugate measurement of the pelvis is below 3½ inches.
2. When the presence of a pelvic, cervical, or vaginal tumor renders delivery impossible.
3. Central placenta prævia.
4. When, with a conjugate measurement below 3½ inches, the forceps has been applied and no advancement can be detected after ten minutes.
5. When a woman has had one stillborn child of moderate size following the application of forceps.
6. When a woman has lost two or three children from accidents during labor.
7. In cases of puerperal eclampsia at full term, Cesarean section is preferable to cervical dilatation followed by version or high forceps.
8. Several cases have been reported in which the complications following ventral fixation have made Cesarean section necessary.
9. The following pelvic deformities, dwarf pelvis, ankylosed pelvis, coxalgic pelvis, kyphotic and oblique pelvis, require the Cesarean operation.

He describes the technic. He has done the operation 21 times, 1 case including the delivery of twins, and 2 patients having been delivered twice each by Cesarean section, with the following results: All the mothers are living, and all the children but 3, 2 of whom died a few minutes after birth, and one a few days later. The 21 mothers had, previous to their operations, lost 39 children, and to-day there are in his state enjoying good health, 19 boys and girls varying in age from 3 months to 6 years, who, in his opinion, owe their existence to this operation. He insists that the antipathy to the Cesarean section must disappear.

5. *Idem.*—Van Sweringen reports three cases subjected to Cesarean section during the last ten months, respectively for the following reasons: (1) Adhesion of uterus to abdominal wall, consequent on appendicitis during pregnancy; (2) central placenta prævia; (3) contracted pelvis resembling male formation. In all cases mothers and babies are alive and well. He urges the more frequent employment of Cesarean section as a conservative measure for both mother and child. He discusses the indications given in the cases above mentioned, and says of adhesions between the uterus and abdominal wall following drainage after appendicular inflammation, that it is an increasingly common indication for this operation.

Medical Record, New York

April 3

- 9 *New Method of Recognizing Ulcers of the Upper Digestive Tract and of Localizing Them. M. Einhorn, New York.
- 10 *Postural Lung Dulness; Its Value in Diagnosis and Treatment. A. Abrams, San Francisco.
- 11 Anaphylaxis and Immunity. E. F. McCampbell, Columbus, O.
- 12 Diagnosis and Treatment of Internal Hemorrhage and of Pulmonary Hemorrhage as a Complication of Tuberculosis. T. F. Smith, Washington, D. C.
- 13 Renal Tuberculosis. E. Quick, Appleton, Wis.
- 14 *Is Gastrointestinal Autointoxication a Disease, or only a Symptom? O. L. Mulot, Brooklyn, N. Y.

9. **Ulcers of the Upper Digestive Tract.**—Einhorn describes two methods of localizing and obtaining information concerning ulcers of the stomach or upper duodenum. The first method consists of a duodenal bucket, in gelatin capsule, attached to a silk thread long enough to allow the bucket, when swallowed at night, to pass for a distance of 75 centimeters from the lips. The external end is fastened to the shirt. The apparatus is removed before food is taken in the morning, and in the presence of an ulcer or bleeding growth a blood stain will be found on the silk where it passes over the ulcer of the stomach or duodenum. The distance of the staining on the thread indicates the position and to some extent the size of the ulcer. Naturally, ulcers of the fundus and greater curvature can not be detected in this way. The other method consists of an India-rubber balloon, covered by a silk gauze bag somewhat stomach-shaped. These are attached to the end of a tube containing a stopecock and stylet. The balloon and gauze are wrapped round the end of the tube and passed into the stomach. The balloon is then inflated by means of a bulb connected with the free end of the tube, and the gauze bag thus comes into contact with the walls of the stomach and receives an impression from the surface of an ulcer similar to that found on a silk thread. Einhorn calls this apparatus the "gastric stamper." This latter method is more difficult of performance and can be done only in patients who are used to lavage and in whom that procedure is not contraindicated. The article is illustrated.

10. **Postural Lung Dulness.**—Abrams refers to the "atelectatic zones," which are circumscribed areas of pulmonary atelectasis dissociated with any demonstrable lesions, varying in size from that of a 25-cent piece to that of a dollar, or even larger, and disappearing after a deep inspiration or on application of the lung reflex test. These zones, even in normal conditions, often yield a dulness or flatness on percussion, and are frequently mistaken for lung consolidation. They bear a definite relation to the points of election and paths of distribution of the lesions in chronic pulmonary tuberculosis. Sometimes the lungs are hyper-resonant, presenting essentially the signs of emphysema consequent on a pulmonary neurosis termed by the author "acute lung dilatation." These two conditions will disappear on cocaineization of the nasal mucosa. Lung dulness is influenced by posture. Abrams describes the changes in dulness brought about by different postures, and says that postural dulness as a pathologic phenomenon is often found. It may be distinguished from that of atelectasis by the fact that the latter is usually circumscribed and may be dispelled by a series of forced inspirations, by rubbing the skin over the area of dulness to provoke the lung reflex of dilatation, and by the cocaine test. Postural dulness is usually diffused, and can not be dispelled by these means, but disappears by complete change of posture. Abrams re-

gards postural dulness as dependent on the blood normally present in the blood vessels of the lungs, which is influenced by gravity. It is most pronounced in passive congestion of the lung and is noticed slightly in pulmonary tuberculosis. He discusses Grocco's sign. He considers postural treatment of the lungs justified.

14. **Gastrointestinal Autointoxication.**—Mulot discusses the idea that gastrointestinal autointoxication is due to the intestinal bacteria, and urges that in that case we should all have it. He thinks it likely to be due to deficient quantity or defective quality of the bile. The cause of liver insufficiency is at present unknown.

Boston Medical and Surgical Journal

April 1

- 15 *Recent Progress in Treatment of Various Conditions Called Rheumatism. R. B. Osgood, Boston.
- 16 *Infection with the *Bacillus Aërogenes Capsulatus*, Following Abortion. E. B. Young and L. J. Rhea, Boston.
- 17 Tuberculous Pericarditis. C. R. Metcalf, Tewksbury, Mass.
- 18 The Wassermann Reaction in Syphilis and Other Diseases. R. I. Lee and W. Whittemore, Boston.
- 19 *Modern Ideas on the Teaching of Therapeutics and Pharmacodynamics. M. V. Tyrode, Boston.

15. **Rheumatism.**—Osgood reviews the phlegmasia theory of rheumatism during which blood letting was advocated, the lactic acid, uric acid and infective theories. He discusses the progress in treatment with drugs, serum, external or mechanical treatment, and palliative methods, and concludes as follows: We may conclude that acute articular rheumatism has not been conclusively shown on purely scientific grounds to be a specific disease in spite of the very general clinical belief that such a disease exists as an entity; that the salicyl compounds, while unquestioned controllers of pain, have not been scientifically proved to control or even shorten the course of the disease; that recent progress in treatment has been made along the lines suggested by the conception of the infective nature of the disease called acute rheumatic fever; that the tendency of this treatment is to place less reliance on drugs and more reliance on those measures calculated to combat the infection and conserve those natural forces within the body whose protective activities are called forth by the appropriate disturbance. Of the chronic types of rheumatism, without attempting any classification, he says that we may with almost common consent speak of a group of conditions which in nearly all their manifestations suggest an infectious origin—gonorrheal rheumatism and the chronic joint involvements following gynecologic infections, acute rheumatic fever, grippe, pneumonia, tonsillitis, typhoid and other diseases. Certain other chronic types in which bacteriologic research thus far has been futile present such a different clinical picture and manifest changes of such different chronology and sequence as to suggest metabolic changes only directly. He describes the attack at present being made on the whole class of chronic joint diseases, and reviews the status of treatment in infectious arthritis and the nature and treatment of the chronic forms probably not infectious. Among conditions heretofore called rheumatism, he describes lesions of various bursæ, lame back, lumbago, sciatica, sacroiliac disease, and those indefinite muscular articular pains which are often fleeting and productive of no definite lesion, other than the evidence of joint strain. He feels confident that they will be found to be closely related to occupation neuroses or to attitude, poise and balance.

16. **Puerperal Infection with *Bacillus Aërogenes Capsulatus*.**—Young and Rhea report two cases in which abortion was followed by the very rare form of puerperal infection with the *Bacillus aërogenes capsulatus*. The first case is noteworthy for the fact that a pure culture of the gas bacillus was obtained from the circulating blood during life. Clinically, the second case is interesting on account of the extraordinary extent of the eutaneous emphysema during life, and the high leucocyte count, 126,400; also in view of the possibility of an autoinfection, as the patient persistently denied any vaginal examination or attempt at criminal abortion. The skin of both patients was of a deep copper color, with spots of dark

purple, analogous to the appearance sometimes seen after the long use of hot applications. This characteristic appearance has not been noted previously, so far as is known.

19. Teaching of Therapeutics.—Tyrode briefly reviews the history of opinion in regard to therapeutics, which brought the profession to a state of therapeutic nihilism, and notes with satisfaction a reaction reinstating therapeutics. The treatment of disease can be divided into four great fields: the physical, including surgery, hydrotherapy, massage, gymnastics, x-rays, Finsen rays and radium; the psychical, dealing with mental suggestion in the waking, hypnoidal or hypnotic states; the dietetic; and the chemical, or medicinal, which deals with drugs in the old sense of the word and with organ preparations, serums and antitoxins. In view of these facts, an adequate course in therapeutics at present should devote a large part of its time to chemical agents, without neglecting the mechanical, dietetic and psychical. The courses in chemical or medicinal agents should consist of one on *matéria medica*, where the chemical and psychical properties are studied, and another in pharmacodynamics, or experimental therapeutics, where the action of these bodies is investigated. Exclusive of surgery, therapeutics other than medicinal should be taught by separate and practical courses. There should be a general course on therapeutics, besides the practical therapeutics taught in all special clinics. There should be a special organization of the men teaching therapeutics in its different branches, so that they might meet frequently and agree on plans for thorough cooperation.

Lancet-Clinic, Cincinnati

April 3

- 20 When Should the Prostate be Removed? E. O. Smlth, Cincinnati.
- 21 Appendicitis with Abscess Formation, Based on a Study of 48 Cases. H. J. Whitacre, Cincinnati.
- 22 Cardiac Complications of Rheumatic Fever. A. A. Robinson, Ogden, Utah.

Northwestern Lancet, Minneapolis

April 1

- 23 Record of First Year's Work at the Minnesota State Sanatorium. W. J. Marckley, Walker, Minn.
- 24 Lacerations of the Parturient Canal: Their Prevention and Immediate Treatment. D. L. Rundlett, Sioux Falls, S. D.
- 25 *Acute Anterior Poliomyelitis. H. G. Franzen, Minneapolis.
- 26 Spina Bifida. A. E. Hedback, Minneapolis.
- 27 A Common Nervous Disease. H. Sneve, St. Paul.

25. Anterior Poliomyelitis.—Franzen reports a case having the unusual features of perfect anesthesia, absence of preliminary fever, and persistent coldness of the skin. Electricity should not be used in the early stages of this disease, as Franzen has noted positive harm from it in acute inflammation.

Surgery, Gynecology and Obstetrics, Chicago

March

- 28 Renal Diagnosis. C. H. Chetwood, New York.
- 29 Tuberculosis of the Cervical Lymph Nodes: 275 Cases Treated by Radical Extirpation. C. N. Dowd, New York.
- 30 *Mortality in 1,000 Operations for Goiter. C. H. Mayo, Rochester, Minn.
- 31 Hysterectomy. W. D. Hamilton, Columbus, O.
- 32 *Twin Tubal Pregnancy and Bilateral Tubal Pregnancy. L. P. McCalla, Boise, Idaho.
- 33 *Surgery of the Lungs Under Positive and Negative Pressure. S. Robinson and G. A. Leland, Boston.
- 34 Primary Carcinoma of the Fallopian Tube. C. C. Norris, Philadelphia.
- 35 Thyroidectomy for Exophthalmic Goiter. A. H. Ferguson, Chicago.
- 36 An Anatomic Anomaly of Importance in Gastrojejunostomy. C. G. Levison, San Francisco.
- 37 *Resection of the Bowel. J. S. Horsley, Richmond, Va.
- 38 *Points in the Surgery of the Bile Tracts. C. U. Collins, Peoria, Ill.
- 39 Uterine and Bladder Displacements and the Best Operations for Their Cure. I. S. Stone, Washington, D. C.
- 40 An Atypical Matas Operation for Femoral Aneurism. J. M. Wainwright, Scranton, Pa.
- 41 A New, Quick, and Practical Surgical Knot. E. P. Quain, Bismarck, N. D.

30. Mortality in Goiter Operations.—Mayo says that in conquering serious diseases by surgical means, the operation itself must be as free from mortality as possible. As surgical technique and sound judgment render operating comparatively safe, serious procedures are chosen as operations of expediency and the operative mortality becomes lower, the dis-

bility is reduced, and the permanency of cure is increased. Goiter is still considered a rare disease in this country, and serious only when operated on. The mortality from early operations was high for the number operated on, as the operations were performed from great necessity after the delay of long and oft-changed medication. Operations on colloid, simple or diffuse adenomata, as a rule, involve slight risk to life. In early surgical work in hyperthyroidism 25 per cent. mortality was considered up to average; with better judgment and more careful preparation of the patient, or with graduated operations, the mortality has been reduced to 3 or 4 per cent. Mayo has in his series of 1,000 operations 574 cases of simple, colloid or diffuse adenomata, including encapsulated goiter, treated by extirpation or enucleation, with four deaths; 18 malignant, with one death; 97 cases of hyperthyroidism treated by double ligation of the superior thyroid arteries and veins, with one death, and 15 cases with single ligation, with no deaths. There were 295 cases in which more or less of the gland was removed, with 18 deaths, 7 of which were in the first 46 cases; 1 ligation, shock; 15 hyperthyroidism; 2 embolism. Ether was preceded by atropin, 1/120, morphin 1/6. Over twenty operations were done under cocaine local anesthesia. Goiter of long standing may become malignant; surgeons, therefore, should encourage early operations in sudden growths of stationary glands.

32. Twin Tubal Pregnancy.—McCalla considers that the best specification would be as follows:

1. Twin tubal pregnancy, or tubal twin pregnancy; one tube contains two embryos.
2. Bilateral tubal pregnancy; each tube contains an embryo.
3. Multiple tubal pregnancy; one tube contains one embryo and the other two or more.
4. Multiple tubal pregnancy; one tube contains no embryo, and the pregnant tube contains three or more embryos.

He tabulates 25 cases of the first, and 36 cases of the second variety, and adds 1 case of the second from his own practice. He discusses the diagnosis and operative treatment. He is convinced that the operator's individual experience and fitness should determine the time and route for operation. An abdominal operation may give more direct shock, which, to a woman who is already all but dead from shock, is a bad feature; but for one to attempt to operate by the vaginal route who is unfamiliar with the work, might give more shock to the woman than operation by the abdominal route, with which he is thoroughly conversant. McCalla is convinced, however, that to the operator familiar with vaginal work on the tubes and ovaries, that route will be the operation of choice. It gives less shock, it should require less time to do the work, and the blood clots left in the abdomen, so long as no sepsis has taken place, will do far less harm than a protracted effort to remove them by a long abdominal operation. Should the abdominal route be the operation of choice, very little time should be spent in removing the blood from the peritoneal cavity in a woman almost moribund from shock; let it alone. In this, as well as in severe cases of peritonitis, the application of the maxim applies: "Get in quick and get out quicker," provided you do your work well, and close the bleeding vessels and remove only the large blood clots by a rapid movement of the hand sweeping around the abdominal cavity. Devote time to restoring the lost vital forces. Give infusion of blood by direct transmission if it is possible to get a healthy donor, or by saline solution if not prepared to use the other. In this kind of case, let all efforts be to save the woman, and not to do any special kind of operation or to make too careful a toilet of the peritoneum.

33. Surgery of the Lungs.—Robinson and Leland discuss the question of positive or negative pressure in lung surgery and review the different methods of supplying the four elements necessary to positive pressure apparatus, namely air compression, an anesthetizing segment arc, a device for introducing these into the respiratory tract, and a means of varying the resistance to expiration. They conclude:

1. The positive-pressure method, as proved by experiments, has no more pathologic effect on the circulatory and respiratory functions than negative pressure.
2. The clinical operative results under positive pressure have justified its employment.

3. It possesses many advantages over the negative-pressure method.

4. Air compression should be excessive rather than insufficient, and is most conveniently supplied directly from a small rotary air-pump.

5. The anesthetizing segment should consist of an ether bottle with side-tracking connections, and permanent joints arranged in the simplest possible manner. Rectal anesthesia, when used, dispenses with this portion of the apparatus.

6. A positive-pressure apparatus should be supplied with a face mask which, in accidental pleural punctures with subsequent dyspnea, will amply suffice for emergency use. In most thoracic operations, it could be removed, in case of vomiting, without danger.

7. For extensive resections of the chest wall in the absence of adhesions, when the permanence of the air compression is essential, peroral intubation should eventually become the method of choice. A tube for the human has not yet been perfected.

8. For animal experimentation, masking and intubation are unquestionably the methods of choice.

9. The water bottle is the preferred device for resistance, because always available and regulated with ease.

10. All forms of rhythmical artificial respiratory devices are too elaborate for universal surgical application.

11. Afferent air of sufficient volume and pressure, with low resistance to support the normal respiratory movements, by providing air exchange and preventing collapse, is the fundamental principle of positive pressure.

The authors next describe a series of eighteen animal operations with experiments, which show that while positive pressure is not a *sine qua non* for preservation of life in the rabbit during opening of the pleural cavity, it is fatal in the dark. Human individuals may possibly vary, some resembling one, some the other.

37. Abstracted in THE JOURNAL, Jan. 16, 1909, p. 241.

38. Abstracted in THE JOURNAL, Jan. 30, 1909, p. 413.

Archives of Internal Medicine, Chicago

March

42 *Nuclear Particles in the Erythrocytes. R. S. Morris, Baltimore.

43 *Specific Chemical Therapy of the Trypanosomiasis and Spirillooses. B. T. Terry, New York.

44 The Agglutinating Power of the Blood Serum of Tuberculous Patients. P. Courmont, Lyons, France.

45 *Effect of Adrenalin on Intestinal Hemorrhage. C. J. Wiggers, Detroit.

46 *The Therapy of Diabetes Mellitus. W. Falta, Vienna, Austria.

47 Production of Morbid Changes in the Blood Vessels of the Rabbit by Alcohol. W. de B. MacNider, Chapel Hill, N. C.

42. The Erythrocytes.—Morris says that evidence of regeneration of the blood is of great value, not only in the diagnosis, but also in the prognosis and treatment of anemias. In addition to the ordinary signs he refers to the presence, which, with certain exceptions he has constantly found, of a few very characteristic nuclear particles in specimens of cat's blood, fixed and stained in the usual manner. Nuclear particles have been found in full grown animals only during active regeneration of the blood, that is, after severe or repeated hemorrhages, etc. They have been found in the blood of embryonic animals and of the human embryo, and in the most varied conditions in some human adults, in whose blood other evidences of regeneration were present. As yet, Morris has not found them in normal blood, but has observed them in nine cases of pernicious anemia, in two cases of anemia in infants, in two cases of secondary anemia, in three of chronic myeloid anemia, and in one of anemia after splenectomy. They were also present in smears of the bone marrow in two cases of pernicious anemia. Since they are found in bone marrow, and are almost always associated with other evidences of regeneration of the blood, he thinks that nuclear particles may safely be considered a sign of regeneration. Morris describes the method of staining to demonstrate them, and discusses the relations and differences between them and Howell's bodies.

43. Trypanosomiasis and Spirillooses.—Terry discusses trypanosomiasis in general and reviews their therapy since 1904. He describes four groups of medicaments: (1) The benzidine dyes; (2) the basic tryphenyl methane; (3) arsenical compounds (sleeping sickness); (4) antimony compounds. He discusses the drawbacks and dangers of treatment, the recently discovered resistant strains, the natural variability of trypanosomes and the combined treatment by the simultaneous or alternate use of two or more medicaments or methods of administration. He next discusses the spirillooses, (1) of fowls (South America); (2) of African tick fever; (3) of European relapsing fever; (4) syphilis.

45. Adrenalin in Intestinal Hemorrhage.—Wiggers reports in detail a careful study of this subject, and draws the following conclusions:

1. Large doses of adrenalin (from 0.05 to 0.1 mg.) cause a short preliminary increase in hemorrhage, followed quickly by a decrease or cessation of bleeding. On account of the great preliminary loss of blood they are always contraindicated.

2. Small doses of adrenalin (from 0.1 to 0.25 mg.) cause little or no preliminary increase, but shorten the course of hemorrhage. As they save the red blood cells in every way, they are therapeutically desirable.

3. The method of introducing adrenalin determines the effect on blood pressure and hemorrhage. No results are obtained by subcutaneous administration. By continuous intravenous injection of weak solutions a slight elevation of pressure can be maintained and hemorrhage be simultaneously checked. This can also be accomplished by intramuscular injections.

4. Adrenalin is not indicated in all intestinal hemorrhages. The condition of the blood pressure is the criterion for its use. In hemorrhages of short duration, when the pressure has not fallen to any extent, a judicious dose of nitrites proves of more benefit than adrenalin. When the bleeding has been profuse, however, and a low pressure already exists it becomes vital that hemorrhage should be checked without further reduction of pressure. Adrenalin finds its use in this field.

5. The use of adrenalin should always be closely followed by blood-pressure observations. A dose sure to be below the safety limit should first be tried and the pressure carefully estimated. If no rise occurs, gradually increasing doses may be injected until a slight elevation of pressure is present, in which case we may be certain that enough has been introduced to affect hemorrhage, and at least no significant preliminary increase has resulted.

46. Diabetes Mellitus.—Falta says that we must not seek in the pancreas the sole cause of the disease, and states that a rôle is also played therein by other organs which elaborate internal secretions, and especially by the nervous system. As we are ignorant of the ultimate cause of the metabolic disturbance, a causal therapy is out of the question. Sympathetic therapy seeks in the first instance to combat the most prominent symptom, the excretion of sugar and its results. Theoretically two possibilities exist: (1) To increase the efficiency of carbohydrate metabolism—efforts in this direction so far have shown but slight success; (2) to diminish the requirements, thereby giving the diseased organ or organs the opportunity of recovery. This is the foundation of the dietetic therapy. After a brief discussion of a small group of cases which manifest a marked disease of the pancreas and often require a special therapy, he turns to the disturbances of the carbohydrate metabolism, in which the chief end of dietetic therapy is the depression of glycosuria. He discusses the grounds on which this end is sought and the methods of attaining it. He insists on the value of the oatmeal therapy, first recommended by von Noorden, and describes the method. He defends it against the criticisms of Naunyn and others, and describes its remarkable results, admitting that the cause of the remarkable effect of oatmeal is as yet unknown.

Philippine Journal of Science, Manila

November

48 Precipitin and Complement Fixation Reactions. H. T. Marshall and O. Teague, Manila.

49 Tuberculo-Toxoidin and Immunization Serum. T. Ishigami, Osaka, Japan.

50 A New Intestinal Trematode of Man. P. E. Garrison, Manila.

51 Blastomycosis of the Skin in the Philippines. J. M. Phalen and H. J. Nichols, Manila.

52 Reduction in the Cost of Anti-Cattle-Plague Serum. E. H. Ruediger, Manila.

53 Three Hundred Examinations of Feces for Amebas. R. E. Hoyt, U. S. Navy.

54 Inoculation of Bacterial Vaccines as a Practical Method for Treatment of Bacterial Diseases, Especially Gonococcus Infections. E. R. Whitmore, U. S. Army.

55 Sanitary Conditions and Needs in Provincial Towns. T. W. Jackson, Medical Reserve Corps, Fort McKinley.

Alabama Medical Journal, Birmingham

March

56 Pathology and Etiology of Diabetes Mellitus. J. S. McLester, Birmingham.

57 *Serodiagnosis of Syphilis and its Clinical Value. W. J. Butler, Chicago.

58 Complications of Pneumonia. J. B. Cooper, Birmingham.

59 Correct Method of Examination of the Rectum and the Diagnosis of Hypertrophied Valves. J. C. Walter, Birmingham.

60 Treatment of Diphtheria, with Special Reference to Intubation and Tracheotomy. J. E. Seay, Pratt City.

61 Appendicostomy. A. Hayes, Birmingham.

57. Published in the *Illinois Medical Journal*, December, 1908, the *New York Medical Journal*, Jan. 30, 1909, and the *Chicago Medical Recorder*, March, 1909, and abstracted in THE JOURNAL, Feb. 13, 1909, p. 588.

Archives of Pediatrics, New York

March

- 62 *Case of Congenital Malformation of the Esophagus. J. P. C. Griffith and R. S. Lavenson, Philadelphia.
- 63 *Spasmodic Stricture of the Esophagus. S. S. Adams, Washington, D. C.
- 64 *Transmission and Progress of Tuberculosis in Children Through Family Association. C. Floyd and H. L. Bowditch, Boston.
- 65 Artificial Feeding of Infants. J. Levy, Newark, N. J.
- 66 Leucocytes in Pulmonary Diseases of Children. I. S. Wile, New York.

62, 63. Abstracted in THE JOURNAL, July 11, 1908, p. 155.

64. Abstracted in THE JOURNAL, Oct. 17, 1908, p. 1366.

California State Journal of Medicine, San Francisco

March

- 67 Review of the Work Done in the Anatomic Department of Cooper Medical College. F. E. Blaisdell, San Francisco.
- 68 *Tobacco Amblyopia (from Cigars) in a Woman. W. S. Franklin, San Francisco.
- 69 Pyloric Stenosis in the New-Born. H. J. Kreutzmann, San Francisco.
- 70 The Faucial Tonsils Considered from a Medical and Surgical Standpoint. L. C. Deane, San Francisco.
- 71 *Tests for Involvement of the Labyrinth in Suppurative Middle-Ear Processes. G. P. Wintermute, Oakland.
- 72 *The Leukemias and Allied Diseases. H. Harris, San Francisco.
- 73 The Influence of Climate on Tuberculosis, with Remarks on the Climate of Colfax, Cal. R. A. Peers, Colfax.
- 74 *Waxed Silk as a Suture. C. E. Thompson, Dunsmuir.

68. **Tobacco Amblyopia.**—Franklin records the case of a Swedish woman, single, aged 52, with tobacco amblyopia, who had been in the habit of smoking from six to eight domestic cigars daily. He discusses the pathologic changes in the optic nerve due to tobacco, which are identical with those caused by alcohol or by the mixed intoxication of alcohol and tobacco. No clinical differentiation is possible between them. In this case, however, Franklin believes the woman's denial of alcohol. He quotes Martin's opinion that in tobacco cases the pupil is contracted, and in alcohol cases dilated, but in the author's case the pupil was moderately dilated. The excess of cases in men is due, not to any predisposition, but to the greater numbers of tobacco and alcohol users among them. In women the amblyopia is generally of the mixed form, but Franklin considers his case as one of pure nicotine neuritis. All forms of tobacco use can induce the neuritis. He discusses the varieties of tobacco and their nicotine content. The diagnosis is made by the reduced vision, the paleness of the temporal quadrant of the disc, and the central scotomata. The latter are in the beginning only relative for colors, then for form, and vary toward all degrees of the absolute, depending on the stage of the neuritis. In a large number of cases the complete stopping of nicotine will effect a cure.

71. **Tests of Labyrinth Involvement in Otitis Media.**—Wintermute describes in detail the tests devised by Barany of Vienna, by means of which the degree of labyrinth involvement may be ascertained in suppurative otitis media and mastoid conditions. These tests are based on the normal reflex reactions of the semicircular canals in producing nystagmus. If the reactions are normal, labyrinth involvement is ruled out; if they are impaired, lost, heightened, or abnormally produced, the condition of the organ of hearing and the objective symptoms may be accurately ascertained. In Barany's tests, the movement of the endolymph is obtained by turning the patient in a revolving chair. As it is impossible, however, to measure the nystagmus while the patient is being revolved, the chair is brought to a standstill after being revolved ten times; the endolymph, following the law of a body in motion remaining in motion is circulating in the direction of the revolutions—toward the right. The nystagmus is to the left, and the patient being stationary the duration of the reflex is timed with a stop-watch from the instant of stopping the revolutions to the time of the cessation of the reflex movement. When the horizontal canal is tested the resulting nystagmus is horizontal. By bringing the patient's chin down and flexing the head forward at right angles, the anterior vertical canals are brought into the plane of the centrifugal force, and the endolymphatic movements take place in them, the horizontal and vertical canals

being unaffected. The nystagmus from the anterior vertical canal is rotary, corresponding to the wheel-like motion of the eye, and in direction, follows the law of being contrary to the endolymphatic movement. By bending the patient's head sharply over either shoulder and revolving him in a similar manner the posterior vertical canals receive the centrifugal impact and the resulting reflex is a vertical up and down nystagmus. By successively changing the position of the head in this way, all the canals may be tested and the results show that each canal produces the movement in its own plane. Wintermute also describes the caloric nystagmus test and states that with a normal labyrinth the patient responds with a rotary nystagmus; if cold be used on the right side there is nystagmus to the left, while the reverse is the case if heat is used. If the middle ear be filled with a mass of cholesteatoma or polyps, the caloric change may not reach the canal and there is no reaction.

72. **The Leukemias.**—Harris attempts to prove that the following diseases are essentially malignant in their nature: Lymphosarcoma, leukosarcoma, chronic lymphocytic leukemia, chloroma, Hodgkins' disease, and other forms of pseudo-leukemia, chronic myelocytic leukemia and myeloma. Some show an increase of various white cells in the blood and this impression of increased leukocytosis is dominant in the minds of most physicians. Harris tries to show that the importance of the blood picture is overaccentuated and that as ordinarily accepted it is not pathognomonic, but rather that of a biologic reaction. He accentuates the statement that the ordinary blood picture of the chronic leukemias as we now understand it has been observed in other conditions, and the converse is likewise true; for leukemia has been repeatedly proved at the bedside and autopsy table minus the usual blood picture.

74. **Waxed Silk.**—Thompson describes his procedure for waxing silk for suture material, and claims for this material the following advantages: Its sterility and the ease of keeping it sterile; the absence of capillary attraction; it does not irritate the tissues; it does not adhere to the tissues, dressings or secretions; it is easily removed; it is easily prepared; it is convenient to carry, easy to thread, and in tying it the knot does not slip so easily as plain silk.

Montreal Medical Journal

March

- 75 Pathology and Treatment of Diabetes Mellitus, Viewed by the Light of Present-Day Knowledge. F. W. Pavy, London, Eng.
- 76 Demonstration of the *Spirocheta pallida* from a Mucous Patch of the Conjunctiva. H. McKee, Montreal.
- 77 Plate for the Relief of Pain in the First Metatarsophalangeal Joint. J. A. Nutter, Montreal.
- 78 Surgical Treatment of Non-Resilient Diverticula of the Bladder. E. M. von Eberts, Montreal.
- 79 Perforative Appendicitis: Venous Thrombosis, Paratyphoid, Intestinal Obstruction. J. Bell, Montreal.

Southern Medical Journal, Nashville, Tenn.

March

- 80 Conservative Surgery, Then and Now. F. W. Parham, New Orleans.
- 81 *Vaginal Hysterectomy for Carcinoma of the Cervix. H. T. Byford, Chicago.
- 82 *Cancer of the Parotid Gland. G. A. Hendon, Louisville, Ky.
- 83 Urethral Transplantation. J. D. S. Davis, Birmingham, Ala.
- 84 *Surgical Treatment of Exophthalmic Goiter. J. R. Wathen, Louisville, Ky.
- 85 *Rare Forms of Hematoma. J. G. Sherrill, Louisville, Ky.
- 86 Cesarean Section in Which the Uterus Was Incarcerated in a Ventral Hernia. X. O. Werder, Pittsburg, Pa.
- 87 Primary Bladder Suture with Special Reference to Suprapubic Cystotomy. L. Frank, Louisville.
- 88 *Bilateral Polycystic Degeneration of the Kidneys. J. W. Bovee, Washington.
- 89 Elephantiasis of the Male Genitalia. J. N. Baker, Montgomery, Ala.
- 90 False Aneurism of the Femoral Artery, Following Typhoid. R. S. Cathcart, Charleston, S. C.

81, 84, 85. Abstracted in THE JOURNAL, Jan. 16, 1909, pp. 242 and 243.

82. **Cancer of the Parotid.**—Hendon reports five cases, in all of which operation was successfully performed, though one patient, aged 71, succumbed within a year.

88. **Polycystic Degeneration of the Kidneys.**—Bovee discusses this subject anatomically, pathologically, microscopically, and also with regard to the symptoms, prognosis and

treatment. The latter, he says, is non-surgical, except in two conditions, first, when the disease is unilateral or is reasonably concluded to be so, and second, when the cysts are so large as to be burdensome in any way. In the former, incision, or possibly nephrectomy, is advisable. If the ureter or other part of the purely waste-bearing portion of the corresponding half of the urinary tract be hopelessly obstructed beyond a period of six weeks the function of the corresponding kidney will be permanently suspended, and nephrectomy is preferable to incision or multiple incisions. But if urine is found to be pouring from both ureters, then nephrectomy should not be done, except in the very exceptional unilateral polycystic kidney. Were it at all apparent that the presence of the disease in one kidney had a tendency to stimulation of its development in the other kidney, he would feel less positive in this matter. In the second condition, puncture or incision seems applicable, whether the disease is unilateral or bilateral. If cystoscopy reveals both ureters to be functioning, then, even though but one kidney is involved, nephrectomy should not be performed, except in the rarest circumstances—such as hemorrhage limited to the affected side.

Dominion Medical Monthly, Toronto

March

- 91 Stricture of the Urethra. W. Scott, Toronto.
92 Complications of Pulmonary Tuberculosis and Their Treatment. J. K. M. Gordon, Gravenhurst, Ont.

Interstate Medical Journal, St. Louis

March

- 93 *Dismemberment of Traditional Hysteria: Pithiatism. J. Babinski, Paris.
94 *Anatomy and Surgery of the Hard Palate of the Infant. V. P. Blair, St. Louis.
95 Treatment of Dislocation of the Peroneal Tendons. E. A. Tracy, Boston.
96 Value of Color Photography in the Teaching of Pathology. G. McConnell, St. Louis.

93. This subject was discussed in *THE JOURNAL*, Aug. 8, 1908, p. 537, and Sept. 12, 1908, p. 929.

94. Cleft Palate.—Blair illustrates certain anatomic points, with their surgical bearing, by illustrations of frozen sections, diagrams and plaster casts. He discusses the etiology of cleft palate, and describes Brophy's operation, which he considers the most effectual operation devised. He has found a supplementary wire approximating the alveoli in front to be advantageous. He passes the wires so that they enter the orbit just above its floor, using needles curved to three-fourths of a circle. Personally, Blair sees no reason why repair of the lip should not closely follow closure of the hard palate, thus correcting facial deformity.

Iowa Medical Journal, Des Moines

March

- 97 Osteomyelitis. E. E. Dunkelberg, Waterloo.
98 The Appendix as a Hernial Content. C. S. James, Centerville.
99 Anesthesia. L. W. Littig, Iowa City.
100 Empyema. I. S. Bigelow, Dubuque.
101 Treatment of Cancer. E. H. Robb, Newton.
102 Hernia. J. H. Maynard, Adair.
103 Medical Progress in 1908. S. R. Klein, Chicago.
104 Urinary Vesical Calculus. J. H. Talbot, Sioux City.

Long Island Medical Journal, Brooklyn

March

- 105 *Diagnosis, and When to Operate in Ectopic Gestation. J. O. Polak, Brooklyn.
106 Progress in Ophthalmology. J. C. Hancock, Brooklyn.
107 Drug Treatment of Nervous Insomnia and a Comparison of the Recent Hypnotics. E. F. Luhrsén, Brooklyn.
108 *Head Injuries. W. S. Simmons, Brooklyn.
109 A Plea for Simpler Medication. L. P. Hoole, Brooklyn.

105. Extrauterine Pregnancy.—Polak describes the signs of rupture, laying particular stress—after the occurrence of severe pain over one or other tubal region or radiating over the entire abdomen or referred to the epigastrium—on extreme sensitiveness of the abdomen, with a diffuse rigidity immediately after rupture, accompanied by small, frequent, and thready pulse, air hunger, sighing respiration and audible yawning. The objects of the operation for ectopic pregnancy are: First, control of hemorrhage, or prevention of recurrence of bleeding by careful ligation; second, removal of the debris incident to the tubal abortion or rupture; third,

filling up of the volume of blood current in such a way as to permit Nature to adjust itself to the new condition. He discusses the views of Hunter and others, who have questioned the propriety of operating at once in every case on experimental evidence that bitches whose ovarian arteries had been cut had failed to bleed to death. Polak argues that in the lower animals the conditions are different from what takes place in the human female. He admits that he has never seen a vessel actively bleeding at the time of operation, and also that if the patient were going to bleed to death she would probably be dead before being seen by the surgeon, but there is no way of knowing positively in which case bleeding will stop spontaneously. When the signs show rupture into the broad ligament, with formation of a hematoma, Polak's custom has been to wait. In these cases the uterus is usually markedly displaced to one side or carried up over the pubis by intraligamentous distention. When these findings are definite, the free use of morphin, elevated foot posture, and the maintenance of firm abdominal pressure with sand bags have controlled extensive dissection of the peritoneum and favored clot formation. In the course of from four to seven days, a vaginal incision may be made and drainage established. In all other forms of this accident abdominal incision offers the speediest and safest results. A pulse of 100 or less permits delay, while increased rapidity, fall in blood pressure, or falling hemoglobin percentage, demands prompt section. He describes his technic.

108. Head Injuries.—Simmons describes eight cases and discusses the question of fractures of the base of the skull in connection with the decompression operation. His own opinion in the matter is that basal fractures should be left alone if there is, in a reasonable time, some evidence of improvement. If, however, there appears no tendency to recovery or if the symptoms at first, slight or severe, do not improve or decrease in intensity, then he deems it wise to explore the middle fossa on both sides if necessary and thus give these desperate conditions the only aid possible from a surgical standpoint.

University of Pennsylvania Medical Bulletin, Philadelphia

March

- 110 Charles Darwin, the Man and His Influence. G. A. Piersol, Philadelphia.
111 *Syphilitic Form of Multiple Sclerosis. W. G. Spiller and A. H. Woods, Philadelphia.
112 *Recent Advances in the Physiology of Saliva, Together with Certain Aspects of its Pathology. E. H. Goodman, Philadelphia.
113 Habitual or Recurrent Anterior Dislocation of the Shoulder. J. T. Thomas, Philadelphia.

111. Syphilitic Multiple Sclerosis.—Spiller and Woods report a case, with special attention to its pathologic aspect, and deduce the following conclusions:

1. Syphilis, in rare instances, may cause a symptomatology indistinguishable from that of typical multiple sclerosis, and this without the formation of sclerotic plaques, but by the ordinary lesions of syphilis, viz., arteritis and meningitis.

2. Syphilis may produce in the spinal cord sclerotic plaques resembling those of multiple sclerosis, without producing the typical symptoms of this disease. These plaques have not the sharp definition seen in most cases of typical multiple sclerosis, and yet multiple sclerosis may exist without plaques sharply defined from the normal tissue. The syphilitic form of multiple sclerosis presents round-cell infiltration of the pia and thickening of the blood vessels. Thickened vessels with a small amount of perivascular sclerosis will usually be found in certain regions without the formation of plaques, though plaques may be present at other levels of the cord. In some places slight neuroglia proliferation without thickened vessels may be detected, resembling in no way true plaque formation, but appearing more in the nature of slight diffuse secondary degeneration. Gumma also may occur in the brain. Secondary degeneration is more common in the syphilitic type, but does occur rarely in multiple sclerosis. Nerve fibers are not always completely degenerated in the syphilitic plaques. Careful and thorough examination will almost always, if not always, make a diagnosis possible between the lesions of syphilis and those of multiple sclerosis, even though they may have a decided superficial resemblance.

112. Physiology of the Saliva.—This paper is essentially a review. It discusses the physiology and the nervous mechanism of salivary secretion, salivary digestion, the pathology of saliva, its diminution and increase. It deserves special commendation for the fact that the twenty-four references given in the bibliography have not been taken at random from other bibliographies and indexes, but are the result of a careful assay of the more than 100 studied by the writer.

Yale Medical Journal, New Haven, Conn.

March

- 114 *Why Is Incipient Pulmonary Tuberculosis so Rarely Recognized? A Study of 150 Cases. H. F. Stoll, Hartford, Conn.
115 *Drainage of the Bladder in the Aged and Infirm. G. P. Harris, Norwich, Conn.

114. Discussed editorially in THE JOURNAL, April 10, p. 1186.

115. **Drainage of the Bladder.**—Harris first describes the anatomy of the bladder and its function, and traces the history of draining it. Cystitis is probably the most common cause for drainage, when associated with thick and inflamed bladder walls and urine loaded with pus, mucus and blood, decomposed and foul smelling. This condition is usually found in elderly patients as a result of enlarged prostate, but in younger persons it may exist as the result of obstruction due to urethral stricture. In either case, free drainage of the bladder should be secured, and the bladder washed out. These cases are never too far advanced for treatment, as frequently one kidney is involved before the other, and if the process can be stopped by washing out the bladder regularly the remaining kidney will be able to carry out the work and the patient may recover. He describes the operation of suprapubic cystotomy.

Old Dominion Journal of Medicine and Surgery, Richmond

March

- 116 *Myoma and Myosarcoma of the Stomach. J. E. Thompson, Galveston, Tex.
117 Laboratory Methods in the Diagnosis of Typhoid. T. R. Boggs, Baltimore.
118 Acute Intestinal Obstruction. S. H. Watts, Charlottesville, Va.
119 What is Minor Surgery? H. A. Royster, Raleigh, N. C.
120 *Gonorrheal Arthritis with Special Reference to the Knee Joint. W. Moncure, Raleigh, N. C.
121 Tuberculous Anorectal Fistula. E. H. Terrell, Richmond, Va.
122 Principles Underlying the Treatment of Uterine Retroversion and Prolapse. R. L. Payne, Norfolk, Va.
123 Case of Quadruplets. E. T. Hargrave, Norfolk, Va.
124 Pathology and Symptomatology of Pneumonia. A. B. Greiner, Rural Retreat, Va.

116. **Myoma of the Stomach.**—Thompson describes an interesting case and analyzes 62 cases found in the literature, of which 19 were operative, the remainder being found at autopsies or as specimens in pathologic museums. From these cases he draws up the following synthesis: The affection is one of adult life, rare before 30, and more common after 40. No conclusions can be drawn as to sex incidence. Profuse hemorrhages are liable to occur from tumors of a considerable size that project into the lumen of the stomach. Analyses of stomach contents afford no valuable information. Pyloric obstruction was a definite symptom in only 3 cases. A palpable abdominal tumor was definite in 18 cases. In only 3 cases was the condition associated with myoma elsewhere. The size varied within great limits. Some of the tumors grow into the stomach like polypi, others toward the peritoneal cavity; only in the earliest stages can they be intramural. Large mild sarcomata frequently have large cystic cavities. Metastases are mentioned in some instances. He gives a bibliography of autopsies.

120. **Gonorrheal Arthritis.**—Moncure, discussing the treatment of acute cases, says that the uselessness of the biologic product is in direct proportion to the acuteness of the process. There are reports of the treatment of gonorrheal arthritis with various serums or antitoxins, and lately by injection of large numbers of dead gonococci or vaccines. Serums or antitoxins have been generally discarded and some reports indicate that the vaccines are more beneficial, especially in very chronic cases. Whatever valuation time and experience may place on the vaccines, in the light of our present knowledge it is much safer to open these joints early than to await for weeks a doubtful result, with the probability of making a cripple and an opium habitué of the patient. When the disease is at all severe, early incision, free flushing of the joint, suturing and injecting with a bland sedative petroleum preparation seems, to his mind, the most rational course to pursue. And this operative treatment can, if desirable, be supplemented with bacterial injections. Finally, adhesions, organized thrombi, ankylosis, subluxations, and contracted

tendons are not in the least amenable to vaccines, or to any treatment except corrective operations.

Journal Tennessee State Medical Association, Nashville

March

- 125 Inversion of the Uterus. J. M. Overton, Nashville.
126 Obstetrics and Obstetric Surgery in the Country. B. F. Fyke, Springfield, Tenn.
127 Croupous, or Lobar Pneumonia. W. L. Carden, Andersonville.
128 Fracture of the Clavicle. D. Eve, Nashville.
129 Medicine. J. P. Blankenship, Maryville.

Journal of the Kansas Medical Society, Kansas City

March

- 130 *Potency of Out-Dated Diphtheria Antitoxin. J. E. Hunt, Kansas City.
131 Exophthalmic Goiter. M. T. Sudler, Lawrence, Kan.
132 Tonsillotomy and Tonsillectomy. J. S. Wever, Kansas City, Mo.
133 Should Kansas Maintain an Institution for the Care of Her Tuberculous Citizens? J. A. Milligan, Garnett.
134 *Appendicitis in an Infant Aged Seven Months. The Difficulty of Diagnosis Probably Accountable for the Rarity of the Condition in Infants. R. B. Gibb, Pittsburg, Kan.
135 Early Infantile Mortality. M. R. Mitchell, Kansas City.

130. **Old Diphtheria Antitoxin.**—Hunt reports a number of cases in which outdated diphtheria antitoxin was given with good results, from which he concludes that we are never justified in deferring the administration of antitoxin simply because old serum is the only material at hand.

134. **Appendicitis in an Infant.**—Gibb records a case of a "colicky" baby, 7 months old, in which the severity and persistence of the symptoms led to careful investigation under anesthesia, with the result that appendectomy was done and an inflamed and purulent appendix removed. Recovery was immediate, without shock, and all symptoms were at once relieved. He suggests that possibly the infrequency of appendicitis in infants may be due to its not being diagnosed.

Southern California Practitioner, Los Angeles

March

- 136 Selwyn Emmett Graves. J. A. Graves, Los Angeles.
137 The Tripod of Medicine, Surgery and the Pathologic Laboratory. A. Vander Veer, Albany, N. Y.
138 Early Diagnosis of Pulmonary Tuberculosis. J. C. King, Banning, Cal.
139 Chronic Nephritis and its Associated Lesions. J. W. Flinn and H. T. Southworth, Prescott, Ariz.
140 The Calmette Reaction. W. W. Watkins, Phoenix, Ariz.
141 The Climate of Southern California. J. A. Munk, Los Angeles.
142 *Ocular Manifestations of Hysteria. W. H. Dudley, Los Angeles.
143 Gonorrheal Ophthalmia. M. M. Cloud, Los Angeles.

142. **Ocular Manifestations of Hysteria.**—Dudley considers especially those ocular manifestations of hysteria that should be borne in mind in doubtful or suspicious cases. These are, first, the anesthetics, manifested by loss of sensation in the eyelids, the conjunctiva and the cornea, by concentric limitation of the field for light and color, by amblyopia, achromatopsia and the so-called inversion of the color fields. Next in order, he places disturbances of accommodation and pupil reaction including the approaching and fixation of the far and near points. These, together with spastic convergence—and they are frequently seen in conjunction—may be considered pathognomonic of this condition, while cycloplegia, with or without mydriasis, in the absence of some known cause, is an important sign. Though other conditions are valuable, these, if sought out and found, will decide the diagnosis in most cases; but they must be looked for, or they are not likely to be found. The marvelous way in which this condition is capable of imitating other diseases renders it highly important that the diagnostician should be always on the alert.

Cleveland Medical Journal

March

- 144 *Eighteen Months' Clinical Experience with the Use of Koch's Tuberculin in Tuberculosis of Bones and Joints. W. G. Stern, Cleveland.
145 Surgical Questions to be Considered in Treatment of Gastric Ulcer. M. J. Lichty, Cleveland.
146 Blepharochalasis, Report of a Case of This Trophoneurosis, Involving also the Upper Lip. W. B. Laffer, Cleveland.
147 Wright's Vaccine Therapy, with Report of Cases. L. W. Ladd and H. C. Russ, Cleveland.
148 Necessity for Using a Mydriatic in Refraction. E. P. Morrow, Canton, O.
149 Medical Cleveland in the Nineteenth Century (continued). H. E. Handerson, Cleveland.

144. **Tuberculin Treatment of Bone Tuberculosis.**—Stern concludes that Koch's tuberculin, although a terrible agent for harm when used indiscriminately in large doses is a powerful agent for good when used in small doses, either by the opsonic method of Wright or by the clinical method of Trudeau. Notwithstanding statements of the laboratory men to the contrary, no harm can come and a great deal of good can follow the proper use of tuberculin without the control of the opsonic index. No matter which method is followed, tuberculin must not be used alone for treatment, but must invariably be a part of a rigid medical and surgical antituberculous régime.

Ophthalmic Record, Chicago

March

- 150 Sympathetic Ophthalmia with Report of Pathologic Findings in Two Cases. E. P. Carlton, Chicago, and A. R. Baker, Cleveland.
151 Unusual Cases of Operable Cataract. A. O. Pfingst, Louisville, Ky.
152 Novel Improvised Prosthesis. R. A. Fenton, Portland, Ore.

Colorado Medicine, Denver

March

- 153 Fractures of the Leg. W. W. Grant, Denver.
154 *Immediate Operative Treatment of Certain Fractures. L. Freeman, Denver.
155 The Abuse of the Sharp Uterine Curette. J. F. Coleman, Montrose.
156 When and How to Treat Hernia in the Young. R. W. Corwin, Pueblo.

154. **Operative Treatment of Fractures.**—Freeman describes the operative technique and emphasizes and discusses the following propositions:

1. No recent fracture should be operated on that can be successfully treated by other means.
2. No recent fracture should be operated on except under the most favorable surroundings and by an experienced surgeon who is a master of aseptic technique.
3. The resisting powers of the patient should be taken into careful consideration.
4. The patient's position and duties in life deserve attention.
5. The success of operative intervention depends much on the accessibility of the fracture—the danger varying directly with the amount of manipulation required.
6. It should be recognized that faulty alignment and overlapping of fragments, or even the presence of visible deformity, does not always mean disturbance of function.
7. In estimating the value of an operation the after-treatment deserves consideration; will it be rendered less trying to the patient or give a better result in a shorter space of time?
8. The indications for operation vary greatly with the particular bone which is broken, the character of the break, and its situation in the bone.
9. Admitting the desirability of operating in certain carefully selected cases, it must not be forgotten that there are two important drawbacks—delayed union and sepsis.

Archives of Ophthalmology, New York

March

- 157 Amaurotic Family Idiocy: Histologic Examination of a Case in Which the Eyes Were Removed Immediately After Death. F. H. Verhoeff, Boston.
158 Cystic Formation by the Pars Ciliaris Retinae Following a Perforating Wound in the Ciliary Region with the Histologic Findings. B. Chance and H. G. Goldberg, Philadelphia.
159 Keratitis Punctata Superficialis, with Report of a Case. M. Wiener, St. Louis.

Ohio State Medical Journal, Columbus

March

- 160 More About Cancer of the Rectum. G. B. Evans, Dayton.
161 *A Year's Experience with Lumbar Puncture. C. W. Stone, Cleveland.
162 The Anatomico-Physiologic Basis of Pediatrics. D. S. Hanson, Cleveland.
163 *Economic Importance of the Spread of Trachoma in Ohio. W. H. Snyder, Toledo.
164 *Acute Rheumatoid Infections in Children with Report of Cases. F. P. Anzinger, Springfield.
165 Hygiene of Menstruation. S. J. Goodman, Columbus.
166 The Physician and the Child of the Future. E. H. Smallwood, Chillicothe.

161. **Lumbar Puncture.**—Stone describes and analyses 114 cases in which lumbar puncture was done, often more than once. He recounts the technique, and, as a result of the analysis, emphasizes the following points:

1. The lymphocytes may predominate in an epidemic meningitis and the polymorphonuclear leucocytes in a tuberculous meningitis, as has been noted by Concetti, who stated that a predominance of lymphocytes indicated an irritation of toxic nature, while the predominance of polymorphonuclears indicated an irritation by bacteria.
2. Many of our pneumonia patients with delirium may be found to be actually suffering from a meningitis.

3. Many children with the so-called meningismus may have real meningitis.

4. The cell count of the spinal fluid in cases of suspected lues of the central nervous system is a helpful aid in diagnosis.

163. Abstracted in THE JOURNAL, May 23, 1908, p. 1721.

164. **Rheumatoid Infections in Children.**—Anzinger reports cases, discusses the conditions, and draws the following conclusions:

1. Children are susceptible to the infectious diseases which most adults resist by acquired immunity.

2. Acute pyogenic and septicemic infections are common and, often starting from a trivial lesion, permit widespread metastases and even may prove fatal.

3. In children the soft tissues, especially near the epiphyses and joints, are vulnerable points for micro-organisms and their products. The symptoms of such lesions often simulate acute articular rheumatism.

4. Acute rheumatism is regarded as a specific disease due to a specific organism not as yet fully established. Until the cause is known we must depend on clinical characteristics, which are untrustworthy.

5. Acute rheumatism is comparatively uncommon in children, whereas pyogenic infection finds them frequently among its victims.

6. Heredity and environment are important factors in the predisposition of the child to infection as well as rheumatism.

7. Prophylaxis rests in safeguarding the child's general resistance by proper hygiene. A careful watch should be kept of the infection areas of the child, and every trivial infection be properly treated.

8. When one or more joints become acutely inflamed, tentative measures are justifiable for a short period, to allow for resolution or abatement. If, however, the symptoms continue and the diagnosis is obscure, exploratory incision will in the end subserve the best interests of both patient and physician.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

March 20

- 1 *Disinfection and Disinfectants. R. T. Hewlett.
- 2 *X-Ray Carcinoma, and an Experimental Inquiry into the Conditions which Precede its Onset. C. W. Rowntree.
- 3 *Mechanism Underlying the Various Methods of Artificial Respiration. A. Keith.
- 4 *Leucocytosis of Epidemic Cerebrospinal Meningitis. W. Dow.
- 5 Intestinal Pseudoparasitism Due to *Chilodon uncinatus*. P. Manson and L. W. Sambon.
- 6 Cultivation of *Spirochaeta duttoni*. C. M. Duval and J. L. Todd.
- 7 Uremia or Meningitis. A. E. Garrod.
- 8 Malignant Disease of the Nasopharynx. W. Stuart-Low.
- 9 Problems in Mendelism and Some Biologic Considerations: Inman Albinos. G. P. Mudge.

1. **Disinfection.**—In the second Milroy lecture, Hewlett describes and discusses the various methods devised for the determination of the germicidal power of disinfectants. Of these the latest and most important are the Rideal-Walker and the Chick-Martin, or Lister Institute method. He compares these two methods as follows: The Rideal-Walker or drop method is one which has given an enormous impetus to the standardization of disinfectants, and it is relatively simple to carry out—a very desirable condition. With the emulsified disinfectants it works well, but with disinfectants like mercuric chlorid, which act comparatively slowly, it gives too low a value according to Chick and Martin. It is lacking in that in its original form it does not introduce organic matter into the test, a matter of considerable importance. This, however, may be remedied by the addition of feces, or perhaps better still of gelatin and starch. In some instances the use of a 1 per cent. solution which has stood for 24 hours, for making the test dilutions is desirable. On the other hand, the Chick-Martin, or Lister-Institute, method is applicable apparently to all classes of disinfectants, and has the advantage that but a single variant (that of concentration of disinfectant) is present, and not two variants—concentration and time—as in the Rideal-Walker or drop method. The method, however, is not nearly so simple to carry out as the Rideal-Walker one. The introduction of organic matter in the form of feces marks a step in the right direction, but further work alone can prove whether this is the best material to employ. Finally, he briefly describes Schryver and Lesing's physico-chemical method for comparing the antiseptic value of disinfectants, which was published a few months ago.

2. **X-Ray Carcinoma.**—Rowntree says that probably there are two essential conditions for the formation of a squamous:

cell carcinoma: (1) The presence of a mass of epithelial cells which are capable of multiplication, and (2) a surrounding area of connective tissue in such a special condition as to render it vulnerable to epithelial invasion. With regard to the second condition, he has already shown that the connective tissues in advanced *x*-ray dermatitis are in almost precisely the same condition as that shown last year by Dr. V. Bonney invariably to obtain in precancerous conditions. With regard to the first condition, it is a feature of *x*-ray dermatitis that in certain stages the subepithelial tissue shows the presence of masses of epithelial cells more or less completely detached from the surface epithelium. It is not difficult to imagine that such a mass of cells, lying isolated in a favorable stroma of altered connective tissue, may, as the result of the stimulating effects of constant small doses of the rays it is undoubtedly receiving, be excited to grow, and as there is no longer any normal purpose which this isolated mass of epithelium can fulfil it proliferates abnormally and invades the surrounding parts. In regard to *x*-ray treatment of malignant growths, all observers are agreed that it is only in very superficial conditions that amelioration can be confidently anticipated; and rodent cancer, the only variety in which only good results have been obtained, is the most superficial.

3. Artificial Respiration.—In the second Hunterian Lecture, Keith devotes his attention to the period of mechanical expansion and compression of the chest wall (1856-1909). After a brief summary of compression methods employed prior to 1856, Keith discusses the methods of Marshall Hall, Silvester, Pacini and Bain, and Howard, and recounts B. W. Richardson's experiments. He then considers the resuscitation of stillborn children, paying particular attention to the methods of Schroeder, Schücking, Schüller, and to the recommendations of R. L. Bowles.

4. Leucocytosis of Epidemic Cerebrospinal Meningitis.—Dow reports his observations into the leucocytosis in 36 out of 55 verified cases admitted into Belvedere Fever Hospital. He divides them into 4 groups: (1) Acute cases, fatal; (2) abortive cases, recoveries; (3) mild cases, recoveries; (4) chronic cases, 21 cases with 3 recoveries. An analysis of these observations under their respective headings and of the tables in which the various blood cells are dealt with leads to the following conclusions:

1. Cases of epidemic cerebrospinal meningitis are always accompanied by a leucocytosis, whether the attack is acute, abortive, mild, or chronic.
2. The character of the leucocytoses is practically the same in all instances, both in adults and children, and is the result mainly of an increase in the number of the polymorphonuclear cells.
3. Nevertheless, a lymphocytosis may be occasionally observed in infants and young children.
4. There is a relative decrease of the large mononuclear elements, alike in fatal and non-fatal cases, though less marked in the chronic type.
5. In the first three groups there is sometimes an absolute decrease of the large mononuclear elements and occasionally total absence of these cells. In the chronic group absolute decrease, like relative decrease, is little marked.
6. Eosinophile corpuscles in acute fatal cases are always absent although present in varying degree in all the other groups.

British Medical Journal, London

March 20

- 10 *Insufficiently Recognized Points in Diagnosis. Sir D. Duckworth.
- 11 Diagnosis of Fever in Patients from Tropics. P. Manson.
- 12 Common Mistakes in Ophthalmic Practice. A. C. Roper.
- 13 Lactic Acid Ferment Preparations for Intestinal Therapy. I. W. Hall and W. A. Smith.
- 14 *Mining Accidents. J. Robertson.
- 15 *Simple Method of Estimating Ammonia in the Urine, Suitable for Clinical Purposes. G. C. Mathison.
- 16 Physiology of Female Genitalia. III. The Correlation of Uterus and Ovaries. W. B. Bell and P. Hick.

10. Diagnosis of Disease.—Duckworth thinks that in our depreciation of old medical and surgical books, of the preparations of our pharmacopeias, and in the concentration of our attention on the methods of laboratory experts, we run the risk of crowding out a good deal of soundly acquired and approved experience and of becoming medical scientists rather than expert medical practitioners. He does not depreciate the necessary researches of the laboratory, especially the clinical laboratory, of which there are too few in the medical

schools, but, he asks: "What is the meaning of experience in our profession? What is it we call for and fall back on in any grave crisis in our clinical work? Is it not the opinion formed by the man who has seen much of disease, who has watched it and pondered over it, and best conducted his patients through their maladies? Is it in such crises that we instinctively appeal to the last experiences of the laboratory operator?" Duckworth would have us see all things medical with a *mens sana* and a *mens medica*. The best part of our art is still founded in empiricism. In daily practice, in the best interests of his patients, Duckworth is content to be a medical artist rather than a medical scientist, though ever ready to avail himself of the best science that comes with the approval of careful experience. He warns against the prevalent tendency to pay too exclusive attention to the pathologic process in progress, and to neglect the peculiarities of the individual and the conduct of his particular constitution in relation to the particular illness. We are disposed to regard the soil or tissues of the patient as an indifferent medium, akin to the agar of the laboratory, equally ready to react and encourage the development of such processes as may be expected to follow on inoculation. The fallacy of this he illustrates by the case of the transmission of bovine tuberculosis to the human subject. Another point of modern deficiency is that we often fail to try to make a physiognomic diagnosis of our patient, that is to judge promptly, by practice of it, as to the habit of body or diathesis of the individual. Here again he uses tuberculosis for his illustration, and discusses it in relation to the "strumous" and arthritic diatheses. He discusses the so-called nervous diatheses, myxedema and cretinism, localized pain, apparently simple anemia, and the numerous variety of skin diseases. He adds: "If we pay too much heed to the disease and neglect to study the patient, we may miss many indications of early phases of disease. Where a long report has to be made on a person under examination, say for a life insurance policy, it is possible to be so much engrossed in recording answers to questions that we fail to study the individual before us sufficiently, and so miss the fuller appreciation of the particular features of the case. Some of these insurance papers, especially the American ones, are so full of details that they are apt to lead to an inadequate appreciation of the examinee before us, and to occupy too much time."

14. Mining Accidents.—Robertson, after describing two cases, discusses the value of oxygen in pit rescue, the effect of "chesting" water on air contained, and the proof of oxygen travel, and deduces the following lessons:

1. In all cases of similar entombments it would be advisable, while sinking a large shaft for rescue purposes, also to sink a large bore hole at the far end of such a position. Had a three-inch bore hole been sunk near the place of entombment of the two men a current of air would have been established and the difficulties we had to contend with avoided.
2. The necessity under such circumstances of taking into account the amount of available air, and the number of men sent into it. If the air is limited, as in this case it was, then the number of men sent down should also be limited, and men not actually working ought to come to the upper seam, all reliefs being kept there, and sent down as required.

He concludes that oxygen is an absolute necessity and a valuable adjunct to all pit plants. The men ought to be trained in its uses, and its properties and uses should form a part of the examination for a manager's certificate.

15. Estimation of Ammonia in the Urine.—Mathison details Malfatti's method and finds that its accuracy can be considerably increased by adding 15 grams of powdered neutral potassium oxalate to the urine and shaking for two minutes before titrating. His experience with the method is favorable.

Medical Press and Circular, London

March 17

- 17 *Hemiplegia Due to Syphilitic Arteritis. G. Milian.
- 18 Chronic Ulcer of Stomach and Duodenum. A. Thomson.
- 19 Hydatid Disease of Liver. G. P. Newbolt.
- 20 State Cure of Leprosy in Norway as it Affects other Countries. A. S. Ashmead.

17. Hemiplegia of Syphilitic Arteritis.—Milian says that hemiplegia of syphilitic origin is in most instances due to arterial lesions, and in such case the attack presents distinctive

tive features, consequent on the mode of production of obliterative endarteritis, which does not obstruct the lumen of the vessel all at once, but in a progressive manner. The course of the disease may be roughly divided into three periods: (1) A period of functional disturbance corresponding to invasion of the vessel, during which the patient complains of painful or other manifestations; these, however, have no direct bearing on the terminal symptoms; (2) a meopragic or paretic stage, corresponding to partial obliteration of the vessel, during which we get in an attenuated, incomplete, intermittent form the terminal symptoms; (3) the paralytic stage, corresponding to total obliteration of the vessel and consequent softening of the brain. In the first period, headache is usually the premonitory symptom, accompanied or followed by dazzling of sight, blurred sight, and other subjective symptoms. There may be impairment of memory, diminished aptitude for work, mental depression, prostration and drowsiness. In the second period, the symptoms become more pronounced, and are directly dependent on the ischemic troubles of the cerebral regions involved. Sensory and motor disturbances may occur—cold and tingling, blunting of the sense of touch, or, on the other hand, hyperesthesia; or tremors, muscular twitching, fugitive weakness, clumsy movements and weak grasp, may precede the hemiplegic manifestations, which may or may not be associated with aphasia. Usually, "fugitive aphasia is to syphilitic arteritis what the shadow is to the body and follows its evolution step by step." In the paralytic period, which obtains in at least 50 per cent. of cases of cerebral syphilis, it may affect three distinct forms: (a) complete from the outset, (b) general but progressive, and (c) successive or by stages, named in the order of their rarity. In the last case the paralysis first shows itself in a limb or segment of a limb—the hand, for instance. On the following day it extends to the face, and later to the lower limb, until the hemiplegia is complete. In short, it is hemiplegia by a succession of monoplegias.

Journal of Obstetrics and Gynecology of the British Empire, London

March

- 21 Wertheim's Panhysterectomy for Carcinoma of the Cervix. C. Berkeley.
- 22 *Prematernity Hospital Practice: Thirty Cases of Morbid Pregnancy treated in the Royal Maternity Hospital, Edinburgh. J. W. Ballantyne.
- 23 *What is the Pelvic Floor? A Criticism, in which the Position of the Urinary Bladder During the Latter Months of Pregnancy and During Labor is Considered. R. H. Paramore.

22. Pre-maternity Hospital Practice.—Ballantyne concludes the article commenced in the last issue. He adds the following conclusions to those advanced by him on previous occasions:

It is very difficult to do full justice to pre-maternity cases in a maternity hospital, with the ordinary staff of that institution. Patients before labor require diet and regimen different from that which they need in the puerperium, and there is a want of elasticity in the management of a maternity hospital which makes it not very easy to cater and care for the pregnancy patients. The nursing, also, should be slightly different, so as to make it possible for nurses to be allotted to individual cases, and to give medical or surgical, as well as purely obstetric care; as it is, the sudden calls and irregular work in a maternity hospital make it difficult to give this kind of attention. The medical officers, also, are hampered in their efforts to benefit the pregnancy cases by the other demands on their time and strength; for instance, a resident surgeon who has been up twice during the night at an indoor forceps case and an outdoor post-partum hemorrhage, is not in the best condition for making blood films and carrying out the finer methods of uranalysis the next morning. These and other difficulties, Ballantyne asserts, could be got over if his original proposal of a pre-maternity hospital in a semidetached building could be carried out. Then, and only then, would the full value of pre-maternity hospital treatment be revealed.

23. The Pelvic Floor.—Paramore concludes his article, begun in the preceding issue, as follows: From a consideration of the position of the bladder, we may conclude that during the latter months of pregnancy it is already in part an abdominal organ, and that its transplantation is completed before the actual mechanism of extrusion of the fetus has commenced. We can not, therefore, accept the idea that the bladder forms part of the pelvic floor; nor can we regard the pelvic floor as being composed of two segments, one pubic, which is pulled upward, and the other sacral, which is pushed downward, during labor. As the child descends, the other pelvic contents pass upward until the fetal mass meets the actual pelvic floor. It is here resistance is experienced, it is here the actual process of extrusion commences; for to gain the outside, the fetus has of necessity to pass through the limiting musculature of the pelvic recess; and it is to this structure, which, with the coccyx and anoococcygeal ligament, plays such an essential part in the support of the pelvic viscera and in the preservation of the intra-abdominal pressure, at the same time that it permits the functioning of the passages which pass through it, that the name of "pelvic floor" is definitely to be given.

Glasgow Medical Journal

March

- 24 Recent Methods of Examination of the Nose and Throat. J. MacIntyre.
- 25 Hodgkin's Disease. R. B. Ness and J. H. Teacher.
- 26 Treatment of Hypertrichosis by X-Rays. J. Donald.

Journal of Laryngology, Rhinology and Otology, London

March

- 27 Suppurative Media Otitis with Mastoid Symptoms, and Infections Pseudorheumatism of Nasopharyngeal Origin. L. Bar.
- 28 Modern Treatment of Syphilis, Especially in Regard to the Upper Respiratory Passages. W. A. Lieven.

Annales de Dermatologie et de Syphiligraphie, Paris

February, X, No. 2, pp. 81-142

- 29 Comparison of Sporotrichoses and Coccal Infections. (Comparaison des sporotrichoses et des infections coeciennes. Sporotrichoses aiguës et subaiguës disséminées. Sporotrichoses à évolution phlegmasique.) De Beurmann and Gougerot.
- 30 Radiotherapy of Epithelial Cancer. (Statistique et réflexions à propos du traitement radiothérapique du cancer épithélial, en particulier du cancer épithélial superficiel.) Lenglet and Sonrdeau.
- 31 Epithelioma Consecutive to Lupus Erythematosus. W. Dubreuilh and G. Petges.
- 32 Lymphangitis and Abscess from Simple Chancre with Antio inoculation. (Trois cas de chancre simple de la verge avec lymphangite abcédée et chancérification secondaire des téguments.) P. Gastinel.

Obstétrique, Paris

February, II, N. S., No. 2, pp. 81-176

- 33 Double Large Intestine in New-Born Infant. P. Bar and M. de Kervilly.
- 34 Prophylaxis of Infant Mortality in France. (Moyens utilisés en France pour lutter contre la mortalité infantile.) V. Bué.
- 35 Jaundice in the New-Born. (Ictère du nouveau-né.) M. Lenret. Id. V. Cathala and R. Daunay.

Presse Médicale, Paris

March 6, XVII, No. 19, pp. 161-168

- 36 Treatment of Cancer by Fulguration. P. Fredet.
- 37 Drainage of Hepatic Duct. (Drainage du canal hépatique.) P. Sikora.

March 13, No. 21, pp. 177-192

- 38 *Diagnostic Tuberculin Reaction on the Nasal Mucosa: Rhinoreaction. Lafite-Dupont and Molinier.
- 39 *Remote Medical Consequences of Contusions of the Kidney. (Suites médicales lointaines des contusions du rein.) J. Simonin and Tanton.
- 40 Sceliosis after Infantile Paralysis. P. Desfosses.

38. The Nasal Tuberculin Reaction—Rhinoreaction.—Lafite-Dupont and Molinier state that a specific reaction was obtained in 68 out of 73 tuberculous patients tested by applying directly to the mucosa of the nose for ten minutes a small tampon wet with a 1 per cent. solution of tuberculin. The tampon clings to the mucosa, while the patient refrains from breathing hard or coughing. The reaction consists in a localized exudation at the spot preceded by more or less intense congestion of the mucosa. The exudate dries and leaves a small yellowish crust. This reaction becomes apparent in from eighteen to forty-eight hours, but is long in subsiding, sometimes lasting for ten or eleven days, but generally not over a week. The patients with pleurisy gave a positive re-

action in 3 out of 11 cases, and all those with pulmonary tuberculosis. The findings of the test seem to be as reliable, they declare, as the ocular and cutaneous tuberculin tests, while the procedure is much simpler and less annoying and, they assert, is absolutely harmless.

39. Tardy Consequences of Contusion Affecting the Kidney.—Simonin and Tanton report two rare cases of reduction of secreting power in the kidney. In one case, the kidney was injured by a kick from a horse, and a latent nephritis developed with tendency to formation of stones; in the other case the blow left a cicatrix, palpable two years later, which interfered with the secretion of the organ, but did not seem to impair the general health. The prognosis of these contusions of the kidney depends on the presence or absence of infection. The other kidney does not suffer so long as the effects of the contusion do not include an infectious process. After an accident of the kind, the condition of the injured kidney and of its mate should be investigated from time to time. He certified in the two cases reported that the earning capacity might be estimated as being reduced about 30 per cent., but he qualified his estimate as requiring revision later.

Archiv für Gynaekologie, Berlin

LXXXVII, No. 3, pp. 497-554. Last indexed March 27, p. 1069

- 41 Etiology of Uterovaginal Prolapse. O. Nebesky.
- 42 *Etiology and Treatment of Sterility in Women. E. Runge.
- 43 Acardia and Acute Hydramnion. M. Krüger.
- 44 *Automatic Movements of Uterus and Their Importance for the Pathology and Treatment of Uterine Infections. (Experimentelle Beiträge zur Kenntniss der automatischen Bewegungen des Uterus und deren Bedeutung für die Pathologie und Therapie der uterinen Infektionskrankheiten, insbesondere der Gonorrhoe.) C. Schindler.
- 45 Chronic Metritis. C. Hueter.
- 46 *Placental Theory of Etiology of Eclampsia. W. Weichardt.
- 47 Ovarian Lymphangioendothelioma. T. Kubo.
- 48 *Duration of Pregnancy. (Wann tritt die Geburt ein?) F. Schatz.

42. Etiology and Treatment of Sterility in Women.—In examining for the cause of the sterility in 66 cases, Runge found infantile conditions in cervix or uterus in some and in others the vagina was shallow and gaping so that fluids ran out at once and nothing was retained. Examination of 17 controls, married women who had borne children, showed retention of spermatozoa in the genital tract, while in 34 of the 66 sterile women, under the same conditions, all the fluids escaped at once and no spermatozoa could be discovered. In treatment he aimed to enlarge the posterior vaginal vault and to render the cervix more readily permeable. By packing the end of the vagina with gauze, supplemented by massage, or by the use of the mercury colpeurynter, the posterior vaginal vault can be hollowed out into a pocket which will retain fluids, or a suitable pessary might accomplish the purpose. Operative measures may be needed for an extremely shallow, conical vagina with torn and gaping meatus. By raising the foot of the bed or the buttocks the vagina can be made to slope downward more and the escape of fluids be prevented. His examination was exceptionally thorough and the system followed demonstrated for the first time the actual conditions regarding the passage of spermatozoa into the uterus when infantile conditions prevail. The details of microscopic findings, etc., are tabulated for comparison.

44. Automatic Movements of the Uterus.—Schindler gives an illustrated description of the experimental technic with which he was able to study the behavior of the rabbit uterus in the living animal under various stimuli and also the surviving uterus. The research has shown that the uterus possesses the property of automatic intermittent and regular contraction, in itself, independent of the central nervous system. The adnexa and also the ligament apparatus have likewise their own automatic rhythmic peristalsis. The automatic intermittent waves in the adnexa occur symmetrically and synchronously with the peristalsis of the uterus under normal conditions, but may become irregular during fatigue and in consequence of artificial injury. Besides the wave-like contraction of the longitudinal muscles toward and away from the vagina there are also waves of the circular muscles in the uterus and ligaments and local restricted contractions. Me-

chanical, chemical and thermic stimuli increase the intensity of the automatic movements, and each uterus has its own peculiar individual excitability, as also the adnexa. Extremely violent movements of the entire sexual apparatus can be induced by various stimuli. The cornua roll up, twist together, stand almost straight up, the adnexa and the broad ligaments waving to and fro like a pendulum and up and down until the effect of the stimulus subsides. The response is much more intense with heat stimuli than with mechanical or chemical. In some of the animals the entire sexual apparatus was set in the most violent motion by an injection of Locke's solution heated to 40 C. (104 F.). This did not occur as the rubber tube was inserted, but only as the warm fluid flowed over the sexual organs. Violent movements were also set up by injection into the cornua of the uterus of solution of silver nitrate or other silver salt. The antiperistalsis of the tubes and ligaments in gravid animals is sometimes so violent that the uterus is drawn up toward the ovaries. He calls these movements "frightful," as they explain the rapidity of ascending infection. They also show that the ordinary therapeutic measures, vaginal douches and rectal enemas, hot air douches and cauterization with chemicals, are all strong stimuli which increase the automatic peristalsis or antiperistalsis of the uterus. If the gonococci have passed the internal os, a single vaginal douche may induce a transient antiperistaltic movement which may decide the patient's fate by carrying the cocci to the adnexa. Bumm has reported a case in which in eleven days after the infection both tubes were palpable as thickened, club-like cords. Schindler saw that the peristalsis alone was able to cause regurgitation of the pus as the uterus was lifted up and swung to and fro by the contracting ligaments. Venous hyperemia has a tendency to reduce the automatic movements of the uterus and its excitability. The practical conclusion from his research is the necessity for keeping the uterus quiet in all inflammations. The entire treatment of gonorrhea should be placed on a new basis. Rest in bed is not enough alone; the peristalsis is unmodified. But in atropin, he says, we have a drug which actually arrests the automatic movements of the sexual apparatus and thus keeps infection from spreading. He uses it in gonorrhea, both in women and men, and has been much impressed by the way in which it hastens the cure. Tabora advocates atropin in treatment of gastric ulcer, from much the same standpoint, aiming to tranquilize the stomach and hold it still. He has injected subcutaneously from 1 to 3 mg. a day for weeks at a time without appreciable by-effects. Schindler shows further that when suction hyperemia is applied it must be kept up from one-half to two hours without pauses to avoid stimulating peristalsis. The period immediately afterward may be seized for local silver nitrate disinfection, as venous hyperemia checks the peristalsis. Suction hyperemia is contraindicated if the infection has extended beyond the cervix.

46. Etiology of Eclampsia.—Weichardt relates research which suggests that the symptom-complex of eclampsia is a manifestation of anaphylaxis, hypersusceptibility, induced by antibodies producing this effect.

48. Duration of Pregnancy.—Schatz continues from the preceding volume his extensive study of the physiologic waves regulating the duration of pregnancy.

Archiv für Kinderheilkunde, Stuttgart

XLIX, Nos. 5-6, pp. 321-484. Last indexed February 27, p. 740

- 49 Biologic Relations Between Mother and Child. (Zur Frage der biologischen Beziehung zwischen Mutter und Kind.) C. Stäubli.
- 50 Mongolism. (Anatomische Studien über den Mongolismus.) P. Hellmann.
- 51 *Care of Infants in Hospitals. (Zur Säuglingspflege im Krankenhaus.) J. Gewin.
- 52 Congenital Aplasia of Biliary Passages accompanied by Cirrhosis of the Liver, Cured by Operation. (Angeborene Aplasie der Gallenwege verbunden mit Lebercirrhose, durch Operation behandelt.) F. Theodor.
- 53 Suprarenals and Suprarenal Treatment in Rachitis. (Nebennierensubstanz in Rachitis.) A. Jovane and C. Pace.

51. Care of Infants in Hospitals.—Gewin tells of the conditions and regulations in the Amsterdam Hospital where 286

infants were received in the infant department in about three years. In 54 cases the infants were healthy. He discusses the means of warding off infection, and urges the importance of keeping the healthy infants away from the sick, with particular isolation for all children with severe affections of the air passages. Attendants suffering from colds should be kept away from the infant department. Visits to sick infants should be restricted to the minimum, and every effort made to secure breast milk for them. One child was received at night and the next morning Koplik's sign was apparent. Although it was at once transferred to the contagious ward, measles developed thirteen days later in some of the other infants.

Berliner klinische Wochenschrift

March 8, XLVI, No. 10, pp. 429-476

- 54 *Surgical Treatment of Tuberculous Affections of Hip Joint. (Operative Entfernung des tuberkulös erkrankten Hüftgelenks.) König.
55 *Brain Surgery. (Hirnehirurgie.) O. Foerster.
56 Some Cases of Surgical Trauma. (Unfallchirurgie.) R. Mühsam.
57 The Antitryptic Index of the Blood in Malignant and Septic Disease. (Untersuchung über den antitryptischen Index des Blutes bei bösartigen Geschwülsten und septischen Erkrankungen.) F. Landois.
58 Serodiagnosis of Syphilis in Practical Surgery. G. Wolfsohn.
59 Technic for Access to Hypophysis. (Zur Freilegung der Hypophysis.) L. Loewe.
60 A Precision Pipette for the Blood Count. (Zur Blutkörperchenzählung.) H. Hirschfeld.
61 Puncture Treatment of Gonorrheal Epididymitis. (Die neueren Behandlungsmethoden der Epididymitis gonorrhoea unter Mitteilung eigener Versuche mit der Punktionsbehandlung.) Ernst.

54. Operative Treatment of Tuberculous Hip Joint.—König has been investigating the present condition of 568 former patients with a tuberculous hip-joint affection. All but 294 required operative measures, and 202 of this group of 294 non-operative cases have been re-investigated; 55 of the patients had died of intercurrent affections and 114 were cured without necessity for aid in walking; in 33 the joint had regained normal function, and 90 had a more or less movable joint. Besides these 114 cases with excellent results, 35 patients still required a cane or crutch and in 3 cases the condition was bad; in 13 there is still a fistula. In the group of 274 resections no news could be obtained of 60 patients; of the others, 66 were cured, and in 16 of these cases the result was extremely fine and the patients were able to dance and take long walks. Canes or crutches still have to be used by 43 patients, and 35 still have fistula. As only the severer cases are given operative treatment, these results he regards as extremely favorable. He has done resection on the hip joint in 400 cases, and remarks that his technic seems to be overlooked by other surgeons. The principle is to remove every trace of diseased tissue. The operation is much more complete than what used to be called "resection," but he retains the name as the incision and part of the operation is the same as in the old technic.

55. Brain Surgery.—Foerster's first patient was a man of 44 with intradural hematoma from a fall down a flight of stone steps. Aphasia developed the next day and monoplegia and cortical epilepsy followed by the sixth day. Immediate improvement followed trephining and evacuation of the hematoma six days after the fall. The dura was not sutured and part of the bone flap was removed. In less than three weeks normal conditions were entirely restored. In the second case there was a "depression fracture" of the left parietal bone. Trephining cured the symptoms except the oculomotor paralysis. The patient was a boy of 6 and the unconsciousness lasted for sixteen days after the trauma. In discussing these and similar cases he remarks that the most important symptom in the indications, so far as the brain is involved, are the contractures from irritation or Jacksonian epilepsy. He advocates expectant treatment in case of aphasia until these develop, but as soon as the symptoms of irritation become apparent he would operate without a moment's delay. He adds, however, that the symptoms of irritation of the cortex, especially the epileptic manifestations, supply the indication for operative measures, while the focal symptoms are less im-

portant from this standpoint. In a third case the Jacksonian epilepsy in the right arm was due to a tubercle in the cortex; this patient also recovered after trephining.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena
XII, No. 3, pp. 81-128. Last indexed March 6, p. 805

62 *Ascarides and Their Importance from the Surgical Standpoint. (Askariden und ihre Bedeutung für die Chirurgie.) L. Müller. Commenced in No. 1.

62. Ascarides and Their Importance from the Surgical Standpoint.—Müller summarizes the main points of 155 articles in international literature each reporting one or more cases of serious, almost invariably fatal, trouble from the presence of ascarides. The large proportion of adults in the series is remarkable. The evidence shows that the ascaris is able to perforate the intestinal wall, especially when favored by tuberculous, typhoid, or other ulcerative lesions. The possibility of disturbance from ascarides in the biliary apparatus also should be borne in mind, particularly when children or adults known to have worms present chronic jaundice, convulsions, fever, violent pain in the liver region or symptoms of an abscess in the liver. The tendency of these worms to work their way into minute openings is shown by the way in which they are found in swallowed beads or loops of wire. A febrile temperature evidently tends to render them more actively migratory, as also retching and vomiting. In over two dozen recorded cases ascarides were responsible for appendicitis. The fatal cases in the biliary apparatus were almost all in adults. Davaine collected 47 cases of tumors in the abdomen, the result of perforation of the intestinal wall by the worms. The list is a long one in which death was caused by suffocation from ascarides getting into the upper air passages. In only a few instances was the patient saved by discovery and removal of the worm. The diagnosis is difficult, although the sudden onset of the suffocation suggests a foreign body. It is important to examine the throat with great care but even tracheotomy does not always reveal the disturbing cause. The worms have been found in the lungs, pleura, peritoneum and appendix, besides the main digestive tract, but only one case seems to have been reported of ascarides in the uterus and one in the Fallopian tube. Cases are on record of the passage of the worms through the Eustachian tube and lachrymal canal, generally after a febrile affection. The ascarides in tuberculous, typhoid and other ulcerative processes are perilous foreign bodies, to say the least, the rough edges of their lips being liable to erode the ulcerating surfaces, and their tendency to penetrate into narrow openings being liable to cause enlargement of a perforation anywhere and prevent its healing.

Correspondenz-Blatt für Schweizer Aerzte, Basle

March 1, XXXIX, No. 5, pp. 145-184

- 63 Importance of Serodiagnosis of Syphilis. (Bedeutung der modernen Syphilis-Forschungen, besonders der Serum-Diagnostik für die Klinik der Syphilis.) Jadassohn.
64 *Pathology and Treatment of Scarlet Fever. (Scharlach.) T. Zangger.

64. Scarlet Fever.—Zangger writes from personal experience besides his clinical observation; at the age of 41, four years ago, he noticed one morning that he had a slight sore throat with a trace of fever, and in the afternoon discovered an exanthem on the chest of unmistakable scarlatinal aspect. There was no known source of infection in his environment unless he had acquired the infection at a meeting of a medical society two days before. During the morning of the day his eruption developed he had made professional calls on children in six families and dined at home with his own five children at noon, none of whom had had scarlet fever, but none of these children developed scarlet fever in consequence. This with his clinical experience reaffirms that scarlet fever is not communicable in the early stages, but is transmitted mainly by the secretions from the mouth, nose and ears. The exfoliated epithelium after the fourth or fifth week does not seem able to carry contagion. Initial vomiting is an aid for the diagnosis when such occurs. In one case in his experience a toxic erythema misled him for several days until desquamation set in. In another case the scarlatina recurred eight days

after the eruption had paled. As the virus of the disease seems to be specially located in the nose and throat he advocates local antiseptics as of extreme importance for attenuating the severity of the infection and warding off complications. For this he has found a 1.5 or 3 per cent. aqueous solution of hydrogen dioxid the most effectual and harmless. Since he has instituted this hydrogen dioxid local antiseptics, spraying the throat and nose vigorously, himself, twice a day, he has not witnessed the development of any complications such as albuminuria, swelling of glands, otitis, etc. He used this spray on himself for four days and experienced great relief from it each time; the fever subsided by the third day and he felt quite well with no further disturbances, but refrained from resuming his practice until the thirty-fifth day. The room he had occupied and the adjoining bathroom were disinfected by the authorities, and no further case of scarlet fever developed. He remarks that the official disinfection is frequently rendered futile by the fact that although the patient has confined himself to one room during his illness, yet as convalescence comes on he is apt to go into other rooms and thus infect the whole house. The statistics at Zurich, where Zangger resides, show an average of 436 cases of scarlet fever each year; 12.1 per cent. occur after the age of 15, and 7.5 per cent. after 20. In 15 cases in the last few years the patients were over 40 and in 2 others over 50. The mortality is highest in children under 2 and gradually declines with increasing age. It averaged only 1.23 per cent. in the last 3,690 cases.

Deutsche medizinische Wochenschrift, Berlin

March 11, XXXV, No. 10, pp. 425-464

- 65 A Year of Gynecologic Disinfection without Water and Soap. (Ein Jahr gynäkologischer Desinfektion ohne Wasser und Seife.) O. v. Herff.
- 66 Structure of Upper Funnel of Vena Cava and its Relation to Absolute Irregularity of the Pulse. (Struktur des oberen Cavatrichters und seine Beziehungen zum Pulsus irregularis perpetuus.) Koch.
- 67 *Simplification of Serodiagnosis of Syphilis. (Zur technischen Vervollkommenung des serologischen Luesnachweises.) J. Bauer.
- 68 Technic of Roentgen Moving Pictures. F. M. Groedel.
- 69 *Improved Method of Showing up the Tubercle Bacilli. (Neue Methode des Tuberkelbazillennachweises.) L. Lange and P. Nitsche.
- 70 *Quantitative Cutaneous Tuberculin Reaction and Clinical Importance of Strength of Tuberculin. (Klinische Bedeutung des Tuberkulintiters.) V. Ellermann and A. Erlandsen.
- 71 *Chronic Idiopathic Internal Hydrocephalus Cured by Drainage of the Ventricle. Halben.
- 72 Irrigation Endoscopy in Chronic Urethritis. H. Lohnstein.

67. Improved Technic of Serodiagnosis of Syphilis.—Bauer expatiates on the necessity for having always fresh guinea-pig serum for the test, but states that the fresh serum can be frozen in small amounts and kept frozen, one of the pieces being used for each test. When frozen it retains all its properties as when fresh. He adds that the combination of artificial and natural amboceptors is not only superfluous, but is liable to transform a positive into a negative reaction from the excess of amboceptor. That naturally in human serum is sufficient, when sheep blood is used.

69. Improved Technic for Detection of Tubercle Bacilli.—Lange and Nitsche utilize the property of tubercle bacilli to be carried up to the surface of water by the rising droplets of a hydrocarbon element in the fluid. Other bacilli are not thus carried up by the rising hydrocarbon droplets and are found in the lower depths of the fluid while the tubercle bacilli collect almost exclusively at the surface. About 5 c.c. of sputum is mixed with 50 c.c. of one-tenth normal potassium hydroxid and left until completely blended (homogenized), shaking frequently. Then 50 c.c. water is added and the whole well shaken. The hydrocarbon is then added; ligroin is the hydrocarbon selected as its droplets are slower in rising and thus give the bacilli time to cling to them. They use 2 c.c. of a ligroin with a melting point between 90 and 120 C. The whole is then vigorously shaken and heated in the water bath to 60 or 65 C. until the hydrocarbon has separated. Loops are then taken from the junction of the supernatant ligroin and the fluid below and transferred to a warmed object-glass. As the ligroin evaporates so quickly, several loopfuls can be deposited on top of each other.

70. Clinical Importance of Tuberculin Titration.—Ellermann and Erlandsen obtain the cutaneous tuberculin reaction by a titration method, inoculating the thigh in a row with a series of standard solutions of the tuberculin of varying strengths. By this means they eliminate individuals with merely latent tuberculosis as only those with active tuberculous processes react to the weaker solutions.

71. Chronic Idiopathic Internal Hydrocephalus Cured by Drainage of the Ventricle.—Halben states that all the main symptoms have retrogressed since the operation done by Payr last October. The patient was a girl of 16; Payr introduced into the right lateral ventricle a piece of an artery about 2 mm. in diameter taken from a calf. The artery had been hardened in formalin and dipped in paraffin and was fastened to allow communication between the ventricle and the epidural and subdural space at the top of the head. The headaches, choked disc, nystagmus, abducent paralysis, and tremor all vanished at once or by the end of a month, and vision, which had been 1/2 on each side, was 4/5 and 5/5 when the patient was discharged two weeks after the operation. Slight headache at times is the only trace left of the former trouble except that the papilla looks a little dirty. The patient had always suffered more or less from headache, but the other symptoms first developed about five months before the operation.

Medizinische Klinik, Berlin

March 7, V, No. 10, pp. 343-380

- 73 Bronchial Asthma. R. von den Velden.
- 74 Peripheral Neuritis with Infectious Diseases. (Periphere Neuritiden bei Infektionskrankheiten.) Kerschenshteiner.
- 75 Pigmentation of Buccal Mucosa. (Vorkommen von Mundschleimhautpigmentierung.) W. Mollow.
- 76 Emotional Shocks. (Affektstörungen.) A. Kutzinski.
- 77 Blood Pressure in Rarefied Air. (Verhalten des maximalen und minimalen Blutdruckes beim Menschen in verdünnter Luft.) R. Staehelin.

Münchener medizinische Wochenschrift

March 9, LVI, No. 10, pp. 489-544

- 78 *Digestive Disturbances of Mental Origin. (Verdauungsstörungen und Psychoneurosen.) W. Fleiner.
- 79 Mechanism of Adrenalin Glycosuria. W. Straub.
- 80 *Simplified Technic for Serodiagnosis of Syphilis. (Eine für die Praxis geeignete leicht ausführbare Methode der Serodiagnose bei Syphilis.) H. Noguchi.
- 81 *Salt and Uremia. (Kochsalz und Urämie.) A. Ceconi.
- 82 *Spinal Anesthesia with Novocain in Gynecology. (Lumbalanästhesie.) H. Sieber.
- 83 *Physiologic and Anatomic Research on Spinal Anesthesia, and its Clinical Value. (Lumbalanästhesie.) H. Klose and H. Vogt.
- 84 Streptococci in Genital Secretions during Pregnancy and the Puerperium. (Die Streptokokken in den Genitalsekreten von Schwangeren und Wöchnerinnen.) F. Fromme.
- 85 Treatment of Typhoid Bacilli-Carriers. (Typhusbazillenträger.) Liefmann.
- 86 Injury of Eyes from Lightning. (Augenverletzungen durch Blitzschlag.) R. Hessberg.
- 87 *Artificial Hail Stimulation of Skin: "Grandination" (Neues Verfahren zur Erzeugung von Hautreizen.) E. Plate.
- 88 Puerperal Fever. Deipser.
- 89 *Salt-Poor Diet as a Systematic Method of Treatment. (Die kochsalzarme Diät als Heilmittel.) F. Mendel. Commenced in No. 9.
- 90 Frequency of Various Fatal Diseases at Different Ages. (Verteilung der tödlichen Krankheiten auf die Lebensalter.) F. von den Velden.

78. Digestive Disturbances of Mental Origin.—Fleiner urges that greater attention should be paid to the mental origin of a number of disturbances in the digestive sphere. He insists that there is no such thing as primary nervous dyspepsia; the trouble thus called is only functional disturbance in the stomach or intestines, or both, of psychogenic origin. These disturbances may occur alone or may complicate existing affections of the organs. He says that it is an immense advantage to say "psychic" or "of mental origin" instead of "nervous," as the correct diagnosis suggests the proper treatment. Until the patient has acquired the necessary degree of confidence in the physician it is well to be reticent in regard to the etiologic diagnosis, merely speaking of functional dyspepsia, then later discussing the functional psychoneurosis causing the trouble. The prospects for treatment are much more encouraging from this standpoint. He states that one third of all the dyspeptic patients in his hospital practice last year were of this class. The frequency of the generally misunderstood trouble is sufficient reason for making an earnest study of this form of psychoneuroses and their proper

treatment, which can be only along the lines of psychotherapy. He commends Dubois' recent works on the subject as summarizing most ably the principles of psychic treatment of psychoneuroses. The diagnosis is easy, and much time is gained by dispensing with functional tests and attempts to disinfect the digestive tract or operate on it or on a wandering kidney. All these measures are useless, and the time thus gained may be spent in sympathetic encouragement of the patient. The anxious restrictions of the diet that previously prevailed can be discarded, and the patient gains confidence as he finds he thrives on a wholesome family diet.

80. Discussed editorially in THE JOURNAL, April 3, page 1113, and April 10, page 1186.

81. **Salt and Uremia.**—Ceconi reviews the research of others on the elimination of chlorids, especially of salt, in its bearing on the origin of uremia. He then relates personal experimental research which confirms the assumption that a tendency to impermeability on the part of the kidneys entails a retention of sodium chlorid more than of any of the other salts. This in turn upsets the osmotic balance in the circulation and interstitial fluids and also in the tissues, causing disturbances of various kinds, which cooperate in producing the clinical picture of uremic poisoning. The electrolytes then present in the juices and tissues are not sufficient to neutralize this excess of salt. This theory of the pathogenesis of uremia is based on the fact of retention of salt and also on the recent theories that the mechanism which insures the maintenance of the osmotic balance depends on the physical properties of the ions involved and especially on the quality and quantity of their electric charges.

82. **Spinal Anesthesia.**—Sieber remarks that the importance of the spinal method of anesthesia is generally accepted now and the only question is the choice of the anesthetic. He relates experiences with novocain used in 200 cases, including all the vaginal operations, and all the laparotomies on feeble elderly women with pathologic heart or kidneys. Under other conditions he prefers the ordinary inhalation technic as more agreeable and giving a better prognosis. He has found that the tendency to retching and vomiting during the operation is much reduced by giving a cup of tea with a teaspoonful of brandy one hour before the spinal anesthesia. The amount of the anesthetic seems to influence the tendency to retching less than the kind of operation.

83. Practically the same article was reviewed last week in these columns, page 1217, abstract 116.

87. **Principle of Sand Blast Applied for Stimulation of the Skin.**—Plate applies the term "grandination" to his method, from the word, *grando*, hail. He uses fine seeds for the hail, chiefly on account of their elasticity, and gives an illustrated description of the simple apparatus devised for the purpose. No other measure known, he declares, induces such intense arterial hyperemia as the impact of the seeds, and they also exert a kind of massage, as the muscles contract under the influence of the pelting.

89. **A Salt-Poor Diet as a Therapeutic Measure.**—Mendel describes a few striking cases to show the remarkable benefits that may be derived from reducing the intake of salt in disturbances in the circulation. He also reports one case in which an abnormally large ingestion of salt led to disturbance in the heart action with extreme edema. The causal importance of the salt in this case was confirmed by the immediate improvement when the patient was restricted to an exclusive milk diet. The edema vanished in three days. The pulse dropped to 100, the liver subsided to normal size in a week, when ordinary diet was resumed, merely restricting the amount of salt; in another week not a trace of disturbance in the circulation could be detected. He draws conclusions from recent experimental research which throw light on a number of different affections. The effect of hydremic plethora from salt accumulating with its accompanying water is shown to be peculiarly striking in various skin and serosa affections, especially in inflammation accompanied by exudation of serum through the altered vessels. An inflammation which in the

control animals caused no tumor or exudation to speak of became very much swollen, with profuse exudation, when there was accumulation of salt and its accompanying water. Transferring these experimentally learned facts to clinical pathology, he found that retention of salt (and water) not only alters the clinical picture of inflammation, but has a more or less injurious influence on their course. If the serous membranes are involved in the inflammation there is greatly increased effusion. The effect of the hydremic plethora is seen in pleurisy and in synovitis in a joint as the effusion rapidly increases in amount. These accumulations of fluid compress the lymphatics and capillaries, and thus have an unfavorable influence on and prolong the course of the inflammation, besides the damage from compression of the neighboring organs. Compression of the lymphatics also interferes with reabsorption. Great benefit consequently follows the reduction of the hydremic plethora. The effusion is reabsorbed more rapidly the less salt is taken with the food. The reduced proportion of salt leads to a powerful osmotic current from the tissues out into the blood and increases the diuresis which further reduces the pressure in the interstices of the tissues, and this in turn favors reabsorption of the morbid effusion. The course can be thus modified of a burn, of eczema, of ascites with cirrhosis of the liver, of pleurisy, gonorrheal epididymitis and joint affections, venous thrombosis with stasis edema and arteriosclerosis—he relates instances of all these in which a remarkable turn for the better followed reduction of salt in the diet. He shows that even normal amounts of salt in the diet increase the fluid in the body 1.5 to 3 liters, and that an excessive intake of salt may entail retention of salt and water even in the healthy individuals with sound kidneys. The healthy organism tolerates this excessive amount of fluid without disturbance, but there is transudation and exudation whenever the vessels are damaged from any cause. In parenchymatous nephritis the hydremic plethora causes edema. In heart affections it increases the resistance in the circulation, favoring thereby failure of the compensation of the heart and promoting stasis edema. All these unfavorable influences can be prevented or at least diminished by reducing the intake of salt. It may pave the way for digitalis to work effectually. He cites a number of cases from his own experience to show the marked antiphlogistic and absorbing action of a salt-poor diet. It is not necessary to exclude all salt, but merely to reduce the amount to 2 or 4 gm. of salt (30 to 60 grains), that is, about one-eighth of the amount usually considered necessary in the diet for twenty-four hours. The easiest way to introduce the salt-poor régime is to restrict the diet exclusively to milk for a few days. He believes that the therapeutic salt-poor diet will prove effectual in other conditions.

Therapeutische Monatshefte, Berlin

March, XXIII, No. 3, pp. 129-184

- 91 *Septic Constriction of Uterus. P. Zweifel.
- 92 *Iodin in Arteriosclerosis. (Jodwirkung, Jodismus und Arteriosklerose.) Erlenneyer and H. Stein.
- 93 Puerperal Neuritis and Paralytic Luxation of the Ilium. E. Ebstein.
- 94 *Transmission of Vaccine Infection. (Vakzineübertragung und deren Verhütung.) L. F. Meyer.
- 95 The More Recent Methods of Conservative Treatment in Gynecology. (Gynäkologische Heilverfahren.) E. Kaufmann.
- 96 Influenza Otitis. Klau. Commenced in No. 2.
- 97 *Dosage of Formaldehyd. P. Fleissig. Commenced in No. 2.
- 98 Removal of Foreign Bodies in Nose. The Spoon Sound. (Fremdkörper der Nasenhöhle und ihre Entfernung mittels der Löffelsonde.) F. Müller.

91. **Tetanus of the Uterus.**—The condition of general tonic contraction known as tetanus of the uterus is generally ascribed to too early use of ergot, repeated examinations or rough manipulations, but Zweifel presents evidence to prove that it is due to local infection and should more appropriately be called septic constriction of the uterus. The putrid odor of the secretions in all the cases on record confirms the assumption of infection. In all such cases premature rupture of the membranes occurred, without labor, and a long interval elapsed before delivery was completed. This allowed infection of the ovum and putrefaction of its contents, under the influence of which the tetanus results. In a personal case de-

scribed no ergot had been given and very little examination done, but three days had elapsed between the rupture of the membranes and protrusion of the arm of the fetus, with intense general tonic contraction of the uterus. Version was then attempted but failed, and when the child was extracted seven hours later by perforation, it was found in advanced maceration. The delay of three days after rupture of the membranes permitted ascending infection with resulting septic constriction of the uterus. It did not yield even when the patient was kept under the influence of an anesthetic for three hours. The uterus was consequently removed by the abdominal route after attempts to remove it through the vagina had failed. The woman had already borne four children and the pelvis was normal, but the malpresentation at this last childbirth, the early escape of the amniotic fluid and absence of labor contractions, cooperated in the tragic outcome. The woman was not brought to the hospital until 72 hours after the rupture of the membranes. The attending physician, Zweifel, says, should have used the inflatable bag to hasten delivery after the escape of the amniotic fluid, as unless this is speedily followed by delivery of the fetus, conditions invite infection. He advises disinfection of the vagina after too early rupture of the membranes, with a 5 to 1,000 solution of lactic acid in physiologic salt solution (equal parts lactic acid and distilled water, adding 10 c.c. of this mixture to a liter of water with one teaspoonful of salt).

92. Importance of Iodin in Incipient Arteriosclerosis.—Erlenmeyer and Stein emphasize the fact that the action of iodine in the organism is essentially an action of ions. The iodine ion is able to aid in the destruction of degenerated tissue and to promote the restitution of cells still alive but incapable or normal functioning. These properties of the iodine ion explain the durable effect of an energetic course of treatment with iodids. If the effect were due solely to the chemical action of the iodine salt, the previous condition would recur when the last molecule of iodine had left the organism. The arguments and evidence presented confirm the necessity for progressively increasing the dosage of the iodine. The iodine ion exerts a stimulating action to which the organism soon becomes accustomed and ceases to respond unless the amount introduced is progressively increased. When this stimulation has been kept up long enough to start the cells well on the way to complete restitution, they can travel the rest of the way unassisted. In arteriosclerosis, a small uniform dosage does no good whatever, but large and progressively increasing doses may accomplish wonders in the incipient cases. Patients long taking about 7.5 grains of potassium iodide two or three times a day without the slightest benefit, soon show progressive improvement when 60 or 75 grains of iodine salts are taken during the day. Severe symptoms of iodism are observed only when the iodine salt is split up by the acid in the stomach. The large doses cause no serious disturbance if the diet is regulated to avoid acids. The acid in the stomach must be neutralized with an alkali, especially at first. For twenty-four hours before commencing the course of iodine treatment the stomach should be rendered alkaline by the use of alkaline mineral waters, and sodium bicarbonate should always be incorporated with the iodids, preferably in the proportion of one part of the bicarbonate to two parts iodide. Much larger amounts of ions are realized when two or three iodids are combined in a single dose, and equal parts of sodium and potassium iodide have been found most convenient and effectual, always combined with one-half the amount of sodium bicarbonate. Wine and fruit should be avoided while taking iodids unless the ferments in the fruit have been destroyed by cooking. Milk should also be avoided on account of the liability to lactic acid formation. This assumption that the presence of acid is the *sine qua non* for the liberation of free iodine, and consequent iodism, is sustained by the benefit of treatment based on this "acid hypothesis" and the failure and threatening symptoms when it is disregarded. As iodine under all circumstances is a poison for the protoplasm, iodism is an unavoidable by-effect of the action of the iodine ions, but the severe manifestations are easily prevented by observing

the above precautions. Iodism should not be feared and measures to annul or suppress it entirely are superfluous. Durable benefit depends on a prolonged course of treatment with progressively increasing doses.

94. Prevention of Transmission of Vaccine.—Meyer insists on the necessity for refraining from vaccination when there is a child with eczema in the environment. He further insists on the importance of protection of the vaccinated area with a cover of cotton wrapped in medicated gauze and fastened to the surrounding skin with adhesive plaster. This protects against contamination and against infection of others while allowing free ventilation of the spot. He adds that a dressing of this kind should be made compulsory at every vaccination.

97. Dosage of Formaldehyd.—Fleissig devotes about six pages to a tabulation of forty-three cases of various affections in which formaldehyd in some form was applied to the surface of the lesion or injected into some organ or vein. He also reviews from the literature the opinions of various authors on the action of this chemical in its different forms, and shows the misconceptions liable to arise from the different modes of calculating the strength and urges the adoption of some uniform formula.

Virchows Archiv, Berlin

March, CXCIV, No. 3, pp. 369-563

- 98 Histologic Study of Causes and Course of Transformation of Bone in Osteoplastic Carcinoma. (Knochenumbau im Karzinom.) G. Axhausen.
- 99 Regeneration in the Liver. (Regeneration in der Leber.) A. Carraro.
- 100 Inflammatory Proliferation of Epithelium in Female Genitalia. (Ueber entzündliche heterotope Epithelwucherungen im weiblichen Genitalgebiete und über eine bis in die Wurzel des Mesocolon ausgedehnte benigne Wucherung des Darmepithels.) R. Meyer.
- 101 Glioma in the Nose. (Nasengliome.) L. Süssenguth.
- 102 The Ganglion Cells in Sunstroke. (Die Ganglienzelle bei der Insolation.) A. Amato.
- 103 Regeneration of Severed Pancreatic Ducts. (Ueber die anatomische und funktionelle Wiederherstellung der unterbundenen und durchschnittenen Pankreasausführungsgänge.) A. Visentini.

Wiener klinische Wochenschrift, Vienna

March 11, XXII, No. 10, pp. 327-362

- 104 Tuberculosis in Children. (Tuberkulose des Kindersalters.) H. Albrecht.
- 105 Influenza Conjunctivitis. R. Possek.
- 106 Production of Antigen for Serodiagnosis of Syphilis. (Zur Frage der Herstellung von syphilitischen Antigenen.) N. A. Tschernogubow.
- 107 Simplification of Serodiagnosis of Syphilis. (Vereinfachung der Komplementbindungsreaktion bei Syphilis.) H. Hecht.
- 108 Treatment of Tuberculosis. A. Krokiewicz. Commenced in No. 9.

Zeitschrift für Geburtshilfe und Gynäkologie, Stuttgart

LXIV, No. 1, pp. 1-223. Last indexed February 27, p. 744

- 109 *Secondary Carcinoma in the Uterus. H. Offergeld.
- 110 Imperforate Vagina. (Zur Klinik der Gynatresien.) E. Gross.
- 111 *Experiences with Pubiotomy. (700 Hebosteotomien.) A. Schläfli.
- 112 The Opsonic Index in Pregnancy and the Puerperium. (Ueber die klinische Verwendung der Opsonine bei Schwangeren und Wöchnerinnen.) H. Guggisberg.

109. Secondary Carcinoma of the Uterus.—Offergeld has been able to find 22 cases on record of a secondary carcinoma in the uterus, and he calls attention to the fact that in 3 of these cases the woman was pregnant. This suggests that the change in the metabolism in the gravid uterus upsets the balance which seems to ward off metastasis from cancer elsewhere. The secondary carcinoma develops with unusual rapidity in the pregnant uterus, while otherwise it grows very slowly.

111. Seven Hundred Pubiotomies.—Schläfli reports 8 cases from von Herff's clinic at Basle and reviews 510 cases from the literature with mention of nearly 200 more of which the details are not so completely given. The mortality for 664 cases was 32 with an operative mortality of 4.82 per cent. for the mother and of 9.18 for the children. The bladder was injured in 12.35 per cent. of 510 cases, and there was a febrile puerperium in 31.76 per cent. and permanent incontinence of urine in 5 women, that is, in 4.17 per cent. of 120 women re-examined later. He regards pubiotomy solely as an emergency operation when the disproportion between the pelvis and the child's head is found to be insurmountable.

Zentralblatt für Chirurgie, Leipsic

March 6, XXXVI, No. 10, pp. 329-368

- 113 *Plastic Operation on Abdominal Wall. (Ueber Muskelplastik bei Defekten der Bauchpresse.) I. K. Spischarny.
114 *Improved Technic for Suturing the Bladder. (Blasennaht mit tiefen Knopf- und oberflächlichen Schnürrähten.) v. Hacker.

113. Plastic Operations on the Muscles for Defects in Abdominal Wall.—Spischarny remedies the defect by means of the oblique muscle taken from the side wall of the chest and the part below the costal arch, as he describes in detail, with reports of five cases in which this technic was successfully applied. The defects resulted from the removal of a large tumor in the rectus muscle, actinomycosis in the abdominal wall, or excessively large hernia.

114. Suture of the Bladder.—Hacker has found that a combination of button sutures in the lower tier and a row of small tobacco bag sutures above forms a particularly strong method of closing the bladder wall. He illustrates the method as applied to a transverse incision.

Zentralblatt für Gynäkologie, Leipsic

March 6, XXXIII, No. 10, pp. 329-376

- 115 *Suture of Recent Laceration of Perineum. (Zur Naht des frischen Dammrisses.) W. Sigwart.
116 *Importance in Obstetrics and Gynecology of Momburg's Method of Expelling Blood from Lower Half of Body. (Bedeutung der künstlichen Blutleere der unteren Körperhälfte für die Geburtshilfe und Gynäkologie.) O. Hoehne.
117 Four Cases of Resection of Ovaries according to Menge's Technic. (Zur Ovarialresection n. Menge.) P. Zacharias.
118 Treatment of Placenta Prævia. V. Zimmermann.

115. Suture of Lacerated Perineum.—Sigwart states that primary healing was the rule in all but 2 out of 125 cases of lacerated perineum in which the suture was completed with the Michel clips. They seem to be peculiarly adapted for lacerations in the perineum as they leave no stitch holes to become infected.

116. Expulsion of the Blood from the Lower Half of the Body in Obstetrics and Gynecology.—Hoehne has been experimenting with the Momburg technic and states that it has the advantage over isolated compression of the abdominal aorta in that the ovarian artery is compressed as well. The conditions are peculiarly favorable for it in obstetric cases, as the intestines then are crowded into the upper part of the abdomen. Various operations in the abdomen and even incision of the exposed aorta caused no bleeding in the rabbits thus belted in. The method was applied in two cases in the clinic in which hemorrhage persisted from atony of the uterus after delivery. The anemia of the organ thus induced stimulated it to energetic contraction at once, while the circulation in the most vital organs was strikingly improved as shown by the improvement in the radial pulse, the quieter breathing and the subsidence of the anemia in the brain. He emphasizes the absolute harmlessness of the procedure and the certain success of the hemostasis. The communication issues from Pfannenstiel's clinic at Kiel; in one of the two cases reported violent pains were felt afterward in the legs for three hours which then subsided without a trace. He does not know whether to ascribe these pains to the belting in or to the preceding winding of the legs to expel the blood, but in any event he comments that it is wise to follow Momburg's directions, that is, not to draw the belt too tight, but merely enough to arrest the pulse in the femoral artery. This is the first by-effect that can possibly be ascribed to the measure that has been reported. The intestines and the ureters do not seem to suffer from the compression, but the question of possible injury to the wall of the inferior vena cava and eventual danger of thrombosis requires study. No tendency of the kind was observed in the rabbits. The method seems to promise a brilliant future in prevention of hemorrhage with placenta prævia, as it dispenses with all intragenital measures. It may even do away with the necessity for manual separation of the placenta, he adds, as the more energetic contractions of the anemic uterus may render it unnecessary. He adds in conclusion that it is possible that this method may also aid in starting an artificial abortion by the effect on the uterus of thus cutting off its blood supply.

Policlinico, Rome

March 7, XVI, Practical Section, No. 10, pp. 293-324

- 119 Positive Complement-Fixation Test in Malta Fever. (La deviazione del complemento nella febbre di Malta.) G. Pulvirenti.

February, Medical Section, No. 2, pp. 49-96

- 120 *Lipemia and Diabetic Lipoidemia. C. Frugoni and G. Marchetti.

March, No. 3, pp. 97-144

- 121 Familial External Ophthalmoplegia. (Oftalmoplegia esterna cronica familiare.) A. Nazari and P. Chiarini.
122 Experimental Lesions in the Liver of Splenic Origin. (Lesioni epatiche sperimentali di origine splenica.) G. Breccia.
123 *Case of Hydatid Cyst in the Heart. (Caso di echinococco del cuore.) B. Baccchi.
124 *Sphygmodynamometer. (Sfigmodinometro.) S. Salaghi.

February, Surgical Section, No. 2, pp. 49-96

- 125 Traumatic Separation of the Epiphyses. (Sui distacchi traumatici epifisari.) A. Pennisi.
126 Independence of the Liver Territory. (Sull'indipendenza del territorio epatici.) S. Gussio.

120. Lipemia and Diabetic Lipoidemia.—The lipemia and lipoidemia—as the presence of cholesterol and lecithin in the blood is called—were so intense in the case described that the authors regard it as unique in this respect. The patient was a boy of 13; the first symptoms of trouble developed four months before he entered the hospital where he died in less than a month. The cerebrospinal fluid was also rich in fat, but nothing was found at autopsy to indicate an embolic process anywhere. The clinical manifestations were those of typical pancreatic diabetes, but the pancreas was found apparently sound. The urine during life contained 3.5 gm. of fat granules in the twenty-four hours—0.875 per thousand—and 270 per thousand of the ethereal extract of the blood was also fat. The literature on the subject of diabetic lipemia, and its probable origin in some general metabolic disturbance are reviewed and discussed.

123. Hydatid Cysts of the Heart.—Baccchi reports a case and compares it with fifty-eight others of which he has found records in the literature, including 15 cases with multiple cysts. There was no eosinophilia to aid in the diagnosis, but there was remarkable exogenous proliferation of the cyst.

124. Sphygmodynamometer.—Salaghi gives an illustrated description of the instrument which combines a sphygmomanometer and an apparatus to measure the velocity of the blood current. It is very simple, merely a broad cuff separated into three lengthwise parts, the outer two serving to measure the arterial pressure and the inner the velocity: three tubes connect the cuff with the standard manometer. He gives a number of tracings to show the findings in various conditions and the important information that may be thus obtained.

Riforma Medica, Naples

March 1, XXV, No. 9, pp. 225-252

- 127 Unreliability of Serodiagnosis of Syphilis with Urine. (La reazione di Wassermann eseguita colle urine ha valore pratico?) G. Pollio.
128 Cutaneous Tuberculin Reaction in Bone and Joint Tuberculosis. (Valore diagnostico della cutirazione tubercolinica nella tubercolosi ossea ed articolare.) G. Impallomeni.

March 8, No. 10, pp. 253-280

- 129 Tumors at Base of Brain. (I tumori della base dell'encefalo.) G. Rummo. Commenced in No. 9.
130 Peculiar Changes in Cutaneous Sensibility in Hysteria. (La polarizzazione dell'anestesia isterica.) C. Calligaris.

Sei-i-kwai Medical Journal, Tokio

January 31, XXVIII, No. 1, pp. 367-372

- 131 Experimental Research on Opsonic Index under Ishigami's Tuberculo-Toxoidin. K. Takaki.

Nordiskt Medicinskt Arkiv, Stockholm

XLI, Internal Medicine, No. 3. Last indexed Jan. 30, p. 428

- 132 *Successful Roentgen-Ray Treatment in Case of Syringomyelia. I. Holmgren and O. Wiman.
133 *Laws Regulating Connection between Infectious Diseases and Specific Drugs. (Observations sur les maladies infectieuses et sur les médicaments spécifiques.) B. Ebbell.
134 *Acquired Heart Disease in Children. (Ueber die erworbenen Herzerkrankungen des Kindesalters.) G. Forssner.
135 *Case of Poisoning by the Flowers of the *Lonicera periclymenum*. (Yellow Honeysuckle.) O. Hanssen.

132. Syringomyelia Cured by Roentgen-Ray Treatment.—Holmgren and Wiman relate the details of a case of syringomyelia in a workman of 51 in which the Roentgen rays ap-

plied to the spinal cord not only arrested the morbid process, but seemed to allow restitution of the functions of the nerve tract involved. The effect is evidently due to direct local action on the pathologic process in the spinal cord, as the improvement involved only the regions innervated from the part of the spinal cord exposed to the rays. The most important effect was the resurrection, he says, of the functions of the hands and fingers. The improvement has persisted to date, nearly two years, and the patient has gained over 25 pounds in weight. The rays may serve to differentiate anesthetic leprosy from syringomyelia in some cases.

133. **Infectious Diseases and Specific Remedies.**—Ebbell comments on the wide difference in respect to the action of drugs between the diseases caused by vegetable micro-organisms and those caused by micro-organisms belonging to the animal kingdom. There does not seem to be any essential difference between the diseases caused by these two groups, he remarks, except in respect to the response to drugs. The animal germs can be destroyed or their development arrested by certain drugs administered internally in doses too small to affect the patient, but the vegetable germs are far more resistant. Dosage strong enough to act on them would kill the patient before the parasites succumbed. According to this law there is no specific remedy for bacterial diseases, and experience to date seems to show that it is useless to seek for such. The efforts in this line should be abandoned, Ebbell declares, and attention concentrated on serotherapy which has already given promising results. If a disease yields to a certain remedy its protozoan origin is thus established. Further research will certainly reveal still more powerful specific remedies for this class of infections.

134. **Acquired Heart Affections in Children.**—Forssner's article won for him the Alvarenga prize. It is based on 47 cases that came to autopsy and 27 other fatal cases. He remarks that in 45 of the 74 cases in children and in 32 of 60 cases in adults the acquired heart affection was the result of acute articular rheumatism. He classifies and tabulates this material, remarking that the 74 cases of fatal heart affections were encountered among 6,602 children in the clinic during the last twelve years. The article is not concluded in this number.

135. **Poisoning from Honeysuckle Flowers.**—A two-year-old boy swallowed some flowers of the yellow honeysuckle and in an hour manifested symptoms of severe poisoning, principally drowsiness, languor, congestion of blood in the head, diarrhea, convulsions and perspiration so violent that the bed clothes were wet through and through, as the spasms abated a little at the end of the eight hours. A few hours afterward the child fell asleep and for several days was peevish and inert with irregular evacuations. The violent perspiration recalls the ancient use of the honeysuckle as a diuretic and diaphoretic. A few cases are on record of the poisoning of children by the fruit of the *Lonicera xylosteum*.

Norsk Magazin for Lægevidenskaben, Christiania

February, LXX, No. 2, pp. 81-168

- 136 *Tumors in the Nerves and Neurofibromatosis. (Om svingster i nerverne og multipel neuro-fibromatose.) F. Harbitz.
137 *Extension in Ambulant Treatment of Fracture of the Arm. (Den ambulatoriske extensionsbehandling paa overextremiteten.) O. Borchgrevink.

136. **Tumors in the Nerves and Neurofibromatosis.**—In this first installment of his article, Harbitz relates more or less of the details of 21 cases, including 12 of a solitary tumor in the nerves, 4 of a tumor in the optic nerve, 2 of multiple tumors, fibromas, on nerves, and 2 of a diffuse sarcoma in the cauda equina. His experience includes a still larger number of tumors in the nerves, but the clinical details are lacking of some of the others, so he does not include them in his list. He here discusses the pathologic anatomy of tumors involving nerves, and defines the affection known as multiple neurofibromatosis, giving its history.

137. **Extension in Ambulant Treatment of Fracture of the Arm.**—Borchgrevink shows in nine illustrations the special

devices which he has found extremely useful in applying extension to a fractured arm while allowing the patient to be up and about. In 450 cases in the last six years the devices have given constant satisfaction, the Roentgen rays showing in the large majority that the results were as good as could have been obtained with suture of the bone.

Ugeskrift for Læger, Copenhagen

January 28, LXXI, No. 4, pp. 77-106

- 138 Diagnosis of Destruction of the Labyrinth. P. Tetens Hald.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

CONSERVATIVE GYNECOLOGY AND ELECTROTHERAPEUTICS. A Practical Treatise on the Diseases of Women and their Treatment by Electricity. By G. Betton Massey, M.D., Attending Surgeon to the American Oncologic Hospital, Philadelphia. Edition 6. Cloth. Pp. 462, with illustrations. Price, \$4. Philadelphia: F. A. Davis, 1909.

AN EXPERIMENTAL STUDY OF SLEEP. (From the Physiologic Laboratory of Harvard Medical School and Sidis' Laboratory). By Boris Sidis, M.A., Ph.D., M.D., Author of Psychopathologic Researches in Mental Dissociation. Paper. Pp. 106. Price, \$1. Boston: Richard G. Badger, 1909.

THE PRACTICAL GUIDE TO HEALTH. Designed for Nurses and for Home Use. By Frederick M. Rossiter, B.S., M.D., Author of "The Story of a Living Temple." Cloth. Pp. 637, with illustrations. Price, \$3. Washington, D. C.: Review & Herald Pub. Assn.

SELF-CONTROL AND HOW TO SECURE IT. By Dr. Paul Dubois, Professor of Neuropathology in the University of Berne. Cloth. Pp. 337. Authorized Translation by Harry Hutcheson Boyd. Price, \$1.50. New York: Funk & Wagnalls Co., 1909.

THE PHYSIOLOGIC STANDARDIZATION OF DIGITALIS. By Charles Wallis Edmunds and Worth Hale. Hygienic Laboratory. Bulletin No. 48, December, 1908. Paper. Pp. 61. Washington: Government Printing Office, 1909.

ANNUAL REPORT OF THE SURGEON-GENERAL OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE OF THE UNITED STATES. 1908. Cloth. Pp. 220. Washington: Government Printing Office, 1909.

MY LIFE AS A DISSOCIATED PERSONALITY. By B. C. A. With an Introduction by Morton Prince, M.D. Paper. Pp. 47. Price, 50 cents. Boston: Richard G. Badger, 1909.

RADEMACHER'S UNIVERSAL AND ORGAN REMEDIES. Abridged and Translated by A. A. Ramseyer. Cloth. Pp. 104. Price, \$1. Philadelphia: Boericke & Tafel, 1909.

New Patents

Recent patents of interest to physicians:

913263. Ankle support and protector. H. J. Collis, Taunton, Mass.
913127. Jury and jury-frame for facilitating orthopedic treatment. G. W. Haas, Los Angeles, Cal.
913492. Massage apparatus. M. A. Haines, Cleveland, Ohio.
913297. Medical apparatus for injecting purposes. K. Kraut-schneider, Innsbruck, Austria-Hungary.
913426. Converting catechu-tannic acid. W. Osborne and H. Schupp, Munich, Germany.
913559. Pasteurizing apparatus. A. A. Pindstoffe, Frederiksberg, near Copenhagen, Denmark.
913323. Sanitary washbowl. C. F. Tollzien, Salem, Ohio.
913686. Method and apparatus for atomizing and spraying oily materials. H. O. Brandt, Manchester, England.
913688. Respirator. W. Bucklen, Jr., Marble Rock, Pa.
914295. Eye-cup. C. A. Maher, Ottawa, Ill.
913836. Sanitary bed-pan. M. B. Morgan, New York, N. Y.
913910. Pasteurizing apparatus. J. T. H. Paul, Chicago, Ill.
913983. Catamenial receptacle. P. J. Scheller and N. I. Haas, Evansville, Ind.
913855. Suspensory sack or pouch. H. C. Shaw, Chicago, Ill.
913989. Obstetrical apparatus. B. H. Simpson, Nobletown, Pa.
914785. Invalid's supporter. E. I. Boyce, New York, N. Y.
914644. Obtaining animal serum. R. H. Deutschmann, Hamburg, Germany.
914935. Poultice case or container. H. J. Dunn, Oakland, Cal.
914950. Syringe. J. R. Harris, Raton, New Mex. Ter.
914576. Respirator. G. F. Jaubert, Paris, France.
914725. Sputa-cup and holder. F. C. Jonah, Boston, Mass.
914871. Syringe. H. F. Ong, Portland, Ore.
915000. Deodorizing and disinfecting device. A. G. Walter and B. M. Inman, Fremont, Ohio.
914623. Manufacture or generating-plates for X-ray machines. H. H. Williams, Chicago, Ill.
914544. Disinfecting apparatus. V. A. Williams, Sedalia, Mo.
915329. Sphygmomanometer. L. F. Bishop and R. Grace, New York, N. Y.
915561. Capsule filling machine. T. P. Curry, Danville, Ky.
915197. Vibratory massage apparatus. C. O. Lindstrom, Chicago, Ill.
915315. Massaging implement. O. N. Tevander, Chicago, Ill.
915127. Obstetrical appliance. M. H. Topping, Flat River, Mo.
915251. Massage device. J. Vanderslice, Montreal Annex, Canada.
915646. Atomizer. E. J. Worst, Ashland, Ohio.

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Address

THE CRITICAL PERIODS IN THE LIFE OF A PHYSICIAN *

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The life of a man is marked by certain critical periods. Birth, marriage and death are commonly so reckoned. Their importance, as conventionally defined, is chiefly historical. In this conventional form they may be regarded as erroneous concepts developed during the lamentable and prolonged darkness which preceded the advent of the biologist. We now know that birth and death are inseparable companions. They begin together long before that change of habitat which we ordinarily call birth, and they go on together even after death has plainly the upper hand. What have we, as rational beings, to do with these processes? Nothing. We are born blank. Of death we know even less than of birth. Ages before the Pharaohs, death came mysterious, unsolved, and still so comes. We have no personal data of birth because we are born without the powers of observation and reason. And we have no data regarding death because our powers take flight before death comes.

To the uninstructed marriage will seem in a different category. I will not deny the obvious fact that its incidence is different. Marriage usually takes place about half way up the ascending portion of the curve of life. By that time our reasoning powers are partly developed. I confess, therefore, that we have our wits, but as a biologist I strenuously deny that we are able to use them. In this even the laity will support me, though by instinct rather than by reason. The preservation of species is perhaps the most important of all natural processes. It is wonderfully safeguarded. In the higher animals, and especially in man, a very complicated protective reflex has been created. It is commonly termed falling in love. The term itself illustrates the process. We despise a calculating lover, and at the root of this distaste lies the subconscious fear that the automatic protection devised by Nature may be evaded. When the symptoms of love are properly marked, reason is not only superfluous, but harmful. Fortunately, it is commonly also wholly ineffective. The locksmith himself is proverbially futile. And so while marriage, biologically regarded, possesses academic interest, it is, like life and death, irrational. It can not, therefore, be considered a critical period in the rational life of man.

These critical periods are two. In the first the youth must choose his gods; he must make up his mind what kind of a man he wishes to be. In the second the man

whose youth is gone, on whose temples time has laid his warning touch, must ask of these same gods whether life be still worth living.

We are met to-day with men who are about to choose. For twenty years these men of 1908 have studied in the schools. To-day their cloistered life is done. The ocean of affairs lies before them. They must embark, these half-reluctant youths, and lay their course.

This period of choice is not without suffering. During his undergraduate life the student leans on teachers and comrades to an extent he scarcely realizes. Suddenly these props are withdrawn. His teachers shepherd a new flock. They no longer stand *in loco parentis* to the young physician who is now a colleague. Love him they may, interested in his welfare they surely are; but the old collegiate bond is loosed, and the freedom of master toward pupil is no longer permissible. The soothing routine of life in the professional school is also gone. To the creaking of the educational machine succeeds a dolorous silence. The first sensation is of luxurious freedom. Soon, however, painful doubts arise. Is the recent graduate to succeed? Has he mistaken his calling? Is he sure of his own powers?

I can still see with almost distressing intensity the surgical ward in which I applied my first dressing: the long, sunny room with its shining floor; the rows of spotless beds, each with a competent critic active to enjoy the awkwardness of the new doctor, and, most distressing of all, the trained nurse, perfectly appointed from her cap to her noiseless shoes, a miracle of freshness and learning. I am now confident that women know very little more than men; but on that day I would have given anything to be sure of ever knowing half so much as that nurse seemed to know.

Marion Sims was one of the great benefactors of his race—a physician of pure genius. He began practice in a small village in the south. His first patient was a baby. After some days it died. His second patient was also a baby. For a time all went happily. Then came a turn for the worse, and in twenty-four hours this child also was gone. Sims went home, tore away his sign, which was of tin and very large, and threw it down a well. The greater the imagination, the greater the anguish of these early days.

In the midst of these cruel doubts there come insidious temptations. The young man may be offered a harbor under the lee of some commercial enterprise. I know a youth who was tempted by the post of resident physician to a remote industrial village, with a house to live in and an ample salary. He asked advice of two physicians, full of years and honors. One said, very cautiously, that he feared that the distressed young man would be sorry whichever way he decided. The other said it was clearly a choice between present poverty with the hope of distinction, and an immediate competence with a stiffened mind. Trials like these are the

* An address at the first Class Day celebrated by the Senior Class at the Harvard Medical School.

test of an education. An education should harden the spirit against the torture of self-doubt and teach us to welcome poverty with the hope of future service. The value lies in the nature of that service.

Here I would urge felicity of choice. It is strange that in all the years I have been a student no one has lectured me on felicity of choice. Of industry I have often, too often, heard. One would suppose from the tiresome iteration of the word that industry possessed intrinsic excellence. Except as an anodyne, industry has, of course, no value independent of the end to which it is applied. The industry of a thief is not to be commended. Nor is indiscriminate industry of any sort desirable. Students believe that if only they work hard enough they will arrive somewhere. This does not necessarily follow. For unimaginable centuries the earth has worked prodigiously on the moon; but this exemplary satellite has come no nearer. Lessing's raven should know by this time the futility of unintelligent industry.

The raven observed that the eagle sat on her eggs for thirty days. "And that is doubtless the reason," cried the raven, "why the young eagle becomes the king of birds. Good! I also will do this." And ever since the raven actually has sat on her eggs for thirty days; but thus far she has brought forth only miserable ravens.

On reflection it will appear that felicity of choice is not the only subject of high educational importance omitted in the schools. Indeed, it is probable that the stated education is everywhere merely elementary. The higher education is too subtle for our coarse curricula. It will not take the pedagogic mold. Bounds can not be set to the more precious values, and a definition is in itself a badge of inferiority. Who shall define the skylark's song that ravishes the soul from earth and bears it up to heaven? That which can not be defined in words can not be conveyed by them; but I may say that the end for which we would scorn delights and live laborious days is personal. It is the happiness of regarding the world from the standpoint of the philosopher.

There died not long ago in Leipsic a famous physiologist—Carl Ludwig. The older English and American physiologists were most of them his pupils. Never was there a teacher like him, at least in his own science. Lucidity of mind, an extraordinary insight into phenomena, and a marvelous skill in the invention of methods were in him united with a most lovable disposition. His high enthusiasm burned undimmed for more than fifty years. To Ludwig's laboratory I made a pilgrimage some months before his death. The simple rooms from which had come so many glorious discoveries were filled with pupils at research. On my venturing to say that it gave us all new faith in life to see him still so fruitful—he was then 72—he replied that his only grief was that he must leave off just when it was most interesting.

Ludwig's life was spent in observation, reflection, experimentation and further reflection. The method of every philosopher is the same, and this same union of observation, reflection, experimentation and further reflection will lead the young physician to the highest honors in his profession and to the largest personal happiness.

I do not mean that happiness shall be pursued. The Declaration of Independence was necessarily in some respects a shallow document, and nowhere more so than in the celebrated phrase "life, liberty and the pursuit of

happiness." Our life is at the disposal of any infected wretch who asks it; liberty is unsocial and in our complex society practically unattainable; and happiness flies from pursuit. In the career that I propose as the most desirable, the young physician and philosopher thinks not of life nor of liberty, and turns his back on happiness. His single aim will be the public service. Yet experience richly shows that lives thus spent are happiest in the end. And, further, they are perhaps the only lives that pass unscarred through the second critical period.

As age steals on there comes a weary time. The pleasures of youth are gone; the energy which seemed inexhaustible is plainly waning; a taste of reputation has shown that it can not satisfy; cares increase, and an inevitable acquaintance with evil seems to make the whole world gray. The youth doubts his own fitness for the struggles and rewards of life; but the older man disillusioned and perhaps embittered, questions life itself.

Many a green isle needs must be
In the deep, wide sea of misery,
Or the mariner, worn and wan
Never thus could voyage on
Day and night, and night and day,
Drifting on his weary way,
With the solid darkness black
Closing round his vessel's track.

Then comes the supreme test of education. The physician who is also a philosopher endures this test. To him neither disillusion nor bitterness are possible, and the evil of the world is more than balanced by the good. Nor does he grow old. It is experience in the sense of repetition that makes one old; experience, in its true sense of experimentation, is the fountain of youth. To the philosopher life is a succession of problems, each more interesting than the last, and at the end he lies down, tired, perhaps, but grateful.

The training which creates the experimental state of mind is easier to obtain at the present day than even twenty years ago. The medicine taught in the schools was once almost wholly didactic. The freedom of dissection, won after a hard fight, afforded training in observation. The introduction of chemical laboratories, and later of practical work with the microscope, greatly enlarged this training. Observation now became the principal discipline of the medical school. At present the requirement of physiologic experimentation and the opportunity for the first-hand diagnosis of disease at the bedside are beginning to weaken the undue emphasis still laid on observation and to establish the pedagogical value of scientific reasoning controlled by rigid experimentation. Yet the battle for a schooling that shall teach men to think is hardly begun. It has always been a difficult fight, and it is made greatly more difficult in medicine by very interesting conditions.

Medicine was once practically an art. It has been widened by the entry of many sciences. Expanding irresistibly with the new spirit, Medicine has broken the hereditary bonds that fettered her as they still fetter Theology and Law. Medicine in her new state is a complex of sciences and arts. It is here that the difficulty lies. For the making of new discoveries, the coming of these new sciences into this ancient profession is an unmixed blessing. For the healer at the bedside science is an advantage only when its relations to empiricism are clearly understood. The practical physician must often be purely empirical. He is sum-

moned to a house hushed in the fear of death. The mother weeps by the bedside of her only child. This is no place for the slow processes of a rational science. Speed and an accurate empiricism will here alone save life—morphin for the pain, an antipyretic for the fever—the fruits of science, doubtless, but not the method. Cases such as these often make the practicing physician impatient of science. He is right so far as he goes. At the bedside science is sometimes a hindrance. Yet in many, perhaps most, cases the methods of rational science may be applied to the diagnosis and the healing of disease with results unobtainable by empiricism.

But the healing of the sick is only a part of the duty of a physician, and for those who have the necessary originality of mind it is the lesser part. A patient is an individual, a social unit, and while his death may be a public misfortune, its importance is infinitesimal compared with the conquest of disease. The benefits of a discovery in medicine are cumulative. The individuals whose premature death was prevented by the new discovery live out their lives, but soon are gone. The knowledge that gave them their peaceful old age lives on and on, generation after generation.

The state of mind that leads to discovery is not to be had from books or the routine of schools. Always it has been a personal tradition handed down from master to pupil in the long line of those who have sought to still the cry of suffering by discovering its cause. It was Hippocrates who exclaimed: "God-like is the physician who is also a philosopher!" And he will be happy.

Sweet hope shall cherish his old age.

As the years pass he will more and more believe that many, if not all, the plagues that now make life so hard will be overcome by those to whom, as youths, he may perchance himself hand on the torch.

Original Articles

HYSTERICAL BLINDNESS

NOTES OF THREE CASES, ONE OF WHICH EXHIBITED
ASTEROGNOISIS *

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Kerneis¹ collected in 1902 from the literature thirty-four cases of bilateral hysterical amaurosis, to which de Schweinitz,² who quotes him, adds several others which were published later, and I have been able to find four additional cases myself.

Hysterical blindness may be of sudden or gradual onset and affect one or both eyes. It may last from a few hours to several years and may be intermittent in character. Hasenknoff³ reports a case of recurring hysterical blindness in a boy, aged 10 years, with astasia-abasia and hysterical vomiting. In all recorded cases vision was sooner or later restored, so the prognosis is good.

Blindness, in the absence of inflammatory changes, and with normal fundi and pupillary reaction, is strongly suggestive of hysteria. Sudden onset and sudden termination also argue for this diagnosis and indeed hardly

admit of any other. Among the other symptoms accompanying hysterical blindness have been ptosis, nystagmus, strabismus and conjugate deviation. Commonly, in the recorded cases, there have been other manifestations of hysteria, but amaurosis may be the sole expression of it, as in a case reported by Dieulafoy.⁴ Unilateral hysterical amaurosis occurs rather more rarely than the bilateral form, according to Kron, and offers different diagnostic problems. But bilateral hysterical amaurosis is almost as rare an affection. The following case, therefore, appears worthy of record:

CASE 1.—Patient.—A man, aged 49; married twenty-five years; a painter by occupation. He smoked and chewed a little; but did not drink and never had acquired venereal disease. He lived in a small country town and his life had been quiet and uneventful. He had worked regularly at his occupation and was never off work on account of serious illness.

Present Illness.—On Jan. 1, 1907, he escorted his daughter, who was making a little trip, to the train. He carried her bag into the car; and while there was suddenly stricken with blindness in both eyes. He had to be led from the car. The blindness was almost complete. He could just distinguish light from darkness. At the end of a week he consulted a physician who did eye work, and was under his care for two months, during which time vision slowly and gradually improved. He was now able to see headlines in the newspaper but not to read ordinary print. His vision remained in this stage until June, 1908, when he came to Pittsburg and placed himself under the care of an irregular practitioner who told him he had a tumor in the brain, and who treated him for six weeks. The treatment consisted in the passage of electricity through the eyes. He was considerably improved by this treatment, and the improvement continued for a time after he returned to his home in the country. Then it remained stationary for about two months. Since about July, 1908, the vision had been gradually failing. In June, 1908, on awakening one morning, the patient found that he was paralyzed in the right forearm and hand from a point a little below the elbow downward and there was a complete loss of feeling in the hand, which felt numb. He gradually regained nearly all the lost muscular power, but only to a moderate degree did he recover the lost sensation in the hand. There seemed to be no trouble from the elbow upward. The "paralysis" (really sensory loss) made the hand useless; and even although the "paralysis" was improved at the time of the first examination the hand was still almost useless because the patient could not feel or distinguish objects with any certainty.

Nothing unusual had occurred at or just before the time of the onset of the blindness. The patient had been out of work for a week, but he was not worrying on this account, as he expected to return to work very shortly. He was not worried or agitated over anything. I subsequently learned by observation and historical data that the patient was a weakling in character, prone to fits of anger, petulance and resentment. He had been hard to live with. On one occasion, several years ago, he made an attempt to cut his throat. The scar present indicated that the cut penetrated no deeper than the skin.

General Examination.—October 17 and the three succeeding days. The patient was led into my office by his daughter as though he were totally blind; and his attitude and gait suggested that of the blind man. He moved his whole head to see an object. The vision was, however, about 20/40 in each eye. With the dynamometer he registered 50 with the right hand and 60 with the left. The knee-jerks were normal.

Sensation: There was almost complete loss of pain sense over the right forearm and hand from a little below the elbow. Over the rest of the body there was considerable diminution of pain sense but nowhere else entire loss. Conjunctival reflexes were lost. Contact sense was normal. With the eyes closed the patient could not tell in what position his fingers of the right hand were placed.

Stereognostic Sense: The patient was unable to recognize objects placed in the right hand. The movements he made

* The first patient was shown at a meeting of the Pittsburg Academy of Medicine, Oct. 27, 1908.

1. Étude sur la cécité hystérique ou amaurose hystérique totale et bilatérale, Bordeaux, 1902.

2. Eye and Nervous System, p. 614.

3. Charité-Ann., 1906, xxx, —.

4. Dieulafoy, R.: Rev. neurol., 1907

were clumsy and not adapted to recognize the object in his hand. The object often fell from the hand. He used this hand very little in dressing and undressing himself. He said it was useless.

Ocular Examination.—The eyes were carefully examined by Drs. Markle and Curry; the former furnished the following report of his examination: "Oct. 21, 1908, examination of the eyes of H. G., aged 49, showed visual acuity in each eye of 20/40. The pupils are $3\frac{1}{2}$ mm. in size and are equal. The irides react to light promptly, also to accommodation. There is a slight hyperopia or far-sightedness (one-half diopter), with presbyopia, the correction of which gives distant vision equal to 20/30 in either eye and enables him to read readily Jaeger No 1 type. Other than a slight esophoria (one degree) no imbalance of the extraocular muscles exists and no limitation in any direction in the excursion of the eye could be detected. The ophthalmoscope showed clear ocular media and normally appearing fundi. The visual fields indicate enormous concentric contraction and are of the tubular form, i. e., the fields show great contraction and remain the same absolute size

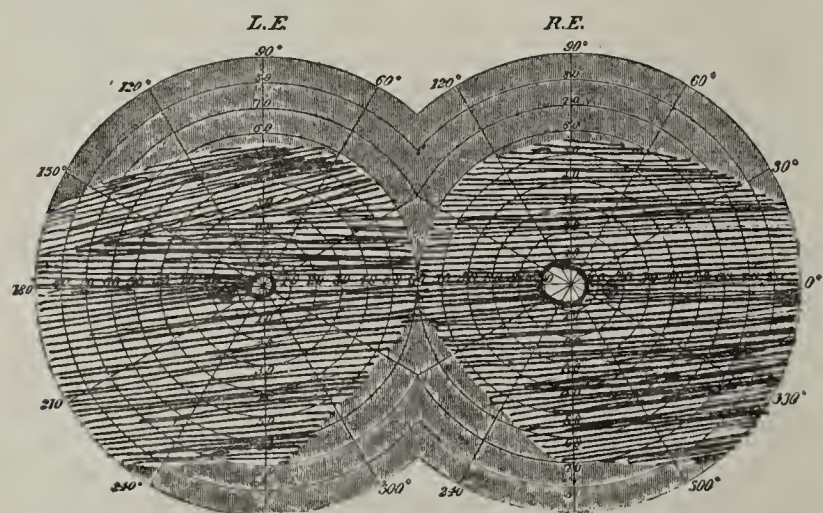


Fig. 1.—Field of vision (tubular in character) on Oct. 21, 1908. O. D. V. = 20/40; O. S. V. = 20/40. The patient named white, yellow, red, green and blue (mm. disc) correctly at central fixation point. No scotomata.

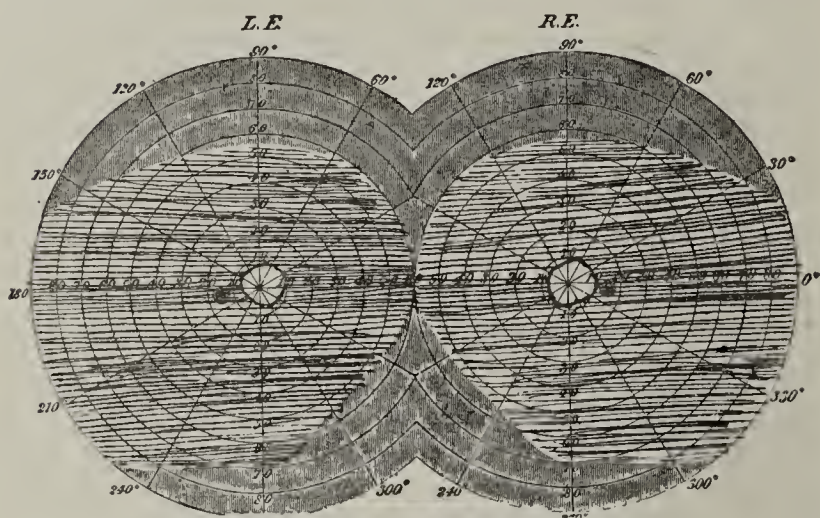


Fig. 2.—Field of vision on Nov. 25, 1908; still tubular in character. O. D. V. = 20/30; O. S. V. = 20/30.

no matter how far distant the patient may be from the point of fixation. There are no scotomata. The field for color, red, green and blue, is equally extensive but is not greater than the form field. A second field taken five weeks later (November 25), as shown by the appended charts (Figs. 1 and 2), reveals essentially the same or but slightly increased area in the visual field. At the later date the visual acuity equalled 20/30 in either eye without glasses."

Course of Illness.—Under suggestive treatment and enforced exercises the patient acquired much greater use of the hand; and he learned to dress himself and to go about alone, etc. But he never seemed to me very anxious to get well.

This case presents several interesting features: the sudden blindness, and later sudden monoplegia with loss of pain sense, the loss of stereognosis sense in the affected member due apparently to loss of muscular and articular sensation, and contracted visual fields of the

tubular variety. It is very interesting to note that astereognosis may be a hysterical manifestation. It is, however, on the ocular manifestation that I wish to comment particularly in this paper. So I shall not now consider these other interesting points.

Looking over my case-book, I find records of two other cases of hysterical blindness which I desire to mention briefly:

CASE 2.—Several years ago I saw a man whose case was an undoubted one of major hysteria. He had had a monoplegia and later a hemiplegia: the former was transferred from one arm to the other and from one leg to the other. He gave a history of having been blind or nearly blind for a period of two months one year previously. He could see only fingers before his face. During these two months the blindness improved and grew worse several times. Examination of the eyes was negative.

CASE 3.—I have also notes of the case of an unmarried woman, aged 25, who was examined ten years ago by me. Her case was also an undoubted one of major hysteria of the most pronounced type. She had at that time been ill for three years. For fourteen months of this time she had been confined to bed on account of paralysis of all four limbs. Later the paralysis had been hemiplegic in character. She was subject to severe convulsive attacks. When I saw her the hemiplegia was improving and she suffered from contracture of the third and fourth fingers and with marked degree of amblyopia. She had only slight vision, enough to enable her to distinguish persons, and what vision she had appeared to be central. Her eyes had been examined by one of our most competent ophthalmologists who was unable to discover any organic disease. He recommended the use of the galvanic current passed through the eyes, which prescription I carried out. This amblyopia persisted for several months. I met this patient on the street about a year ago looking the picture of health; she appeared to be happy and in the best of spirits. She had been happily married three or four years previously.

Westinghouse Building.

THE BLINDNESS OF HYSTERIA

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It has long been known that in hysteria disturbances of sight occur comparable to the anesthesia in other sensory regions. In relatively rare instances the disturbances may amount to one-sided or double-sided complete transient blindness. More common, however, is the mere reduction of sight usually associated with contraction of the visual field and some disturbance of color perception. As the full literature is readily accessible in de Schweinitz's excellent article on hysteria¹ it is unnecessary to repeat it here. My main object in relating my own experience is to show that the problem of psychic diminution of sight is a live one and not merely an academic question, since neurologists often quote the statement that the hysterical patient is neither conscious of nor annoyed by a certain degree of one-sided or even double-sided visual imperfection. My experience has shown me that the real importance of psychic influences on the eye is more apparent in the oculist's office than in the neurologic clinic.

I shall arrange my material in different groups and begin with the most striking type.

DOUBLE-SIDED COMPLETE BLINDNESS

The most dramatic instance was that of a middle-aged woman in the practice of Dr. Ritter, who called me into consultation.

1. In Posey and Spiller's *Eye and Nervous System*, 1906.

CASE 1.—The patient, hitherto in good health, had had a severe shock to her feelings the previous evening, and clapping her hands to her eyes to shut out the sight, found herself absolutely blind. No objective reason could be found for the blindness, while the freely mobile pupils showed that light was perceived at least by the lower centers. Yet she could not tell the direction of the window. Her great anxiety to be cured made the prognosis favorable. She was told to gaze toward a distant clock with the understanding that a few minutes' electric treatment would enable her to see the clock distinctly and without fail. A mild faradic current applied to the temples and "suggestion" restored normal sight permanently.

According to Kron there were but 26 cases of bilateral hysterical blindness reported up to 1902. While some of these were cured by suggestive measures at once or speedily the disturbance persisted in others for variable and long periods of time with occasional relapses.

ONE-SIDED HYSTERICAL BLINDNESS

One-sided hysterical blindness was found by Kron reported only 23 times. It is probably not very rare but is not usually put on record. The following is a good example.

CASE 2.—*Patient*.—D., a vigorous young man of 20 years had accidentally had a porcelain knob thrown at him six weeks ago, since which time he claimed to be blind in the right eye. He had been under treatment in the country and wanted my opinion as to the probability of recovery.

Examination.—A small scar slanting through the right brow was evidently limited to the skin. The orbital margin felt sound. The right eye was objectively normal in every way like the left and the pupillary actions of both were perfect. The left eye had normal V. and normal field. The patient denied all perception of light in the right eye. By throwing light alternately into each eye with the ophthalmoscope I could convince myself that the patient could localize correctly with the blind eye. There was also a distinct compensatory movement of the blind eye when weak prisms were placed before it while watching a light. These tests, and especially the normal play of the pupil, showed at least a moderate perception of light in the right eye of which the patient claimed to be unconscious. The promise of a good prognosis and various suggestive manipulations, like electricity, had no immediate effect on the psychic blindness. Yet there could be no doubt about the psychic nature of the blindness. For, had the optic nerve been injured by the accident, partial atrophy would have been recognizable after the lapse of six weeks. In the present case there was no reason to suspect simulation. The patient wanted no testimonial and seemed anxious for a good prognosis. Besides there was no question of any damage suit or insurance considerations.

As the patient did not return I know nothing of his subsequent history except that he was examined by two colleagues within the next two weeks with the same findings.

The distinction between hysteria—or let us say psychic—blindness and wilful simulation can not be based on objective findings. They would be the same in both cases. We must base our judgment on a psychological analysis of the patient's mind and object. I have seen two other instances of alleged one-sided blindness following a trivial traumatism in which examination led to the same results as in the above-quoted patient. There was no demonstrable lesion, there were normal pupillary reaction and compensatory movements of the blind eye under a prism which would have caused double sight and yet any sensation of light was absolutely denied. But as both those people were anxious for damages and did not seem particularly pleased with my definite assurance of recovery I unhesitatingly qualified them as malingerers. I may of course have been influenced somewhat by mannerisms

of the patients which one can hardly describe but which impress the observer as regards their sincerity.

Much more common than total blindness of psychic origin is moderate impairment of sight in hysterical subjects. Observers of Chareot's school (Parinaud and Gilles de La Tourette) have often found in hysterical people moderate amblyopia, mainly one-sided, contraction of the visual fields, particularly for colors and with this not uncommonly anesthesia of the front and the neighborhood of the eye. These observations lose much of their importance from the fact that the subjects are either not conscious of them or at least are not annoyed by them in their every-day life. Like some of the other stigmata of hysteria they are either brought out or at least accentuated by the examination.

PARTIAL IMPAIRMENT OF SIGHT IN OTHERWISE NON-HYSTERICAL SUBJECTS

Of greater clinical significance are interference with good vision complained of by people who are otherwise not suffering from hysterical manifestations, or at least not at that time. In my observations of such cases I have found neither contraction of the visual field nor marked changes in the fields for colors such as reversal of the limits of red and blue. My suspicions regarding the psychic origin of sight impairment in a number of such cases were based on the absence of other explanations and the emotional instability of the subject. But the diagnosis of hysterical or psychic amblyopia was considered established only when the condition had proved fugitive and the prolonged observation had excluded all other explanations. The following cases illustrate some of the various clinical aspects.

CASE 3.—*History*.—R., a salesman, aged 35, stated that his eyes had been in satisfactory condition until within the six weeks preceding examination. He noticed an occasional blurring, at first only in reading, later on too, in distant vision, and thought that the right eye was at fault wholly or at least much more than the left. At least three weeks, but probably longer, the lids troubled him, especially on the right side and the trouble was increasing.

Examination.—The left eye was objectively normal except for a slight chronic conjunctivitis. V. = 20/35, with cyl. + 0.5 axis 90° V. = 20/20. The right eye showed considerable acute inflammatory swelling of the edge of the upper lid, with pronounced catarrhal conjunctivitis, but with very scant secretion. The eyeball was pale, pupil, media and fundus normal. V. = only 20/80, not improved by any glass. The near point was about eight inches for either eye. The field for white and colors was normal and there was no scotoma.

Course of Illness.—The cause of the dimness in the right eye was not clear. Careful testing showed that it was not due to mucus floating on the cornea or to regular astigmatism. There were no symptoms suggesting any disease of the optic nerve. Neither the history nor the physical examination pointed to hysteria. But there was an emotional display in the man's answers to questions and an exaggerated anxiety in his manner that, together with the enfeebled accommodation, made me suspect that his amblyopia might be of psychic origin, perhaps induced by the pressure exerted by the inflamed lid on the cornea. Accordingly I gave him as positive a promise regarding the recovery of sight as seemed warranted, and confined the treatment to local applications for the inflammation of the edge of the lid and conjunctiva (nitrate of silver, zinc sulphate solutions, Credé's ointment of soluble silver). Three days later the external condition had improved without the formation of the sty which I had expected. His sight seemed clearer to him but was not objectively changed. Field normal even for colors. On the seventh day the lid was practically well, and V. was found 20/25 in the right eye, and the accommodation in both eyes improved so as to enable the patient to read without fatigue.

When seen a few weeks later he was found normal in every respect.

CASE 4.—History.—Miss F., cashier, 20 years of age, had been nervous, apparently from close confinement to work. On account of slight asthenopia she had been wearing cyl. 0.50, axis 90. She was also said to have had slight convergent strabismus in former years. Without known cause she felt on the day before examination a "snap" in the left eye, had since seen very poorly with that eye and had besides a dull ache in the rear of the head.

Examination.—Objectively both eyes were normal in every way and the pupillary reaction was normal. The right eye had V. = to 20/40 plus with her glass. Accommodation and field were normal. The left eye only saw the hand at six feet and recognized no colors but had intact field. The patient was given antipyrin for the headache and a dose of calomel.

Course of Illness.—Two days later the patient returned feeling much better. The sight of the right eye was still below par (20/40) but the left eye with correction had nearly as good sight as the right and could now see all colors. More accurate testing showed a hyperopia alike in both eyes amounting to 0.75 D with 0.50 D astigmatism, confirmed under homatropin. There evidently had been a former convergent strabismus of the left eye which the patient had outgrown spontaneously, for there was still an occasional tendency to convergence, alternating with binocular fixation. On account of some asthenopia, mainly due to anemia and nervousness, she was seen off and on for two years subsequently. With the exception of one other period of dimness of the left eye lasting half an hour she retained a sight of nearly 20/30 (with correction) in both eyes.

HYSTERICAL EXAGGERATION OF CONGENITAL AMBLYOPIA

The next instance in which the inferiority of one eye, probably congenital, was exaggerated psychically was much more difficult of interpretation.

CASE 5.—History.—V. A., a boy of 11, had been a frail child and passed through a variety of children's diseases. Three years before the present trouble he spoke of poor sight in the left eye, was treated and said to have been improved, but again claims since a short time that with the left eye he could only perceive light. He also complained somewhat of discomfort on using his eyes.

Examination.—The patient was a frail-looking boy, mentally well developed, somewhat anemic, though otherwise now in good health but restless, fidgety and emotional, with an extremely long and high but narrow skull. Both eyes were externally normal, and there was no visible strabismus. The right eye was perfect with a hyperopia of 0.75 D. The left eye could barely tell a light but the pupil reacted normally and light in the left eye influenced the pupil of the right eye. The ophthalmoscope showed a healthy eye but with an anomaly which seemed to me a malformation. From the normal papilla there protruded three short club-shaped or stem-like opacities into the vitreous, while a longer one, apparently the remnant of the hyaloid artery, passed from the center of the disk forward to about the middle of the vitreous. The anomalies, probably congenital malformations, were not inconsistent with good vision in view of the integrity otherwise of the disk and fundus. That there was fair sight was shown by the normal pupillary reaction both direct and consensual. On the other hand, prisms could evoke neither double sight nor compensatory movements of the eye said to be blind. It seemed more probable to me therefore that this eye with congenital anomaly had defective central sight. The alleged total blindness I considered hysterical.

Course of Illness.—Iron was prescribed and the faradic current used on the temple with a hint that it would have to be used stronger if not effectual soon. A few days later the boy returned with the ability to count fingers at ten feet and with normal vision and color sense. This condition did not change any further within a month's observation.

MALINGERING AND HYSTERIA IN CHILDREN

It is difficult in children to draw a sharp line between wilful misrepresentation and real psychic inter-

ference with sight. Youngsters with vivid imagination are apt to consider disturbances created by their fancy or ideas as real. For instance:

CASE 6.—A boy of 8 years was brought to me because he could not see writing on the blackboard in school. I found no objective reason why he should not have perfect sight, but I could not get him to read more than 20/200. This poor vision was somewhat improved by almost any weak glass. By using a slightly disagreeable faradic current with the implied threat that it would have to be made stronger I raised the sight at once to the normal standard. After a short vacation and some iron for the anemia there was no further trouble.

The diagnosis is more difficult when suggestive influences do not improve the sight promptly. My general experience in hysterical conditions has been that immediate cures can be expected only in cases of very recent onset, while a persistence of symptoms for weeks makes it unlikely that they will yield to any influence. The following is a good illustration of psychic impairment of sight in a child:

CASE 7.—Patient.—S. H., a healthy boy of 10, had complained of slight watering and discomfort in the eyes and thought he did not see well. His music teacher had observed that he did not recognize his notes well.

Examination.—Aside from a slightly follicular conjunctivitis the eyes were perfect in every way and emmetropic. But the sight with either or both eyes was only 20/100, perhaps improved a trifle by different glasses, especially concave glasses. Nothing additional was gained or learned by the use of homatropin. The patient's visual fields were capriciously constricted and, as Greef has described it, apparently tubular, that is to say the area which he claimed to be able to see was not larger on a distant wall than it was on a sheet of paper close to the eye—as if he were looking through a tube. His answers concerning colors are contradictory and the field for blue seems smaller than for red.

Course of Illness.—My diagnosis of hysteria was based on the want of objective findings, the contracted and tubular field of vision and the contradictions regarding colors. But suggestion, glasses and electricity did not materially increase his sight while under examination. The frequent frowning and blinking seemed to suggest that conjunctival irritation was the origin of his symptoms. I ordered a sulphate of zinc solution without further directing his attention to the eyes and suggested an out-door life with rest of the eyes. One week later the patient had normal sight, normal field and color sense.

The case is not an isolated one in my experience. I could collect probably half a dozen similar ones from my case books, though none of them are quite as striking and conclusive as the present one.

100 State Street.

THYMOL AS A SOURCE OF ERROR IN HELLER'S TEST FOR URINARY PROTEIN *

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It is a well-known fact that the ordinary tests for urinary proteins, especially for serum proteins, are not specific. Several concordant tests are necessary for satisfactory differentiation. Reliance on a single test often leads to error; a disturbing factor may prevent the detection of a substance that is present or may simulate the behavior of a substance that is absent. It is the object of this paper to present some observations on a disturbing factor in Heller's test.

The tests most frequently used by the general practitioner for the detection of serum protein in the urine are: (1) The heat test—coagulation by boiling aided

* From the Laboratory of Biological Chemistry, Columbia University.

by a slight proportion of acid; (2) precipitation by potassium ferrocyanid in the presence of acetic acid, and (3) Heller's test—precipitation by concentrated nitric acid.

As stated above, none of these reactions is specific for any of the serum proteins, the proteins in the urine about which the physician is mostly concerned, as a rule. *Boiling* the urine precipitates albumin and globulin under certain conditions, e. g., at a certain degree of acidity, but may fail to precipitate them under others. According to the nature of the acid used—nitric or acetic acid—a greater or less acidification will vitiate results. Addition of either of these acids is necessary to guard against the interference of basic phosphates in alkaline or neutral urine. On the other hand, addition of acetic acid in moderate excess will not only dissolve phosphates, but will cause the formation of soluble acid albumin. Nitric acid, if added in too small a quantity, will tend to convert a portion of the basic into the acid phosphates, allowing albumin to remain in solution. An excess of nitric acid will redissolve albumin, especially if the urine should be heated *after* the addition of the acid.

The potassium ferrocyanid-acetic acid test is one of the most reliable and accurate, although the albumoses, nuclealbumin and urates have to be differentiated. In this test, however, it is often difficult to attain the most favorable volume relation between acid-salt solution and urine.

It is obvious, therefore, that there are urines in which neither the heat test nor the potassium ferrocyanid test will allow an unequivocal interpretation—a situation that occurs frequently in connection with urines containing particularly small proportions of serum proteins. In such cases S. Fraenkel¹ and others most urgently advise the use of Heller's test. Its technic is well known.

In this research, the test was applied as follows: 5 c.c. of concentrated nitric acid were poured into a test tube, the tube was then inclined and, with the aid of a pipette, urine was directed slowly down the side to prevent mixture of the liquids. In this way two sharply defined strata are obtained. Along the line of contact a ring appears if the urine contains albumin or globulin or certain other substances.

According to Hammarsten,² "there is hardly another test for protein in the urine which is at the same time so easily performed, so delicate and so positive as Heller's if the possible errors and the means by which they may be prevented are borne in mind." What are these sources of error?

The principle of Heller's test is the precipitation of acid protein by concentrated nitric acid. Any chemical constituent of the urine precipitable by the action of concentrated nitric acid will, therefore, be apt to give misleading results. Here again Hammarsten² may be quoted:

In a urine rich in urates a complication may occur, due to the formation of a ring produced by the precipitation of uric acid. The uric acid ring does not lie, like the protein ring, between the two liquids, but somewhat higher. For this reason, two simultaneous rings may exist in urines that are rich in urates and do not contain very much protein. The disturbance caused by uric acid is easily prevented by diluting the urine with from one to two volumes of water before perform-

ing the test. The uric acid now remains in solution and the delicacy of Heller's test is so great that, after such dilution, only in the presence of insignificant traces of protein does this test give negative results. In a urine very rich in urea a ring-like separation of urea nitrate may also appear. This ring consists of shining crystals, and it does not appear in urine previously diluted. A confusion with resinous acids, which also give a whitish ring with this test, is easily prevented, since these acids are soluble on the addition of ether. Stir, add ether, and carefully shake the contents of the test tube. If the cloudiness is due to resinous acids, the urine gradually becomes clear, and on evaporating the ether a sticky residue of resinous acids is obtained. A liquid which contains mucin does not give a precipitate with this test, but it gives a more or less strongly opalescent ring, which disappears on stirring. The liquid does not contain any precipitate after stirring, but is somewhat opalescent. If a faint not wholly typical reaction is obtained with Heller's test after some time with undiluted urine, while the diluted urine gives a pronounced reaction, the presence is shown of the substance which used to be called mucin or nuclealbumin.

From this quotation it will be seen that the degree of concentration of the urine is an important factor in the behavior of protein toward the concentrated nitric acid of Heller's test. In this connection the following observations made by Hallauer³ may be of interest: If to urine which has been concentrated on the water bath, albumin has been added, the heat test will be intensified as compared with normal urine containing the same amount of albumin, whereas both Heller's test and the potassium ferrocyanid-acetic acid test fail to show the presence of any albumin in the concentrated urine. If the latter be diluted, the last mentioned tests will again become positive. In urines concentrated beyond a certain degree even the heat test will be negative, and this occurs even in the presence of large amounts of albumin. Dilution of the urine will give here the same result as before. The usefulness of diluting concentrated urine before testing for albumin is very evident.

Another source of error in Heller's test has been discovered in this laboratory. It is rarely possible, even in hospital practice, to make a thorough qualitative and quantitative examination of the urine in the vicinity of the patient or shortly after micturition. Very often either a sample or the total daily quantity of the urine has to be sent quite a distance to a chemical laboratory or to the medical examiner of a life insurance company. There is plenty of time for chemical changes to take place in the urine, be it a change in the reaction and the consequent precipitation of otherwise soluble material, or fermentation and decomposition of the different constituents of the urine. To obviate these disturbing occurrences, preservatives are commonly employed.

Of the large number of chemicals proposed as urine preservatives, toluol, chloroform, formaldehyd, sodium fluorid and thymol are the ones most frequently used. The use of toluol as a urinary preservative is still in the experimental stage. "Chloroform⁴ is unreliable in many instances. If a urine has a high specific gravity, the preserving action is greater than when the specific gravity is 1.021 or less." We know that Nylander's test for sugar may be negative in the presence of chloroform in the urine.

The value⁴ of formaldehyd as a preservative is well known, but as a urine preservative it has its limitations, particularly if not used in proper quantity. The chief danger is in using too much. . . . Perhaps the most objectionable feature of this preservative is its reducing action on Fehling's solution.

1. Descriptive Biochemie, 1907, p. 578.

2. Textbook of Physiological Chemistry, 1907; translated by Mandel, p. 641.

3. München med. Wehnschr., 1903, 36, 1539.

4. Ogden: Boston Med. and Surg. Jour., 1905, p. 718.

This occurs when several drops of the formaldehyd solution have been added to a small specimen of urine (4 ounces). The copper test for sugar can not, therefore, be used, but other tests must be utilized. Formaldehyd reacts in a peculiar manner with phenylhydrazin, producing an abundant noncrystalline deposit, which, of course, is readily distinguished from phenylglucosazone by the fact that it is noncrystalline.

Kenney⁵ has found that when four or more drops of the 40 per cent. solution of formaldehyd are added to an ounce of urine a distinct reaction for albumin is obtained in Heller's test. If, therefore, too much formaldehyd has been used for preservation this test for albumin becomes unreliable. We know, furthermore, that formaldehyd reacts with uric acid, and that the reaction for indican is seriously interfered with and the detection of the bile acids is rendered impossible. It follows from this that the use of formaldehyd as a urinary preservative may give unreliable results.

There remain sodium fluorid and thymol. According to Cronheim,⁶ these alone answer the two requirements of a reliable preservative, i. e., maintenance of sterility even if added in a small proportion without causing changes that alter the caloric value of the latter. While it is known that the use of sodium fluorid is attended by the precipitation of calcium salts from the urine, thymol until recently was considered an absolutely safe preservative. "Thymol⁴ does not, so far as I know, interfere with any of the tests usually applied to the urine." We have been making observations in this laboratory lately which show that thymol is not so indifferent in this connection as it was supposed to be. Welker⁷ found here that, on applying the iodoform test for acetone to distillates from urines preserved with thymol, a pink or red coloration was produced which, while not completely destroying the usefulness of the above test, certainly increases the difficulty attending its application. Rosenbloom will shortly report from this laboratory another fact showing how the presence of thymol may account for unexpected results in an ordinary urinary test.

In the course of our investigation of another problem, a new source of error has been found in urines preserved with thymol in any of the usual ways. If Heller's test is applied to such urine, after filtration, a ring will invariably appear even in the absence of protein. The ring is most marked, all other things being equal, in urines that have been treated with a solution of thymol, although it is very conspicuous in urines that have been preserved with powdered thymol.

The characteristics of this ring may be briefly stated as follows: A few seconds after the urine has been carefully poured on the acid there forms precisely on the line of junction a grayish-white ring about 0.5 mm. high, resembling the ring given by a faint trace of albumin, which gradually becomes more and more distinct, until in some urines, under conditions to be mentioned later, it presents the appearance of a heavy thick precipitate, the height of which gradually increases and renders the lower portion of the urine completely opaque. At this stage the color is more yellowish than that of a protein ring. Below the ring there is a greenish zone extending somewhat into the acid, above it a reddish somewhat smaller zone. The whole ring is best seen by daylight reflected against a dark background; the color rings are best seen if the test tube is held against a

white background. On slightly disturbing the layers of urine and acid the ring, if a delicate one, disappears at once but gradually reappears. These effects can be obtained several times in the same mixture. A heavy ring, however, will not completely disappear on slight shaking, but will gradually widen and extend into the upper urinary layer; and it depends on the volume relation between urine and acid whether complete mixing will remove the precipitate. On thoroughly shaking an excess of acid with a little urine, a clear yellow solution results. If an excess of urine has been used, the mixture will not clear up, but will remain turbid. Warming the mixture will not prevent the formation of the ring, nor will it clear the liquid, but, if anything, will make the reaction more distinct. Dilution of the urine with three to four times its volume of water has no prohibiting effect.

As has been indicated, the above reaction is caused by thymol dissolved in urine when the latter is treated with it even in solid form, and it is noteworthy that more thymol is dissolved if the urine is neutral or alkaline than when acid. Accordingly, an alkaline thymolized urine will give Heller's test more pronouncedly than a strongly acid one. But while the thick and heavy ring in the first case will have an appearance somewhat different from the protein ring and thus will hardly mislead the observer, the delicate thymol ring in the acid urine closely resembles a protein ring and is, therefore, more apt to cause uncertainty.

In urine containing both albumin and thymol in various amounts, each ring may be discerned. The albumin ring is wider (from 2 to 3 mm.) and white, whereas the thymol ring forms underneath it and is gray and thinner. The albumin ring may also be completely covered by the thick thymol ring, so that the detection of protein may be seriously interfered with.

Somewhat detailed investigation has shown that this ring consists at first of thymol precipitated by the concentrated acid. At this stage it closely resembles the albumin ring. Soon nitration of the thymol occurs resulting in the formation of nitroso-thymol and possibly also nitro-thymol. This accounts for the gradual color change from white to yellowish white which the precipitate undergoes.

A partially successful attempt has been made to isolate the nitro substance or substances produced. With the aid of chloroform as the solvent, crystals of a yellowish-brown color were obtained that gave Liebermann's nitroso-reaction. These crystals melt at a temperature slightly above 50 C., whereas nitroso-thymol melts at 160 C. Thymol melts somewhat below 50 C. It is probable, therefore, that very incomplete nitration occurred and that the brown crystalline product referred to was a mixture of thymol and a small amount of nitroso-thymol. Besides, some chloroform was doubtless occluded in the crystals.

From the above description of our findings with Heller's test as applied to thymolized urine, it is obvious that the nitric acid test must be modified, if it is to be a reliable test for serum proteins in such urines. It can not be applied directly to urine preserved with thymol. The latter must first be removed by extraction. Petroleum ether is very suitable for this purpose. Gentle agitation of the urine with an equal volume of petroleum ether for two minutes suffices to remove practically all traces of thymol.

5. New York Med. Jour., 1904, p. 403.

6. Engelmann's Arch. f. Physiol., 1902, suppl., p. 262.

7. Welker: New York Med. Jour., 1907, p. 552.

Since thymol is occasionally administered internally as a vermifuge in cases of ankylostomiasis, the question arose as to whether urine excreted under such conditions may not, on account of the presence of thymol derivatives, give a positive response to Heller's test, even in the absence of serum protein. Accordingly, a medium-sized dog was given 5 grams of thymol by mouth. The urine excreted during the succeeding twenty-four hours showed the familiar brownish-yellow color, which on standing gradually became black. Heller's test was positive, but, as the precipitate that was produced had the same color as the urine, differentiation was almost impossible. To overcome the difficulty, different metabolism derivatives of thymol,⁸ e. g., thymosulphuric, thymohydrochinon sulphuric and thymoglycuronic acids were isolated from the urine in the form of their chlorine substitution products. A small quantity of each of these substances was then individually added to normal urine, which in turn was subjected to Heller's test. The treated urine in each case showed a positive reaction. Agitation of this urine with petroleum ether in the manner above indicated did not extract the compound of thymol with glycuronic acid. This fact is of some importance, for, while petroleum ether readily extracts thymol from urine to which it has been added as a preservative, it does not do so when this drug has been given internally and is excreted through the kidneys.

I may add that Robert's modification of Heller's test—consisting in the substitution of a mixture of one volume of concentrated nitric acid and two volumes of a saturated aqueous solution of magnesium sulphate for the concentrated nitric acid—produces a thymol ring in thymolized urine which is characterized by the absence of the color phenomena caused by the concentrated acid alone, and is therefore much more readily mistaken for an albumin ring. However, extraction with petroleum ether will guard against this error.

I am much indebted to Prof. William J. Gies for his valuable suggestions and active interest in this investigation.

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SOME EXPERIENCES WITH THE OATMEAL DIET IN THE TREATMENT OF DIABETES MELLITUS

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The feeding of diabetics with large quantities of a single carbohydrate (oatmeal, rice, potato, milk) has been practiced with occasional success for many years; when carefully controlled and when employed in properly selected cases this method is a useful and often indispensable adjuvant to the treatment; when applied promiscuously it is dangerous. Because it is not a routine measure applicable alike to all types of diabetes it has not become popular.

As a preliminary step the type of diabetes must be established. I have found the following clinical classification to be convenient and useful.

CLINICAL TYPES OF DIABETES

Type 1.—In cases of this type the sugar disappears within two days after complete withdrawal of carbo-

hydrates; this type, of course, includes patients who retain a small tolerance, i. e., that fail to pass sugar even when 100 or 150 grams of white bread or its equivalent¹ are administered.

The cases of Type 1 that occur in very young and in very old people possess special clinical significance. In the young patients the outlook is always more serious and they almost invariably develop the severe type unless the greatest care is exercised. In the old patients, in whom the diabetes is usually associated with obesity, gouty manifestations or arteriosclerosis, the outlook, on the other hand, is especially favorable as far, at least, as the development of severe degrees of diabetes is concerned.

Type 2.—The sugar can not be made to disappear until the patients have been on a strict, that is, carbohydrate-free, diet for at least two to three weeks. Here three subgroups can readily be distinguished:

In Group 1 there occurs with the gradual reduction and final disappearance of the glycosuria a general improvement in the condition of the patient, an increase in weight, a reduction of the acetone bodies of the urine to the normal.

In Group 2 there is an initial loss of weight, a general feeling of malaise and weakness, and the acetone bodies are excreted in increased quantity. With the complete disappearance of the sugar, however, the weight again increases, the patients recover their sense of well-being and the acetone bodies are reduced to normal.

In Group 3, finally, the condition of the patient becomes aggravated at once and, while the sugar excretion may decrease or the glycosuria disappear altogether, the patients rapidly lose weight and strength and develop alarming degrees of acidosis with a correspondingly large excretion of acetone bodies. Such patients, too, often develop digestive disorders and in unfortunate cases relapse into coma if the strict diet is persisted in. It is clear that they form a transition to the third or severe type of diabetes.

Type 3.—The sugar does not disappear from the urine even if a carbohydrate-free diet is given for many weeks consecutively, showing that these individuals are unable to consume even that proportion of sugar which is generated within their own tissues from the disintegration of the body albumins. Reduction of the food albumins often causes a disappearance of the sugar in the urine, but resumption of the normal proteid ration promptly causes its reappearance. The patients of Type 3 usually excrete large quantities of acetone and its congeners and rapidly emaciate, even if the caloric intake is carried far above the normal limit.

TYPES SUITABLE FOR THE OATMEAL TREATMENT

The "Von Noorden oatmeal cure" is worse than useless in the mild cases of the first type, occurring in adults or in senile individuals. These patients respond to the ingestion of large quantities of oatmeal by an increased glycosuria and very often by severe digestive disturbances.

The method is also harmful in Groups 1 and 2 of the second type of diabetes. I have seen cases of medium

1. The carbohydrate contained in 100 gm. of white bread is approximately equivalent to the carbohydrate in: 120 gm. of rye or graham bread; 200 gm. of aleuronat or gluten bread; 70 gm. of zwieback; 80 gm. of chestnuts (peeled); 80 gm. of flour (wheat, rye, barley, buckwheat); 70 gm. of rice; 70 gm. of noodles or macaroni; 70 gm. of oatmeal; 120 gm. of dried peas, beans, lentils; 200 gm. of green peas; 360 gm. of new potatoes; 280 gm. of old potatoes, etc.

8. Blum, Ztschr. f. physiol. Chemie, xvi, p. 514.

severity which would, in my judgment, have been converted into very mild cases with a high carbohydrate tolerance by judicious feeding, but which were converted by oatmeal feeding into severe types and remained so; it seems that in these cases the overtaxation of the carbohydrate metabolism produces irremediable and permanent damage.

In the juvenile cases of Type 1, as well as in adolescent cases of the severe Type 3, the method is distinctly useful; here brilliant results, not obtainable, I am convinced, by any other method of feeding, are occasionally observed.

Adults, in cases of the very severe type, do not respond so well to the oatmeal treatment. If certain precautions, to be presently specified, are observed, however, no harm can accrue from a trial. In view of the inefficacy of the ordinary methods of diabetic treatment in this type and in view of the occasional improvement derived from oatmeal feeding, the plan should at least be tried.

Whereas in juvenile patients, however, no valuable time should be wasted with preliminary attempts to modify the course of the glycosuria by the ordinary strict diet and the administration of the oatmeal diet should be begun as soon as possible after the discovery of glycosuria, in adults oatmeal feeding should be regarded as a last resort and should be employed only when all other means, after persistent trial, have been found to be inefficacious.

PRACTICAL POINTS IN OATMEAL FEEDING

The technic of the von Noorden oatmeal cure has been so often described in other places² that it is unnecessary to explain the method here. I have found it quite superfluous, even disadvantageous, to administer the oatmeal in the unpalatable and thoroughly distasteful form originally proposed by von Noorden. Two hundred and fifty grams of oatmeal, 250 grams of butter, half a dozen eggs and salt can be combined in many other ways than as a very fatty porridge or soup. In very small children the gruel method is probably the simplest, and they object to it less than do adolescents or adults. In older individuals it requires an immense amount of will-power to live for days on the oatmeal porridge given every few hours with nothing to relieve the monotony but a little black coffee or some claret, whiskey, or brandy and water.

It is much easier and safer to begin the oatmeal cure than to stop it. The change of diet in the beginning must be abrupt, i. e., nothing whatsoever must be given but the oatmeal mixture. It is unnecessary, as a preliminary step, to attempt reduction of the glycosuria by a strict diet, although as a rule the patients will have been on a strict diet before the oatmeal treatment is begun; this, in my experience, is detrimental rather than otherwise.

In patients reacting favorably to the oatmeal diet the resumption of a general diet or of a meat-fat-vegetable diet must be very gradual. For a long time, often months, after the exclusive oatmeal feeding has been stopped, oatmeal should still remain the only carbo-

hydrate eaten, and other starchy pabulum should be very carefully administered. It is especially precarious to mix carbohydrates after an oatmeal course.

Animal proteids should always be resumed with care; for I have found that particularly those patients who respond well to the oatmeal treatment exhibit a marked intolerance for meat, fish and poultry; so that even in the most favorable cases, but especially in cases in which the sugar and acetone bodies did not disappear but were merely reduced, the addition of animal proteids is promptly followed by an increased glycosuria and an increased excretion of acetone bodies.

The oatmeal diet occasionally does harm, particularly if its administration is persisted in when improvement in glycosuria, polyuria, acetonuria, thirst and hunger and strength fails to appear within five days. It is a good rule, therefore, and a safe one, to give up the oatmeal attempt at the expiration of this period unless such improvement has become clearly manifest. In my earlier experience, as expressed elsewhere, I have seen a reduction in the tolerance for carbohydrates, quite alarming degrees of acetonuria and severe digestive disturbances appear if oatmeal feeding was persisted in for longer than five days in cases in which the patients did not respond favorably within this period.

As a precautionary measure against acidosis, from two to four teaspoonfuls a day of sodium bicarbonate, either alone or mixed with equal parts of magnesia usta, should be given throughout the oatmeal treatment. I also administer 10 grains of pancreas powder with one grain of sodium glycocholate four times a day during the period of exclusive oatmeal feeding. No laxative is ever needed, the oatmeal and the fat effectively promoting good bowel evacuations.

SUMMARY OF RESULTS IN CHILDREN

The most brilliant results are obtained in children, particularly if the oatmeal cure is administered as soon as possible after the diabetes is discovered. I have seen in the last five years three cases of diabetes in children (see below) within two or three weeks after the first symptoms of diabetes were discovered. And these three children, after a lapse of from three months to three and one-half years, are altogether well, one on a general diet, one on a partially restricted diet, one (the most recent one) on a diet still incorporating no other carbohydrate than oatmeal.

In cases of diabetes of longer duration children below 15 years, in my experience, do not fare so well. Of eleven children, with a diabetes of longer standing, varying in age from 7 to 14 years (whom I either treated myself or in whom I advised the oatmeal treatment) who were fed on the oatmeal diet as a last resort and who had been fed for periods of several months before with a strict diet, not one is even symptomatically well to-day. Seven of them have succumbed to coma, one to intercurrent tuberculosis, three are still alive, but none of them sugar-free.

SUMMARY OF RESULTS IN ADOLESCENTS AND ADULTS

In adolescents and adults the results have, on the whole, been favorable rather than otherwise. In so far as the mild cases of Type 1 (see above) and certain cases of Type 2 are excluded as altogether unsuitable from this summary, there remain only a limited number of severe, usually quite old, cases of diabetes to be considered.

2. von Noorden: *Bemerkungen zur Pathologie und Therapie des Diabetes Mellitus*, Wien. med. Presse, 1902, No. 40; *Ueber Haferkuren bei schwerem Diabetes Mellitus*, Berl. klin. Wchnschr., 1903, No. 36.

Croftan: *Some Practical Points in the Dietetic Management of Diabetes*, Therap. Gaz., April, 1906; *Clinical Therapeutics*, ed. 2, 1906, p. 129 ff.

Herrick, James B.: *The Oatmeal Diet in the Treatment of Diabetes Mellitus*, THE JOURNAL A. M. A., March 14, 1908, L, 861.

In no adolescent patient have I seen permanent cessation of the glycosuria in the sense, namely, that a general diet could safely be resumed. In a considerable number of the cases the oatmeal diet, however, produced a decidedly favorable effect, and when persisted in led to a complete disappearance of the sugar, without much acetoneuria, a result that had been impossible to obtain by any other method of feeding; associated with these changes was often a marked gain in weight and strength and a disappearance of the most distressing general symptoms of severe diabetes and of certain of the complications (neuralgias, furunculosis, constipation, itching).

None of these patients maintained their improvement when abundant proteid feeding was resumed. In so far

symptoms the child developed lassitude and "crankiness," with great hunger, thirst and polyuria, was taken to her physician on the third day after the onset of these symptoms and the urine found to contain abundant sugar, diacetic acid and acetone. Twenty-four hours' quantity passed on the day following was 4,200 c.c. I saw the child four days after the discovery of the diabetes, i. e., seven days after the appearance of the first symptoms. For four days a strict diet had been followed. Urine analysis of the quantity collected from the seventh to eighth days: Quantity, 4,400 c.c.; specific gravity, 1.038; sugar, 68 grams; ferric chlorid reaction positive; acetone, 4.1 grams. Weight, 59 pounds 4 ounces (loss of 2 pounds 4 ounces from the third to the seventh day). The oatmeal diet was at once administered to the exclusion of everything else, and the accompanying table shows the sequence of events. I heard from the child's parents about a year and a half later; she had then been on a general diet

TABLE 1.—CASE 1

Date.	Total Urination.	Spec. Grav.	Sugar.	Gm.	FeCl Reaction.	Acetone.	Body Weight. Lbs. Oz.	Diet.
May 12, 1904.....	4400	1038	1.54	68	+	4.1	59 4	Strict diet.
May 13, 1904.....	4100	1040	1.17	48	+	3.8	57 6	Strict diet.
May 14, 1904.....	3600	1018	0.65	23.4	+	2.1	56 4	Oatmeal diet.
May 15, 1904.....	3800	1015	0.305	11.6	+	0.8	56 8	Oatmeal diet.
May 16, 1900.....	1480	1009	0.14	2.1	+	0.22	57 0	Oatmeal diet.
May 17, 1904.....	1620	1014	0.27	0.4	+	0.06	56 9	Oatmeal diet.
May 18, 1904.....	720	1005	0.0	0.0	+	0.07	58 1	Oatmeal diet.
May 19, 1904.....	2100	1010	0.0	0.0	+	0.12	58 8	Oatmeal diet.
May 20, 1904.....	1600	1014	0.0	0.0	0	0.11	59 8	Oatmeal, "allowed vegetables."
May 21, 1904.....	1620	1012	0.0	0.0	+	0.09	60 4	Oatmeal, "allowed vegetables."
June 2, 1904.....	1480	1016	0.0	0.0	0	0.08	62 1	Oatmeal, "allowed vegetables."
June 15, 1904.....	1540	1014	0.0	0.0	0	0.10	63 4	} A little meat, fish, poultry, "allowed vegetables," oatmeal.
July 20, 1904.....	1220	1020	0.0	0.0	0	0.03	64 4	
August 14, 1904.....	1420	1018	0.0	0.0	0	0.11	67 3	
September 10, 1904....	1580	1018	0.0	0.0	0	0.12	68 1	} General diet, with exclusion only of sugar and sweets.
December 20, 1905....	1600	1018	0.0	0.0	0	0.02	76 4	

TABLE 2.—CASE 3

Date.	Total Urination.	Spec. Grav.	Sugar.	Gm.	FeCl Reaction.	Acetone.	Body Weight. Lbs. Oz.	Diet.
October 18, 1908.....	.....	1030	2.5	.....	+	1.4	64 8	Strict diabetic diet.
October 19, 1908.....	1410	1030	3.2	45	+	2.02	66 0	Strict diabetic diet.
October 20, 1908.....	2610	1030	2.5	65	+	1.7	66 6	Strict diabetic diet.
October 21, 1908.....	2040	1020	2.0	40.8	+	1.2	66 0	Oatmeal diet.
October 22, 1908.....	1010	1015	1.0	10.1	+	0.7	65 8	Oatmeal diet.
October 23, 1908.....	690	1010	0.4	2.7	+	0.21	65 7	Oatmeal diet.
October 24, 1908.....	1050	1010	0.0	0.0	+	0.14	65 7	Oatmeal diet.
October 25, 1909.....	1350	1005	0.0	0.0	+	0.19	65 9	Oatmeal diet.
October 26, 1908.....	1260	1013	0.0	0.0	+	...	65 10	Oatmeal diet.
October 27, 1908.....	2520	1009	0.0	0.0	+	0.31	67 0	Oatmeal diet.
October 28, 1908.....	2520	1007	0.0	0.0	+	0.02	66 4	Oatmeal diet.
October 29, 1908.....	1440	1010	0.0	0.0	+	0.02	65 8	Oatmeal diet.
October 30, 1908.....	1470	1010	0.0	0.0	+	0.07	67 1	Oatmeal diet.
October 31, 1908.....	2900	1010	0.0	0.0	0	0.03	68 5	Oatmeal diet.
November 1, 1908.....	3150	1010	0.0	0.0	0	0.11	67 8	Oatmeal diet plus 1 lb. steak.
November 2, 1908.....	2250	1015	0.95	21.37	0	0.14	67 8	Oatmeal diet.
November 3, 1908.....	3060	1010	0.16	4.89	+	0.42	68 0	Oatmeal diet.
November 4, 1908.....	2010	1011	0.0	0.0	+	0.10	68 2	Oatmeal diet.
November 5, 1908.....	1920	1009	0.0	0.0	+	0.06	68 0	Oatmeal diet.
November 6, 1908.....	2160	1010	0.0	0.0	+	0.06	67 4	Oatmeal diet.
November 7, 1908.....	2010	1012	0.0	0.0	+	...	67 8	"Allowed vegetables."
November 9, 1908.....	1600	1014	0.0	0.0	+	0.02	68 1	Left hospital.
November 13, 1908....	1820	1012	0.0	0.0	0	0.01	68 0	Oatmeal and vegetables.
November 20, 1908....	1490	1016	0.0	0.0	+	0.02	70 1	Oatmeal and vegetables.
November 27, 1908....	1240	1016	0.0	0.0	0	0.11	71 0	Oatmeal and vegetables.
December 5, 1908.....	1400	1020	0.0	0.0	0	0.09	71 8	} 100 gm. oatmeal, fat, vegetables and a little meat, fish or poultry.
December 17, 1908....	1240	1016	0.0	0.0	0	0.03	73 2	
December 23, 1908....	1640	1018	0.0	0.0	0	0.12	73 8	
December 29, 1908....	1520	1020	0.0	0.0	0	0.08	74 1	} 50 gm. oatmeal; no other starchy food; vegetables, a little meat, fish, poultry, plenty of fat and a little alcohol each day
January 16, 1909.....	1580	1019	0.0	0.0	0	0.14	77 8	

as continuous feeding with the oatmeal diet is impossible, and in so far as in several of the cases the oatmeal ceased to be so well tolerated after several weeks as at first, this improvement is only relative; nevertheless, it is an improvement, a much-to-be desired one, and one, in my judgment, not obtainable by any other means. Even when the oatmeal diet was administered within two or three weeks after the discovery of the diabetes in adults or adolescents suffering from types suitable for this treatment, no such good results as those occasionally obtained in children under similar conditions have ever, in my experience, been observed.

REPORTS OF THREE CASES OF DIABETES IN CHILDREN
CASE 1.—Mary P., referred by Dr. W. B. Irish of Pittsburgh, aged 8 years 6 months. Without any premonitory

for several months, only sweets and candies being excluded. A urine sample revealed normal conditions. The family has since then lived in Europe and I have lost track of the case.
CASE 2.—This case was also seen by Dr. J. B. Herriek, who administered the oatmeal diet; he has published a report of the case in *extenso* in his excellent article² on "The Oatmeal Diet in the Treatment of Diabetes Mellitus," and I abstract the essential parts of his report as follows:
Elizabeth B., aged 10, referred by her father, Dr. B. of Iowa, suffered slight indisposition with a little temperature, some epigastric tenderness and a faint icterus. Six weeks later she became thirsty. Urine examination at this time: 4,000 c.c.; specific gravity, 1,040, with a large amount of sugar. The child was brought to Dr. Herriek Dec. 27, 1906, and the oatmeal diet begun at once. Jan. 2, 1907, the urine for twenty-four hours was 1,000 c.c. and sugar-free. The sugar entirely disappeared after three days of the oatmeal diet.

On January 14 it was determined that no sugar had been present from January 1 to June 1; then for three days there was a little sugar, which again promptly disappeared on the oatmeal diet. The patient weighed 70 pounds, felt strong and was attending school. Daily examination of the urine had been made for six months and Nov. 20, 1907, the father reported that, barring the occasional appearance of a little sugar in the tests that were made every day, the child was apparently well, the sugar never being present for more than three days at any time since ten months ago. "She is eating gluten bread twice a day and buckwheat cakes for breakfast; fruit and nuts as she cares for them; meat and eggs, all we can induce her to take; no milk except cream in weak tea or weak coffee."

Dr. Herrick expresses himself as follows in regard to the case: "This result is, it seems to me, remarkable. It is better than any other obtained by me in the case of diabetes in a child on other diets. One can not say that recovery has occurred; one may join with the father in hoping for it. But an amelioration of symptoms with such a marked general improvement would stamp the treatment that was efficacious in bringing about such an effect as a most valuable one."

"I am sure Dr. Croftan, who also saw this patient, will agree with me in ascribing to the oatmeal treatment the sudden checking of the onward progress of the disease; and this must be one of the cases that has induced him to say:³ . . . No case of juvenile or adolescent diabetes should be deprived of the benefits of the oatmeal cure."

CASE 3.—Jennie M., aged 10 years, 1 month, was referred by Dr. A. Schirmer, Chicago. Sugar was first discovered Oct. 8, 1908, following symptoms of general weakness, peevishness, loss of appetite, great thirst for two weeks preceding first visit of Dr. Schirmer. From October 8 to October 18 strict diabetic diet was given. On this régime the child continued to lose weight, grew weaker, polyuria increased and urine remained "loaded with sugar."

She was referred to me Oct. 18, 1908, and was sent to Michael Reese Hospital. Strict diabetic diet for forty-eight hours. Sugar excretion during the first twenty-four hours was 45 grams; during the second twenty-four hours, 65 grams. (For other urinary findings, see Table 2.) October 21 the patient was put on oatmeal diet. The sugar excretion on four succeeding days was as follows: 40.8 grams, 11.1 grams, 2.7 grams, 0 grams. Under exclusive oatmeal diet for eight days the urine remained sugar-free. The addition of one pound of beefsteak to the diet caused the reappearance of sugar, 21.37 grams. Strict oatmeal diet caused the urine to become sugar-free again in two days. Several vegetables and a little fish, poultry and beef were now added to the diet, the oatmeal at the same time being reduced. The urine has remained sugar-free ever since. The acetone bodies have been reduced to normal figures. The child to-day (Jan. 16, 1909) weighs 77 pounds 8 ounces as against 64 pounds 8 ounces three months ago, feels well and strong on a diet containing about 50 grams of oatmeal, about 200 grams of meat, fish or poultry, 25 grams of bread, 25 grams potato, and other "allowed" vegetables *ad libitum*.

100 State Street.

3. Clinical Therapeutics, ed. 2, p. 130.

Antibodies in Persons with Hydatid Cysts.—The *Revista de la Sociedad Med. Argentina*, xvi, 624, 1908, contains an article by Apphatic and Lorentz reporting the discovery of specific antibodies in the blood serum of persons with hydatid cysts. Their experience indicates that the presence of these antibodies confirms or excludes hydatid affections, and that their absence excludes hydatid disease. They applied the hemolytic test with the ordinary technic, following the directions of Bordet and Gengou. The reaction was positive in everyone of the twenty-five cases examined, while the findings were equally constantly negative in 117 control individuals.

INDURATIVE HEADACHE

(SCHWIELENKOPFSCHMERZ) WITH REPORT OF THREE CASES *

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Indurative headache is of organic origin, chronic and usually paroxysmal, occurring in various parts of the head, and due to infiltrations or thickenings at various points, chiefly in the muscles of the head and neck. From the so-called cases cephalalgia, cephalodynia, migraine, hemicrania, cranial neuralgia and neuritis, many can be separated as belonging to this class.

A search made through works of neurology and monographs on headache by American physicians found little or no mention of headache due to these indurations. The subject seems neglected, except for the statement that headache is sometimes rheumatic, lithemic, or gouty in origin. The condition is ably treated, however, by Professor Edinger¹ and by Professor Norström,² of Stockholm, who spent some time in New York and while there wrote on this subject. The significance of this condition has been recognized for years by physicians abroad, notably by the Swedes and Germans.³ In writing on headache due to organic disease, Edinger makes the astonishing statement that, though indurative headache is almost unknown, it is probably the most frequent form of this disease.

CAUSE

In studying the cause of this condition we find that at the insertions or within the bodies of the muscles of the head and neck there appears a thickening which comes and goes at first and later becomes chronic, and which gives rise to stimulation or irritation of the sensory nerve fibers, thereby causing pain. Given, then, this chronic condition, a paroxysm may be brought on by emotional disturbance, physical or mental fatigue, sudden exposure to cold, as a chilling draft, insufficient drying after washing the hair, a stay in badly ventilated places, as the theater, by the approach of damp and chilly weather or storms. As Dr. Mitchell⁴ wrote, "It is only required to come within the outer limits of storm conditions. The sky may be cloudless and the rain or cloud areas two or three hundred miles away and yet the sufferer be within the area of barometric depression. It was not needed that there be rain." The condition varies with seasons, being least common in summer and most frequent in fall and spring.

It is not the purpose of this paper to enter into the consideration of the pathologic chemistry of these swellings, for after much investigation the chemistry of gout, lithemia, uricacidemia and allied conditions is still far from being satisfactorily defined. These infiltrations or thickenings actually exist and give rise to a chronic myositis at the points of their lodgment. They are found present in three stages: 1. A swelling. This

* From the Department of Neurology of the University of Pennsylvania.

1. Edinger: In Diseases of the Nervous System, translated from Die Deutsche Klinik, Appleton & Co., New York, 1908.

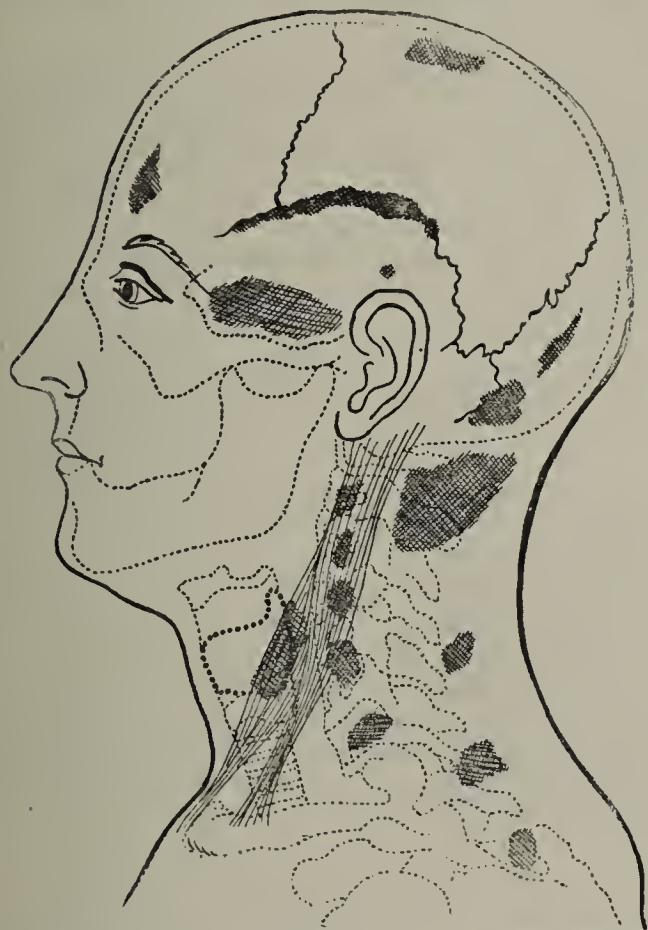
2. Norström: Der chronische Kopfschmerz und seine Behandlung mit Massage. Leipzig, 1903; Le migraine; traitement par le massage, Paris, 1904, Baillière & Fils; New York Med. Jour., 1905, lxxxii.

3. Reidel: Der Kopfschmerz und seine physikalische Behandlung, Berl. klin. Wchnschr., 1907, xlv, 338; Kleen: Handbook of Massage, P. Blakiston's Son & Co., Philadelphia, 1892.

4. Mitchell: Relation of Neuralgic Headache to Storms, Tr. Coll. Phys. Philadelphia, 1903, xxv, 71.

is of a soft, yielding consistency and is frequently present in the bodies of the muscles, where a puffiness is often noticed. 2. A slightly elastic resistance offered to the touch as though some organization had taken place. 3. Induration. There is an absence of elasticity and organization has advanced to the stage at which a substance of cartilaginous consistency presents itself to the examiner. The older these thickenings are the firmer they have become and the more resistance they offer to treatment.

These indurations appear again and again for some time before becoming chronic, and they are by no means confined to the head and neck. Other haunts of this insidious invader are the points where the gracilis, sartorius and semitendinosus muscles cross the inner side of the knee, at the inner and outer aspects of the ankle, at the insertions of the pectoralis major and latissimus dorsi into the humerus, the muscles of the abdominal wall where there are occasionally found little nodules which feel like small grains of shot, and which give rise to sharp pain on slight movement. In one obscure case



The most common sites of indurations. (Drawing modified from Eddinger).

of this kind the patient was suspected of having appendicitis. So-called cases of sciatica have ceased after the removal of these infiltrations around the gluteal and sacral regions. Deafness has been produced by the pressure of these swellings on the Eustachian tubes, and hearing has been restored after appropriate treatment. By far the most frequent site of these accumulations is in the muscles of the head and neck, and I believe that this is due to the fact that this is a much exposed part of the body. These indurations are probably the chief cause of the so-called rheumatic throat, but I do not believe any of these conditions are due to gout, for a paroxysm of gout, such as frequently involves the metatarsophalangeal articulation of the great toe, gives rise to marked redness and fever. An attack of lumbago does, however, present a strikingly similar picture, inasmuch as it frequently follows exposure to dampness or cold. After a number of acute attacks it may become

chronic, offering considerable resistance to palpation, and it may give rise to a dull ache or sharp pain. It is relieved by local pressure. There is no redness and fever present, and it will yield to the same treatment employed in the removal of these indurations.

SYMPTOMS

The symptoms are of two groups—those of the chronic condition and those of the paroxysm. In the development of these pains, they are at first slight and infrequent; gradually they occur more often, are of greater severity and of longer duration. Sometimes they are of the nature of a dull ache and almost constant; again they may be sharp in character. Local pressure often affords relief, but if an actual neuritis is present the suffering will be intensified by pressure. These patients are very susceptible to colds, subject to depression of spirits and mental torpor and frequently there are associated symptoms in other parts of the body, some of which are gastrointestinal disturbance, toxemic in character, painful spasms of the calf muscles, an occasional attack of nephritic colic, myalgia in many different parts of the body, and the oral cavity may give manifestations in the form of hypersensitiveness of the teeth and pyorrhea alveolaris. It is probable that all these local conditions are but different manifestations of the same general disturbance of nutrition. Many of these cases are neurasthenic and it seems likely that an excess of uric acid or an allied substance is concerned in the production of this condition. Before an attack of headache the enlargements become swollen and sensitive; the pain which develops a little later may be mild or agonizing. It occurs in various parts of the head, depending on the location of the enlargements; it is usually over the site of these areas, but there may be radiation of the pain. Fever and redness are absent.

All cases of headache should be examined by forcible flexions and twistings of the neck, which may bring out intense pain at the insertions or along the bodies of the neck muscles. The exploration may be made advantageously during a paroxysm, for at such a time the swellings are more apparent and their sensitiveness greater, so that points which might otherwise be overlooked are then easily detected. The head and neck should be thoroughly palpated in the following manner:

Moderately firm pressure should be employed over the entire scalp, where thickenings, irregularities, indurations and nodules may be found. These parts may be only slightly sensitive or they may be exceedingly so. The same condition is then sought at the insertions of the trapezius, scaleni, splenii and sternomastoid muscles. Hypersensitive points are often found around the base of the skull from one mastoid process to the other, on the spinous processes of the cervical vertebrae, and particularly on the transverse processes of the upper cervical vertebrae. The supraorbital region is often involved and the temporal muscle may be the seat of marked thickening. Any portion of the scalp may be thickened or nodular. Chronic glandular enlargement due to irritation produced by proximity to these accumulations is sometimes present and congestive headache may be produced by the circulation being retarded through pressure from these swellings on the veins. This ceases after the dispersement of the enlargements.

DIAGNOSIS

In the diagnosis of a severe paroxysm with agonizing pain in the head and back of the neck, this condition

may be mistaken for meningitis, but here fever is present and the indurations and hypersensitiveness absent. In migraine there is frequently a sensitive aura, painful and hypersensitive areas are absent, while nausea and vomiting are present. Hereditary migraine begins in early youth; indurative headache appears in later life, and, finally, migraine is unrelieved by massage. Indurative headache may, of course, develop in persons subject to migraine. Neuralgia and neuritis may result from these thickenings. Cases of hemicrania frequently belong to this group of headaches.

TREATMENT

Under efficient treatment, which will take from one to three months, these enlargements can usually be removed. There are a few cases of induration of such marked cartilaginous consistency and of such long standing that only amelioration can be effected.

Persons in whom there is a tendency to these thickenings should take active exercise in the open air, drink water freely between meals, avoid overfatigue from excessive physical or mental activity and emotional excitement. If a relationship between this condition and uric acid is subsequently proved, the diet should be low in the percentage of purins; it should be nutritious, of easy assimilation and not too abundant; alkaline waters are useful; tea and coffee should be used only sparingly, and alcoholic beverages should be avoided. Internal medication does but little good unless a reconstructive tonic is indicated by general debility. Potassium iodid may give some relief in advanced cases. For a severe acute attack a brisk purgative should be given, a warm bath, hot dry applications to the affected part, and repeated large doses of sodium salicylate, aspirin (acetyl-salicylic acid) or salophen (acetylparamidophenol salicylate). The removal of the thickenings will require from one to three months, and the measures given, in the order of their efficiency, are massage, vibration and galvanism. The galvanic current may possibly be made useful, the anode being placed over the affected area and the cathode at an indifferent point. Vibration by means of the electric vibrator helps to remove the thickenings and is conducive to more rapid absorption, but should not be used about the head in cases of arteriosclerosis. The most effectual means of removing these enlargements is without doubt massage. This is at first painful, but after a few treatments the hypersensitiveness disappears. During these treatments a local application of an ointment containing methyl salicylate and capsicum is of some benefit, the former drug acting by absorption and the latter doing good as a counter-irritant. Massage sometimes causes enlargement and tenderness of the lymph glands which receive lymph from the site of the swellings, but this soon subsides.

In all these cases the bowels should be kept active and it is not enough that they be opened daily; they must be emptied; this may be accomplished by the generous use of the laxative mineral waters. The treatment is complete when the swellings have disappeared and tenderness no longer exists.

Few patients are more grateful than those relieved of the sufferings from these agonizing and obstinate headaches.

REPORT OF CASES

I report three cases which, as far as I am able to determine, are the first reported by an American physician. The first history which I give is not from a case of my own, but from a patient whom it was my privilege

to examine some weeks ago while he was under treatment.

CASE 1.—History.—The patient was a lawyer, aged 40, who had had headaches since boyhood. For the last three years they had become very severe and had occurred as often as once or twice a week with a duration of one or two days. They were frequently brought on by work in the court-room and were so incapacitating that the patient thought at times he should have to relinquish the practice of law. He did not remember that they were affected by damp, wet weather, but recalled that while traveling in England they were very annoying and that he was free from them during a stay in Switzerland. The headaches were largely confined to the two temporal regions.

Examination.—The patient appeared anemic, poorly nourished, and of a color which suggested a sluggish liver. Cartilage-like thickenings were found on the transverse processes of the upper cervical vertebrae, marked enlargements offering considerable resistance at the insertions of the muscles around the base of the skull between the mastoid processes. Swellings were present in the sternomastoid muscles from the level of the thyroid cartilage to their clavicular attachments. Both temporal muscles were involved; they were thickened and very sensitive and it was to these areas that the headaches were largely limited.

Course of Disease.—The patient has now been under treatment every other day for two months, and during this time has only had four attacks, all of which were mild and of short duration. His general appearance has improved; there is an increase in weight and his work is now done without fatigue.

CASE 2.—History.—The patient, aged 63, was formerly owner of a business college. He had suffered for years from pain in the back of the head and neck. He said that he had had several attacks of renal colic and frequently noticed a brick-dust sediment in his urine. He was very susceptible to cold and was much affected by damp, chilly weather. He was troubled with stiffness in the back of the neck, where he said he did not have proper use of his muscles. Because of poor health his business was disposed of a few years ago and he then spent some months in California, after which he was somewhat improved.

Examination.—The patient was rather poorly nourished and anemic. Foreible flexion and twisting of the neck caused intense pain in the back of that region. Areas offering marked resistance and sensitiveness were found over the transverse processes of the upper cervical vertebrae; the occipital portion of the occipitofrontalis muscle was thickened and painful, and there were two enlargements which were very painful on pressure on either side of the spine just below the seventh cervical vertebra.

CASE 3.—I have myself suffered from this condition. I was free from headaches until 18 years of age, and since then have really suffered only during the last six years. A dull ache was often present but severe attacks have not occurred oftener than two or three times a month and have been most frequent and painful in the fall. Bad weather has often brought on a headache, as has my being in crowded and poorly ventilated rooms. Occasionally indigestion would be followed by an attack, but there was never any accompanying nausea or vomiting. I have frequently been troubled with a stiff neck and different portions of the trapezius muscle have often been painful on slight movement. My headaches were on the left side and were mainly limited to the temporal and supraorbital regions. For a long time I had noticed that with a headache the left supraorbital region was tender and swollen as well as painful. The left temporal region was always swollen and tender from the zygomatic arch to the temporal ridge. In the course of an attack, this swelling would increase so that the left arm of my glasses would cut a distinct furrow where it crossed this area. Two small patches of exceeding tenderness were present in the auricularis superior muscles just above the ears. During the paroxysms the headaches were constant, severe, and very depressing. They lasted from a few hours to two days and twice I was confined to my bed. Pressure over these areas always gave some relief. Local enlargements were also present

causing distinct puffiness of the sternomastoid muscles on a level with the thyroid cartilage. Quick forcible flexion would cause pain at the cephalic insertions of the muscles along the superior curved line of the occipital bone. This line at the base of the scalp was always sensitive to pressure but there was never an ache in this portion of my head. It was not until last summer that I determined the cause of these headaches, since when, through massage and vibration, the swellings and sensitive areas have disappeared, and the pain has ceased.

THE VEINS IN THROMBOANGIITIS OBLITERANS

WITH PARTICULAR REFERENCE TO ARTERIOVENOUS ANASTOMOSIS AS A CURE FOR THE CONDITION

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In a paper read before the New York Pathological Society in March of last year, and then in a communication made to the American Association of Physicians in May, I proposed the term "thromboangiitis obliterans of the lower extremities" to designate a distinct group of cases formerly included by the Germans under the names *endarteritis obliterans* and *Spontan-Gangrän*. With the tremendous influx of Polish and Russian Jews into this country, we are now more than ever brought face to face with the perplexing question as to what can be done for these unfortunate patients. During the past two years I have seen more than 55 cases, have been able to collect clinical data on 44 of these, and have made pathologic studies on the vessels and nerves from 20 amputated limbs.

The history of the advent and development of the symptoms is very much the same in all the cases. Beginning in many instances with indefinite pains in the sole of one foot, in the ankle or in the toes, the patients soon notice that they are disturbed in their walk by the sudden onset of cramp-like sensations in the calf or elsewhere in the leg. These feelings make them take frequent rests, often inducing them to investigate the condition of their limbs. Some of them take off their shoes and rub the parts in the hope of either dispelling the pain or of getting rid of uncomfortable numbness in the toes and foot. Others say that the feet become cold and numb when the temperature is low and the weather is inclement.

After the lapse of weeks, months or even years, evidences of trophic disturbance make their appearance. After the cutting of a hang-nail, or without apparent cause, an abraded spot or a hemorrhagic bleb or even a dead dry patch of skin develops near the tip of one of the toes or under a nail. Now the local pain becomes excruciating during night as well as day so that many of the sufferers beg for the amputation of the affected part.

It is during the first attack of trophic disorder that the physician usually notices another characteristic symptom, namely, a peculiar blush of the toes and fore part of the foot extending to the ankle or slightly above when the limb is in a pendent position. When the limb hangs down the affected toe soon turns color; it assumes a bright red hue which is seen to pass to the other toes and then up the back of the foot for a variable distance, fading off toward the ankle or lower part of the leg. The elevated extremity, on the contrary,

rapidly becomes blanched and the ischemia may persist even in the horizontal plane. Sometimes the superficial ulcer will heal under conservative treatment and the patient will either recover perfectly or his symptoms will become chronic. If we examine his limb in this period, we see the scars pointing to previous trouble; the *dorsalis pedis* and the posterior tibial artery usually fail to pulsate, and ischemia in the elevated position and redness or "erythromelia" (if I may be permitted to use the word) in the pendent position are regularly elicited. Sooner or later, however, be it in the extremity first affected or in the limb not yet diseased, an ulcer will give way to dry gangrene and amputation will be the issue.

Because of the striking condition of redness in the dependent position, and because of the increase of local pain when the limb is hanging down, a number of clinicians have been wont to diagnosticate "erythromelalgia" in these patients. Some cases have been regarded as examples of Raynaud's disease, because in them the symptoms of ischemia and cyanosis of the parts were prominent features. It is not my purpose to enter into a discussion on the differential diagnosis of these states, but I wish merely to point out that, although resembling erythromelalgia and Raynaud's disease in a number of symptoms, the clinical picture of thromboangiitis obliterans, as we see it, is so characteristic and definite that an attempt should be made to put it into a separate class.

If we keep in mind the pathologic lesions that belong to the vessels in this disease, we shall not hesitate long in concluding that unless something can be done to interrupt the rapidly progressing obliterating thrombosis, at its very inception, medical treatment can at best but alleviate some of the distressing symptoms. For the sake of clearness, let me briefly summarize the pathologic changes which I have described elsewhere.¹

Studies of the vessels in the amputated limbs show the following: Most of the larger arteries and veins are obliterated over a large extent of their course. All stages in the occlusive change may occur in the various vessels of an extremity or in the same vessel in different parts of its course. The occlusion of the vessels is effected by red obturating thrombi; these become organized, vascularized and canalized. Recent red thrombosis may involve large portions of arteries or veins and is not secondary to the gangrenous process. It occurs even when no gangrene is present.

In short, we are dealing with vascular lesions of considerable extent, apparently initiated by the formation of occlusive thrombi, chiefly in arteries but not confined to these, followed by organization or healing, with an attempt at the production of sufficient collateral circulation.

When the patients consult us the lesions are usually profound. The absence of pulsation in the *dorsalis pedis* and posterior tibial arteries points to occlusion not only of these vessels but also to involvement of the plantars and possibly also to the closure of veins as well. Little wonder then, that our medical, mechanical and electrical treatments and radiotherapy and thermotherapy have done practically nothing for these patients. Medicines, including potassium iodid, mercury, fibrolysin, thiosinamin, nitroglycerin, are of no avail; light therapy, hot-air baths—all of these have been tried with but a very temporary and slight amount of relief from

1. Am. Jour. Med. Sc., October, 1908.

the most disturbing of the symptoms. I have purposely included mercury, since I have reason to doubt the statements of a certain number of observers who assert that injections of this drug have caused a cure in these cases. Quite a number of such cured patients have later fallen into my hands during exacerbation of their malady, and I have done the Gritti amputation on two patients who had been considered well after antiluetic régime.

So, recognizing the futility of the employment of ordinary measures in the therapy of thromboangiitis obliterans, it seems incumbent on us to try those means that still give promise of success in this disease. The attempt to divert the arterial stream from more or less closed and diseased channels into patent veins has been successfully carried out both experimentally in the lower animals and clinically in man. As far as I know, the operation of arteriovenous anastomosis has been done four times for the condition under discussion with a successful result in but one case. In looking over the reports of these cases it occurred to me that it would not be amiss to record the results of my investigations on the condition of the veins in thromboangiitis obliterans. For it is evident that any attempt to throw the arterial blood into veins which are diseased and closed must result disastrously for the patient. And it is just this particular fact that has been overlooked by those surgeons who have suggested anastomosis, namely, that the veins are very frequently and rather extensively obliterated in thromboangiitis obliterans. It shall be my purpose, then, first, to outline briefly the state of the venous channels as they were found in nineteen amputated limbs; second, to discuss the probable condition of the vessels in certain cases in which no pathologic studies could be made; and, third, to indicate in what direction our clinical studies should lead us if we wish to be able to decide rationally when the operation of arteriovenous anastomosis should be performed.

Before entering on my first theme it may be well to indicate in a few words what has already been accomplished by arteriovenous suture in the disease under discussion. In 1907 Lilienthal² did an end-to-end anastomosis between the femoral artery and femoral vein, but his patient died thirty hours after operation. The cause of death was not known.

Wieting of Constantinople, in a paper on the operative treatment of "angiosclerotic gangrene," reports a successful case in which he intubated the femoral artery below the origin of the profunda, into the femoral vein below the termination of the saphenous. The saphenous vein, he says, carries the venous blood back into the proper venous channel and the femoral vein distributes arterial blood, the profunda being left to act as a collateral. Whereas the color of the foot was livid in the horizontal position, and cadaveric when raised just before the operation, the completion of the angiorrhaphy was followed by reddening of the toes and a distinct improvement in the patient's subjective symptoms. The coldness gave way to a feeling of warmth, and the pains and paresthesia are said to have disappeared at once. When seen two months after the operation (March 7, 1908) the foot was warm and there were no symptoms.

Wieting also gives a few incomplete data in reference to a third case in which the anastomosis was done in the popliteal region but with failure because of thrombosis.

Finally, F. B. Lund³ reports a case of "obliterative endarteritis" temporarily improved by arteriovenous anastomosis. Gangrene, which was imminent before operation, soon became progressive, however, and amputation had to be performed. In a personal communication Dr. Lund tells me that the case was probably of the type which I call thromboangiitis obliterans, as shown by his recent pathologic studies of the vessels.

Directing our attention now to the lesions of the veins, we may consider these under two separate heads: the changes in the deep veins, especially the larger solitary veins and venae comites, and the changes in the superficial veins. Both systems are of the utmost importance when arteriovenous anastomosis is done, the one for the arterial, the other for the return venous circulation. Although my study of the deep veins is fairly complete, having been based on the findings at autopsy of the amputated limbs, I am unable to give as extensive and anatomic account of the superficial vessels. For, strangely enough, these were more frequently diseased in those cases in which amputation has not as yet been necessary, and my data have been collected mostly from clinical observation and from the study of excised pieces.

The same pathologic changes that I have described elsewhere⁴ as being so characteristic for the arteries occur also in the veins. Thus we meet with various types of occlusion depending in the main on the age of the obturating process. In Figure 1 is seen an example of very recent closure of a vein by a red thrombus, which has become adherent at one point. A more usual type of early thrombosis is exemplified in Figure 2, where a segment of a large vein is occluded by a mixed clot. This shows lamellated fibrinous masses in its center and a peripheral zone of organization bordering on the intima. In this zone three so-called "miliary foci" containing giant cells can be readily detected. A still older stage in which organization is complete and in which the lumen of the vein is filled with connective tissue, small capillaries and blood pigment, is shown in Figure 3. Later in the history of the case, when by virtue of the attempts to produce efficient collateral circulation, the small canalizing capillaries have widened, and the obturating connective tissue has ripened into sclerotic fibrous masses, we see the development of those pictures which have been so frequently mistaken for an "endarteritis obliterans." In Figure 4 such an old type is depicted.

In the veins, too, as well as in the arteries, the thrombosis seems to take place in attacks, for we not uncommonly encounter various stages of the process in the two venae comites following an artery. A reference to Figure 5 will clearly illustrate this point. The posterior tibial artery and one vein have been obliterated for a long time, judging from the nature of the obturating tissue. The other accompanying vein shows very recent blockage, and a small additional satellite illustrates an intermediate type of thrombus organization. And, finally, in Figure 6 a portion of a vein is seen, in the canalizing or daughter vessels of which the same thrombotic process has recently occurred. This is shown by the foci of giant cells and fibrin and the marked cellular infiltration evoked by the thrombosis.

3. Boston Med. and Surg. Jour., 1908, p. 683. I may also refer to Hubbard's three cases, Ann. Surg., December, 1908, which, however, do not fit in here, since the gangrene was of the senile arteriosclerotic type.

4. Am. Jour. Med. Sc., October, 1908.

2. Ann. Surg., 1907, xlv, 1.

I do not wish to go deeply into the minutiae of the histologic changes, and have referred only to those features which seem of value in elucidating the nature of the process. For, from the standpoint of surgical intervention, we are more interested in determining the extent of venous involvement in the various cases than in the manner in which occlusion is brought about.

Reviewing the pathologic notes on nineteen amputated limbs, we find that, although the arteries were more or less affected in every case, obliteration of deep veins occurred in but seven of these, and closure of a large portion of the internal saphenous took place in one case. If we analyze these cases we learn that the thrombotic process in six of them concerned so many and such a large part of the venous channels that these certainly could not be regarded as possessing any advantages over the arteries for the requirements of an adequate circulation. In the table here appended I shall attempt to make this point clear.

Referring to the first seven cases in the table, we find that either one or both venae comites of the posterior

Without entering now into a discussion as to the theoretical requirements of the proposed new circulatory route, it is apparent that in six of the seven cases the existing venous channels were entirely inadequate.

What were conditions in the twelve cases in which the deep veins proved to be patent? Here, at least, the *sine qua non* for success in the establishment of an arteriovenous anastomosis, namely, wide and open efferent venous trunks, was present. Whether or not the other essential factors, soon to be discussed, obtained we shall determine in the analysis of the clinical pictures.

Having established the fact that the performance of vascular anastomosis could be rationally entertained in at least twelve out of nineteen patients, we must still answer the following questions: First, are there any other conditions that must be fulfilled before we decide on the procedure? Second, what information in regard to the state of the arteries and veins can we gain from our clinical studies

I have already alluded to the fact that both the superficial and deep venous trunks must be patent. Further-



Fig. 1.—A vein showing recent clot; the thrombus has become adherent to the wall at one point. The changes in the media correspond in situation to the places at which organization of the clot is beginning.

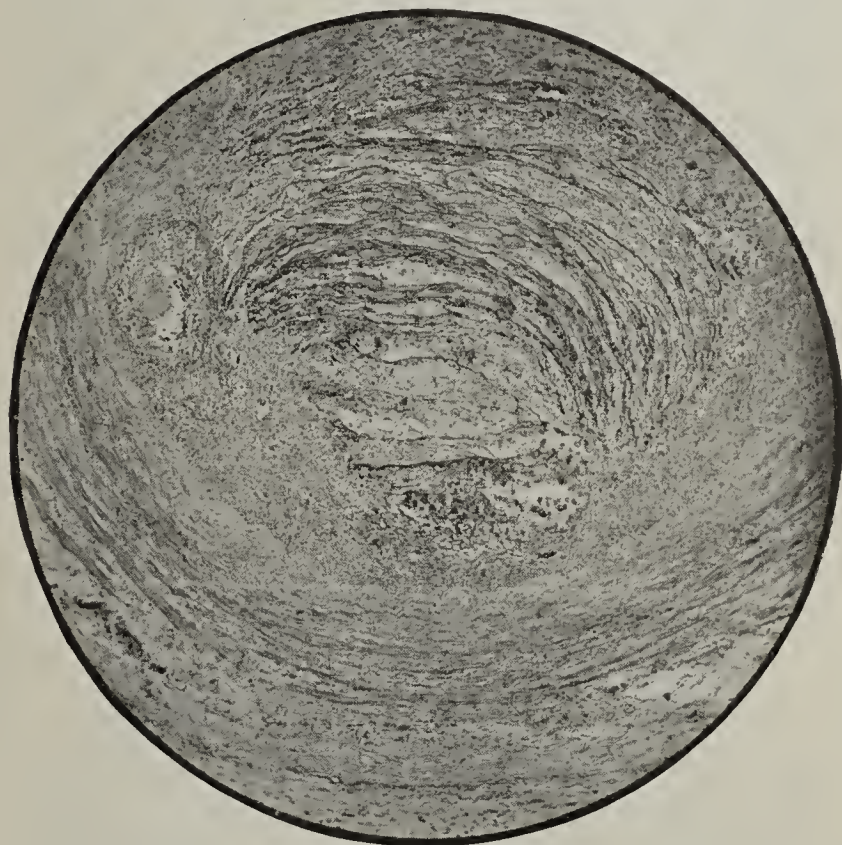


Fig. 2.—Recent thrombosis in a vein: about one-third of the cross-section shown. Below are the adventitia and media. The lumen is completely filled with recent clot undergoing organization at its periphery.

tibial artery were obliterated in every instance. Closure of the anterior tibial veins was less frequent, but the important external plantars were occluded in four out of the five cases in which they could be examined. Wherever I have indicated occlusion, a fairly large part or the whole course of the vessel showed the lesion.

more, the femoral artery must be absolutely free from any thrombotic process. Although this vessel is usually found to be pulsating at the groin, I have seen a number of cases in which the occlusive change had ascended so high that not the faintest suspicion of pulsation in the femoral artery could be detected. This, however, is rare

SCHEME OF OCCLUSION OF VESSELS IN EIGHT CASES OF THROMBOANGIITIS OBLITERANS *

Case	1	2	3	4	5	6	7	8†
Patient	1. L.	1. L.	D. F.	N. L.	S. S.	A. S.	A. P.	J. C.
Popliteal	A. V. V.	A. V. V.	A. V. V.	A. V. V.	A. V. V.	A. V. V.	A. V. V.	A. V. V.
Post. tibial	+	+	+	+	+	+	+	+
Peroneal	+	+	+	+	+	+	+	+
Ant. tibial	+	+	+	+	+	+	+	+
Dorsal. pedis	+	+	+	+	+	+	+	+
Dorsal. hall.	+	+	+	+	+	+	+	+
Metatarsal	+	+	+	+	+	+	+	+
Princeps hall.	+	+	+	+	+	+	+	+
Ext. plantar	+	+	+	+	+	+	+	+
Int. plantar	+	+	+	+	+	+	+	+
Calcaneal	+	+	+	+	+	+	+	+
Saphenous vein	+	+	+	+	+	+	+	+

* Explanation of table: Under the number of the case in each column are the initials of the name of the patient. A. = artery; V. = vein; + = closed; O = open; ? = not examined.
† In Case 8 there was no involvement of deep veins, but extensive obliteration of the internal saphenous.

and seems to occur especially when the disease is of many years' duration, or in patients in whom a low amputation had been performed. For in such cases the ablation of the limb had been done at a point at which the vessels were still occluded, and had thus failed to arrest the progress of the thrombotic process.

If we deflect the arterial current from the femoral artery into the femoral vein, below the termination of the long saphenous, we do so with a view to establishing

interanastomosing deep venules, but in the main finding its way into the vast network of superficial veins that empty in the long saphenous and thus into the femoral.



Fig. 3.—Obliterated vein. Closure of vein is of long standing. The media is infiltrated with round cells and capillaries; the lumen contains connective tissue, numerous capillaries, and blood pigment.

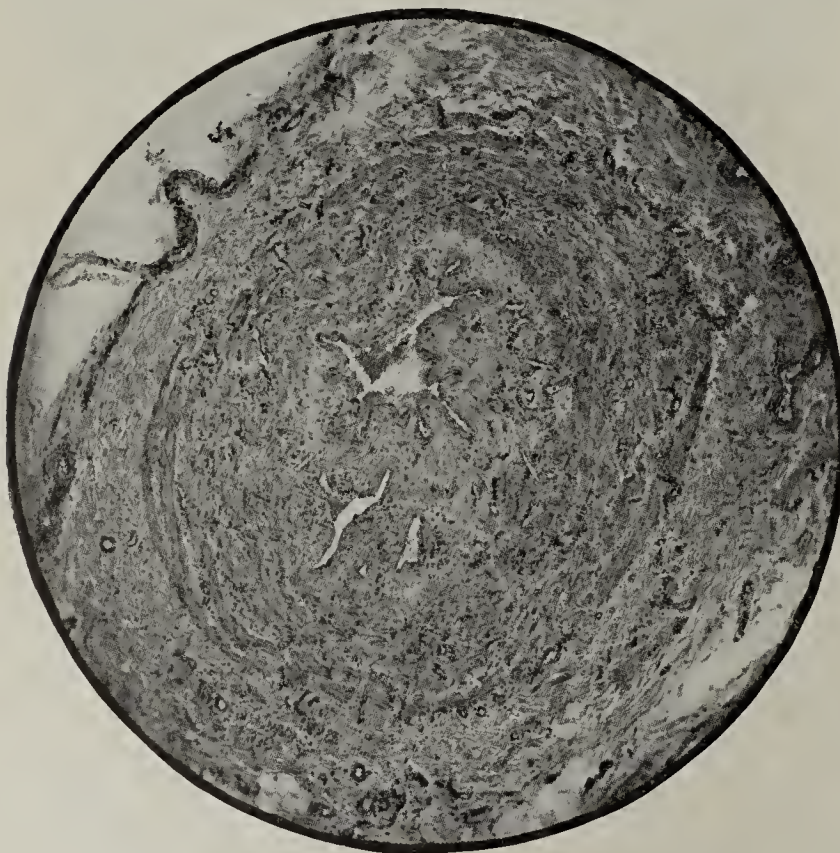


Fig. 4.—Type of old occlusion in a vein. The lumen is occupied by dense connective tissue enclosing blood spaces lined with endothelium, the result of canalization and organization of thrombus.

the following conditions: (1) the deep veins are to be transformed into arteries; (2) the blood must find its way into the capillaries where it meets the blood from the profunda and collaterals; and (3) a new centripetal flow must be established, primarily through a set of

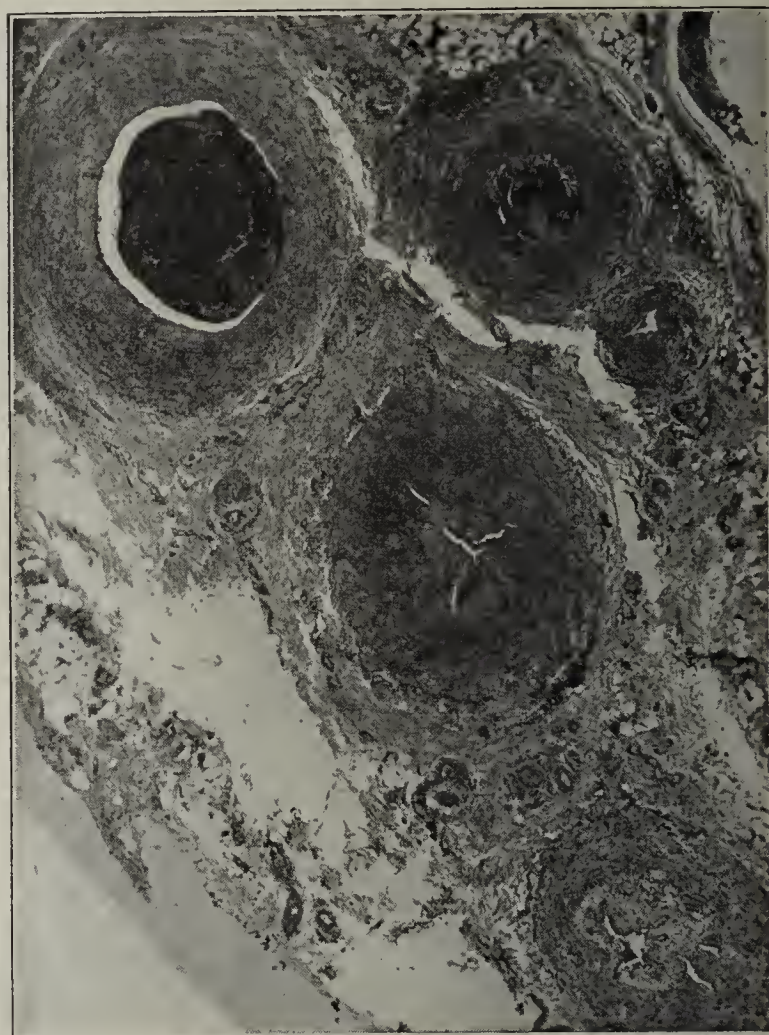


Fig. 5.—Artery and veins, showing various stages of the obliterative thrombotic process. Above, there are two veins, the large filled with very recent, the smaller with "intermediate" clot; in the center and below, an artery and vein are filled with sclerotic canalized tissue.

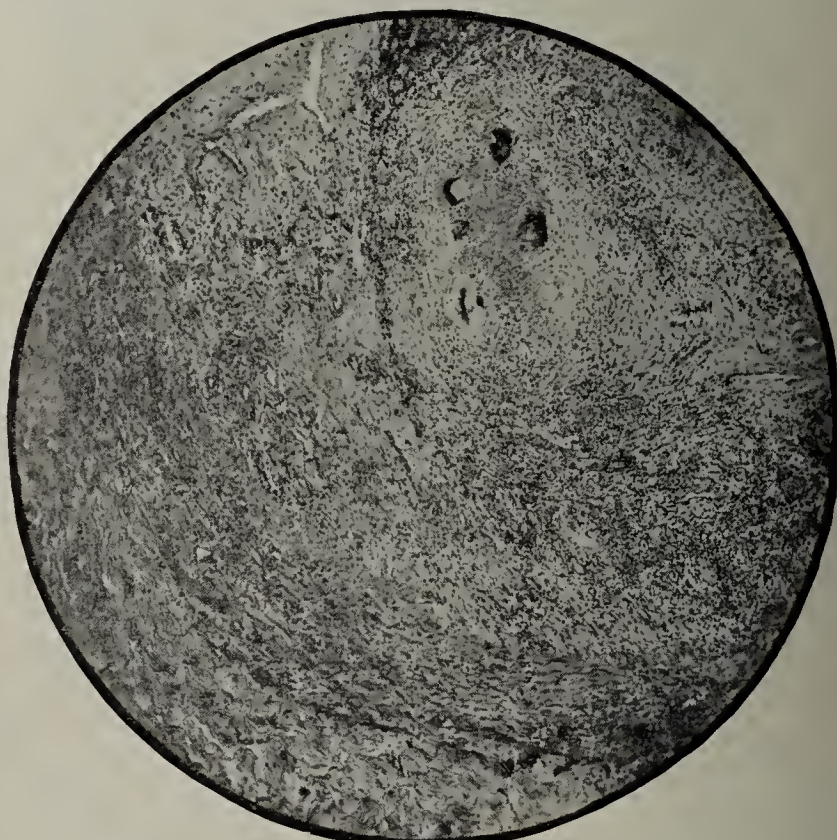


Fig. 6.—Recurring thrombosis in a large vein (popliteal). Only a portion of the cross section is shown. Below and to the left are the adventitia and media. The lumen is filled with connective tissue, many capillaries and larger blood sinuses and thick-walled "daughter" canalizing vessels. One of these is recently thrombosed and contains a miliary giant-celled focus.

A glance at the schematic diagram, Figure 7, impresses us at once with a number of doubts as to whether such new conditions can be obtained. The most impor-

tant query that arises is, why the blood does not rapidly find its way into the superficial veins through the large anastomosing tributaries and then return without having been distributed to the tissues. This question is difficult to answer. However, in the light of the successful results that have been thus far reported in both animal and man, it would be foolhardy to cling to scepticism. Let us therefore rather try to explain just what readjustment of vascular flow must occur. Granted that the arterial blood reaches the tissues through the femoral, popliteal, anterior and posterior tibial and peroneal venae comites, must not a large part enter the external saphenous vein and then be short-circuited into tributaries of the long saphenous and thus be carried centripetally by a short route? This certainly must occur. It would appear to me that this apparent complication or interference with the superficial veins as venous channels has certain advantages, at least in the period immediately following the anastomosis: for, through this short route, a back flow to the heart would be at once established, and the function of the superficial venous channels—with the internal saphenous as main efferent trunk—as veins, would be immediately determined. This accomplished, however, ligation of the external saphenous just below the popliteal would seem to be in order, so as to save as much arterial blood as possible for the nourishment of the limb. Whether or not ligation of the external saphenous is essential or whether it

thrombophlebitis with complete closure and final total obliteration of the affected veins.

I do not wish to dilate on this most interesting phase of the history of cases of thromboangiitis obliterans any further than is necessary to show how the phenomena manifest themselves, leaving a detailed description of some of my cases for a future publication. Suffice it to say here that spontaneous thrombosis, without apparent cause, may occur in the larger veins of the arms, but most frequently in the long saphenous and its tributaries. I am speaking here not of the secondary thromboses that are sometimes seen complicating the gangrenous process, but of an independent lesion appearing here and there along the course of the saphenous or some of its tributaries, now in the thigh, now in the leg, at one time manifesting itself as a hard tender cord with or without tendency to spread, and at other times showing itself in the form of multiple indurated areas or cutaneous nodosities. When, in two of the cases, I noted that a fresh exacerbation of the superficial thrombotic process was accompanied by distinct symptoms pointing to aggravation of the disease of the deep vessels (thromboangiitis obliterans) the suspicion which I had already entertained as regards the relationship of the two conditions, became considerably strengthened. Be that as it may, for our purpose it is enough to record the fact that a certain number of these patients suffer from attacks in which tributaries of the long or external

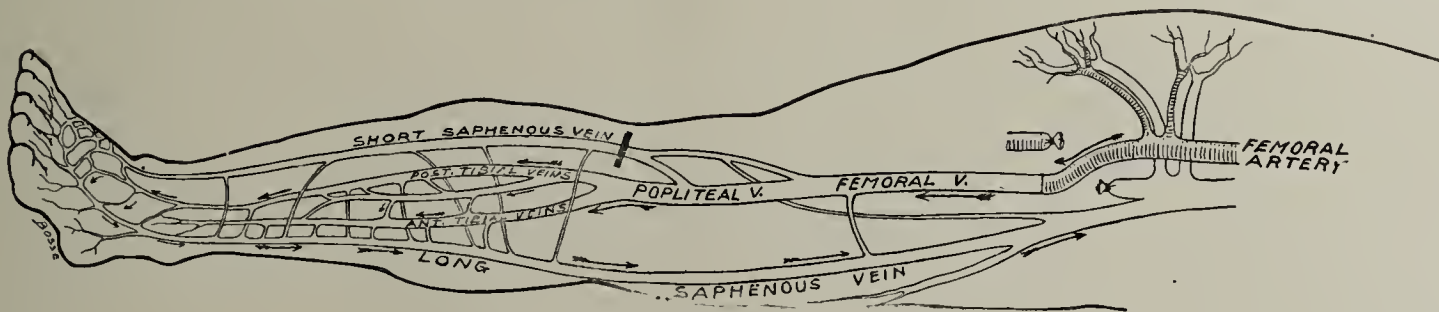


Fig. 7.—Schematic diagram, showing blood supply of leg.

should be done immediately or some time after operation, experience alone can determine.

I have already referred to the rôle of the superficial veins in the new circulation. Now that we have become orientated as regards the direction of the flow, it is clear that the importance of the tributaries of the long saphenous can not be overestimated. I mention this because my clinical studies have made me aware of the fact that *migrating phlebitis*, or *thrombophlebitis*, in the territory drained by this vessel is not an uncommon occurrence.

The association of attacks of thrombophlebitis involving superficial veins with the symptoms characteristic of thromboangiitis obliterans has been overlooked apparently, for I can recall no mention of it in the literature. In my own series there are records of the incidence of such phenomena in seven cases. It was not, however, until a fairly large number of patients had passed out of my hands that my attention was directed to this circumstance, and I feel therefore that a careful questioning of some of my old patients might elicit similar histories. From the standpoint of the surgical treatment of these patients it appears to be of no little moment to know just how extensive such thromboses may be, what vessels are usually involved and how frequently previous attacks have occurred. For there seems to be no doubt but that the nature of the lesion is a

saphenous, or the trunks themselves, become diseased and closed.

Whereas it is a relatively easy matter to determine with a fair degree of certainty whether or not the patient possess patent superficial veins, the question as to the involvement of the deep veins is a most puzzling one. From the histories and from my own observation in three cases I would be willing to state emphatically that arteriovenous anastomosis would not succeed in them. For in these patients I have watched the recurrence of thrombophlebitis throughout the thigh and leg, have seen it come and go, have found it extending even down into the sole and have extirpated pieces of such veins when they were recently occluded and later when they were mere fibrous cords. A careful questioning, then, may in such instances give us all the information we desire.

On the other hand, what signs and symptoms are of value in indicating the patency or occlusion of the deep veins? Have our clinical observations thrown any light on this question? It is here that we have to concede the inadequacy of our clinical methods. Looking over the histories of the cases in which amputation showed marked obliteration of the deep veins, I find that in two of these distinct mention was made of cyanosis in the dependent position of the limb. Whereas the capillary blush, or erythromelia, made its appearance first in the

usual fashion, the onset of cyanosis was more rapid and its degree more intense than in most of the other cases. Here, then, we have at least one sign which may be of service to us in this connection. Although investigations along these lines are not particularly promising, we may yet hope to learn a great deal by comparing careful clinical notes with pathologic findings. I have still a number of cases under observation which may prove particularly illuminating. In one of these—that of a patient whom I have watched for four years—the cyanosis following the temporary erythema is very pronounced and there have been numerous attacks of migrating thrombophlebitis of both the upper and lower extremities pointing at least to involvement of superficial veins.

For the future study of this particular phase of the subject I have begun the trial of the following test, by means of which we may be able to learn something about the sufficiency of the deep veins: I allow the limb to hang, watch for the advent of the erythema and wait until a fair degree of cyanosis has become established. This may take considerable time—five to ten minutes. The veins are then obliterated above the knee by means of a Martin bandage properly applied. The limb is then raised high and the bandage loosened just enough so as to remove pressure from the deep, but not from the superficial veins. If the cyanosis is slow in disappearing or fails to disappear, it may be concluded that the function of the deep veins is impaired.

Seeing the cases as we do at such diverse stages in the development of the disease, it is a difficult matter to decide as to what therapeutic measures to employ. Although I have been able to collect many data on the course of the disease after various modes of treatment, and after the appearance of the various characteristic symptoms there still remains a great deal to learn before the chapter can be closed. It may be well, however, to mention those facts which, at the present state of our knowledge, must determine us in the course which we would pursue. When the patients seek advice they usually present one of the following groups of symptoms:⁵

1. There is an ulcer that refuses to heal; erythromelia is present; neither the dorsalis pedis nor the posterior tibial arteries pulsate; the patients are suffering from their first attack of trophic disorder.

2. The same symptoms as in Group 1, except that inflammatory signs in the region of the ulcer or local dry gangrene indicate to us that the affected part of the limb will not recover.

3. There is a history of a number of recurrences such as belong to Group 1. The pain is extreme; recovery of the part is doubtful.

4. The gangrene has already involved one or more toes.

5. In the old cases in which sufficient collateral circulation must have been established years previously, the patients are over 45 years of age and suffer from a fresh exacerbation with gangrene. They have a combination of the lesions of arteriosclerosis and thromboangiitis obliterans.

6. There are no trophic disturbances; the patient may or may not have had previous attacks. The symp-

toms belong to the type of "intermittent claudication." The pain is either bearable or so intense that the affected limb is useless.

7. An acutely progressing affection of the vessels of one limb is evidenced by the exquisite pains and other typical signs with or without signs of trophic disorder. In some cases one limb has already been lost.

8. Any of the above pictures may be combined with attacks of migrating thrombophlebitis.

9. With any of the above pictures there may be absence of pulsation in the popliteal, or femoral arteries, or of both.

10. In those neglected cases in which a conservative operation has been done resulting in a chronic ulcerative or chronic gangrenous condition, there are usually extensive chronic inflammatory changes in the vessel and nerve sheaths and between the muscular planes.

11. The picture is dominated by attacks of ischemia that are especially marked in cold weather and involve the toes, with or without the rest of the foot. Cyanosis may be a feature in the dependent position. Either the dorsalis pedis or posterior tibial artery, or both, seem pulseless. Pain may or may not be present. The other leg may be unaffected or show one of the other groups of symptoms.

12. In those doubtful cases that belong either to this group or to the "acrocyanoses," erythromelia and ulcers may be present, but all the vessels pulsate. They are examples of an angiospastic condition, or, perhaps, they belong to a group of thromboangiitis obliterans in which only the deep veins are involved. I have had no material from such cases, and am, therefore, still undecided as to their nature.

Reviewing these conditions we ask ourselves: "When shall we suggest arteriovenous anastomosis between femoral artery and femoral vein?" In a general way we should be influenced in favor of the operation by the following considerations:

1. The feasibility of performing a perfectly functioning anastomosis; this necessitates a fairly healthy condition of the femoral artery and vein.

2. The presence of proper conditions for the production of a better vascular system. This includes patency of the deep veins, patency of the superficial veins, at least of the internal saphenous and its tributaries (the external saphenous not being theoretically necessary), a good pulsating femoral artery and a good general condition of the patient.

3. The absence of extensive local infection with ascending chronic interstitial inflammatory process.

4. The suffering of the patient.

5. The uselessness of the limb.

6. The history of the loss of the other limb.

7. The absence of attacks of migrating phlebitis.

8. Evidence of arterial occlusion, such as absent pulsation of anterior tibial, posterior tibial and popliteal arteries.

9. The presence of signs indicating that the limb can not be saved by other means.

Keeping the above essentials in mind, the cases in which the operation would be most clearly indicated are the following: Those of Groups 2, 3, 4; Group 6 if the pain warrants intervention; Group 7 if not of too long duration,⁶ and finally those of Group 1 if the pa-

5. These twelve groups are not to be regarded as definite, mutually exclusive classes. A patient's symptoms may fall within one or more of these, depending on the period in which he comes under observation. The patient's symptoms may pass from one group into another, as we watch them month after month. However, at any particular time in the life history they usually present one of the pictures described.

6. I add this reservation, for in one case of this group, the deep veins were found extensively thrombosed by fairly recent clot, although gangrene was not yet present. The leg was amputated at the request of the patient, because of the pain.

tients demand relief and the trouble is not alleviated by proper conservative treatment.

I have discussed this subject at such length because I feel that by my own studies I may possibly have contributed something toward directing other observers into those paths that may lead toward a more thorough understanding of one of the most interesting and difficult diseases that we are asked to treat.

I take pleasure in acknowledging my indebtedness to Miss Adele Oppenheimer, assistant in surgical pathology, Mount Sinai Hospital, for her valuable and efficient aid in collating many of the data on which I have drawn, and in thanking Dr. F. S. Mandlebaum, director the pathologic laboratory, for the preparation of the photomicrographs. Finally, thanks are due Drs. Lilienthal, Gerster, Sachs and the other members of the Mount Sinai attending staff, through whose generous cooperation a large part of the material for study became accessible to me.

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THE APPROPRIATE INSIGNIA FOR THE AMERICAN MEDICAL ASSOCIATION

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An emblem, to be appropriate, should be so devised as to convey a meaning suitable to the organization which carries it as a badge; therefore it seems strange that the American Medical Association should have adopted for its use the device of the red cross, which belongs to another organization and represents a character of work entirely different from that of the medical profession.

The American National Red Cross, through its executive committee, passed resolutions Oct. 18, 1907, which decided that by reason of an international agreement the emblem of the red cross was adopted to designate the personnel of sanitary corps, and was to be used in time of peace or war to protect sanitary formations, establishments and personnel and material.

Furthermore, in order that the emblem should be kept in its proper place, legislation has been recommended to prevent its use by private persons or by societies, and the executive committee has requested that all hospitals, health departments and like institutions kindly desist from the use of the red cross and suggests that some other insignia be substituted for it.

Some commercial houses which manufacture surgical necessities and appliances, together with some nostrums, print the red cross on their packages of kidney plasters, dog soap and dyspepsia medicines. There is a nurse's school which claims to teach nursing in a short term of a few weeks and calls the graduates "red cross nurses" who go out in competition with those who have served several years in hospitals.

In many of the large cities throughout the United States druggists are fond of naming their places "Red Cross Pharmacy." In New York and Chicago physicians have placed this symbol on their automobiles—whether this gives them more privileges than they would otherwise have is a question; it appears more as an advertisement than an explanation for speed. On state occasions some use it as a chevron on the sleeve, and sometimes the police think they have a right to it during large parades and wear it before the crowd.

There may, however, be raised the question of priority of use, inasmuch as the red cross was adopted by

the American Medical Association before the laws were passed, and therefore the latter has a perfect right to its use. This all may be true, but when we come to consider the objects of the Red Cross as originally set forth in 1864 we must concede that its use was not intended solely for the medical man but for all connected with the work of relief. Besides, we should be charitable enough to consider that we have appropriated an emblem devoted to humanitarian work.

What, then, is the proper badge of the medical profession?

In the United States Army the device of the surgeon is Mercury's wand, consisting of a rod surmounted by a pair of wings with two serpents twined about it. Carefully examining the literature on the subject of Mercury we learn many facts arguing against the use of this latter emblem in the healing art. We shall see that it belongs strictly to commerce and trade; the name "Mercury" itself is derived from the Latin *merc.* *mercis*—"goods." Mercury was the Roman divinity of commerce and gain; also *mercor*, to traffic, is from the same root; the word *mercatus* is akin to our English word "market," as is also the word *mercator*, "merchant."

Mercury, the Roman god, is identical with the Greek god Hermes and was considered the god of diplomacy, arts, sciences, commerce, gain and riches, especially of sudden and unexpected riches and of good luck at the games. He was usually represented with a purse in one hand, his magic caduceus in the other, and was supposed to preside over the commerce of the Romans.

The magic caduceus of Mercury is an evolution of the staff of Hermes, and the original caduceus or staff was an olive branch with garlands. Later ribbons were substituted for the garlands and finally mythologists transformed the ribbons and garlands into snakes, about which others, like Hyginus, invented various tales, one of them being that Hermes found two snakes fighting in a garden and, dividing them with his wand, chose this as a symbol of the quarrels which it was his duty to assist in settling. After a time a pair of wings was added to the staff to indicate the speed of Mercury as a divine messenger; it also became a symbol of power that produced wealth and was supposed to be an enchanted wand of prosperity.

Owing to the fact that Mercury's wand is used by the United States Army and by some medical publishers, and is to be placed on the ambulances of some New York hospitals, it would appear to be the proper emblem; but, studying the references which we have just gone over, we learn that it is more adapted to merchants, delivery wagons and steamships and is a commercial device. With the knowledge that the red cross and Mercury's wand are incorrect emblems, what, then, shall we consider the true insignia for the healing art?

The medical profession should be proud of the fact that a symbol has been handed down from ages past, though it was lost to some extent by those who forgot history and our traditions and desired something new for a device. The true ancestral symbol of the healing art is the knotty rod and serpent of Esculapius. Delving into the history of this symbol we find a veritable mine of facts which will convince us that we have a heritage worthy of our profession. It is customary to trace the history of medicine back to the story of Esculapius, whom the Greeks elevated to the position of the god of medicine. He was revered and worshipped

throughout Greece, but the great center of healing was at Epidaurus, where a beautiful temple was built to his honor in which his statue by the sculptor Thrasymedes stood. This statue, of gold and ivory, the head bearded and surrounded with rays, a knotty stick in one hand, the other entwined by a serpent, gives us the original symbol of the healing art.

Serpents of a peculiar kind were kept in the temples. Votive tablets also have been found on which the ailments were inscribed and which were similar to our hospital case records. No doubt Hippocrates, the "father of physic," gained much of his knowledge of medicine from these tablets, for some of his reputed writings and formulas, such as *Prorrhetica* or *Prædictiones* and *Coacoæ Prænotiones*, are very much like them. He was a descendant of the early Asclepiades and was said to be the nineteenth in descent from Esculapius. He inherited the instruction of his fathers though a long line of physicians and was well versed in the practice of his time.

Later on we find the Greek practitioners coming to Rome, and the practice of the Asclepiades came with them. According to the Roman law they were freedmen. After a time they established shops, on which they placed the sign of the Esculapian snake and practiced their art and sold medicine; the Romans called them *medicinæ*.

We learn from Ovid that on the occasion of the great plague in Rome, at the command of the Delphic oracle, B.C. 293, an embassy was sent to the temple of Esculapius at Epidaurus, whence was brought a living serpent which was received with great ceremony by the Romans. They built a temple on the Tiber and the serpent was placed therein.

Now let us glance at the sources of this serpent idea as found in the earlier times and the strange ramifications of the respect for the serpent among barbaric races. In the earliest civilized times we find that the Egyptians represented the eternal spirit "Kneph" as a serpent. Osiris in snake form was usually associated with health; the Chaldean Hoa was identical with the *Agatho-dæmon*, which the Hebrews, who were in Egypt for over four hundred years, learned to regard as the symbol of health and life. Thermuthis, the sacred asp, was associated with Isis, the goddess of life and healing.

The serpent's change of skin may have been suggestive of resurrection and renovation; he was feared because he was supposed to possess superhuman knowledge and power. His supposed longevity was, no doubt, the reason why this animal entwined about a staff was symbolic of health and the distinctive attribute of the classical Esculapius and Hygeia.

We find also that the Phenicians adored the serpent as a beneficent genius. The Hindoos had a serpent deity, Rudra, who was not only beautiful and strong but also the healer. The Druids had serpents in the sanctuary to bring good fortune. The Python of the Greeks in the temple of Apollo, described by Ovid, was all-powerful; the Celts, the Basques and all Asia had legends of the Orm and the Paystha pictured as a great dragon.

We are all familiar with the fables of St. Michael and St. George, and, turning to the Chinese, the winged dragon or serpent is a symbol of superior wisdom and power.

In the folk-lore of the Gauls and Germans the white snake, when boiled, was considered to have the attribute

of conferring wisdom in medicine. The white snake was also venerated by the Scottish highlanders, as well as by certain Arabian tribes, as a mighty agent and the king of all serpents.

Following this thought into America, let us learn what the Indians believe in this respect. The general idea among them is that it brings happiness. Professor Agassiz tells us that he found the Maues Indians, who live in Brazil, whenever they assign a form to any *remedio*, give it that of a serpent. Among the Lenape Indians their famous doctors were called "big snakes."

We must not forget to look into Holy Writ for the symbolical influence and intelligence of the serpent in the history of the fall of man, where it is stated, "Now the serpent was more subtle than any beast of the field."

In the story of the Exodus we have many allusions to the serpent as a power for deliverance. Aaron's serpent rod is an instance. Also during the wanderings in the wilderness Moses placed a brazen serpent on a pole in the midst of the camp, which was preserved for many centuries, until the days of Hezekiah, when it was broken to pieces because it became an object of worship and tended to turn the people from their true God.

During the Christian era the serpent was employed to signify the virtue of prudence and wisdom; the disciples were admonished, "Be ye wise as serpents."

In the Latin church of the early days the pastoral staff terminated at the top with a serpent, indicating power and wisdom.

Whatever element of superstition or imagination may have been injected into these stories of mythology and the legends of more recent times, there is a wonderful history hidden behind them, all of which permeates the whole human race.

Man in his primitive state and in his more civilized life believes there was a superior power for good, and his mind, requiring a material expression of that unseen source, used the serpent as a symbol of power and wisdom. Without this the rod of Esculapius would be impotent over disease and the wand of Mercury would have no authority over trade or commerce. The cultured Greeks therefore, having great respect for the healing art, honored it with the most significant and expressive symbol of the highest attributes conducive to the welfare of the race.

Among the orientals the shepherd was considered the highest type of citizen, whose life in the open country brought him in contact with great struggles. The rod was the weapon with which he struck down the adversaries of the sheep; the staff or crook, however, was used for their guidance in the proper path on the trackless pastures. Hence we read in the beautiful pastoral song of the "shepherd king" these expressive words: "Thy rod and thy staff they comfort me." The rod therefore became the symbol of a defending power which brought comfort and support to the weak in the consciousness that they were protected from all danger.

Esculapius was always pictured with a knotty rod in his hand, the knots indicating the many difficult problems of physic to be solved in the treatment of the ailments of mankind. Therefore, applying these thoughts to the symbol, we have in the entwined serpent, power, wisdom and health, together with the protection and support against disease and the difficulties to be overcome by the knotty rod. With this historical symbol the sanctity of medicine can be pictured and the doctor is shown in his true light, not only as a labora-

tory scientist and as a practitioner, but as a teacher and adviser to the patient, the family and the community in all the difficult problems that arise concerning health and disease.

This dissertation on the meaning of the medical emblem will suggest the appropriate insignia of the American Medical Association to be as follows: A shield on which is emblazoned the American eagle holding in its talons a laurel wreath within which is the knotty rod and entwined serpent and the letters A.M.A., of which a design is here submitted.



Suggested design for an emblem for the American Medical Association.

The explanation of the emblem so devised would be as follows: The eagle represents the national organization of the United States; the laurel wreath stands for the crown which the Romans bestowed on the healing art; the entwined serpent is indicative of power, wisdom and health, and the knotty rod signifies protection and support in the difficult problems of the treatment of disease.

SUMMARY

The insignia and device of the red cross belongs to another organization and its use is not proper for the medical profession. It represents a character of work entirely different.

From the fact that Mercury was the Roman god of trade and commerce and his magic caduceus was the symbol of authority over trade and commerce and was the enchanted wand of prosperity, it is not adapted to be an emblem for the healing art.

The knotty rod and serpent of Esculapius is the ancient inheritance of the medical profession, and the history of this symbol, together with its mythology and its legends, prove its appropriateness, for the reason that the serpent was considered by every race on the globe as a great power and man's mind used it as a symbol of wisdom and health.

The knotty rod is an expressive representation of support, protection and comfort in the difficult problems arising in the management of disease.

NOTE.—It may interest readers of this paper to consult some of the following authorities on the subject:

- Smith, William: Dictionary of Greek and Roman Biography and Mythology.
Niebuhr: History of Rome.
Harper's Dictionary of Classical History and Antiquities, and Encyclopædia Americana.
Walton: The Cult of Æsculapius.
Brinton: The Myths of the New World.
Parke: Epitome of the History of Medicine.
Bulletin American National Red Cross, Nos. 1 and 2.
McClintock and Strong: Cyclopedia of Biblical, Theological and Ecclesiastical Literature.
Wake: Serpent Worship.
Meyer: The Shepherd Psalm.
Dunglison: History of Medicine.
Blair and Crawford: Design.

639 North Sixteenth Street.

Importance of Dental Orthopedics.—F. A. Gough (*Amer. Jour. Obstet.*, April) states that though parents desire that their children have good permanent teeth, few realize the importance of saving the deciduous teeth till their mission is accomplished.

Clinical Notes

ACUTE PECTORAL (THORACIC, ANTERIOR AXILLARY) LYMPHADENITIS FROM CUTANEOUS INFECTIONS OF THE LOWER LATERAL CHEST AND UPPER ABDOMINAL WALL

WALTER M. BRICKNER, M.D.

Assistant Adjunct Surgeon, Mount Sinai Hospital
NEW YORK

Based on the observation of three cases, I published the following editorial note in the *American Journal of Surgery*, April, 1906:

A tender, painful swelling just at or beyond the upper, outer border of the breast, and near the edge of the pectoralis major, is usually an inflamed lymphatic gland. In its presence it is well to look for some skin infection about the waist line, e. g., furuncles, which are not rare at this site as a result of irritation by the corset. *Per contra*, with a boil, abscess, dermatitis or other infection at or above the waist line, one may be on the lookout for glandular enlargement at the point referred to.

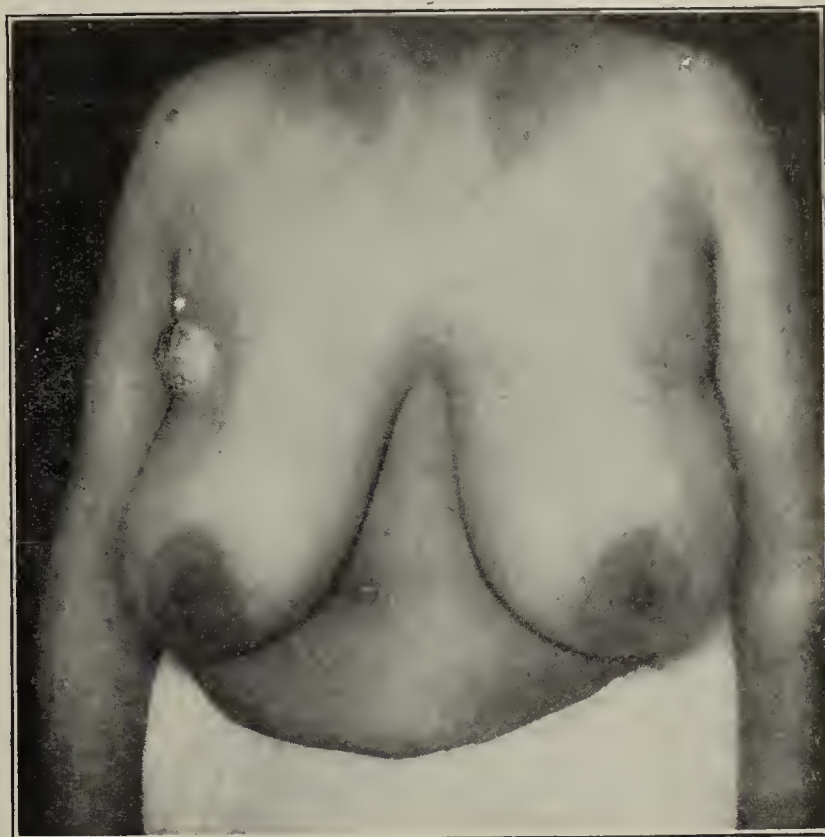


Fig. 1.—Photograph showing pectoral adenitis, and location of furuncle causing it.

Two similar cases have since come under my care. All five of the patients were women. In four the exciting lesion was a furuncle, and suppuration slowly developed in the glands; in the other case infection of a superficial burn over the lower costal cartilages caused the lymphadenitis, which resolved without suppuration. Four of the patients had previously consulted other physicians, who had regarded the thoracic swellings as neoplasms.

The patient from whom the accompanying photograph (Fig. 1) was made presented herself recently at the Mount Sinai Hospital Dispensary, with the statement that the hard swelling in the right anterior axillary line, above the breast, had been developing for three weeks. She said that at two clinics the diagnosis of cancer had been made and radical operation advised. The assistant who first examined her at the Mount Sinai Hospital Dispensary was also inclined to look on

the swelling as a neoplasm until it was suggested that he examine the line of corset pressure for the cause. A receding furuncle, shown in the photograph, was there found. Five days later the thoracic swelling was larger, somewhat reddened and adherent to the skin, but still fairly hard; an incision evacuated pus and thereafter the tumor promptly subsided. Just before it was incised two colleagues—both men of experience and training—pronounced the swelling an “undoubted carcinoma.”

The mistake is most apt to be made in women with large, firm mammae, in whom the proximity of the tumor suggests its involvement of outlying breast tissue. The lesion is probably more common in women than men for the reason suggested in the above-quoted note.

In “The Lymphatics,” by Poirier, Cunéo and Delamare,¹ the axillary glands are divided into the following groups: (1) humeral, (2) thoracic, (3) scapular, (4) central or intermediate, (5) subclavian. The thoracic, pectoral or anterior group or chain consists of a superointernal portion, overlying the second or third intercostal space beneath the pectoralis major, and an inferoexternal portion, over the fourth and fifth intercostal spaces, along the long thoracic artery. As will

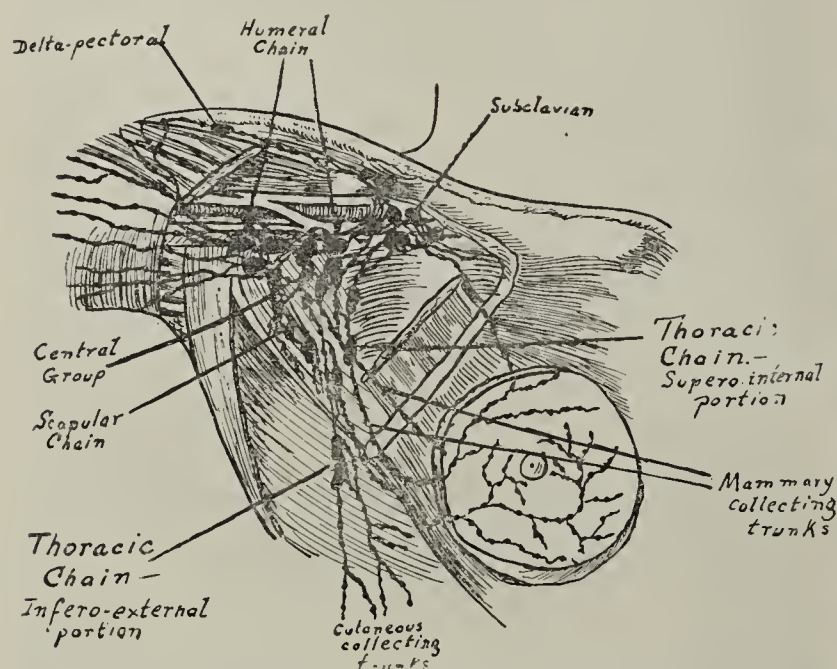


Fig. 2.—The axillary glands and lymphatic drainage (After Poirier)

be seen in Figure 2, “the anterior cutaneous and the mammary lymphatics more particularly end in the superointernal group; the absorbent vessels of the lateral wall of the thorax in the inferoexternal group” (Leaf).

It is, then, the superointernal (portion of the thoracic) group which is usually early involved in breast carcinoma. The inferoexternal portion, on the other hand, is affected in cutaneous lesions of the lower lateral chest wall and of the upper abdomen; when inflamed, these glands form a mass over the fourth rib near the outer edge of the pectoralis major, sometimes partly beneath that muscle.

The text-books of surgery discuss acute lymphadenitis in general rather than in anatomical detail.² They

make no more specific reference to the lesion under consideration than such general statements as “all infections in the upper extremity, the adjacent thorax, or the breasts, may produce [axillary] lymphadenitis with or without a recognizable intercurrent lymphangitis.”³

This note is written, therefore, to call attention to a condition but little described and often misinterpreted. 30 West Ninety-second Street.

LIMITED SUBSCAPULAR MYOPATHY WITH ABSENCE OF FACIAL, HUMERAL AND CRURAL INVOLVEMENT *

GEORGE E. PRICE, M.D.

Associate in Nervous and Mental Diseases at the Jefferson Medical College
PHILADELPHIA

The following case is of interest chiefly on account of the unusual distribution of the atrophy. It does not conform at all to the pseudohypertrophic type or to the Landouzy-Déjerine type, but approaches more nearly the scapulohumeral or juvenile type of Erb.



Fig. 1.—Front view of patient with muscular atrophy of a type approaching Erb's scapulohumeral or juvenile type.

History.—The patient, E. H., a white girl, aged 17, was a patient at the neurologic dispensary of the Jefferson Medical College Hospital. She had chickenpox and gastric fever at 8 years of age, and an attack of chorea at 9 years. This latter was caused by a fright, lasted six months, and was of unusual severity. She was never very robust.

Present Illness.—The onset was so gradual that it was impossible to say just when the wasting commenced. Two and a half years before the time of examination the attention of the patient's mother was attracted to what seemed to be an unusual concavity in the front of her chest, but it was not until several months later that the flaring of the right shoulder-blade was observed. Shortly after this the patient noticed a prominence of the sternal end of the right clavicle and experienced difficulty in raising the right arm to arrange her hair. About six months before the examination the same symptoms were found to be commencing on the left side. There was never any pain until the condition was well advanced, and then only an occasional aching or soreness of the right shoulder and back after exertion. Six months before the first symp-

1. Translated and edited by Cecil H. Leaf.

2. The surgical text-books by the following authors and editors have been searched in vain for a reference to acute pectoral adenitis: von Bergmann (in German); von Bergmann-Bull (English); Bryant and Buck (incomplete); Keen, Fowler, Da Costa, Walsham, American Text-Book of Surgery, Dennis, Park, Tillmann (in German and English), Wullstein and Wilms, Wyeth, Brewer; likewise the works on surgical anatomy by Deaver, Woolsey, Eisendrath; and various works on surgical diagnosis.

3. Von Bergmann-Bull, iii, 80.

* Presented before the Philadelphia Neurological Society, Feb. 26, 1909.

toms were observed the patient collided with a horse and buggy while riding a bicycle, sustaining a sprained ankle and considerable shock. This was the only history of trauma. An older sister, who used to bathe and care for the patient during her infancy and early childhood, was positive in her assertion that at this time there was no deformity present.

Examination.—The patient was a fairly well-nourished girl, presenting marked flaring of the right scapula, with wasting of the underlying serratus and rhomboid muscles, and with a similar but much less marked condition of the left side. Anteriorly there was an abnormal concavity on both sides of the upper chest, most marked on the right side. The right sternoclavicular articulation was unusually large and prominent. The patient was unable to raise her right arm higher than the level of the shoulder, and when she attempted to elevate or bring the arm forward, the scapula glided on the shoulder. When the scapula was held firmly in place against the ribs in its normal position the arm could be fairly well raised. There was no wasting of the deltoid, supra or infraspinatus on either side, or any wasting of the thenar, hypothenar or interosseous muscles. The lower extremities presented no wasting or pseudohypertrophy. The atrophied muscles presented no fibrillation, and the electrical reactions were normal.

Diagnosis.—The condition had to be differentiated from the serratus palsy due to disease of the long thoracic nerve; from



Fig. 2.—Rear view of same patient (with muscular atrophy) shown in Fig. 1.

progressive muscular atrophy of spinal origin; and from congenital elevation of the scapula or Sprengel's deformity. Opposed to neuritis was the absence of exciting cause, the absence of reactions of degeneration, and the slow progressive course with bilateral symptoms. The age of the patient and the absence of fibrillation and reactions of degeneration differentiated the condition from a chronic anterior poliomyelitis; while the fact that symptoms were not observed until after infancy, and the progressive course, separated it from Sprengel's deformity.

Treatment.—When the scapula was held in place by the hand or the point of the shoulder held backward, the arm assumed a normal position and the range of movement was greatly increased. This fact suggested the advisability of a brace, and I referred the patient to the orthopedic department, where she was fitted with an admirable apparatus which fixed the scapula and to a certain extent held the shoulder back as well. Massage, galvanism, and the high-frequency current have been given her. She is certainly more comfortable and the wasting does not seem to have progressed under my observation.

I am indebted to Dr. F. X. Dercum for the privilege of placing the case on record.

NEW ABDOMINAL RING SPECULUM

H. EDWARD SAUER, M.D.

Associate in Gynecology, Northwestern University Medical School;
Attending Surgeon, German Hospital
CHICAGO

Too many forceps about an abdominal wound, one of which might become lost in the abdomen; too much catching of suture and ligament material about the hemostats, impeding work and annoying the operator, especially when forced to hurry in his work; too much loss of the assistant's power, due to his hands being so much employed in pulling retractors—experience of all these hindrances caused me to scheme to obtain some simple device to do away with these difficulties. The set of rings, which my instrument-maker has called an abdominal ring speculum, is the result.

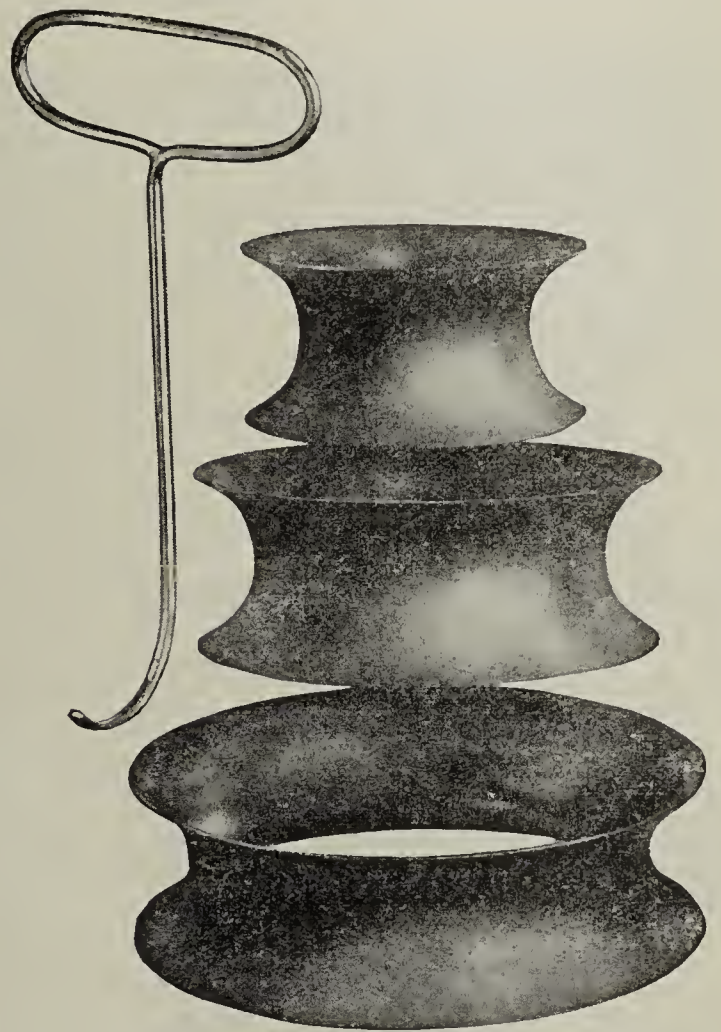


Fig. 1.—Abdominal ring speculum in three of the six sizes; and blunt-pointed retractor for use with the speculum.

The next thought which occurred to me was that of stretching a large sheet of sterile rubber dam over the ring, a small hole having been cut in the center of the sheet of rubber dam, thus completely covering the edge of the wound, skin and umbilicus with sterile rubber sheeting, and in a far more convenient way gaining the object sought by the use of gutta-percha varnishes, pastes, etc. This convenience has afforded me much comfort in my operative work in the past year, and furnishes a field of observation in clinical teaching heretofore unattainable.

Its use is simple. The method is as follows:

1. Make the abdominal incision the desired length, and then clamp and twist or ligate only the spurting arteries. The oozing points will be controlled entirely by the pressure of the ring and need not be individually clamped.
2. Open the peritoneum and place the patient in extreme Trendelenburg position.

3. Grasp the abdominal wall with the hand and have the assistant do the same on the opposite side.

4. Pull the abdominal wall forward and with the other hand work the intestines up toward diaphragm.

5. Place the laparotomy sponges and pack them tightly toward diaphragm, placing one clamp on all the tapes attached to them and collected in one bundle.

6. Place the rubber dam around the abdominal speculum, and then insert the ring into the abdominal opening in such a way that the wall of the abdomen on one side only fits into the groove around the ring.

7. Now spread the rubber dam over the patient, and, while holding the ring in place with one hand, gradually, inch by inch, push the opposite abdominal wall outward over the edge of the ring, when it will immediately snap into the groove and remain there. The whole proceeding is similar to clinching on an automobile tire.

Those who make this remark forget the natural resiliency of the tissues. The incision does not have to be any longer than the greatest diameter of the ring. About half an inch greater than the internal diameter of the ring is all that is required.

Another criticism is that it is undesirable to cut the patient to fit an instrument. This remark is made without due consideration, for it is to avoid this necessity that a series of six rings is made, with interior diameters, 4, $3\frac{1}{2}$, 3, $2\frac{1}{2}$, 2 and $1\frac{1}{2}$ inches, thus affording a ring convenient for any incision.

I have used the abdominal ring speculum in fifteen cases, with not only satisfactory but brilliant results. I have not had a wound infection in any one of the cases.

This being only a preliminary report, no detailed account of cases will be given, but a later article will take up those details.

100 State Street.

DEVIATION OF COMPLEMENT WITH FAILURE OF COMPLETE HEMOLYSIS (WASSERMANN REACTION) IN CERTAIN, NON-SYPHILITIC, HUMAN SERA

A PRELIMINARY COMMUNICATION *

JAMES G. CUMMING, M.D., AND FRANK SMITHIES, M.D.
ANN ARBOR, MICH.

The specificity of the so-called Wassermann reaction together with its clinical interpretation have been matters of comment and criticism since the introduction of the test. Granting that in all cases in which work has been reported, the technic and the component parts of the manipulations have been beyond question, it has been frequently noted that cases of undoubted syphilis, clinically, have failed to give positive reaction. Conversely, the literature already contains rather frequent mention of failure of hemolysis in instances in which leucite history has been eliminated and in which individuals have been ill from various other ailments.

Landsteiner¹ found that when rabbits had been inoculated with *Trypanosoma equiperdum* their serum caused inhibition of hemolysis. Weil and Braun² noted positive indications from the test in cases of pneumonia, typhoid fever, tuberculosis, diabetes and certain tumors variously distributed throughout the body. Munch and Eichelberg³ have called attention to the fact that serum from patients affected with scarlet fever behaved similarly. However, Ivy McKenzie⁴ notes no inhibition of hemolysis in nine cases of scarlet fever, four cases of lobar pneumonia, three cases of bronchopneumonia and six cases of typhoid. In six cases of tuberculosis hemolysis was complete, and in four out of five cases of chronic tuberculosis there was no inhibition. Butler⁵ obtained the reaction in three cases of noma, in which the etiologic factor appeared to be due to *B. fusiformis* and a spirillum. Gay and Fitzgerald⁶ report no positive reactions in patients affected with acute conditions such as typhoid fever, pneumonia, meningitis and tuberculosis.

In the course of our work with the Wassermann reaction, we have observed that blood serum of evidently



Fig. 2.—Ring speculum, rubber dam and retractor, in use.

The ring, once in place, is held there by the abdominal wall very firmly; in fact, it requires a particular maneuver to get it out.

Since it may, in the course of the necessary work on a given case, become desirable to get a little further to one side or the other, a hook is furnished with the rings, bent to fit exactly on the inner curve, by means of which retraction can be accomplished. Retraction in this way is superior to the older methods in that one is always retracting a perfect circle.

No claim is made for a universal application for this abdominal ring speculum, but it is of service in by far the greater number of abdominal cases. A little use will soon demonstrate its value to the operator, and he will quickly find out that it has a far greater use than would at first appear.

One of the first criticisms of the instrument that I have heard is that too large an incision has to be made.

* From the Laboratory of the Pasteur Institute at the University of Michigan.

1. Referat am Internat. Kong. f. Hyg., 1907.

2. Wien. klin. Wchnschr., 1908, No. 26.

3. Med. Klinik., 1908, p. 671.

4. British Jour. Path. and Bact., January, 1909.

5. New York Med. Jour., Jan. 30, 1909.

6. Boston Med. and Surg. Jour., Feb. 11, 1909.

non-syphilitic patients, who are in progress of treatment for rabies or who have recently taken such treatment, by the Pasteur method, possessed certain properties which prevented or influenced the lysis of sheep's erythrocytes.

Details of cases, together with practical and theoretical considerations need not greatly concern us here. Suffice it to say that it would appear that the partial or total absence of hemolysis in these Pasteurized patients is explained by the fact that this class of patients in the course of the prophylactic treatment, receive rabbits' blood serum as an extrinsic substance. Consequently, from these injections, they become more or less perfectly sensitized to rabbit's serum.

By the original procedure of the Wassermann reaction, the extrinsic components are obtained from the rabbit (amboceptor), the guinea-pig (complement) and sheep's blood (erythrocytes).

It apparently follows that if one uses the rabbit to obtain hemolytic serum (amboceptor) for the sheep's erythrocytes, this serum after inactivation, will give the precipitin reaction with the sensitized human serum of the Pasteurized patient and the complement (from guinea-pig). This precipitin reaction is due to the presence of amboceptor in the blood serum of the patient who has had the prophylactic injections of rabbit's serum according to the Pasteur method, and to the receptor in the inactivated rabbit's serum. This inactivated serum, in the presence of complement (guinea-pig's serum) and sensitized erythrocytes (sheep) gives rise to a deviation of complement. It

gland, sclerotic artery, phlebolith, calcified bodies in muscle or fascia, or accentuated calcification in the transverse processes of the vertebrae. It has been recognized that a simple *x*-ray picture is subject to these errors, at least, and to overcome this error it has been the custom of those expert in genitourinary surgery to pass styleted urethral catheters and to have the *x*-ray picture taken with the catheters in the ureters, by which means it has been possible to interpret shadows suggesting ureteral stones more accurately, as the course of the ureter is clearly defined by the shadow cast by the metal stylet, and a calculus in the ureter will be detected budding, as it were, from the stylet.

While this method of diagnosis is satisfactory, it is possible to employ it only when all the necessary apparatus is at hand.

To detect stones in the ureter without the *x*-ray, and to aid in their dislodgement, the instrument here illustrated is of value. It consists of a ureteral catheter with an opening at the tip through which a manganese stylet is passed. On the distal end of the stylet is soldered a silver conical-shaped tip, the proximal end of which is concave, and of the circumference of the ureteral catheter, so that it fits perfectly over the opening. On the proximal end of the stylet is soldered a metal cup which may be fitted into a stethoscope. By the passage of this catheter into a ureter containing a calculus an impulse is carried to the ear as the metal tip strikes the foreign body. The catheter being marked off in inches, it is known exactly what distance the stone is from the ureteral mouth.



The lower figure shows the ureteral catheter with the silver tip flush with the catheter end, and the metal cup at the proximal end of the stylet, which cup fits into the stethoscope.

The upper figure shows the silver tip advanced in position to be withdrawn after the catheter has passed a ureteral stone. It is hoped that the concave shelf at the base of the conical tip will engage the ureteral calculus enough to dislodge it, and allow it to pass on into the bladder after the catheter is removed.

thus follows that there is a fixation of complement in both the precipitin reaction present and in the process of hemolysis.

The consideration of the resulting partial or complete absence of hemolysis, together with a fuller explanation of the phenomena connected therewith, we shall endeavor to take up in a future communication.

URETERAL CATHETER FOR THE DETECTION AND DISLODGEMENT OF STONES

JOHN H. CUNNINGHAM, JR., M.D.

Visiting Surgeon to the Long Island Hospital, Boston; Third Assistant Visiting Surgeon, Boston City Hospital
BOSTON

Previous to the employment of the *x*-ray as a means of detection of calculi in the ureter, the error in diagnosis between stones in the kidney and ureter was great. The employment of the *x*-ray has been of the greatest value in the diagnosis. This method of diagnosis, however, contains a two-fold error: first, the impossibility of detecting pure uric acid calculi; and, second, the presence of questionable shadows in, or near by, the course of the ureter. It has been a common mistake to cut down on supposed ureteral calculi because of shadows present in *x*-ray plates, and to find no ureteral stone, the shadow being due to a faulty plate, calcified

The second object of this catheter is to aid in the dislodgment of the calculus if detected. It is well known that the ureteral catheter will usually pass any calculus in the ureter, and it has been observed many times that the stone is often dislodged following the removal of the ureter catheter. This is probably due to the fact that the stone is only lightly held in the ureter, and the dilation produced by the passage of the catheter by it may result in sufficient dilatation to allow the stone to pass on after the catheter is removed. This, however, does not always take place, and with the idea of increasing the possibility of dislodging the stone, the conical end of the stylet is advanced for about one inch, after the catheter has passed the stone, and then, the catheter being withdrawn, the shelf on the conical end may engage the stone and dislodge it.

829 Boylston Street.

Medical Inspection Prevents Caisson Disease.—The engineers who built the Cortlandt street tunnel below the Hudson river, are justly proud, says the *Scientific American*, of the fact that the whole 5,900 feet of pneumatic work was driven through without the serious injury, through air pressure, of a single workman. The tunnel was built under air pressure of from 25 to 35 pounds to the square inch, and the enviable freedom of the workmen from attacks of the "bends" was due mainly to a searching medical examination of all candidates for the compressed-air work.

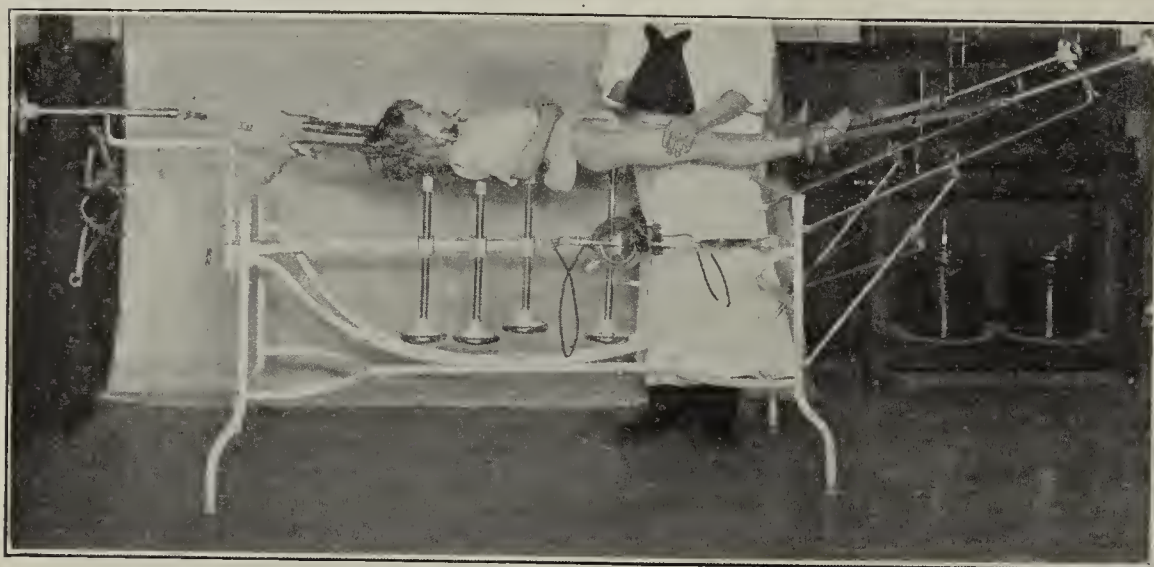
AN IDEAL ARRANGEMENT FOR THE TREATMENT OF FEMORAL FRACTURES

EDWARD A. RICH, M.D.
TACOMA, WASH.

The accompanying illustration shows a practical and exceedingly satisfactory arrangement for the treatment of fractures of the femur. Hammerstein's extension table is made use of to fix the patient's body and limbs; an x-ray tube suspended on an adjustable cross-bar of the table is connected with the coil. An assistant can increase or decrease the amount of extension by a turn of the screw attachment, as can he also control the amount of abduction or adduction.

The operator thus equipped can make frequent use of the fluoroscope during his manipulations and all guess-work is positively eliminated. When perfect position is secured there is no hindrance to the application of splints. Should plaster-of-paris casings be used we have the same unobstructed freedom as when applying spicas for tubercular hips. I use internal plaster splints and external splints of the same material, reaching from the axilla to the external malleolus with a steel rod incorporated for extension on the foot. When the splint is properly applied and secures muscular immobilization there is no reason why the bony fragments should be displaced.

The last three femoral fractures that have been referred to me were difficult cases, all of the patients



Extension table with x-ray attachment for the treatment of femoral fractures by the illuminated method. Note the unobstructed field for application of immobilizing splints; also mode of applying extension and abduction, and case of positive reduction.

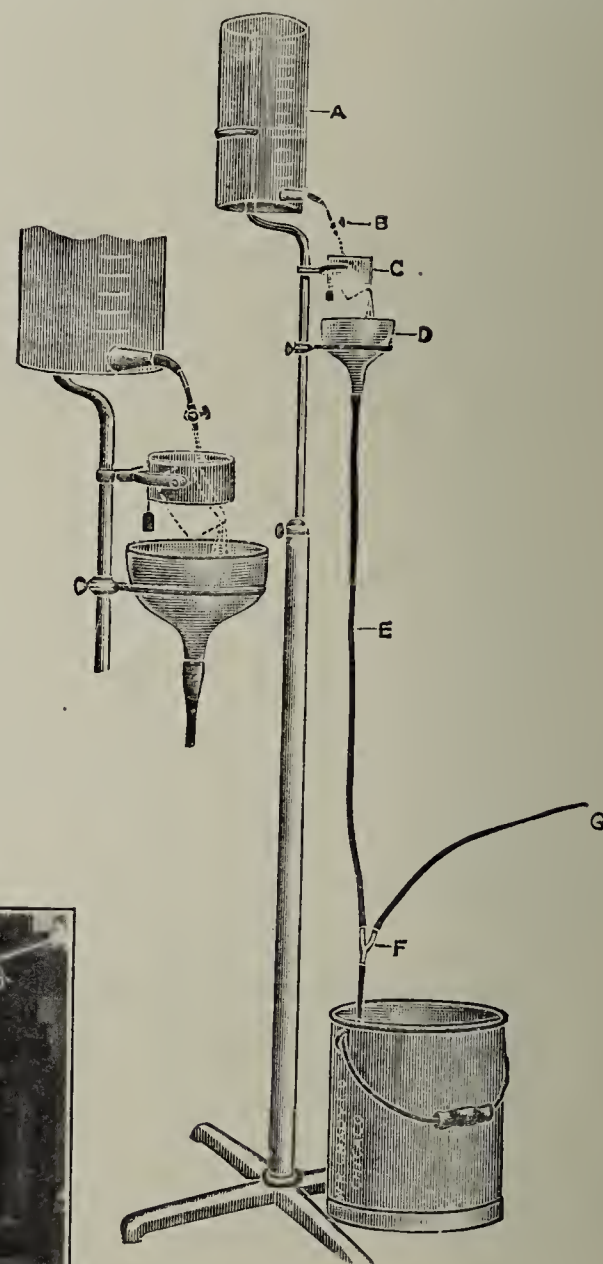
having suffered breaks in the region of the surgical neck. The three after this method of illuminated reduction and immobilization were taken from my operating room to their homes in conveyances. Later radiographs show splendid results.

NEW APPARATUS FOR COMPLETE DRAINAGE OF THE BLADDER FOLLOWING EITHER SUPRAPUBIC OR PERINEAL CYSTOTOMY

LEWIS WINE BREMERMAN, A.M., M.D.
CHICAGO

Having had considerable difficulty in draining the bladder after cystotomy with the ordinary apparatus, I devised the apparatus shown by the accompanying cut, which fulfills perfectly the purpose for which it was constructed, that of perfect drainage of the bladder.

After the patient is placed in bed the tubing is connected with a drainage tube from the bladder. The Y-shaped tube F must be below the level of the patient lying in bed; the reservoir A filled with water, the stop-



Apparatus for complete drainage of cystotomy; A, reservoir for water; B, stopcock for regulating the flow; C, cup weighted in the rear to hold in place when empty; D, funnel to catch the water when the cup tips on being filled with water; E, long tube which connects the funnel with the Y-shaped glass tube; F, Y-shaped glass tube; G, tube connecting the drainage tube from the bladder with the Y-shaped tube.

cock B turned on so that the water will drop slowly into the cup C, which, on being filled, tilts and empties itself into the funnel D. The water running down the long tube E into the Y-shaped tube F forms behind it a suction which causes a siphonage of the fluid in the bladder. This siphonage may be regulated to occur at any given interval by arranging the flow of water from the stopcock B which flows into the cup.

Usually the first twelve hours following the operation I regulate the flow so that the cup will tilt every five minutes, which is sufficiently often to keep the bladder perfectly dry. During the second twelve hours I arrange the flow so that the cup tilts about every ten minutes; during the second twenty-four hours, about every fifteen minutes.

I find this apparatus of exceptional value, particularly after prostatectomies, in which perfect drainage is exceedingly essential. Complete drainage of the bladder causes the patient to be comfortable and free from pain,

whereas if the bladder is not drained completely and is allowed to fill, the distention is accompanied with considerable pain and discomfort to the patient.

I am sure that those who are doing much bladder work have met with the same difficulties in perfect drainage as I have met with in my work, and that if they will take the occasion to use the apparatus which I have devised they will be satisfied with the results.

72 Madison Street.

WOUND CLOSURE WITH A MINIMUM SCAR *

H. EDWARD CASTLE, M.D.
SAN FRANCISCO

This subject is ever interesting, as the scar which remains is a constant reminder to patient and surgeon of an important event in a human life. It is the one thing that remains uppermost in the mind of the patient long after the disease for which the operation was performed is forgotten. In exposed parts, especially neck and face, an unsightly scar is embarrassing.

There are two essential factors in the production of a minimum scar, viz.: asepsis and the proper coaptation of tissues. The former is impossible, the latter is rapidly being perfected. The older method of interrupted sutures which was devised with the thought in mind that if one suture gave way, owing to sloughing, the remainder might hold, has largely been replaced by the continuous. The right-angle subcuticular suture is an excellent one for closing the skin and is the one now in general use.

After experimenting on dogs, Dr. Ryfkogel and I have put into use, in the former's clinic and in our private work, the following method for closing wounds. For example, in the closure of a laparotomy wound, the peritoneum is closed with No. 00 iodized catgut, the serous surfaces being approximated by a right-angle suture. One, two or three silkworm-gut tension sutures are placed through the remainder of the abdominal wall and left untied. The muscles are drawn together by No. 00 iodized catgut, and the fascia either overlapped according to Moynihan, or the raw edges approximated with No. 1 chromic catgut. The space between muscle and skin is obliterated, as the case requires, with No. 00 iodized catgut. A similar suture is run close to the skin, which is closed by a continuous suture of china-bead silk carried by a No. 16 embroidery needle. The stitches are placed nearly two-thirds of a centimeter apart and include nearly one millimeter of the edge of the skin in their grasp. A collodion strip is placed over the wound and the tension sutures are tied over a bolster of plain gauze.

The apposition of the skin is almost perfect, there being no spaces left in which blood clots may form. The wound is inspected within three days. When the sutures have served their purpose they can be wiped off with a dry sponge, leaving an almost invisible scar.

We have not attempted to keep any record of these cases, but so far there has not been one bad result.

1871 Sutter Street.

* From the Research Laboratory of the University of California.

Syphilis of the Upper Air Passages.—W. A. Lieven (*Journal of Laryngology*, March) states that tertiary processes in the larynx require energetic general treatment as there is a marked tendency to cicatricial narrowing of the larynx in these cases.

Therapeutics

ACUTE CHOREA

Although there is nothing new in our knowledge of the best treatment of this disease, it may be well to rehearse our present understanding of chorea, as well presented by Charles H. Scribner, Patterson, N. J., in the *Journal of the Medical Society of New Jersey*, February, 1909.

The pathologic disturbance which causes the muscular movements which are termed chorea seems to be principally located in the brain, and the great variety of movements and their generalization in severe cases of chorea show that there are irritations in various parts of the cerebral cortex and basal ganglia. The symptoms referable to cerebral irritations are, besides the muscular movements, mental irritability, sleeplessness, troublesome dreams, night terrors, impaired memory, and various hallucinations of sight, taste, and smell. Besides anemia and disturbed menstruation in young girls, often amenorrhea, a most frequent complication is endocarditis.

It is probable that chorea is due to an infection, and this infection is doubtless closely associated with the micro-organisms that cause acute inflammatory rheumatism. There is no reason to believe that the disease of chorea is contagious, but neither is rheumatism. Still, it is wise to isolate a child, not only for its own sake, but on account of other children involuntarily mimicking the movements of the patient, and imitative chorea is an accepted condition.

The earlier the patient is taken from school and put to bed in good hygienic surroundings, or, if the case is very mild, taken where, with the least exertion, noise and confusion, he or she may have the most fresh air and sunlight, the less likely is the chorea to be severe.

The success of any medicinal treatment must be judged by the accepted fact that chorea is self-limited, and the intensity of the symptoms will abate in from two to four weeks. Arsenic, in the form of Fowler's solution, the dose being increased by one minim a day until the full physiologic effects are obtained, is the treatment that is most lauded and many times apparently the most successful. On the other hand, it often fails, and it is possible that in the many mild cases in which it apparently succeeds it is successful only because the disease is self-limited. Doubtless many cases of neuritis and blood deterioration have followed in the steps of chorea because too much arsenic has been used, and it certainly does not seem advisable, in a disease that is apparently self-limited, to give a poison in sufficient amount to produce poisoning to attempt to shorten the disease. Scribner says that as soon as the lids become puffy, or gastrointestinal symptoms develop, the dose should be decreased again to the starting point.

To reiterate, it does not seem advisable to use a drug so foreign to the system as arsenic to the point of serious symptoms (and it should be remembered that when puffing occurs under the eyes from arsenic there is also generally albumin in the urine). When, during its administration, choreic movements cease, it is by the self-limitation of the disease, or by the arsenic causing some debility of the nerves, if not an actual neuritis.

Scribner states that antipyrin is one of the most valuable of drugs in lessening muscular activity and easing the pains that may be present in the muscles and joints. This drug is valuable in relieving muscular contrac-

tions, but must be given in good doses and not continued too long, and if during its action the heart is protected with small doses of digitalis it certainly is not any more dangerous a treatment than is arsenic.

The salicylates and salol (the latter in small doses) are as valuable in chorea as is arsenic, and they would certainly seem indicated when there are painful and swollen joints, as frequently occurs in chorea.

If the movements from the disease are so severe as to cause injury to the patient, or even to endanger life from continuous sleeplessness, Scribner advises the chloral treatment. Chloral for this purpose, according to Forchheimer, "is given in five-grain doses every four hours the first day, and two and one-half grains are added to each dose the second day, and these second-day doses are repeated on the third day until the proper effect is produced. This means that the patient should be kept asleep until the choreic movements have ceased for about twelve hours." The amount of chloral administered on this plan sometimes may be enormous, considering that it is a child that is generally being treated. Of course the heart should be carefully watched, but it generally withstands the treatment well. Forchheimer states that, in his experience, "this treatment has always resulted in one of two ways: either the child wakes up cured (i. e., without any form of chorea), or the grave form has been converted into the mild form."

Scribner says that the extreme danger to life of the severe form of the disease, and the really wonderful results of the chloral treatment, justify the risk.

HEADACHE

Of all painful conditions this is the most frequent and the one that is the least tolerated; hence the nostrums for its treatment are legion.

It should be the aim of the physician to make a diagnosis of the cause of a headache. The acute headaches occurring in feverish processes may be due to increased temperature and the increased rapidity of the heart causing an actual increased cerebral pressure, or may be due to a toxemia from the products of infection. Anything that reduces the temperature, lowers the blood pressure, and cleanses the intestines of feces, products of fermentation, putrefaction, and old bile, will relieve this kind of a headache.

If the headache is due to cerebral hyperemia without fever, anything that will relieve the blood pressure, as dilating the peripheral blood vessels, or putting the feet into a hot bath, will be efficient treatment.

If the headache is due to cerebral excitement (often perhaps caused by an increased blood pressure), it will be relieved by anything that lessens cerebral activity, as bromids and chloral.

If the headache is due to venous congestion, as from cardiac insufficiency or from arteriosclerosis, nitroglycerin by dilating the superficial blood vessels may be expected to relieve the headache. Posture and the addition of another pillow at night will often relieve this headache. If, with cardiac insufficiency, there is headache when the patient is up and about, digitalis may relieve it.

Headache may also be due to anemia and low blood pressure, as in neurasthenia. In these conditions a slight serous exudate may occur at night in the brain similar to that which occurs in the extremities during the day. Such headaches are relieved by iron, sometimes by vasoconstrictors, and at times by calcium.

The most frequent causes of toxic headache are constipation, intestinal fermentation, kidney insufficiency and liver insufficiency. In the first instance free daily movements of the bowels, and such dietetic and medicinal treatment as to prevent fermentation will also prevent the headaches. In kidney or liver insufficiency the diet should be so arranged as to allow the easiest metabolism and the most perfect elimination of waste products, and the headache will be less.

Actual inflammation of the meninges of the brain is, of course, the cause of intense headache. Such headache can only be combated by narcotics and the inhibition of the inflammation. If the pressure from the products of inflammation or exudation becomes sufficient to allow of draining by spinal puncture, this may relieve the headache, even if there is not sufficient fluid to cause coma.

The persistent headache from a cerebral tumor can only be cured by the removal of the tumor, or, perhaps, by trephining and thus relieving cerebral pressure.

The headaches of post-epileptic attacks may be due to a slight exudate in the ventricles of the brain, or to a congestion of the meninges, and will generally be relieved by bromids.

The terrible, typical migraine attacks are also perhaps due to toxic irritants circulating in the blood much as are the unexplained epileptic attacks. Such headaches are relieved only by stronger narcotics and time. Such attacks, as well as epileptic fits, may be prevented by the most perfect possible regulation of the stomach and intestines and such modification of the diet as will prevent the formation and absorption of toxins.

The post-alcohol and post-ether headaches are probably due to exudates into the cerebral cavities, and the toning up of the circulatory system with ergot, digitalis and strychnin would seem to be the best treatment.

Of all causes of headache far and away the most frequent is eye-strain. While there are a few enthusiasts who go too far with the eye reflex theory as a cause of many nervous disturbances, and while it is not necessary under the discussion of headaches to prove or disprove or defend other reflexes that may occur from eye tire, it is a positive, incontrovertible fact that defective eyes cause more headaches than all other causes put together. Unfortunately, if this cause is not corrected early in life before the headache habit has been acquired, the human neurotic mechanism so readily develops a nervous habit that the headaches recur throughout life.

It is not to be understood for one moment that a headache should be considered ocular unless all other more serious causes have been excluded. Such causes having been excluded, a careful consideration of when, how and why the patient has headaches should so impress the investigator with the probability of ocular defect that he should insist on his patient consulting an oculist before allowing him to become a chronic headache sufferer, or to seek help from physician to physician, or to take "patent medicines" for relief. The eyes of such patients should be carefully examined and ocular defects found or excluded.

It should be carefully impressed on the patient that if an ocular defect is found, and if apparently the right lenses are given him, that, in the first place, the decision of the exact ocular defect, even by the best ophthalmologists, is not absolute, and that it is no more an exact science than is internal medicine, and that an eye

showing a defect to-day may show a different defect a few months or even a few weeks hence. The patient ought also to understand that he should have the prescription for lenses put up, and then have the lenses adjusted to his eyes by the very best optician he can find. He should also be told, if he has astigmatism, that the least bending of the frames of his glasses or spectacles will not only make the correction *nil*, but perhaps cause more eye pain and headache than he had before. Hence astigmatic lenses should be frequently straightened by the optician. The patient should also be told that however perfectly his lenses fit his eyes now, a year or more hence they may not fit at all. Consequently, careful examination of a patient with headaches having proved to both the physician and the consulting oculist that the trouble is due to eyestrain, should cause that patient to remember that it is the oculist to whom he should look for the cure of a recurrence of his headaches.

Considerable time has been spent in discussing the prevention of eye headaches for the reason that eyestrain is the most frequent cause of headaches, and their treatment by the laity is making weak hearts; and weak general circulation is becoming the bane of the treatment by medical men of all acute disease or post-operation conditions. This is due largely to the fact that civilized people frequently take large amounts, or repeatedly take small amounts, of coal-tar antineuralgic drugs, and the most frequent cause for the taking of such drugs is headache. Consequently, anything that will prevent frequent headaches will prevent many unnecessary deaths. The amount of acetanilid, antipyrin, and now phenacetin (acetphenetidinum) that is consumed in this country is enormous, mostly through the medium of nostrums, especially headache powders and tablets. Though the pure food and drug law now compels the proper labeling of such products, the laity still does not understand the dangers from these drugs, or their pernicious action on the heart and blood. From an ordinary dose death does not often occur, but, unfortunately, the deteriorating action on the blood and circulation from these drugs goes on unrecognized, and they have now become the most frequent cause of anemia, neurasthenia and general circulatory debility in this country to-day.

It is hardly necessary to mention the reflex head pain that may come from a bad tooth, from an inflammation in the antrum of Highmore or the frontal sinus, or from inflammations in the ear, as these diagnoses of causes of headache should be readily excluded.

It should be remembered that frontal headache is frequently caused by syphilis.

It should also be remembered, if there is insufficient pulmonary ability, whether from tuberculosis, emphysema, pleurisy with effusion, or asthma, that this lack of proper aeration may cause headache.

At times gastric hyperacidity and uterine displacements may be reflex causes of headache, but such causes are rare.

The wearing of heavy hats and heavy masses of hair may be the cause of headaches in girls and young women, to say nothing of the pernicious spotted veil.

MALIGNANT GROWTHS

Although we can not yet declare the exact method by which mercury inhibits the activity of the germ of syphilis, nor exactly how it removes or causes absorption of small-celled specific growths, it is a well-known

fact that mercury has the power not only to do this, but if long enough administered, can prevent syphilitic recurrences.

Dr. Bucher, Fort Lyons, Colo., has recently declared that small doses of mercury have greatly improved patients with tuberculous laryngitis, and improved tuberculous infiltrations of the lungs. The mercury in these tuberculous cases is given subcutaneously. This, then, would seem to indicate that at times mercury may remove a small-celled infiltration that is tuberculous.

Now Dr. William L. Harris, Providence, R. I. (*New York Medical Journal*, Feb. 27, 1909), states that for more than four years he has been using mercury hypodermatically to remove carcinomatous growths and infiltrations, and with apparent success. Such treatment is not instead of operative treatment, but as an adjunct to operative treatment. He considers that the treatment should extend over two or three years, and that the earlier it is begun the better. "For two months after operation for carcinoma" he "injects hypodermatically 1/2 grain of a soluble iron salt and 1/24 grain of arsenous acid." He also "administers subcutaneously 2 1/2 grains of salicylate of mercury, and repeats this every ten days for four times; then he administers 1/2 grain or 1 grain every fifteen or twenty days for the first year." In the second year he "administers 1 grain of the mercury every ten days until 10 grains have been taken, and then 1/2 grain once a month." He states that lately he has been using "the succinimid of mercury in 1/5 grain doses, subcutaneously, administering this dose every five or ten days for ten doses, and then every fifteen or twenty days." The iron and arsenic injections he states he gives from time to time as a tonic.

He is very careful not to give the arsenic frequently enough or in a dose sufficient to cause salivation, and therefore watches each patient carefully. He also would not use it in an anemic patient, and during its administration frequently counts the red blood corpuscles to note the condition of the blood. He thinks that the combined iron and arsenic treatment is beneficial both to the patient and to the best action of the mercury.

Harris believes that this mercury treatment is inhibitory to the cancer germ or to cell proliferation.

Harris does not state why he thinks that iron and arsenic are more beneficial when administered hypodermatically than when given by the stomach. There certainly seems to be, many times, an advantage in administering mercury subcutaneously rather than by the mouth or by inunction, but if mercury is beneficial in carcinomatous conditions it would probably also be of benefit when given by the mouth. In any case, the experimental dose of mercury for the treatment of cancer would be small.

Carcinosarcoma of the Ovaries.—Forssner, in *Hygiea Festsband*, adds two new cases of this rare form of tumor to the small number already recorded in the literature, in all not more than eight or ten. Whether the tumor develops as a mixed one from the beginning or whether a carcinoma and a sarcoma originate independently and perhaps subsequently coalesce, in either case the different tumor tissues present the same characteristics as ordinarily observed on part of the tumors when occurring in the uterus independently; thus the carcinoma in the case is either a so-called malignant adenoma or a adenocarcinoma and the sarcoma tissue may be either round, spindle or giant-celled.

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ADVANCES IN KNOWLEDGE OF INFECTIOUS ENDOCARDITIS

Infectious endocarditis presents problems of great interest to the student of infections. First there is that much discussed but still unsettled question: Why is the left side involved so much oftener than the right? And then, in the cases that run a more protracted course, the problems of the complicated mechanisms whereby a focus of infection in the middle of the blood stream is permitted to maintain itself for so long a time naturally press forward for some attempt at solution. In connection with these and other phases of infectious endocarditis the results of the investigations of Rosenow¹ merit special notice.

In the first place, Rosenow, on the basis of a considerable experience, emphasizes strongly the diagnostic value of blood cultures, especially in the early stages of infectious endocarditis. Blood cultures may serve not only to establish the existence of endocarditis, but also the etiologic nature of the process. Blood-agar is recommended as more likely to give growth than broth, especially in pneumococcus endocarditis, and because of the additional advantage that the number of colonies which develop may be made use of to estimate the number of bacteria in the blood from time to time.

Most of the cases of endocarditis studied by Rosenow were caused by pneumococci. One was caused by a staphylococcus. When first isolated from the blood these bacteria presented certain special and peculiar characteristics which soon were lost on artificial cultivation, namely the faculty of adhering firmly to solid surfaces and of growing in clumps, especially in the presence of oxygen. When still possessed of this property they readily caused endocarditis in rabbits on injection of large quantities, even though no experimental injury was first inflicted on the valves or other parts of the endocardium. Simultaneously with the loss of the peculiar cultural characteristics the bacteria also lost the power to localize on the endocardium and to produce changes there. In some instances, the experimental endocarditis was progressive, but in many cases more or less healing took place. Rosenow is inclined to see in the peculiar characteristics of the bacteria in question an explanation in the first place of

their power to produce endocarditis (especially of course in the rabbits) and then also of the greater frequency of involvement of the left side because the adhesive tendency is more pronounced in the presence of oxygen. The fact that the special characteristics were readily lost raises the question whether they were not acquired during the growth on the endocardium and in the blood of the patient—in other words a result rather than a cause of endocarditis. Nevertheless, the readiness with which endocarditis could be produced experimentally so long as the special characteristics were retained certainly indicates the importance these properties may have in leading to localization on the endocardium.

On isolation from the blood and, in some of the cases, from the endocardium after death, the pneumococci were of only minimal virulence for rabbits, and as would be expected in view of this fact, freely susceptible to phagocytosis by human and other leucocytes in the presence of serum. When pneumococci are isolated from the blood of pneumonia patients they are virulent for rabbits and insusceptible of phagocytosis by normal leucocytes in normal serum. There consequently exists a profound difference in the strains from each of these two diseases and the question naturally comes up: How can apparently avirulent pneumococci exist in the blood and cause endocarditis and the other lesions? Rosenow's attempts to analyze the mechanism of immunization of the pneumococci against the antibodies of the patient give results that are highly interesting. He found that not only did the pneumococci grow better in serum of the patients from whom they were obtained than in normal serum, but that they also possessed a distinct power to resist phagocytosis by the patient's leucocytes. This immunity of the pneumococci seems to have been limited strictly to the blood of the patient in whom they had existed—a remarkably specific adaptation. Furthermore, while normal leucocytes in the patient's serum and patient's leucocytes in normal serum would cause active destruction of the pneumococci, the patient's leucocytes in the patient's serum might not cause any destruction. Growth of pneumococci in the patient's serum would render them more resistant to phagocytosis than growth in normal serum. The acquirement of this resistance to phagocytosis appears to be closely dependent on some heat-sensitive property of the serum, because when grown in heated serum the cocci remained susceptible to phagocytosis. In other words, pneumococci under certain circumstances immunize themselves against the antibodies of the host, and as this immunity is limited strictly to the antibodies of the individual host we seem to stand here before an adaptation of remarkably narrow specificness. This, then, may be the explanation of the fact that apparently avirulent bacteria may maintain existence for months in the blood and heart of the endocarditis patient and sus-

1. THE JOURNAL A.M.A., Nov. 7, 1908, p. 1571; Jour. Infect. Dis., 1909, vi, 245.

tain a more or less active endocarditic process—the bacteria become immune to the antibacterial substances of the particular patient.

Finally, notice should be taken of the fact that in Rosenow's cases the therapeutic injection of dead bacteria had no influence on the course of the disease.

The discovery of the peculiar adhesive tendency of certain bacteria when freshly isolated from cases of endocarditis and the immunity of such bacteria to the anti-infectious powers of the patient's blood, constitute important additions to our knowledge of the pathogenesis of endocarditis and to the rôle of adaptation of bacteria in maintaining infection.

TYPHOID FEVER AND MECHANICAL FILTERS

As is well known, there are two principal methods in use in this country for purifying public water supplies. The older of these is the slow sand filtration method practiced for many years in England, Holland and Germany, and long proved to be an efficient safeguard against water-borne infections. When this system is employed with relatively clear waters the difficulty and expense of operation, due largely to the frequent scraping-off of the surface layer of sand, are not great, but if a very turbid water has to be treated the rapid clogging that results makes the filter practically unworkable. Muddy waters, therefore, are usually clarified by the addition of suitable chemicals, such as aluminum sulphate. Many special forms of apparatus for this purpose have been devised and are in use in different parts of the United States. They all agree in providing for mixing the chemicals with the water in proper proportion and then, after a more or less complete settling process for passing the water at a relatively rapid rate (*e. g.* 125,000,000 gallons daily) through beds of sand arranged so as to be conveniently cleaned by back-flushing. Various mechanical appliances are used in effecting these results and the name mechanical filter is commonly applied to this type of apparatus.

While the principles of construction and operation of the slow sand filters have been well worked out, and beneficial results from their installation have been generally noticed, the newer mechanical filters are, so to speak, still on trial, particularly as regards the conditions that determine their sanitary efficiency. Some sanitarians have been disposed for this reason to oppose the introduction of mechanical filters and to advocate on all occasions the installation of slow sand filters. Since it has been abundantly demonstrated that the latter type is not at all adapted to the treatment of the highly turbid surface waters common in many parts of the United States, a more rational attitude would seem to be to watch closely the operation and effects of the mechanical filters perforce installed in many

places and learn how to avoid or overcome the weaknesses inherent in the system.

One of the anticipated difficulties in the management of the mechanical filters has been the estimation of the proper amount of coagulant that should be added under varying conditions. If this matter is left to inexpert or inexperienced hands, it is clear that filters operated on this principle may be very far from successful. That the possible danger from this source is not an imaginary one is shown by certain experiences with a mechanical filter at Conneaut, Ohio, recently narrated by the Ohio State Board of Health.¹ The filters at Conneaut, a city of about 9000 inhabitants, are of types that use aluminum sulphate as a coagulant. The character of the raw Lake Erie water on which these filters operate does not seem to be very bad at certain seasons, but at other times the sewage-polluted Conneaut river flows over the intake, producing a condition by no means easy to remedy. Several epidemics of typhoid have occurred at Conneaut since the filter plant was installed. The last of these, in 1906-1907, was thoroughly investigated by the Ohio State Board of Health, and evidence was secured that the water supply was the chief cause of the outbreak. It was found, further, that a connection apparently existed between the time of infection of many cases and known irregularities in the operation of the filter plant. Among the features that tended to produce poor results are enumerated improper methods of operating the filter, lack of sufficient sedimentation after addition of the coagulant, lack of sufficient filtering capacity and extremely small storage for filtered water at the plant.

The occurrence shows, first, the lack of protection against typhoid fever afforded by badly managed mechanical filters, and second, the necessity for such thorough investigation as that undertaken in Ohio. No filter can be expected to distinguish automatically between pure water and water containing typhoid bacilli.

A SANE NEWSPAPER VIEW OF ANTIVIVISECTION

We recently called attention to the awakening of the lay press in regard to a sound and well-informed knowledge on medical matters of public interest, citing as an example the admirable comment of the Philadelphia *North American*² on the Tuberculosis campaign. We now welcome two sane editorials in recent issues of the St. Louis *Republic* in reference to the "antivivisection" outburst. "Dr." Still, of osteopathic fame, has recently urged a law for Missouri prohibiting all animal experimentation. To this the *Republic* replies by pointing out that not so long ago, Mr. Still—not then a "doctor of osteopathy"—"appeared as a humble suppliant before a committee of the Missouri legislature to

1. Report on Water and Sewage Purification in Ohio, 1908, pp. 82-92.

2. THE JOURNAL, March 27, 1909, p. 1042.

plead for his right to follow the practice of healing according to the light of his own thought and theories, regardless of the opinions and presuppositions of others"—and got it. "This," says the *Republic*, "was hailed as a triumph of the principle of free investigation, of the right to seek the good of humanity, untrammelled by precedent and formal method."

"And now comes an effort to have the parts in the play reversed. It is Doctor—by grace of the triumph of the principle of freedom in the healing art—Doctor Still, himself, and no other, who would play camel to the M.D.'s Arab, and put the regular practitioner out of the tent because his methods do not commend themselves to Doctor Still's refined sensibilities. It is the erstwhile suppliant who would now dictate the terms on which scientific research should go on in the medical colleges and universities of Missouri!" As to the bill itself, the *Republic* aptly says: "It might fitly be termed 'an act to substitute children and their parents for dogs, cats, and mice in surgical experiments.'"

Of the antivivisection movement in general, the *Republic* says: "The antivivisectionists have broken out again. Miss Lind-af-Hageby has come clear from Sweden to assure us that she 'does not believe that there has been any decrease in deaths from diphtheria since the introduction of antitoxin,' and other things which are of like interest, as showing what a young woman, when she sets her mind to it, can contrive not to believe."

No one knows better than the conscientious scientist the power of mental predisposition, conscious or unconscious, in "contriving" belief or disbelief in facts. If he has to keep himself constantly on guard against it, how much more should even the most positive beliefs of professional agitators be received for what they are worth!

ERADICATION OF THE PLAGUE IN SAN FRANCISCO

The nation owes a debt of gratitude to San Francisco, not only for averting from the whole country an impending danger, but for affording to other cities a model of sanitary policy and execution. Ordinarily, the public, and even the medical profession, are inclined to throw the whole burden of sanitary administration on the health authorities—a fact which allows politics to place in power an inefficient health board or hamper and neutralize the efforts of a capable one. While in her dealings with the first epidemic, San Francisco allowed politics to exert a baneful influence, in the last one the united and awakened community presents the spectacle of politics replaced by enlightened statesmanship; thus she has eradicated from her limits bubonic plague, which threatened to decimate not only a single city but the entire country.

The story is well told in the lately published report of the Citizens' Health Committee, and it is universally acknowledged that the result was largely due to the

wisdom and tact of Passed Assistant-Surgeon Rupert Blue, in command of the federal sanitary administration at San Francisco. The experience of the city demonstrated two things very clearly: first, the efficiency of the United States Public Health and Marine-Hospital Service in emergencies of this kind; and second, the value of the cooperation of the lay public. Previous to the outbreak of this epidemic the most erroneous notions prevailed regarding the plague. It was said to be a disease affecting orientals only, a filth disease, one due to vegetarianism, a disease which had always existed in Asia but need not be feared in America.

The first epidemic was confined to Chinatown and was eradicated by rat-proof building. The outbreak of the recent epidemic was from several foci and the striking fact was ascertained that practically the only part of the city exempt was Chinatown. The disease affected Americans of the middle class, among whom reasonable cleanliness prevailed, and the mortality, although smaller than among the orientals, was sufficiently appalling, viz., 48 per cent.

The work of eradication was a war on the rat. This demanded the starving, poisoning, trapping, and destruction by other methods, of at least 2,000,000 rats. In order to make the work effective, it was necessary to enlist the cooperation of all classes of the community in making garbage and food supplies rat-proof as well as in the actual capture of the rodents. Not only employers, tradesmen, restaurant keepers, butchers, grocers, teamsters, householders, but even school children were pressed into service to rid the city of rats. Everyone was incited to clean up his own premises and to see that his neighbor did the same. Not only were plague-bearing rats hunted out and killed, but an immense amount of work was done in laying concrete sidewalks and foundations, which with other forms of rat-proof building gives reason to hope that the plague will not again gain a foothold in the city.

The investigations of the health authorities showed that the plague among rats continued and even increased after the human cases had disappeared. This fact renders it advisable that rats should be periodically examined for the plague, so that the slightest evidence of recurrence among animals may be met by prompt and energetic measures to suppress the epizootic.

The example of San Francisco should lead other municipalities to meet their sanitary problems in the same united and determined way. Especially the seaports should remember that the introduction of plague is an ever-present danger which should be warded off by efficient measures against rats.

JAPAN, AND OPIUM IN CHINA

We have heard much in late years of the efforts of the government of Japan to keep opium out of that country, and it would indeed appear that it is meeting with praiseworthy success in the endeavor. The Japan-

ese do not seem, however, so anxious to prevent the Chinese from suffering from the evil; according to one writer, Mr. John Stuart Thomson,¹ who seems to speak by the card, they are flooding China with cheap hypodermic syringes and encouraging the morphin habit in that land while discouraging it in their own. It is reported that they are reducing the number of opium-smokers in Formosa, but Mr. Thomson says that they do not apparently look with as much concern on the growth of the habit as does the Chinese government, for in one month alone of this year 30,000 new licenses, at 30 sen each, "good for life," were issued to Formosans. This probably means that, while the intentions of the Japanese government may be good, it has not yet carried any legislation so far as to check the unscrupulous commercial instincts of some of their people. It will be one of the good results of the Shanghai conference if the resolutions there adopted can be honestly accepted and given the force of laws by Japan as well as the other powers.

THE HOMES COMMISSION REPORTS

Several times recently we have commented on the valuable and interesting data collected by the President's Homes Commission and published in its official reports. These reports, it will be remembered, compose the document whose transmission through the mails one of the United States senators tried to have prohibited. As we remarked at the time the immediate result of this action was to cause the document rooms of the House and Senate to be stripped of the reports, many of those who had access to them at once hastening to obtain what was fondly imagined to be a salacious morsel. Of course, no material of this sort is contained in the reports; they do contain, however, a vast amount of information very damaging to "patent medicine" and other equally vicious "interests." Whether this fact bears any relation to the attempt made to refuse mailing privileges to the document, can only be surmised. In any case the attempted suppression has been partly successful. A number of physicians have written us that their senators have been unable to furnish them with copies as the supply is exhausted. It is of interest to learn, however, that a limited number of copies are held for distribution by the commission itself.²

PRACTICAL EXAMINATIONS FOR THE MEDICAL LICENSE

An important step recently taken that will have a tendency to raise the standards of medical education is the inauguration of the practical examination by two state examining boards, those of Ohio and Massachusetts. During the written examination, in June, in Ohio, each of the one hundred and sixty-one applicants was called on, in the presence of the entire class, to make a urinalysis and to identify under the microscope histologic, pathologic and bacterial specimens. It required about 50 minutes for each applicant to complete

the practical test; he was then given an extension of time to finish his written examination. The results were reported as highly satisfactory. The Massachusetts board required each applicant to give a demonstration on the obstetric manikin and to make a urinalysis, as well as to identify specimens under the microscope. It was stated that many who took these practical tests seemed totally unfamiliar with the microscope. The board proposes in its future examinations to require also the use of the stethoscope as well as demonstrations on the cadaver and the application of bandages and surgical dressings. It has recently been announced that within the next few months the boards of Minnesota and Indiana will require, in addition to the written examination, practical tests in histology, pathology, bacteriology and urinalysis. These practical tests have long been required in the medical license examinations in other countries. Their requirement by state licensing boards in this country is, indeed, most important and timely. They enable the boards readily to differentiate the applicant who has undergone merely a cramming process by "quiz-compend" methods from one who has had training in practical laboratory and clinical work. Since the necessary apparatus and material for making these tests are so easily obtained, it is hoped that many state boards will soon require them as a part of the license examination.

Medical News

ALABAMA

Commencement.—On April 19, the commencement exercises of Birmingham Medical College were held, when a class of thirty was graduated. The address of the evening was delivered by Dr. George T. McWhorter, Riverton; Dr. Benjamin L. Wyman presented the diplomas and Dr. Hogan gave the charge to the class.

Personal.—Dr. S. H. Newman, Dadeville, was thrown from his buggy in a runaway accident April 6, breaking his left leg below the knee.—Dr. Morris Henry has been elected city physician for Tusculum, Dr. Walter A. Maxwell for Sheffield, Dr. Charles W. Williams for Cherokee, and Dr. J. H. Master-son for Leighton by the Colbert County Medical Society.—Dr. Neal B. Sewell, Wetumpka, was painfully injured in a runaway accident, April 6.

ILLINOIS

Personal.—Dr. Samuel M. Wylie, Paxton, who has been ill for several weeks, is recuperating in Citronelle, Ala.—Dr. Laban A. Burr, Bloomington, is reported to be seriously ill with heart disease.

Cornerstone Laid.—Ceremonial arrangements have been completed for the laying of the cornerstone of St. Francis Hospital, Evanston, by Archbishop Quigley, April 25. The new building will accommodate 350 patients, and is expected to cost more than \$250,000.

Labor Union Opposes Tuberculosis.—The State Federation of Labor has decided to cooperate actively in the fight to stamp out tuberculosis. Literature dealing with occupational diseases, and particularly with tuberculosis, giving full information concerning symptoms of the disease, and the work being done for its eradication, is to be distributed by the federation among the 500,000 trade union members in the state.

Chicago

Resigns from Staff.—Dr. Lucy Waite announces that she has resigned as head surgeon of the Mary Thompson Hospital and has retired from practice.

New Hospital Plans.—The new building of the Maimonides-Kosher Hospital is to be erected on a site purchased by the directors on California avenue near Fifteenth street. The building will be six stories in height and will cost more than \$75,000.

1. World To-Day, April.

2. Physicians desiring copies of the report should address the "President's Homes Commission, 923 H street, Washington, D. C.," enclosing 19 cents to cover cost of mailing.

Health Department "Donts."—The department of health, in the current bulletin, makes the following suggestions to the public to bring about a reduction of the cases of, and deaths from communicable diseases:

1. Don't belittle the gravity of a sore throat—call in your physician without delay.
2. Don't think that every attack of vomiting and a "breaking out" of the skin is due to overloading of the stomach—follow the same course as above.
3. Don't let the good ladies of the neighborhood diagnose what disease your child is suffering from.
4. Don't seek immunity from the observance of health regulations.
5. Don't ask your physician not to report a case of scarlet fever or diphtheria—it is his duty to do so.
6. Don't allow visitors when you have contagious disease in the house—likewise don't make visits.
7. Don't in any way try to evade, shirk or disregard any of the regulations made by the health department. They are made for your own good and for the protection of the community.
8. Don't put the well children with the sick—as is the practice in many ignorant families—so that they may catch the disease and "be over with it." It is a dangerous practice, contrary to all reason and principle, resulting in the needless sacrifice of many lives and the pitiful crippling of many that survive.
9. Don't—once more—don't allow any form of close association such as eating, playing and sleeping together of those recently recovered from a contagious disease (even for some time after the house was disinfected) with the other children who have been kept apart from the patient during the illness and who had not the disease previously.
10. Don't clamor for the premature termination of your case by the health department. When this is done it surely results in the infection of many others by those prematurely released from quarantine.

INDIANA

Condemns Insanitary School Houses.—The State Board of Health, after making sanitary surveys, has condemned 24 school houses on account of insanitary conditions.

Tent City to Be Erected.—Plans for the proposed tent city for tuberculosis patients were discussed at the meeting of the South Bend Antituberculosis Society, April 14, and an agreement was made to proceed with the scheme, and to establish three shacks at the Orphans' Home, Mishawaka, at once, and to locate others in South Bend in the very near future.

Personal.—Dr. George T. MacCoy, Columbus, has been elected president and Dr. William N. Wishard, Indianapolis, vice-president of the State Board of Health.—Dr. Marcus H. Thomas, Huntington, it is announced, has decided to give up the practice of medicine on account of ill health.—Dr. Frederick W. Sauer, Indiana Harbor, is reported to be ill with typhoid fever.

Lose Licenses.—The State Board of Medical Examination and Registration, on April 13, after hearing evidence against Dr. James M. Towey, Clinton, charged with having issued prescriptions for intoxicating liquors to be filled by druggists on Sundays and legal holidays, and after receiving his plea of guilty, is said to have revoked his license.—At the same meeting, the board declined to take up the question of reissuing the license of Dr. Charles L. Landfair, Bluffton, which was revoked when he was convicted of criminal practice.

March Sickness and Death.—During March, there were reported to the State Board of Health 3,444 deaths, or 243 more than for the corresponding period of last year, the respective death rates being 14.8 and 13.8 per 1,000. The order of prevalence of disease was as follows: Tonsillitis, pneumonia, influenza, bronchitis, rheumatism, measles, scarlet fever, typhoid fever, whooping cough, diarrhea, intermittent fever, diphtheria, chickenpox, erysipelas, smallpox, inflammation of the bowels, dysentery, puerperal fever, cholera morbus, cerebrospinal meningitis, and cholera infantum. There were 574 deaths from pneumonia, 410 from tuberculosis, and 191 from violence during the month.

KENTUCKY

Sanitary Campaigns.—At a joint meeting of the State Board of Health and the State Federation of Woman's Clubs, held in Louisville, April 10, plans were discussed for making a general thorough inspection of the sanitary conditions of the state as they apply to general cleanliness and health, and it was urged that a more rigid, wide-reaching sanitary inspection law be passed and enforced.

Personal.—Dr. W. A. Kipp, Louisville, who has been in Central America for three years, is reported to be seriously ill with diabetes at the Deaconess Hospital, Louisville.—Dr. Joseph J. Back, Newport, and J. Frank Houston, Alexandria, while examining the mental condition of a farmer at Ten Mile, were attacked and assaulted by the patient.—Dr. John K. Wood, first assistant physician at Central Kentucky Asylum,

Lakeland, who has been seriously ill, is reported to be improving.—Dr. Sidney B. Johnson, Bowling Green, was stricken with paralysis April 2, and is reported to be in a critical condition.

LOUISIANA

Tuberculosis Building Condemned.—The Shreveport Board of Health, on April 13, condemned and ordered burned the tuberculosis building of the State Charity Hospital, considering it dangerous to public health.

Hospital Enlarged.—St. Mary's Hospital and Training School for Nurses, Patterson, has recently been enlarged from a capacity of 15 to 25, and it is expected soon to further increase its capacity to 40 patients.

Parish Society Meetings.—At the annual meeting of the Calcasieu Parish Medical Society, held in Lake Charles, April 6, the following officers were elected: President, Dr. Norman S. Craig, Jennings; vice-president, Dr. Temple B. Smith, Lake Charles; secretary-treasurer, Dr. S. George Keeger, Lake Charles (re-elected), and delegates to the state society, Drs. Thomas H. Watkins, Lake Charles; Valerion A. Miller, Lake Arthur; Edward R. Gandy, West Lake, and the president.—At the last session of the Webster Parish Medical Society, held in Minden, Dr. R. Ernest Smith, Minden, was elected president; Dr. Joseph G. Gladney, Minden, vice-president, and Dr. Robert H. Johnson, Lanesville, secretary-treasurer.—At a special meeting of St. Tammany Parish Medical Society, held in Mandeville, March 31, the following officers were elected: President, Dr. George R. Tolson, Covington; vice-president, Dr. Louis M. Thomason, Mandeville; secretary, Dr. Henry E. Gautreaux, Covington; treasurer, Dr. Phau R. Outlaw, Slidell; delegate to the state society, Dr. James F. Pigott, Covington, and alternate, the president.—Physicians of Livingston Parish met in Denham Springs April 3 and organized a medical society with the following officers: Dr. Thomas B. Odom, French Settlement; president; Dr. William W. Faust, Albany, vice-president; Dr. Montgomery Williams, Denham Springs, secretary, and Dr. William H. Bridges, Weiss, treasurer.

MARYLAND

New Hospitals.—A large hospital building is to be erected for a state tuberculosis sanatorium near Sabillasville, for patients in advanced stages of the disease. It will be a frame building two and a half stories in height with wide verandas.—The new cottage for women at Springfield Hospital for the Insane, Sykesville, is almost finished and will accommodate 75 patients and cost about \$30,000.

Baltimore

Deceased Doctor Rich.—More than \$22,000 in coin and currency is said to have been found in the pockets of Dr. George G. Farnandis, who died April 4. He is said also to have left ground rents and other property to about the same amount.

Personal.—Dr. Victor B. Rench, for two years clinical assistant and assistant surgeon in the Baltimore Eye, Ear and Throat Charity Hospital, resumed practice in Washington, D. C., April 19.—Dr. Claude Van Bibber, who has been ill at St. Agnes Sanatorium, is convalescent and has left the city to recuperate.—Dr. G. B. Harrison has been elected resident surgeon of the Greenbrier General Hospital, Ronceverte, W. Va.—Dr. Rufus I. Cole has been elected director of the Rockefeller Institute, New York City.—Dr. Harry Friedenwald has been appointed consulting ophthalmologist; Dr. Frank D. Sanger, consulting laryngologist; Dr. Henry O. Reik, consulting otologist; and Dr. Arthur M. Shipley, consulting surgeon at the new Sydenham Hospital for Infectious Diseases.

MISSOURI

Addition to Hospital.—The work on the addition to St. John's Hospital, Joplin, will begin about May 1. The addition will cost between \$30,000 and \$35,000, and will increase the capacity of the institution to more than 100 beds.

Tuberculosis Camps to Be Established.—After a thorough examination of the State Penitentiary, Jefferson City, a committee of the State Board of Health has recommended the establishment of a convict tuberculosis camp on the state farm just east of the prison, where all prisoners afflicted with the disease will be quartered for treatment.

Personal.—Dr. Albert H. Cordier, Kansas City, left April 15 for Kodiak Island, Alaska, for a three months' bear hunt.—Dr. William F. Keir, St. Louis, started on a trip around the world April 12.—Drs. Frederick A. Patterson, St. Joseph,

and Harlan P. Mills, Grant City, have been appointed assistant physicians of State Hospital No. 2, St. Joseph.—Drs. William Porter, St. Louis, and Edward W. Schauffler, Kansas City, have been appointed members of the board of managers of the State Tuberculosis Sanatorium, Mount Vernon.

NEW HAMPSHIRE

Personal.—Dr. Ezra Mitchell, Lancaster, has resigned as chairman of the board of trustees of the New Hampshire Tuberculosis Sanatorium.—Dr. John M. Gile, Hanover, president of the New Hampshire Medical Society, was the guest of honor at a banquet of the Portsmouth Medical Society April 6.

Resolutions Regarding Dr. Conner.—The faculty of Dartmouth Medical School has adopted resolutions of regret at the death of their distinguished colleague, Dr. Phineas S. Conner, Cincinnati, placing on record their appreciation of his high scholarship and commanding ability as a practitioner and teacher.

Hillsboro Physicians Elect.—At the fourth annual meeting of Hillsboro County Medical Association, held in Nashua April 6, the following officers were elected: President, Dr. Eugene Wason, Milford; vice-president, Dr. John H. Gleason, Manchester; secretary-treasurer, Dr. Ella B. Atherton, Nashua; auditor, Dr. James B. Pettengill, Amherst, and delegate to the state society, Dr. Frank E. Kittredge, Nashua.

NEW YORK

Isolation Hospital.—The Buffalo Municipal Contagious Hospital Commission has decided to accept from the German Roman Catholic Orphans' Asylum land for a site for a hospital for acute communicable diseases. The plot of land is 563 by 486 feet, is located on Dodge and Best streets, and will cost \$50,000.

Reception to Dr. Hopkins.—In acknowledgment of forty years' service as a member of the board of censors of Erie County Medical Society, a reception was recently tendered Dr. Henry Reed Hopkins. His important activities in the many years of practice were reviewed as follows: "State Society," Dr. Charles G. Stockton; "Medical Education," Dr. William W. Potter; "Health Legislation," Dr. Edward Clark; "Midwifery Legislation," Dr. Peter W. Van Peyman; "Protection of the Profession," Dr. Delancey Rochester; and the "Profession at Large," Dr. William C. Phelps.

Bills Signed by the Governor.—Governor Hughes has signed the Boshart bill which defines the term adulterated cream in the state agricultural law as cream containing less than 18 per cent. of milk fat to which any substance whatsoever has been added. The governor has also signed the bill amending the public health law regarding the establishment of hospitals or camps for the treatment of pulmonary tuberculosis. The new law corresponds to the recommendation of the governor in his annual message and requires that any person, corporation or municipality proposing to establish such an institution shall file a petition with the state commissioner of public health.

Contingent Fees.—It is stated that the present bill before the legislature in regard to contingent fees will not reach the root of the matter, and it is suggested that there should be some plan by which a jury shall know whether it is dealing with a contingent fee case or not. There should be a requirement to the effect that every such contract be filed with the papers in the case. On the rendering of the verdict the judge should ascertain the exact costs and fix the amount due the attorney, which in no case should exceed 25 per cent. of the recovery. Such a measure would serve to take away the temptation that now confronts "ambulance chasers" to enter into arrangements by which they get as much as 50 per cent. of the recovery and the costs, leaving the victim but a small fraction of what the jury intended that he should have.

New York City

Public Lecture Postponed.—Owing to important government business, Dr. Harvey W. Wiley, chief of the Bureau of Chemistry, Washington, D. C., has been compelled to cancel his engagement to address the Academy of Medicine, April 29, on "Drugs in Foods."

Favors New Ambulance Bill.—At a meeting of the Hospital Saturday and Sunday Association, resolutions were adopted commending the bill before the legislature to redistrict New York City and to authorize a public board of ambulance serv-

ice. The association offers its cooperation whereby the hospitals of the city can be connected by telephone with a central bureau where reports can be made daily as to the number of beds vacant for the public use.

Staff House of City Hospital Opened.—Many men and women, prominent in charity work, were present at the opening of the staff house of the City Hospital on Blackwell's Island. The new building is called Janeway Hall in honor of Dr. Edward G. Janeway, who has been connected with this hospital for many years. This building cost \$75,000, and has accommodations for 25 physicians. When it is occupied there will be accommodation in the hospital for 100 additional patients.

Lectures on Sanitary Science.—The last four lectures on Sanitary Science and Public Health will be as follows: April 14, "Personal Hygiene and the Hygiene of Communities," by Dr. Luther Gulick, chairman of the Playground Extension Committee, Sage Foundation, New York; April 21, "The Prevention of Alcoholism and Insanity," by Dr. Frederick Peterson, professor of psychiatry in Columbia University; April 26, "Visiting Nursing and Its Influence on the Prevention of Disease," by Dr. Richard Clark Cabot of Harvard University; and April 28, "The Influence of Education on Public Health," by Homer Folks, secretary of the State Charities Aid Association.

Plan to Economize in the Hospitals.—At a meeting of the heads of 45 hospitals in Greater New York a plan was presented by Mr. W. V. S. Thorne, former purchasing agent for the Union Pacific and Southern Pacific railroads, by which supplies for hospitals will be purchased by the same methods that were used in purchasing for railroads. Such a bureau would save the time of the various hospital officials and would supply them with samples and specifications of the goods bought. The maintenance of this agency would cost \$24,000 a year, and it is estimated that there would be a saving of \$161,318 annually. Before the plan can be put into operation it will be necessary to have the approval of the directors and executive committees of the hospitals. Many heads of hospitals were present at this conference and a resolution was passed favoring the plan.

NORTH CAROLINA

Physician Convicted.—Dr. J. Thomas Wright, Winston-Salem, charged on three counts with violation of the provisions of the recently enacted state prohibition law by prescribing liquor, is said to have been found guilty, but judgment was withheld and the defendant released on bonds of \$200.

Personal.—Dr. Ivey G. Riddick, Youngsville, has been elected physician of the state penitentiary, Raleigh.—Dr. R. H. Stancell, Margarettsville, has been elected chairman of the board of directors of the State Hospital for the Insane, Raleigh.—Dr. Albert M. Ballard, Asheville, has been awarded the annual medal of the American Humane Association for the most notable act of kindness to horses or dogs coming to the attention of the association in 1908.

State Board of Health Meeting.—The State Board of Health held a special session in Raleigh, March 30, to transact business growing out of the recent increased appropriation made by the last legislature. Under the new law the secretary must reside at Raleigh and devote his entire time to the public health interests. Dr. Richard H. Lewis, Raleigh, secretary of the board since 1892, resigned to take effect June 30. Dr. J. Howell Way, Waynesville, was tendered the position, but declined, as he did not wish to retire from private practice and to reside at the state capital. Dr. Watson S. Rankin, professor of pathology in the Wake Forest Medical School, was then unanimously elected secretary and executive officer of the board. His salary was fixed at \$3,000. Dr. C. A. Shore was continued in the position of director of the state board's laboratory of hygiene.

PENNSYLVANIA

Medical Board Bill Fails.—After coming in contact with legislative obstructions, almost from the day it was introduced, the Herbst-Shreve single board medical bill failed by the "dropped from the calendar" channel. Mr. Shreve moved for the dropping of the bill from the calendar on account, he said, of the most pronounced opposition.

Reciprocity for Pennsylvania Physicians.—The Thompson bill, increasing the standard of the medical profession in this

state, passed the senate finally April 14. This bill was introduced in the house in case of the failure of the single examining board bill. It raises the standard to the same level as that of New York, Ohio and Maryland. This is done to permit reciprocity of licensure between these four states.

Personal.—Dr. Thomas S. Arbutnot has been elected dean of the College of Medicine of the University of Pittsburg.—Dr. H. Ross Coover has been made a member of the board of health of Harrisburg, and Dr. John C. Hutton is said to be the nominee of the mayor for health officer.—The health board of Oil City was reorganized April 7, and Dr. Jacob P. Strayer was elected president.—Dr. Adam J. Riegel has been elected president of the Lebanon Board of Health.

Sanatorium Notes.—In order to accommodate the increasing number of patients at the White Pine Sanatorium, Mount Alto, it has been decided to erect 40 additional cottages which will give accommodation for 320 more patients, making the total capacity of the sanatorium exceed 1,000.—The health officer of Butler has served notice on the medical inspector to remove the tuberculosis dispensary from the center of the city to the outskirts, alleging that it is a menace to public health.—The new infirmary at White Pine Sanatorium has already 100 patients, and there are now 600 patients in the institution.—The Braddock Tuberculosis Dispensary was opened March 28 with a public reception. Dr. Finlay K. Whitfield is physician in charge.

Philadelphia

Bequests.—The will of the late Charles E. Ellis bequeathes \$10,000 to the Presbyterian Hospital for the endowment of a private room.—The will of the late Frank W. Hoyt contains the following provisional bequests: Samaritan Hospital, \$10,000; Children's Hospital, \$5,000; and Free Hospital for Poor Consumptives, \$5,000.

Personal.—Dr. W. E. Nicely resigned the chief residentship of the Methodist Hospital.—Dr. Randall C. Rosenberger has been elected professor of bacteriology and hygiene in Jefferson Medical College.—Dr. Charles E. G. Shannon has been elected visiting ophthalmologist to the Seybert Home for Poor Children.—Dr. Aller G. Ellis has been elected assistant professor of pathology in Jefferson Medical College.

Water Nearly Pure.—Director Stearns' weekly statement on the efficiency of the city's filtration plants as ascertained by bacteriologic examination of the water supplied by these plants, shows that 99.59 per cent. of all bacteria has been removed from the raw water. The raw water from the Schuylkill, before passing through the filter beds, contained 72,000 bacteria per c.c., while the filtered water contained but 50 bacteria per c.c. The raw water from the Delaware contained 1,100 bacteria per c.c., while the filtered water from the same source contained but 40 bacteria per c.c.

Alumni Elect Officers.—At the annual business meeting of the Alumni Association of the Medical Department of the University of Pennsylvania, April 14, the following officers were elected: President, Dr. Richard C. Norris; honorary vice-president, Provost Clarence C. Harrison; vice-presidents, Drs. George C. Stout, Louis H. Adler Jr., and Charles P. Franklin; recording secretary, Dr. William S. Wray; corresponding secretary, Dr. Benjamin F. Stahl; treasurer, Dr. Herbert B. Carpenter; and executive committee, Drs. George D. Morton, George P. Miller, William McKeage, and John J. Gilbride.

RHODE ISLAND

Optometry Bill Denounced.—The bill regulating the practice of optometry, now before the general assembly, was denounced at the regular quarterly meeting of the Rhode Island Medical Society, March 4, and the members of the legislature were urged to fight against its passage.

Hospital Staff Increased.—Four assistant surgeons have been added to the staff of the Rhode Island Hospital, Providence: Drs. George A. Matteson, George W. Gardner, Charles E. Hawkes and Henry J. Hoyer. Drs. Joseph C. O'Connell, Albert A. Barrows and John B. Ferguson have been appointed surgeons to the out-patient department of the institution.

Society Meetings.—At the annual meeting of Pawtucket Medical Society, held March 18, the following officers were elected: President, Dr. Bernard L. Towle, Pawtucket; vice-president, Dr. Byron U. Richards, Pawtucket; secretary, Dr. Adolph R. V. Fenwick, Central Falls; treasurer, Dr. Michael A. Ford, Pawtucket; counselor, Dr. Augustine A. Mann, Central Falls; delegates to the State Medical Society,

Drs. Charles A. Stearns, and William F. A. Gillian, Pawtucket, and member of the standing committee, Dr. John A. Remington, Central Falls.—Newport Medical Society, at its annual meeting, elected the following officers: President, Dr. S. Parker Cottrell; vice-presidents, Drs. William S. Sherman and Michael H. Sullivan; secretary, Dr. Mary E. Baldwin, and treasurer, Dr. Douglas P. A. Jacoby.—The following officers were elected at the annual meeting of the Westerly Physicians' Association: President, Dr. John L. May; vice-president, Dr. Harold D. Kenyon; secretary, Dr. William A. Hildard; treasurer, Dr. C. Grant Savage, and censors, Drs. Edwin R. Lewis, J. Howard Morgan and Samuel C. Webster.—Washington County Medical Society, at its annual meeting held in Westerly, January 14, elected the following officers: Dr. Michael H. Scanlon, Westerly, president; Drs. Frank C. Pagan, Westerly, and Edward E. Kenyon, Usquepaugh, vice-presidents; and Dr. J. Howard Morgan, Westerly, secretary-treasurer.

GENERAL NEWS AND COMMENTS

The Carroll Fund.—The following contributions to the Carroll fund have been received and have not yet been acknowledged in THE JOURNAL:

Previously reported	\$2,808.95
Dr. D. C. Strong, San Bernardino, Cal.....	5.00
Rockland County Medical Society, Nanuet, N. Y.....	34.00
Dr. R. E. Bering, Tulare, Cal.....	1.25
Dr. Juo. B. Rosson, Tulare, Cal.....	1.25
Dr. A. M. Field, Tulare, Cal.....	1.25
Dr. T. D. Blodget, Tulare, Cal.....	1.25
Dr. S. C. Plummer, Chicago.....	5.00
Dr. W. H. Axtell, Bellingham, Wash.....	1.00
Dr. W. A. Long, Lewiston, Mont.....	5.00
Dr. A. W. Sherman, Burlington, Iowa.....	1.00
Dr. R. J. Fly, San Diego, Cal.....	1.50
A Physician of Jacksonville, Ill.....	2.00
Dr. Randolph Winslow, Baltimore.....	5.00
Dr. Wm. Treacy, Helena, Mont.....	5.00
Dr. Harold J. Rothschild, St. Paul, Minn.....	1.00
Dr. Charles L. Minor, Asheville, N. C.....	10.00
Dr. W. H. Roberts, Pasadena, Cal.....	5.00
Dr. Vincent Bonelli, Vicksburg, Miss.....	1.00
Dr. M. H. Bell, Vicksburg, Miss.....	1.00
Dr. B. B. Mactin, Vicksburg, Miss.....	1.00
Dr. H. F. Sprales, Vicksburg, Miss.....	1.00
Dr. Jos. Waldaeur, Vicksburg, Miss.....	1.00
Dr. Sylvan Myers, Vicksburg, Miss.....	1.00
Dr. Victor E. Bonelli, Vicksburg, Miss.....	1.00
Dr. E. F. Howard, Vicksburg, Miss.....	1.00
Dr. R. A. Quin, Vicksburg, Miss.....	2.00
Dr. H. B. Wilson, Vicksburg, Miss.....	1.00
Dr. G. Y. Hicks, Vicksburg, Miss.....	1.00
Dr. H. H. Haralson, Vicksburg, Miss.....	1.00
Dr. S. W. Johnston, Vicksburg, Miss.....	1.00
Dr. J. A. K. Birchett, Vicksburg, Miss.....	1.00
Dr. Wm. L. Holt, Paso Robles, Cal.....	1.00
Dr. D. E. Kisecker, Caldwell, Kan.....	1.00
Dr. James W. Gray, Clarksdale, Miss.....	5.00
Dr. A. T. Blachly, Lame Deer, Mont.....	2.00
Academy of Medicine of Cincinnati.....	100.00
Anonymous, New York City.....	10.00
Dr. J. R. Fabricius, New York City.....	5.00
Dr. J. Elvin Courtney, Denver.....	5.00
Dr. J. J. Moyer, Mayfield, Cal.....	1.00
Dr. John W. Ross, Palm Springs, Cal.....	10.00
Dr. Clifford U. Collins, Peoria, Ill.....	5.00
Tippecanoe County Medical Society, Lafayette, Ind.....	15.00
Dr. Joel E. Goldthwait, Boston.....	5.00

Total\$3,073.95

\$4,500 is still needed to raise the mortgage on the Carroll property.

Study and Prevention of Tuberculosis.—The preliminary program for the fifth annual meeting of the National Association for the Study and Prevention of Tuberculosis, which meets in Washington May 13 to 15, shows the comprehensiveness of the discussions at the meeting. In the advisory council, Dr. Victor C. Vaughan, Ann Arbor, is to read a paper on "Tuberculosis Legislation, State and Municipal." In the Sociological Section, Mr. Homer Folks, New York City, will take up the matter of "Recent Tuberculosis Campaigns and Their Results." In the Clinical and Climatologic Section, of which Mr. Lawrason Brown, Saranac Lake, N. Y., is chairman, a general discussion is to be held on the "Methods of Increasing the Efficiency of the Sanatorium," under the following heads: "Economic and Efficient Construction," "Improved Organization and Management," "Selection of Patients," "Economic and Scientific Dietary," and the "Work for Patients as an Economic, Immediate and Therapeutic Factor." On the second day, Dr. William Welch will deliver an address on "The Selection of a Library for the Study of Tuberculosis;" Dr. Joseph Walsh, Philadelphia, will speak on the "Diagnosis of Intestinal Tuberculosis," and Dr. William C. White, Pittsburg, on "New Method of Estimating the Beginning Dose of Tuberculin." In the Pathologic and Bae-

teriology Section, of which Dr. Alfred S. Warthin, Ann Arbor, is chairman, the topics for consideration are "The Hematology Studies in Tuberculosis"; "The Study of the Heart in One Hundred Patients Dying from Advanced Tuberculosis"; "What May be Looked for in the Lungs in Chronic Cases of Pulmonary Tuberculosis"; "The Infection of Man by the Avian Type of Tuberculosis"; "The Tuberculo-opsonic Test in the Diagnosis of Pulmonary Tuberculosis," and "The Amount of Lung Tissue Involved in the Test for Pulmonary Tuberculosis." In the Surgical Section, of which Dr. Rudolph Matas, New Orleans, is chairman, demonstrations of gross microscopic lesions in tuberculosis of bones and joints will be made with the aid of lantern slides, mobilization of tuberculosis joints with animal membrane will be described, and a paper will be read on "Anesthesia in Tuberculosis." The chief papers of the Section of Tuberculosis in Children, of which Dr. John H. Lowman, Cleveland, is chairman, will be on the "Diagnosis of Tuberculosis in Young Children," "Study of Symptomatology of Tuberculosis in Young Children," and "Treatment of Surgical Tuberculosis."

CANADA

Anti-Spitting Law Enforced.—Recently in Montreal, fourteen young men were fined, and eight were given an option of a fine of \$3 and costs or thirty days in jail for violation of the anti-expectoration ordinance.

Hospitals in Ontario.—The thirty-ninth annual report of the Hospitals of Ontario for the year ended Sept. 30, 1908, shows that there are in the province 69 hospitals, 34 refuges, 30 orphanages, 3 homes for incurables, 2 convalescent homes and Magdalene asylums, and 28 county homes of refuge under governmental inspection.

Personal.—Dr. George R. McDonough, Toronto, has returned after a winter spent in South America.—Dr. A. E. Garrow, Toronto, convalescent from a long illness, has gone to Bermuda.—Dr. Margaret S. Wallace, Toronto, has been appointed professor of medicine in the College of Medicine for Women, North India.—Dr. John M. Piper, Toronto, is taking a trip to the Mediterranean.

Registration Bill for New Brunswick.—The College of Physicians and Surgeons, New Brunswick, has a bill before the provincial legislature, which provides that all registered practitioners shall constitute the New Brunswick Medical Society and that the council shall be composed of 9 members elected by the society, three each year for a term of three years. Names can be removed from the register for cause by the judge of the supreme court of the Province only.

Society Meetings.—The Association of Medical Officers of the Militia of Canada held its annual meeting at Ottawa February 25 and 26, the president, Col. George S. Ryerson, M.R.O., Toronto, in the chair. The following officers were elected: President, Lieutenant-Colonel Hubert S. Birkett, Montreal; vice-presidents, Lieutenant-Colonels G. S. Rennie, Murray, MacLaren, Blanchard and Jenkins, Majors Rankin, M. P. Kilborn, A. T. Shillington, E. R. Brown and E. A. Lebell, and Captains Williams and McTavish and Lieutenant S. W. Hewitson, and Secretary-Treasurer, Captain T. H. Leggett, Ottawa. The next annual meeting is to be held at Ottawa Feb. 24 and 25, 1910.—The Regina (Sask.) Clinical Society was organized April 3, and the following officers were elected: President, Dr. John M. Shaw; vice-president, Dr. H. M. Stevens; secretary, Dr. Harry Morell, and treasurer, Dr. A. E. Rothwell.—The Canadian Branch of the International Congress on School Hygiene was organized in Toronto during the meeting of the Ontario Teachers' Association last week. Sir James Grant, M.D., Ottawa, was elected president, and Dr. Helen MacMurehy, Toronto, secretary.—The third annual meeting of the Canadian Hospital Association was held in Toronto during the week ended April 17, under the presidency of Dr. W. J. Dobbie, Weston Sanatorium, Ont. The following officers were elected: President, Dr. Henry E. Webster, Royal Victoria Hospital, Montreal, and secretary, Dr. John N. E. Brown, Toronto General Hospital.

FOREIGN

The Catastrophe in Southern Italy.—The *Policlinico* of Rome adds the names of five more physicians to the list it has already published of the medical victims of the disaster. This last group were all army medical officers. Professor Gabbi has prepared a question blank with 29 questions in regard to the nervous disturbances observed after the earthquake, and is distributing these blanks hoping to obtain the elements for an original study which may throw new light on an impor-

tant branch of medicine. The *Policlinico* has received subscriptions for aid of the physicians suffering from the effects of the earthquake; the amount is now nearly \$500, and it reports nearly \$2,000 received by the national medical association and distributed in amounts of \$10 up to \$40 to physicians or widows of physicians.

Sanfelice's Serotherapy of Cancer.—THE JOURNAL has mentioned from time to time the research of Professor Sanfelice of Messina on the saccharomycetes found in cancers, one species having proved capable of inducing in animals tumors closely resembling cancer in man. He has been at work for fifteen years on research in this line and has succeeded in isolating a toxin from this special saccharomycetes which has the same effect on animals as inoculation of the germ itself, that is, causing apparently malignant tumor growth. He has further succeeded in obtaining a curative serum from animals immunized against this toxin, and this serum has shown marked curative action when animals with the experimental tumors were injected with it. He had just begun to apply this serum treatment in the clinic when the earthquake at Messina destroyed his laboratory. He was in northern Italy at the time trying to organize a national cancer research committee and central cancer institute.

Recent Deaths in the Profession Abroad.—Most deaths of prominent men abroad are mentioned in the letters from our foreign correspondents. Among those not mentioned elsewhere are: P. I. Diakanow, professor of surgery at Moscow and editor of the Russian surgical journal *Khirurgia*.—J. G. Metzger, of Paris, the massage specialist, who was a Hollander, originally a teacher of gymnastics, but who studied medicine and devoted himself to developing and practicing massage, first at Amsterdam, then at Wiesbaden. He finally settled in Paris where his success was a potent factor in popularizing massage.—K. Seggel, the ophthalmologist, of Munich.—A. Boursier, professor of gynecology at Bordeaux.—B. Vedeler, a prominent gynecologist at Christiania.—Dr. Paulun, president of the German medical school at Shanghai.—H. Brat, of Berlin, a well-known writer on occupational affections and hygiene.—U. Mosso, professor of materia medica at Genoa.—Dr. Motet, of Paris, author of numerous works on the medicolegal aspects of insanity and on hygiene, secretary of the *Académie de Médecine* from 1902 to 1908.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 3, 1909.

British Medical Colleges for China

A movement has been started for the foundation of medical colleges in China under Christian auspices. It is thought that with the awakening of China to western civilization the time is opportune for furthering the propagation of Christianity and that some attempt should be made to educate the Chinese on a Christian basis and not allow their education to fall entirely into the hands of the Japanese who would put it on an agnostic basis. A meeting has been held at the Mansion House which was attended by Sir Robert Hart, late director of the Chinese customs, the American ambassador and other important personages, and a resolution was adopted calling for the provision of at least \$500,000 for the purpose. The following scheme has been elaborated: 1. The establishment in the four principal cities of China of colleges for the training of Chinese students in western medicine, uniting the Christian churches working in China without sacrificing their various denominational principles. 2. The provision in as many centers as possible of normal training for Chinese school teachers and pastors on the same basis of unity as the medical colleges. 3. The publication in Chinese of the best western literature suitable for medical, normal training, and theological colleges to assist the Christian literature and tract societies at work.

Scalded by Water Used to Check Postpartum Hemorrhage

The proverbial ingratitude of patients is illustrated by the following case in which a woman brought an action against her physicians for doing a thing which probably saved her life. In the Aberdeen sheriff court Drs. J. A. Mearns and W. J. Bryce were each sued for \$625 damages for alleged negligence in treating her during her confinement. She was scalded by the injection of hot water used to check postpartum hemorrhage. The sheriff in giving judgment remarked that it was a most painful case to decide in consequence of the mutual aspersions of the parties. On the one hand, there was no

ground for accusing the plaintiff of shamming or malingering. Yet he could hardly understand how she suffered so severely from the application of water not hot enough to scald the hands of the physicians. In the absence of any proof of negligence, he must regard the scald as the result of accident, whether due to abnormal sensitiveness of the skin, to the midwife allowing the sheet saturated with hot water to remain in contact with the skin, or to some unascertained circumstance. Even in hospitals where the patients had the advantage of the highest skill and the most scientific appliances blisters had resulted from the use of hot water in the treatment of hemorrhage. He sympathized with the plaintiff, but he doubted if she would have brought the action if she had known that the physicians probably saved her life when she was under chloroform by promptly applying the only available remedy. If desperate cases called for desperate remedies, a physician might be pardoned for taking the risk of the water being too hot for the patient's skin instead of allowing her to bleed to death. He therefore gave judgment for the defendants.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 8, 1909.

The Number of Medical Students in Paris

The council of the University of Paris has forwarded to the minister of public instruction its report on the situation and the work of the different faculties, as well as of the superior school of pharmacy, for the school year, 1907-1908. The author of the report, Dr. Pouhet, professor at the Faculty of Medicine, has drawn up a statement of the number of students registered at each faculty. In the Faculty of Medicine this number has risen to 3,535, exceeding the preceding year by 334. This total comprises 3,330 candidates for the M.D. degree (an increase of 293 over the preceding year); 4 for that of *officier de santé* (a decrease of 2 on the preceding year); 32 candidates as midwives of the first class (about the same as the figure of the preceding year); 48 as midwives of the second class (an increase of 7 over the preceding year), and 121 surgeon-dentist students (an increase of 6 over the preceding year).

The number of medical students of foreign nationality is markedly diminished (311 in place of 431). This diminution occurs largely in the Russian students (110 in place of 132). On the other hand the number of foreign women students is greatly increased (207 in place of 168), while that of French women students has increased from 78 to 94.

At the school of pharmacy, the number of students registered was 1,001, the women students numbering only 12, in place of 23.

The Protection of Infants of Tender Age

The minister of the interior has addressed to the President of the Republic a report on the carrying out of the Roussel law, relative to the protection of infants of tender age, and particularly of nurslings. This law places under surveillance of the public authority, with a view to the protection of its life and health, every infant under two years of age which, for pay, is put out to nurse, for weaning, or for custody, away from the home of its parents. The report just published covers the year of 1905, and gives some interesting information concerning the mode of rearing children.

Of 171,132 infants under protection during 1905 the mode of bringing up is precisely stated in only 159,643 cases, as follows: Nursed at the breast, 47,553, or 29.8 per cent.; artificial feeding, 99,040, or 62 per cent.; mixed feeding, 3,204, or 2.1 per cent.; infants weaned, 9,846, or 6.1 per cent. In 1903, out of 177,488 infants protected, 57,394, or 32.4 per cent., were nursed at the breast; 104,261, or 58.8 per cent., had artificial feeding; 15,733, or 8.8 per cent. were on mixed feeding or weaning. These figures show that the breast nursing of infants placed out to nurse tends to fall. This is particularly true for the northern part of France, where bottle feeding prevails; while in the southern part, breast nursing predominates.

A Hospital for the Tuberculous

The city of Paris is about to construct a hospital exclusively for the tuberculous of both sexes, to contain 1,200 beds. This will render it possible to give tuberculous patients treatment more appropriate to their condition, and also to relieve certain hospitals in which the tuberculous now occupy a large number of beds and are a continual menace of contagion for the other patients.

Prizes for Hospital Merit

M. Leon Grunbaum has remitted to M. Mesureur, director of public assistance, a sum of 3,800 francs (\$760) for the purpose of distributing six prizes of 500 francs (\$100) each, and four gold medals of the value of 200 francs (\$40) each to the nurses of the Cochin and Lariboisière hospitals. In each of these hospitals the jury of award will consist of the director, with the chief physicians of the respective services. M. Grunbaum hopes that these prizes will encourage those nurses who have shown excellent qualities of heart rather than professional technical aptitude. If this experiment succeeds—and it can hardly fail to succeed, for the candidates are already very numerous in the two hospitals named—M. Grunbaum intends to establish a definite foundation for the award of these prizes of "hospital merit."

Centenary of the Operation of Ovariectomy

Dr. Pozzi, professor of clinical gynecology at the Faculty of Medicine at Paris, has been appointed by the French government to represent the University of Paris at the centenary of the operation of ovariectomy in the United States.

Anti-Alcohol Instruction

The minister of public instruction, in a circular, has called the attention of the academic rectors to the fact that the decree of March 9, 1897, ordered the introduction into the educational syllabuses of definite instruction on the dangers of alcoholism. Although the teachers were invited to organize meetings to denounce the scourge that ravages the land, the minister regretfully announces that the results are hardly or not at all perceptible. It seems essential that the teaching faculty in all its grades should redouble its energy against alcohol and absinthe. The minister, moreover, calls on the rectors to favor the creation or extension of pupils' temperance societies in the secondary teaching establishments as well as in the primary schools. The ministerial circular points out that other countries have set a salutary example in this respect; thus, in Belgium, the propaganda in the schools, both by means of anti-alcohol teaching and by the action of temperance societies, has had the effect of reducing the consumption of alcohol *per capita* from 10.22 liters in 1891, to 8.45 liters in 1902, and 5.78 liters in 1905.

Reorganization of the Morgue

In accord with the ministries of justice and of public instruction, and conformably to a recent decision of the general council, the prefect of the Department of the Seine has appointed a commission to draw up a complete scheme for reorganization for the morgue. This commission contains among other members Professor Landouzy, dean of the Faculty of Medicine of Paris, and Dr. Thoinot, medical inspector of the morgue.

Epidemic Meningitis

Because of the disquieting recrudescence of epidemics of typhoid and cerebrospinal meningitis appearing in different localities, M. Clemenceau, minister of the interior, has addressed to all the prefects a circular directing them to issue an urgent summons to the permanent council of hygiene of their department, to elaborate prophylactic measures against these epidemics. In Paris the council of hygiene of the Department of the Seine has brought its decisions to the knowledge of the public by means of placards. It has decided, among other measures, to address to all physicians of Paris and the Department of the Seine a circular containing instructions necessary for the diagnosis of the diseases and the measures to be adopted with the patient. This circular will also enumerate all the facilities placed at the disposition of physicians by the sanitary service of the prefecture of police and the prefecture of the Seine.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, March 31, 1909.

New Examination for Dentists

A few days ago a new examination for dentists was provided by the federal council. This gives the right of conferring license on dentists to the authorities of each state of the empire which has one or more national universities. The production of a certificate of graduation is a condition for entrance on the study. The time spent in military duty can not be reckoned in the prescribed period of study. The new regulations take effect on October 1 of this year.

Serum Treatment of Typhoid

Professor Hoffmann has recently reported the result of an investigation of the serum for typhoid recommended by two young Berlin investigators, Bergell and F. Meyer. He comes to the conclusion that the application of this antitoxic typhoid serum to man is not justified at present. The presence in the serum of agglutinins, precipitins and substances favoring phagocytosis was confirmed, but it was shown that there is not enough antitoxin to neutralize the toxin set free by the death of the bacteria.

Hygiene of Barber Shops

The municipal authorities of Stuttgart have passed an ordinance for securing cleanliness in barber shops. The shops must be provided with a seamless impermeable floor covering. Combs and brushes must be cleansed at least once a day in warm solution of soda. Every customer must be furnished with a clean towel, etc. Violations of these rules are punished by a fine up to \$36.00 (150 marks) or by imprisonment.

Tips for Securing Patients

We have described the method of the Russian Institute which secures Russian patients to prominent specialists for a fee. In connection with a trial of two Berlin physicians for some alleged insult this custom was made the subject of a judicial inquiry, and it came out that a number of Berlin professors of the first rank were in the habit of paying fees to the proprietors of this institution as well as to other agents for bringing them patients. The names of all those who were guilty of such a practice were not disclosed in the trial, but their exposure is only a matter of time for the tribunal of honor as well as the Berlin medical faculty will investigate the matter thoroughly. The disclosures have already furnished one victim, and this person seems to be the least guilty. Among those named in the trial is the prominent clinician Senator. As he is president of the Berlin Medical Society this body has engaged in the discussion of the question of his culpability. Senator explained that he had paid the money not as a tip but as a fee to interpreters, but since the matter is likely to become the subject of judicial investigation he has resigned his office as president. The medical society is satisfied with this, for it must be admitted that the man occupying an office which has been held by such men as v. Graefe, Langenbeck, Virchow and v. Bergmann should be above reproach. The majority of Berlin physicians believe that Prof. Senator is a man of entirely honorable character who has not knowingly transgressed the ethics of the profession, and it is hoped that he will come out of the judicial investigation spotless. Under these conditions it may well be expected that he will be reinstated in his office at the next election of president of the society, and this rehabilitation is very desirable for a distinguished scientist who with gray hairs has reached his seventy-fifth year in honor. The situation is not as good with the majority of the other professors named in this affair. The result of the exposure of their practices is likely to affect them for a long time. Some of them have published explanations which indicate that the revelations in the court were incorrect. They claim that they are not guilty of the offense of which they are accused. A definite decision for or against them can not be given by outsiders. As an appeal from the decision of the court has been taken by both of the litigants, a new trial will occur which it is hoped will clear up the matter. Moreover, the tribunal of honor, as well as the faculty of the Berlin university will take further notice of these charges.

The Cause of Trachoma

About two years ago Prof. Greeff, director of the university eye clinic of this city, published an account of his discovery of bodies in the cells and secretion of the conjunctiva in cases of trachoma which in his opinion were the existing cause of this disease. Greeff has continued his investigations and has reached the result according to an article in the last number of the *Deutsche medizinische Wochenschrift* that these bodies are really the cause of trachoma. They are round bodies considerably smaller than the smallest cocci. They stain intensely violet or reddish with the Giemsa stain, less strongly with anilin dyes and do not stain with Gram's stain. Commonly they lie side by side as diplococci. These bodies are hard to recognize and it is necessary to examine fresh and untreated cases. After a few days of treatment with solid copper sulphate the bodies are no longer demonstrable in smear preparations. The detailed methods of staining and drawings of these bodies are to be found in the original article to which those interested are referred.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, April 3, 1909.

Mortality in Vienna

The latest report of the metropolitan board of health for 1908 contains a few interesting figures in regard to mortality in the city of Vienna. The average death rate was 17.57 per thousand, lower than any preceding year. Altogether 35,511 persons died last year, 18,334 men and 17,177 women. Of these deaths, 8,320 (24 per cent.) were of infants under 12 months, and 2,803 of children between 2 and 5 years, so that 11,123, or fully 31 per cent. of the total, occurred in the first five years of life. Among children the causes were chiefly measles, scarlet fever and whooping cough; among those over 65 years, carcinoma and marasmus; while pneumonia and gastrointestinal diseases were responsible for many deaths among the middle-aged. A decided decrease was noticed in deaths due to cerebral disease and tuberculosis, although the last-named was still responsible for the largest number of deaths (5,564, or 15 per cent.). At any rate, the decrease in deaths from tuberculosis (5,564, against 5,840) is too marked to be accidental.

To Protect from Dangers of Lye

The ministry has just issued an ordinance regulating the sale of the liquid known as household caustic potash. An investigation concluded by a special committee of the Vienna Medical Society has demonstrated the amount of harm done by the careless handling of this liquid, and its suggestions were adopted by the ministry. Thus, in future the liquid must not be sold otherwise than in special bottles distinctly labeled "poison," nor in small quantities in stronger solution than 1.25 per cent. An unpleasant smell must be imparted to it by the addition of a few drops of ammonia. Children must not be sent for the bottles. Accidents and attempts at suicide with caustic potash solution have been so numerous during the last few years as to attract public attention.

Restrict Use of Phosphorus in Matches

Another important measure now under consideration is a bill regulating the manufacture of matches, as the use of white or yellow phosphorus in making matches is not illegal here. The investigations of the Vienna Medical Society have proved, not only that the present regulations do not prevent that dreaded disease, phosphorus necrosis, but that no means short of prohibition of the use of phosphorus can be relied on to stop it. Therefore the government, which lately has turned a somewhat friendlier ear toward the wishes of sanitarians and public health officers, has brought in a bill making the use of phosphorus in match factories a serious offense after July 1, 1912. Meanwhile, strict regulations to lessen the risk of employes are to be enforced. Thus, no one may work longer than four weeks at a time in one branch of the manufacturing process, which consists of three parts. Special ventilation plants and sufficient lavatory accommodations, including a supply of soap and hot water, as well as special working gowns must be provided by the employer; and a control system to ensure personal cleanliness, and especially to prevent the employes from eating with unwashed hands, is made obligatory. A prize has been offered for the invention of a method of using phosphorus without harm to the health of the workers, and without making the cost of the product prohibitive. Unless such a method is invented before July 1, 1911, the law—for there is no doubt that the bill will become law—will be put in force one year later.

Wet-Nurses and Syphilis

A movement, arising out of a paper by Drs. Sperk and Pollak, has been initiated in medical circles for taking the business of providing healthy wet-nurses out of the hands of professional agents and turning it over to a municipal or state institution, where every nurse, together with her baby, could be examined before being permitted to suckle another child. A series of cases seen recently at one of our largest children's ambulatory clinics shows the imminence of this danger. In one case a wet-nurse infected a whole family. Her own baby showed symptoms of hereditary syphilis; yet the physician of the agency which negotiated the supply of wet-nurses had made no effort to have the woman struck off the list. The suggestion has received unanimous assent, and a petition, signed by the leading physicians of the city and supported by the senate of the university, will be presented to the board of health, asking for the complete suppression or reliable regulation of such agencies.

Pharmacology

PROSECUTIONS UNDER FOOD AND DRUGS ACT

The Value and Necessity of Pure Food Laws and What They Are Accomplishing

As a broad generalization, the command, "Thou shalt not lie," has been accepted as a good moral precept for a number of centuries; when applied specifically, however, more or less specious arguments have, in all ages, been advanced against too slavish an adherence to its tenets. This point has been somewhat emphasized since Jan. 1, 1907, when the national Food and Drugs Act went into effect and so modified the earlier commandment as to read in effect "Thou shalt not lie on the label." As a general proposition, that requirement of the law would seem incapable of working hardship to any one—yet apparently it does.

"HARPER'S BRAIN FOOD"

For instance, Robert N. Harper, of Washington, D. C., manufactured a headache nostrum to which he gave the euphonious name "Harper's Cuforhedake Brane-Fude." This was sold with the statements that it contained no "poisonous ingredients of any kind" and that it was a "harmless relief." The Bureau of Chemistry of the Department of Agriculture analyzed this "harmless" and "non-poisonous" preparation and reported that it consisted of the following ingredients:

Alcohol (per cent. by volume).....	24.2
Acetanilid (grains per ounce).....	15.0
Caffein (per cent.).....	1.5
Antipyrin (per cent.).....	1.0
Potassium, sodium and bromids also present.	

Inasmuch as this nostrum was shown to be neither "harmless," "non-poisonous" nor a "brain food," Mr. Harper was found guilty of misbranding and sentenced to pay a fine of \$700. Motions were made in arrest of judgment and also for a new trial, both of which were overruled. Then notice was given of appeal to the Court of Appeals. Subsequently, however, Mr. Harper withdrew the appeal and paid the fine.

HANCOCK'S LIQUID SULPHUR

The Hancock Liquid Sulphur Company of Baltimore marketed a product of the same name for which they made numerous claims. The statements on the label represented that this preparation contained some unknown, peculiar liquid sulphur and that it was "Nature's Greatest Germicide" as well as "the Great Cure for . . . Diphtheria . . ." and numerous other conditions such as "itch," "granulated eyelids" and "pimples." The Bureau of Chemistry analyzed a sample of this product and reported that it "consisted of an aqueous solution of commercial calcium sulphid." R. N. Menefee, manager of the Hancock Liquid Sulphur Co., was therefore prosecuted by the government for shipping a misbranded product. The court decided that a solution of calcium sulphid was not "Nature's Greatest Germicide," neither was it a "Great Cure for . . . Diphtheria . . ." and that the statements on the label "were false, misleading and deceptive." The manager of the company entered a plea of guilty and the court imposed on him a fine of \$100.

"CONCENTRATED OIL OF PINE COMPOUND"

A preparation labeled "Concentrated Oil of Pine Compound," manufactured by the Globe Pharmaceutical Co., Dayton, Ohio, was subjected to analysis by the Bureau of Chemistry. The result obtained showed, according to the report, that the sample examined "consisted of a mixture of fixed oil, a resinous substance and a small amount of volatile oil . . . resembling turpentine." This analysis made it evident that the product was misbranded as "the composition did not in any way warrant the use of the name 'Concentrated Oil of Pine Compound,' and the statement that it was such was false, misleading and deceptive." The Globe Pharmaceutical Co., in the persons of Wm. E. Pilkinton and A. P. Foose, pleaded guilty to the charge and paid the fine imposed and the costs of the prosecution.

"CASTOR OIL PILLS"

Robert Blackburn, doing business under the name of the Victory Remedy Company, Dayton, Ohio, was prosecuted by the United States for shipping a misbranded drug product from Ohio to Michigan. The preparation in question was labeled "Blackburn's Cascara, Wild Lemon, Castor Oil Pills, Compound," and samples were subjected to analysis at the government laboratory. According to the report the "pills" contained "calcium sulphid, capsicum, atropin (introduced probably, in the form of belladonna extract)." As to castor oil, if they contained any, it was at most a trace. As the cathartic, curative and therapeutic effects of castor oil were naturally "almost wholly absent," the use of the name "castor oil pills" was unjustified and constituted misbranding. Blackburn pleaded guilty and paid the fine and costs of prosecution.

"SARTOIN SKIN FOOD"

The Globe Pharmaceutical Company, which has already been referred to in connection with the "Concentrated Oil of Pine Compound," also marketed what was known as "Sartoin Skin Food." The modest claim was made for this preparation that it "is probably the most effective remedy known to science for sunburn, rashes and all skin blemishes" and that it was equally effective in "creating the normal growth of all parts not fully developed and shrunken." The Bureau of Chemistry analyzed a sample of this "skin food" and found "the most effective remedy known to science" to consist essentially of "epsom salts colored with a pink dye." The government decided that to claim epsom salts to be a "food" is "false, misleading and deceptive"; as Wm. E. Pilkinton and A. P. Foose (the Globe Pharmaceutical Co.) failed to "show any fault or error in the findings of the analyst," but pleaded guilty, they were each fined \$10.

It must not be thought that these five prosecutions represent all that has been accomplished in bringing adulterators or misbranders to justice under the provisions of the Food and Drugs Act; up to April 12, 1909, no fewer than fifty judgments have been rendered against firms or individuals that have violated the law. When it is borne in mind that advantage of every legal technicality is likely to be taken by those who make a business of putting on the market adulterated food-stuffs or misbranded "patent medicines," the success of the Board of Food and Drug Inspection is highly to be commended.

Apparent Incompatibility in a Prescription

To the Editor:—I find the following prescription in Keen's "Surgery" under Specific Urethritis

R. Zinei sulphatisgr. xvi
Plumbi acetatisgr. xxx
Glycer. of tannin,
Lloyd's hydrastisāā, ʒiv
Mucil. acacieʒiv
Aque destillat., q. s. ad.....ʒvi
M. Sig.: Inject.

My druggist says this mixture is incompatible, the lead acetate and mucilage of acacia forming a lumpy precipitate, which could not be injected. As Horwitz recommends this prescription, I think there must be some way of preparing the same, so that it will not be lumpy.

C. L. E., California.

ANSWER.—In compounding the prescription several reactions occur which no doubt the prescriber wished to take place. Zinc sulphate and lead acetate interact to form insoluble lead sulphate and soluble zinc acetate. Any alkaloid hydrastin which is contained in Lloyd's hydrastis will react with tannin in the glycerite of tannin to form an insoluble hydrastin tannate; also, any lead that remains in the solution will combine with the tannic acid to form insoluble lead tannate. Soluble lead salts also react with acacia to form a precipitate which is liable to be coherent and gummy in character, and consists of the lead salt of arabic acid. Acacia consists chiefly of arabic acid in combination with calcium, potassium and magnesium, and when a solution of acacia is

mixed with a solution of a lead salt, insoluble lead arabate is formed. The following procedure, however, will give a uniform mixture, which, even after standing several days, can still be shaken up into a uniform emulsion: Dissolve the zinc sulphate in water and to this add the lead acetate, also dissolved in water. The Lloyd's hydrastis is then added, followed by the glycerite of tannin, and finally the mucilage of acacia.

Correspondence

Refraction

To the Editor:—"Say nothing but good of the dead" is good advice; yet I feel that the article by the late Dr. St. John Roosa (*THE JOURNAL*, Feb. 13, 1909, p. 543) should be criticized.

I do not think that Dr. St. John Roosa was right when he said: "An eye with a moderate degree of hypermetropia without corneal astigmatism, other conditions being favorable, will do its work in a thoroughly satisfactory manner." I often have patients with moderate hypermetropia, without any corneal astigmatism, in whom the general health is good and who yet suffer from severe and intolerable headaches. I recently had as a patient a dental student who had one diopter of hypermetropia without any corneal astigmatism and who was in good health, but suffered from constant headaches that interfered with his work. He was entirely relieved of his headaches by plus 0.75 spheres for each eye.

Nor can I endorse the statement that if glasses do not improve the vision . . . they are absolutely of no use." The patient whose case I just cited above had no improvement in vision with his glasses as his vision was good without glasses, and this is the case with most hypermetropes of moderate degree and without corneal astigmatism.

I do not believe that Donders said the last word on refraction; I think that a great deal is yet to be learned in regard to refraction.

There are very few, if any, who will claim to get good results without mydriatics and with ophthalmometers which Dr. Roosa recommended so highly. In the case that I have just cited of the dental student, the refraction of the eye had been determined several times by some one who used an ophthalmometer and the patient was wearing weak compounds when he came to me with his severe headaches. Reverting to the statement that "if glasses do not improve the vision . . . they are absolutely of no use," it may be said that just this idea is the source of trouble in the cases of many school children who suffer from hypermetropia. They have good vision without glasses and, if they are examined by some one who is not a competent oculist, are dismissed with the statement that their eyes are all right.

Articles like that by Dr. Roosa have a bad influence on the general practitioner and have a tendency to encourage opticians and the traveling spectacle-vender.

M. MORGAN CLOUD, Los Angeles, Calif.

Tuberculosis or Consumption?

To the Editor:—The following advertisement appeared lately in the daily papers under the official emblem of the International Congress for the Prevention of Tuberculosis:

"Join the fight against tuberculosis. The war is being led into the camp of the enemy by the *Metropolitan Magazine*. 200,000 people are killed each year in the U. S. alone, and 3,000,000 are afflicted with the disease. The April article is by Mr. O. F. Lewis of the New York Charity Organization. Other articles will follow by the leading specialists of the world."

I desire to call attention to the advisability of conservatism in this matter. To overdo it will cause a reaction in the public mind. In 1902, we told the public that 100,000 people die every year from tuberculosis. In 1909, after seven years of hard fighting with all scientific achievements at our com-

mand, with all the vast sums expended, with all the aid of civilized governments cooperating with well-trained physicians and an intelligent public, it is now said that over 200,000 die every year of this disease in the U. S. alone. There can be only one deduction, and that is, that the claim that tuberculosis is a preventable disease is contrary to fact.

Progress in medical science now enables us to diagnose tuberculosis at a very early stage, so that its more frequent discovery makes it appear to be on the increase. "Consumption," however, *i. e.*, the advanced stage of tuberculosis, when it has become a "consuming" disease, is in fact, on the decrease, for many more patients are now cured before they get to the "consumptive" stage.

We should not teach, therefore, that tuberculosis is synonymous with consumption, for it is not. This teaching is objectionable on the following grounds:

1. Tuberculosis in the incipient stage is curable, while the advanced stage called consumption is nearly always beyond the point of possible arrest.

2. The belief in their identity has a depressing effect on patients in the early stage, from the sinister significance of the word consumption.

3. The teaching that tuberculosis and consumption are identical and that tuberculosis is a curable disease, rouses false hopes of cure in every case to the ultimate detriment of scientific medicine.

4. It exposes the public to the mercy of the charlatan who pronounces every case of cough tuberculosis; and it plays up to the fakers who advertise marvelous "cures of consumption."

5. Finally, the fakers make capital out of incipient cases curable by any treatment, while the fate of the patients in the incurable cases is laid to the medical profession. If the public understood by consumption only the cases of consuming disease, fakers could be challenged to make good their claim.

The term tuberculosis should be reserved for scientific use, that of consumption being retained for advanced cases, and these alone should be dealt with in statistics for the public use. We should then be able to show a decrease in consumption instead of an increase in tuberculosis.

L. W. ZWISLOCK, M.D., New York.

Miscellany

First Aid in Electric Accidents.—The *Scientific American*, March 20, 1909, calls attention to the need of instruction of men engaged in handling electric circuits in the proper immediate treatment of persons injured by strong currents and in self-protection. A fallen live wire may be safely removed by a rope improvised from a twisted coat. A person who has fallen across a live rail may be removed by pulling on his coat or by using a wooden pole. A live wire may be cut by pliers provided with wooden handles boiled in paraffin. Interesting experiments have shown that a fireman incurs practically no danger in directing fresh water from a hose against a live high-tension wire at a distance of 3½ feet, although salt water was not used and would doubtless be found a far better conductor of the current. Chemical extinguishers were found very dangerous. This fact should be more generally known, as passenger trains are usually equipped with chemical extinguishers and, in case of a wreck on an electrified line, serious consequences might result from playing an extinguisher on a charged wire.

A Claim to Priority.—Dr. W. H. Hutt of Philadelphia has issued a pamphlet, "The First Fifteen Years of the Antituberculosis Crusade, 1873-1888," in which he claims to have put into practice—1873 to 1888—the principle of seeking public aid and legislative assistance to carry out the outdoor and fresh-air treatment of tuberculosis, combined with adequate feeding. His efforts culminated, he says, in February, 1884—a year before the sanatorium at Saranac Lake was opened—in the establishment at Glen Mills, Delaware county, Pa.,

of the first public institution for the outdoor treatment of the tuberculous. This movement was aided by the Protestant Episcopal City Mission, and it is said received the support of the following well-known physicians: Drs. Rowland G. Curtin, W. Joseph Hearn, D. Hayes Agnew, James Tyson, William Pepper, S. W. Gross and William H. Pancoast. While, for various reasons, the movement had to be abandoned, Dr. Hutt claims its recognition among the seed that has brought forth the fruit of modern organized methods for the public treatment and prophylaxis of tuberculosis.

Thyroid Treatment of Lipomatosis.—P. Morsaline reports in the *Revista de la Sociedad Medica Argentina*, XVIII, p. 281, 1908, several cases of symmetrical lipomatosis. One patient in particular was a middle-aged man with lipomatosis especially prominent in the neck. The symmetry of the lesions indicated trophic nervous disturbances and various signs of infantilism, etc., suggested that the thyroid gland had been functioning defectively. Morsaline cites a few cases from the literature in which lipomatous lesions coexisted with almost complete absence of the thyroid. Thyroid treatment is said to promote the growth of the skeleton, reduce elimination of lime and facilitate the consolidation of fractures in cases of defective thyroid functioning. In his case the thyroid had also suffered from the action of liquor. For all these reasons, after a course of strychnin, he ordered thyroid treatment, and the tumors in the neck, back and abdomen were a third smaller after three months of treatment, and considerably softer, while the patient's general health was much improved.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

AFTER-EFFECTS OF VASECTOMY

To the Editor:—In THE JOURNAL, April 3, is an editorial in advocacy of vasectomy for confirmed criminals and defectives. Is it a fact beyond dispute that there have been no deleterious after-effects from this operation? Is the sexual appetite affected by it? J. L.

ANSWER.—While vasectomy for the sterilization of those judicially declared unfit for citizenship is a recent practice, yet vasectomy for other purposes—the relief of prostatic and vesicular disease, and of recurrent epididymitis—has long been a standard surgical procedure; so has the excision of the tuberculous epididymis and vas. There is therefore a large surgical experience as to the effects of vasectomy on sexuality. This experience affirms that neither sexual desire nor sexual power is impaired by vasectomy. For example, Ochsner (A. J.) stated before the Chicago Medical Society, April 7, that men on whom he had performed vasectomy were sexually normal ten years later. Others have made similar observations and say that they have not seen impairment of sexuality follow the operation. The testis furnishes two products, spermatozoa and an internal secretion. Neither of these is arrested by occluding the seminal duct, for Posner years ago reported that by puncture of the testis he had withdrawn living spermatozoa ten to seventeen years after occlusion of the epididymis by gonorrheal invasion. Belfield of Chicago, on making an anastomosis of epididymis and vas for the cure of sterility, found spermatozoa present fourteen years after occlusion of the epididymis had occurred. That vasectomy itself is equally harmless to the spermatogenic function is shown in a case in which he reunited the vasa three years after they had been divided, the semen subsequently containing normal spermatozoa. Moreover, absence of the spermatogenic function of the testis does not include absence of sexual desire or power; this is amply proved by cases of retained testes, the subjects being sexually vigorous though the testes produce no spermatozoa. It is also shown by the sexual vigor of those whose spermatogenic function has been arrested by exposure of the testes to the x-ray. Evidently it is the internal, not the external (spermatic) secretion of the testis which confers and maintains sexuality; evidently the two functions are independent; and evidently neither is arrested by vasectomy. Sterilization of criminals by x-ray exposures has been proposed as a substitute for vasectomy; among the objections to this is the observation that such sterilization seems to be transient.

INTRAVENOUS MERCURIAL TREATMENT IN RHEUMATISM

To the Editor:—In THE JOURNAL, April 3, 1909, page 1151, reference is made to intravenous mercurial treatment in rheumatism. Can you give me a formula for use? What action would it be likely to have on the blood and economy if continued in a tuberculous patient, the dose being only 1 mg. or 3 mg. every three days? G. W. PARK.

ANSWER.—The drug used by Ortali in the article referred to was mercuric chlorid. It is usually given in 1 per cent. solution and the solvent should be an isotonic (normal) salt solution. An account of the technic of intravenous injections may be found in an article by G. P. Crume in THE JOURNAL, Dec. 19, 1908, p. 2155. We can not say what would be the effect of such injections if continued in a tuberculous patient. The dose proposed would probably be so small as to produce little if any effect.

BOOKS ON HYPNOTISM AND PSYCHOTHERAPY

To the Editor:—Please name some good books for the information of physicians in regard to psychotherapy. R. M.

ANSWER.—A fairly full list of books on this and related subjects was given in THE JOURNAL, Feb. 29, 1908, p. 710. This was added to considerably, Feb. 13, 1909, p. 577, and further additions were made Feb. 20, 1909, p. 650.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers for the week ended April 17, 1909:

Raymond, T. U., major, granted leave of absence for 1 month.
Munson, E. L., major, granted leave of absence for 2 months 10 days, about June 5.

Woodson, R. S., major, ordered to Fort Hamilton, N. Y., for duty, instead of Fort Du Pont, Del.

Brown, H. L., capt., granted leave of absence for 6 days.

Hart, W. L., 1st lieutenant, ordered to accompany Company G, Engineers, to San Francisco, Cal., then to return to Washington Barracks, D. C.

Hopwood, L. L., Freeman, C. E., McIntyre, H. B., 1st lieutenants, ordered to report at San Francisco for examination for promotion.

Love, A. G., Jones, H. W., Pinkston, O. W., Reasoner, M. A., Hanson, L. H., Schmitter, F., 1st lieutenants, ordered to report at Washington, D. C., for examination for promotion.

Baily, H. H., capt., ordered to accompany Company F, Engineers, from Washington Barracks, D. C., to Vancouver Barracks, Wash., and then return to station, Fort Myer, Va.

Sparrenberger, F. H., M. R. C., granted an extension of 20 days to his leave of absence.

Kress, C. C., M. R. C., relieved from duty at Fort Bliss, Tex., in time to proceed to San Francisco and sail June 5 for the Philippine service.

McMillan, C. W., M. R. C., ordered to duty at target range near Ashland, Neb., during the target practice season.

Hughes, L. S., M. R. C., ordered from Fort McDowell, Cal., to temporary duty at the Department Rifle Range, Point Bonita, Cal.

Hewitt, J. M., M. R. C., ordered to duty with troops in the Yosemite National Park.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for week ended April 17, 1909:

Reed, T. W., asst.-surgeon, orders of March 17 modified; detached from the *Colorado* and ordered to the Marine Recruiting Station, San Francisco, and to duty in attendance on officers and families not otherwise provided with medical service.

Connor, W. H., acting asst.-surgeon, ordered to duty at the Naval Hospital, Norfolk, Va.

Wilson, H. D., surgeon, ordered to additional duty in charge of the medical departments of the *Indiana*, *Kentucky* and *Illinois*.

Fiske, C. N., P. A. surgeon, ordered to special temporary duty in the bureau of medicine and surgery, Navy Department.

Bell, W. H., and Kennedy, R. M., surgeons, detached from the bureau of medicine and surgery, Navy Department, and ordered to instruction at the Naval Medical School, Washington, D. C.

Wentworth, A. R., surgeon, detached from the *Louisiana* and ordered to the Naval Academy.

Stokes, C. F., surgeon, detached from the Naval Academy and ordered to the Naval Medical School Hospital, Washington, D. C., for duty.

Curl, H. C., surgeon, detached from duty at the Naval Medical School Hospital, Washington, D. C., April 24, and ordered to duty at the Naval Hospital, Canacao, P. I., via the *Buffalo*.

Jones, E. L., asst.-surgeon, detached from the *Maryland* and ordered to the Naval Recruiting Station, Dallas, Tex.

Chambers, W., asst.-surgeon, detached from the Naval Recruiting Station, Dallas, Tex., and ordered to the *Maryland*.

Heiner, R. G., P. A. surgeon, detached from *Pennsylvania* and ordered to the *Albany*.

Biello, J. A., asst.-surgeon, detached from duty at the Naval Hospital, Mare Island, Cal., and ordered to the *Vicksburg* when commissioned.

Stibbens, F. H., asst.-surgeon, detached from *Albany* and ordered to *Pennsylvania*.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended April 14, 1909:

Irwin, Fairfax, surgeon, relieved from duty on the revenue cutter *Snohomish* and directed to report to the commanding officer of the revenue cutter *Rush* for duty.

Wertenbaker, C. P., surgeon, relieved as chairman of board of medical officers convened under bureau order of April 5, 1909.

Gardner, C. H., P. A. surgeon, granted 3 days' leave of absence from April 8, 1909.

Sprague, E. K., P. A. surgeon, granted 7 days' leave of absence from April 8, 1909.

Hobdy, William C., P. A. surgeon, on being relieved by P. A. surgeon Frederick E. Trotter, directed to proceed to Honolulu, T. H., and assume command.

King, Walter W., P. A. surgeon, relieved from duty at the Marine Hospital, San Francisco, and detailed for duty in the examination of arriving aliens at San Francisco.

Goldberger, Joseph, P. A. surgeon, directed to proceed to Richmond, Va., on special temporary duty.

Trotter, Frederick E., P. A. surgeon, on being relieved by P. A. Surgeon Walter W. King, assume command of San Francisco Quarantine Station, Angel Island, Cal.

Ebersole, R. E., P. A. surgeon, granted 7 days' leave of absence from Feb. 27, 1909, under paragraph 191, Service Regulations.

Collins, G. L., P. A. surgeon, detailed as chairman of board of medical officers convened under bureau order of April 5, 1909.

Stiles, Charles Wardell, chief of division of zoology, hygienic laboratory, granted 1 day's leave of absence in March, 1909, under paragraph 211, Service Regulations.

Kastle, Joseph H., chief division of chemistry, hygienic laboratory, granted 2 days' leave of absence in March, 1909, under paragraph 211, Service Regulations.

Blanchard, J. F., acting asst.-surgeon, granted 3 days' leave of absence from April 3, 1909.

Onuf, B., acting asst.-surgeon, granted 7 days' extension of annual leave on account of sickness from March 29, 1909.

Tappan, J. W., acting asst.-surgeon, granted 5 days' extension of annual leave on account of sickness from March 11, 1909.

APPOINTMENT

Dr. Samuel C. Hotchkiss commissioned as asst.-surgeon in the Public Health and Marine-Hospital Service.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 16, 1909.

SMALLPOX—UNITED STATES

Alabama: Antaugua county, to April 5, 11 cases; Pottsville, Feb. 7-April 5, 3 cases; Montgomery, March 26-April 2, 1 death.

California: Los Angeles, March 20-27, 1 case; Sacramento, 1 case; San Francisco, 1 case.

District of Columbia: Washington, March 27-April 3, 1 case.

Georgia: Macon, March 28-April 4, 2 cases.

Illinois: Canton, Jan. 1-March 1, 50 cases; Chicago, March 27-April 3, 1 case; Danville, March 29-April 4, 7 cases; Fulton county, general, Jan. 1-March 1, present; Peoria, March 27-April 3, 12 cases.

Indiana: Kokomo, Jan. 20-March 7, 14 cases, 8 deaths; Muncie, March 27-April 3, 1 case; South Bend, 1 case.

Iowa: Cedar Rapids, March 1-31, 13 cases.

Kansas: Kansas City, March 27-April 3, 1 case; Topeka, March 20-27, 15 cases; Wichita, March 27-April 3, 1 case.

Kentucky: Berea, Feb. 1-April 5, 20 cases; Covington, March 27-April 3, 8 cases.

Louisiana: New Orleans, March 27-April 3, 2 cases.

Minnesota: Minneapolis, March 13-27, 5 cases.

Missouri: St. Louis, March 27-April 3, 2 cases.

New Jersey: Camden, March 27-April 3, 3 cases; Hightstown, March 3, 1 case, imported; New Brunswick, March 27-April 3, 3 cases; Paterson, March 6-April 5, 8 cases; Plainfield, March 29-April 5, 1 case; Woodbridge, March 6, 1 case.

New York: New York, March 27-April 3, 4 cases.

Ohio: Cincinnati, March 19-April 2, 10 cases; Cleveland, March 26-April 2, 1 case.

Tennessee: Knoxville, March 28-April 3, 3 cases.

Texas: Corpus Christi, April 2, present; Fort Worth, March 1-31, 10 cases; San Antonio, March 27-April 3, 4 cases.

Wisconsin: La Crosse, March 27-April 3, 2 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, Feb. 20-27, 5 cases.

SMALLPOX—FOREIGN

Brazil: Bahia, Feb. 13-27, 15 cases, 1 death; Pernambuco, Feb. 1-15, 11 deaths.

Canada: Halifax, Feb. 13-27, 5 cases.

China: Hongkong, Feb. 13-27, 4 cases; Shanghai, Feb. 28-March 6, 1 death; Tientsin, Feb. 20-27, 1 case.

Egypt: Alexandria, Feb. 18-25, 1 death; Cairo, Feb. 18-25, 27 cases, 17 deaths.

France: Paris, March 6-20, 6 cases.

Great Britain: Bristol, March 13-20, 1 case, 1 death.

India: Bombay, March 2-9, 19 deaths; Calcutta, Feb. 20-27, 332 deaths; Madras, Feb. 27-March 5, 1 case; Rangoon, Feb. 20-27, 7 deaths.

Indo-China: Saigon, Feb. 6-13, 1 case, 1 death.

Italy: General, March 13-21, 14 cases; Catania, March 6-20, 2 cases; Genoa, Feb. 1-28, 5 cases; Naples, March 14-21, 2 cases; Palermo, Feb. 28-March 6, 2 cases.

Japan: Formosa, Feb. 13-March 13, 9 cases; Kobe, March 6, 1 case, 1 death.

Java: Batavia, Feb. 13-20, 5 cases, 1 death.

Malta: Feb. 13-20, 1 death.

Mexico: Guadalajara, March 18-25, 5 cases; Monterey, March 21-28, 4 cases; Veracruz, March 21-27, 1 case, 1 death.

Netherlands, The: Rotterdam, March 20-27, 1 death.

New Foundland: St. John, March 13-20, 1 case.

Russia: Moscow, March 6-20, 54 cases, 17 deaths; Odessa, March 6-13, 1 case; Riga, March 6-20, 6 cases; St. Petersburg, Feb. 20-March 6, 23 cases, 5 deaths.

Spain: Almeria, Feb. 1-28, 2 deaths; Barcelona, March 8-22, 7 deaths; Valencia, March 12-19, 1 death.

Straits Settlements: Singapore, Feb. 13-20, 1 death.

Uruguay: Montevideo, Jan. 1-31, 1 death.

YELLOW FEVER

Barbados: General, March 22-27, 3 cases.

Brazil: Bahia, Feb. 13-27, 14 cases, 6 deaths; Para, March 6-13, 5 deaths; Pernambuco, Feb. 1-15, 1 death.

Ecuador: Guayaquil, March 6-13, 10 deaths.

CHOLERA—INSULAR

Philippine Islands: Provinces, Feb. 20-27, 48 cases, 34 deaths.

CHOLERA—FOREIGN

India: Calcutta, Feb. 20-27, 40 deaths; Madras, Feb. 27-March 5, 2 deaths; Rangoon, Feb. 20-27, 7 deaths.

Russia: Saratov, March 21, 1 case; St. Petersburg, March 19-26, 19 cases, 4 deaths.

Straits Settlements: Penang, Feb. 10-27, 1 case; Singapore, Feb. 13-27, 3 cases.

PLAGUE

Brazil: Bahia, Feb. 13-27, 6 cases, 2 deaths.

Chile: Magillones, March 10, epidemic.

China: Hongkong, Feb. 6-27, 6 cases, 5 deaths.

Ecuador: Guayaquil, March 6-13, 6 deaths.

India: General, Feb. 20-27, 4,717 cases, 3,750 deaths; Bombay, March 2-9, 197 deaths; Calcutta, Feb. 20-27, 36 deaths; Rangoon, 17 deaths.

Japan: Formosa, Jan. 23-March 13, 223 cases, 187 deaths; Kobe, Feb. 27-March 6, 1 death.

Turkey: Jiddah, March 15-21, 16 cases, 16 deaths.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

Am. Assn. of Genito-Urinary Surgeons, Pocono, Pa., May 31-June 1.
American Gynecological Society, New York, May 27-29.
American Neurological Association, New York, May 27-29.
American Pediatric Society, Lenox, Mass., May 27-28.
American Therapeutic Society, New Haven, Conn., May 6-8.
Association of American Physicians, Washington, D. C., May 11-12.
Arizona, Medical Association of, Prescott, May 19-20.
Arkansas, Medical Society of, Pine Bluff, May 18-21.
Connecticut State Medical Society, Hartford, May 26-27.
District of Columbia, Medical Assn. of, Washington, April 27.
Illinois State Medical Society, Quincy, May 18-20.
Iowa State Medical Society, Dubuque, May 19-21.
Kansas State Medical Society, Emporia, May 5-7.
Louisiana State Medical Society, New Orleans, May 4-6.
Maryland, Med. and Chir. Faculty of, Baltimore, May 13-15.
Missouri State Medical Association, Jefferson City, May 18-20.
Montana State Medical Association, Missoula, May 12-13.
Nat. Assn. for Study and Prevention of Tuberculosis, Washington, D. C., May 13-15.
Nebraska State Medical Association, Omaha, May 4-6.
New Hampshire Medical Society, Concord, May 13-14.
North Dakota State Medical Association, Fargo, May 11-12.
Ohio State Medical Association, Cincinnati, May 5-7.
Texas State Medical Association, Galveston, May 4-6.

TENNESSEE STATE MEDICAL ASSOCIATION

Seventy-sixth Annual Meeting, held at Nashville, April 13-15, 1909

The President, B. D. BOSWORTH, Knoxville, in the Chair

After addresses of welcome on behalf of the city, by Mr. J. S. Brown, Mayor of Nashville, and Dr. John A. Wither-
spoon, on behalf of Davison County Medical Society, with a
response to these addresses by Dr. George R. West, Chat-
tañooga, the reading of papers was proceeded with.

Officers Elected

The following officers were elected for the ensuing year:
President, Dr. Jere L. Crook, Jackson; vice-president for
middle Tennessee, Dr. T. J. Coble, Shelbyville; vice-president
for east Tennessee, Dr. C. H. Davis, Knoxville; vice-president
for west Tennessee, Dr. O. Dulaney, Newbern; secretary, Dr.
George H. Price, Nashville, re-elected; treasurer, Dr. W. C.
Billbro, Murfreesboro, re-elected.

Memphis was selected as the place for holding the next an-
nual meeting; time, second Tuesday in April, 1910.

Squint and Its Treatment

DR. WALTER DOTSON, Gallatin: The commonest cause of
squint is some refractive error. To overcome this error, the

muscles of accommodation are overworked, thus producing pathologic changes. The same pathologic change may be transmitted to the extraocular muscles by the same nerve supply. We should estimate under a cycloplegic, the refractive error, and correct it with lenses. We should test the strength of each extraocular muscle, and operate on the one which is at fault. If the rectus on the squinting side is abnormally strong or abnormally short, or both, then Panas' operation should be performed on it. If the recti on the opposite side of the squint are abnormally weak, or abnormally long, or both, then a Valk tucking operation should be done. If both internal and external recti muscles are at fault, then the required operation should be done on each muscle of the squinting eye, but never on both eyes.

DISCUSSION

DR. G. C. SAVAGE, Nashville: In March, 1893, in the *Ophthalmic Record*, I described my operation for shortening the rectus muscle. This operation is simple, effective, and free from the two prominent risks incurred in any of the advancement operations. In this, as in many other operations on the eye, cocaine anesthesia can be relied on. The first step of the operation consists of a vertical conjunctival incision one-eighth of an inch behind the insertion of the tendon, and a little longer than the muscle is wide. From the lower extremity of this cut a horizontal conjunctival incision is made one-quarter inch long, near to, and parallel with the lower border of the muscle. The triangular flap of conjunctiva is now dissected up, and is held out of the way by an assistant. The second step consists in passing a strabismus hook beneath the tendon and in making a slight dissection of the connective tissue and capsule of Tenon at the upper and lower border of the muscle. The last step is the taking of the stitch for shortening the muscle. A thread is armed with two needles slightly curved. One needle is passed through the muscle from its outer surface and is brought out beneath the lower border of the muscle, the other is passed in the same way, but is brought out beneath the upper border of the muscle. The amount of tissue thus included in the loop need not be more than one-quarter the width of the muscle; and the distance of this loop behind the insertion of the tendon must depend on the amount of shortening desired. The muscle is held away from the globe by fixation forceps, while the needles are being passed as above indicated. The operator, taking a hook in his hand, draws it slightly back and at the same time gently lifts the tendon from the globe. He then takes needle No. 1 and pierces the tendon from the ocular side, at its point of insertion and between the center and its lower border, bringing it out through the conjunctiva over the insertion, then removes the needle. In a similar way needle No. 2 is passed through the tendon beneath its center and upper border, and is brought out through the conjunctiva over the insertion. This needle is then removed. The two ends of the one thread need not be more than one-eighth of an inch apart, as they emerge from the tendon. On tying the knot in the usual way, that part of the muscle at the loop is brought in contact with the tendon at its insertion, and is there confined by completing the knot. The triangular flap of conjunctiva is then allowed to fall and cover in the exposed muscle, including its "tuck." The stitch is allowed to remain from four to six days, depending on the inflammatory action excited. The stitch will excite sufficient inflammation to bind the parts in their new relationships and thus the shortening is made permanent. As in advancements, so in the shortening, it is found necessary to do either a partial or a complete tenotomy of the opposing muscle.

Under date of Aug. 15, 1895, Dr. Valk writes: "I have no doubt that you (Dr. Savage) are fully entitled to the credit for what seems to be an excellent operation."

DR. W. DOTSON: I have never heard of this operation until I saw Dr. Valk do it. He told me it was his operation, and I read a description of it in his book. I was firmly impressed with the fact that it was Valk's operation until Dr. Savage established his priority.

Surgery of the Thyroid

DR. R. M. McCOWN, Knoxville: In exophthalmic goiter, to say that surgical procedure is best is not enough. Operation is indicated in all cases that do not show a degenerated heart muscle, with irregular pulse, low blood pressure and periodical attacks of delirium cordis, and in those cases associated with an enlarged thymus. A mistake often made is not operating early. Early operation in the hands of competent surgeons in the past few years has materially reduced the mortality, in that it has ranged from 2 to 4 per cent., which is not greater than in the majority of all capital operations, and the percentage of cures ranges from 5 to 90 per cent. Halsted reports 90 cases, with only 2 deaths; Mayo, 176 operations, with 8 deaths, and 70 per cent. cures. In his last 75 cases Mayo reports only one death. Kocher reports 153 cases, with 2 deaths, and 83 per cent. cures. The question of anesthesia is one of personal preference. I prefer general anesthesia. In removing the gland there should be as little maceration of gland substance as possible, because the gland juices may increase the symptoms.

DISCUSSION

DR. WILLIAM D. HAGGARD, Nashville: It has long been supposed that goiter bears a causal relation to the water supply, and it has been found that if the water is filtered, it depreciates the incidence of goiter. Of 13 individuals who took the filtrate, 4 contracted goiter. It was afterward observed that if the same filtrate were boiled for ten minutes, the patients to whom it was administered would not develop goiter. Therefore, there is undoubtedly in the sediment some bacteria with which we are not yet acquainted, and which may bear a causative relation in the production of goiter. Selection of cases for operation is important. Patients with swollen feet, ascites, etc., should not be operated on as they are likely to die within a few weeks or months. They should be left alone until perchance the superior thyroids alone can be ligated, and this can be done under local anesthesia, and within a few weeks or months thereafter the enlarged gland can be removed with safety. I agree with Dr. McCown that all patients with exophthalmic goiter should be operated on while the condition is in its incipency, if possible. Only the largest part of the gland should be removed, never the entire gland, because then the patient gets myxedema.

DR. BATLE MALONE, Memphis: Dr. McCown failed to call attention to one form of medical treatment which is of value. Senn, in his text-book on "Pathology and Treatment of Tumors," speaks of the use of iodine in simple hypertrophy of the gland, and states positively that when we have this condition without tumor formation, goiter will disappear under the use of iodine, and I have found this to be true. While Halsted of Baltimore has done a great many of these operations under local anesthesia, I prefer general anesthesia.

DR. L. E. BURCH, Nashville: The mortality from operations in cases of exophthalmic goiter in the hands of the best surgeons is about 5 per cent. In the ordinary form of goiter it is about 2 per cent. The most important part in the operation is not only a judicious selection of cases, but the time of operation and the proper preparation of the patient. In the exophthalmic cases we should strive to avoid gastric crises. Accordingly, patients should be put to bed, and an icebag applied over the heart. They should be kept quiet and chloral and bromids given. The great danger from the operation is tetany, which will not occur if the operation is carefully performed.

DR. R. E. FORT, Nashville: We should avoid the application of the x-ray in cases of goiter, because it produces a fibrous condition of the gland, rendering its subsequent removal exceedingly difficult. The mortality is increased by the use of the x-ray. While Kocher and other surgeons have operated on a large number of cases of goiter under local anesthesia, I think the general trend is toward general anesthesia.

DR. R. M. McCOWN: I wish to report briefly two cases of goiter that have come under my observation in the last six

months. One patient, a woman of 30, had tachycardia, enlargement of the lateral lobe, and heart beat of 120. The left lobe was somewhat enlarged. She was extremely nervous, irritable, and presented a tremor. I ligated the superior thyroid artery and enucleated the gland, which was very much atrophied. The nervousness is disappearing, and she has been very much improved. In the other case I removed the goiter under general anesthesia about six months ago, and the patient has made very rapid improvement.

(To be continued)

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS

Ninth Annual Meeting, held in Boston, April 9-10, 1909
(Continued from page 1277)

Pathology of Arthritis Deformans

DRS. E. H. NICHOLS and F. L. RICHARDSON, Boston: This paper describes two pathologic types of the disease, though there are not two distinct etiologic groups to correspond. The first is the proliferative, the second the degenerative type. In the former there is proliferation of connective tissue of the synovial membrane over the cartilages; the latter may be destroyed with the possible union of the bones. Changes in the shafts of the bones are secondary to those in the joint. In the second type, which is more common in old people, there is degeneration of articular cartilage. This begins as a fibrillation at right angles to the surface, the cartilage cells change and finally disappear until the bone may be reached. The endosteum of the spongy bone proliferate and eburnated bone forms. Then occurs a new growth of perichondrium. Ankylosis may occur from irregularity in the surfaces, even though they are not united.

Anatomy of Senile Dementia

DR. E. E. SOUTHARD, Boston: Among 247 cases of insanity as diagnosed by several clinicians, were 42 of senile dementia. Of these, 29 brains were below normal in weight, 16 being evidently atrophy of the brain. In 5 the weight ratios were compared as in Vierordt's tables, and 3 were found opposed to the other two. Of the great group of senile dementia, many cases should be given another name to indicate the true condition.

Abnormality of Epidermal Hornification Due to Obliterative Changes in the Veins of the Corium

DR. OSCAR T. SCHULTZ, Cleveland: In cases of psoriasis and similar affections, the literature contains descriptions of the superficial structures but nothing is said of changes in the deeper parts of the corium. My specimens show this to be a prominent lesion. There is first a proliferation of endothelium, then of cells around the vessels until, finally, the veins are obliterated. It appears probable that this leads to the changes found in the superficial structures, such as edema, parakeratosis, and others as commonly described.

Chronic Skin Lesions, Due to Repeated Exposures to the X-Rays, Including X-Ray Carcinoma

DR. S. BURT WOLBACH, Albany: Cases of chronic x-ray dermatitis are common and thirty-six cases of carcinoma following this condition in x-ray workers have been reported. Clinically, there is thickening of the epidermis, then a scaly condition of the skin, and finally an infiltrating carcinoma. The use of phosphotungstic acid hematoxylin aids greatly in studying the histology of these cases. Microscopically, there is no evidence that the epidermis is greatly susceptible to the x-ray. The deeper tissues, such as endothelium, connective tissue, and smooth muscle fibers are much more susceptible. The changes in these are: 1. Obliteration of vessels by degeneration and proliferation of endothelium. The muscle coat of the vessels also degenerates and its place is taken by connective tissue. This begins in the small vessels and finally involves the larger ones. 2. The formation of foci of degeneration due to obliteration of vessels. The larger of these foci lead to ulceration. 3. Downward proliferation of epithe-

lium into and around the areas of degeneration. The production of tumors can not be ascribed to primary action of the x-rays on the epithelium.

DISCUSSION

DR. A. S. WARTHIN, Ann Arbor: Has Dr. Wolbach noted any difference in the type of the carcinomas studied? I have observed an instance in a medical student, treated for lupus, in which a growth appeared two years later. This proved to be a basal-celled epithelioma originating in the sebaceous glands and bearing no relation to the superficial epithelium.

DR. WOLBACH: The three cases of tumor I studied were of the epidermoid type.

Transplantation of Devitalized Arterial Segments; Morphologic Changes in the Implanted Segments

DRS. ISAAC LEVIN and JOHN H. LARKIN, New York: Specimens from three series of experiments on the aortas of dogs were shown. The technic was a slight modification of that employed by Carrel. Histologic studies of tissues from 24 hours to 10 weeks after transplantation were made. They showed the occurrence of gradual changes in the introduced segment, leading to the disappearance of the various structures and the formation of a fibrous tube around it which finally occupied its place. Calcareous infiltration also occurred in some instances. In the dog which lived for ten weeks, anastomotic circulation had formed. Blood had evidently passed through, and remained fluid, for several days before a thrombus formed, showing that living endothelial cells are not necessary as a boundary.

Behavior Toward Filariae of Tissues of Cattle Inoculated with Cultures of Human Tubercle Bacilli

DR. THEOBALD SMITH, Boston: Flattened nodules were found on the omentum of cattle after injections of human tubercle bacilli and in these nodules were filariae, either degenerated or in a healthy condition. This form is not known to be a stage in the life of the filaria and the possible explanation is that under the influence of injections of tubercle bacilli the filariae are stimulated, or are collected in the focus of proliferation of the tubercle bacillus. The practical point is that possibly filariae in the human being become annoying at times because of the influence of other infections in the host.

Viability of the Tubercle Bacillus

DR. THEOBALD SMITH, Boston: Cultures of a strain of the tubercle bacillus which had been carried along for years were made and placed in the refrigerator for fourteen months, when the bacilli were still living and virulent. One tube was kept twelve months in the refrigerator and then the bacilli lived seven months in salt solution. Very few of the bacilli were alive, hence it was the case of one bacillus in one thousand or in ten thousand possessing an exceptional vitality.

Rapid Diagnosis of Rabies with Special Reference to Lesions in Gasserian Ganglion

DR. LANGDON FROTHINGHAM, Boston: Assuming that Negri bodies are diagnostic of rabies, the rapid demonstration of them is a point of great importance. They can always be found in the cells of Ammon's horn and the question arose as to whether those cells would adhere to a slide if it were pressed against the fresh tissues. This was tried and found to work satisfactorily. The best method of treating the films is to plunge them at once into methyl alcohol, which instantly fixes them. They are then stained by Van Gieson's method one minute. The red cells do not stain by this method, which prevents confusing them with the bodies. When the brain can not be obtained then the posterior root ganglia or the Gasserian ganglion must be employed. I have made a systematic study of the latter in 700 animals and find two types of lesions: 1. The typical or focal lesion. The ganglion cells are destroyed and their place taken by cells of the endothelial type; the nucleus may be little or not at all affected. 2. The atypical or diffuse lesion is a diffuse infiltration between the ganglion cells of a connective tissue type of cell. The lesions in the Gasserian ganglion are therefore not specific for rabies.

DISCUSSION

DR. W. T. HOWARD, Cleveland: In one case a dog bit three groups of children. In the Ammon's horn of the dog were Negri bodies. The children were given the Pasteur treatment. One died some time later with symptoms suggesting meningitis. Neither Negri bodies nor rabic tubercles could be found and the Gasserian ganglia were normal. A guinea-pig was inoculated with material from the medulla and soon died. No Negri bodies were found in its brain. A second pig was inoculated with the medulla of the first pig and died; it also showed no Negri bodies. The medulla of the second pig inoculated into a rabbit caused typical rabies and in its tissues Negri bodies were found.

(To be continued)

Medical Education and State Boards of Registration

COMING EXAMINATIONS

FLORIDA: Tallahassee, May 19-20. Sec., Dr. J. D. Fernandez, Jacksonville.
 GEORGIA: Regular: Capitol Bldg., Atlanta, April 30-May 1. Sec., Dr. E. R. Anthony, Griffin. Homeopathic: Atlanta, May 1. Sec., Dr. R. E. Hinman, 153 Whitehall St.
 LOUISIANA: Regular: New Orleans, May 20-21. Sec., Dr. Felix A. Larue, 211 Camp St. Homeopathic: 919 St. Charles St., New Orleans, May 3. Sec., Dr. Gayle Aiken, 1102 St. Charles Ave.
 MASSACHUSETTS: State House, Boston, May 11-13. Sec., Dr. Edwin B. Harvey, Room 159, State House.
 MISSISSIPPI: State Capitol, Jackson, May 11-12. Sec., Dr. S. H. McLean.
 MISSOURI: Kansas City, May 17-19. Sec., Dr. J. A. B. Adcock, Warrensburg.
 NEBRASKA: State Capitol, Lincoln, May 25-27. Secretary, Dr. E. J. C. Sward, Oakland.
 NEVADA: Carson City, May 3. Sec., Dr. S. L. Lee.
 NEW YORK: Albany, May 18-21. Dr. Charles F. Wheelock, Albany.
 TENNESSEE: Nashville, Memphis, Knoxville, May 4-5. Sec., Dr. T. J. Hoppel, Trenton.

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

Fifth Annual Conference, held at the Auditorium Hotel, Chicago, April 5, 1909

Besides the members of the Council, 90 delegates were present, representing 21 state examining boards, 15 state medical societies, 2 departments of the government services, 1 confederation of examining boards, 1 college association and 3 national medical associations, as well as 35 medical and liberal arts colleges.

CHAIRMAN'S ADDRESS

The conference was called to order at 10 a. m., by the chairman, Dr. Arthur Dean Bevan, who delivered the following address:

Gentlemen, Delegates from the state licensing bodies, from the state medical societies, from the National Institute of Homeopathy, from the National Eclectic Medical Association, from the medical college associations, from the confederations and associations of state licensing boards, from the United States Army and Navy Medical Corps and the Public Health and Marine-Hospital Service, from the schools of liberal arts, officers of the American Medical Association and invited guests.

The Council on Medical Education of the American Medical Association has invited you to this fifth annual conference to discuss the subject of medical education and to ask your advice and cooperation in the effort to elevate the standards of medical education in this country.

It might be well to briefly review the work of the four previous conferences. The first annual conference was held in Chicago April 20, 1905. At this conference the questions of preliminary education, medical curriculum and the relation of the college of liberal arts to the medical school were discussed. As a result of this discussion the Council formulated as the minimum standard of the American Medical Association the following:

MINIMUM STANDARD

(a) A preliminary education sufficient to enable the student to enter the freshman class of our recognized universities; (b) The passing on the credentials of such an education by a state official; (c) The graduation from an approved medical college

requiring a four years' course of not less than 30 weeks each year with 30 hours each week, of actual work. (d) The passing of an examination for licensure before a state board.

IDEAL STANDARD

The Council further formulated a so-called ideal standard which should be secured as rapidly as the conditions throughout the country warranted. This ideal standard was briefly as follows:

(a) A four year high school education, (b) a year's university training in physics, chemistry and biology, (c) four years of medicine proper, and (d) one year as interne in a hospital or dispensary.

THE SECOND CONFERENCE

At the second conference, held in Chicago, May 12, 1906, these standards were restated and probably the most important facts presented were the standings of the various medical colleges based on the failures of their graduates in examinations before state boards. The colleges were divided into three groups: Group I, colleges having less than 10 per cent. of failures; Group II, colleges having from 10 to 20 per cent.; and Group III, colleges having above 20 per cent. A fourth unclassified list was made of those colleges which had insufficient data to permit of comparison. These reports have been productive of much good in stimulating faculties to guard against the graduation of illy prepared students.

THE THIRD CONFERENCE

At the third conference, held in Chicago, April 29, 1907, a detailed report of a personal inspection made by members of the Council of all the medical schools of the United States was presented. In this inspection the schools were marked on a civil service basis consisting of ten points covering the essentials of a modern medical college, these 10 points making a possible 100. And on this basis the colleges as graded were divided into three groups. The result was as follows: An acceptable group of 82 colleges with marks from 70 to 100, a conditioned group of 46 colleges with marks from 50 to 70, and a rejected group of 32 colleges with marks below 50.

This personal inspection of colleges is being continued and the second inspection will soon be completed.

THE FOURTH CONFERENCE

The fourth annual conference held in Chicago, April, 1908, was from many standpoints the most encouraging and interesting of the series. The secretary, Dr. N. P. Colwell, was able to show, in a graphic study of medical education in the various states of the Union and in the twenty most important countries of the world, the comparative position of medical education in this country with that of the rest of the world. While many deficiencies were disclosed it was shown that more than fifty first-class schools in this country had agreed to accept what has been adopted by all the rest of the world, i. e., a five year medical course. This is to be brought about by adding to our present preliminary requirements of a four year high school course, at least one year of physics, chemistry and biology.

This advance requirement has become so general that it will doubtless be adopted by all first-class schools within the next few years and thus place American medical education on a par with that of England, France, Germany, Austria, Canada—in fact, with that of all our neighbors and rivals in progress and civilization.

In the study of medical education in this country, as we compare the existing conditions with those existing in Germany and England, we are shocked by our many shortcomings. However, we are tremendously encouraged by the progress that has been made in the last five or ten years, and are urged to redouble our efforts to secure uniform and acceptable American standards. This can be done only by wiping out of existence a large number of alleged medical colleges which at present disgrace American medicine.

AGENCIES AT WORK

In this effort to elevate standards and secure acceptable conditions in medical education many agencies are doing splendid work: The medical colleges themselves, the associations of medical colleges, the universities and colleges of liberal arts, the confederations of state boards, the medical societies, etc. Such conferences as we are having to-day also have much weight, and yet, after all has been said, the clear and definite fact remains that the legal power to control and elevate the standards of medical education rests entirely and alone with the state boards. It is in the power of the state boards to

so raise the preliminary requirements and to exact such fair and complete medical preparation as to secure for such states competent medical practitioners. While in some states the conditions of general education and public opinion are not such as would warrant the immediate exaction of proper standards, in most states the conditions would warrant such a stand at the present time. In the Middle West, for instance, if such states as Ohio, Indiana, Michigan, Illinois, Kentucky, Wisconsin and Iowa should do as is to be done in Minnesota, North Dakota, South Dakota and Colorado, demand of their medical men a higher preliminary education, including thorough work in physics, chemistry and biology, public and professional opinion would doubtless unanimously support them in such a position. Then the battle for higher medical standards in this country would be practically won. Even in the other states the general educational advance is such that proper standards can be demanded within the next few years.

Most of you are familiar with the fact that our northern neighbor, Canada, has just added the preliminary science year to her medical curriculum.

COLLEGE MERGERS

Another encouraging fact to be noted is the mergers being made among medical schools whereby stronger schools are resulting. Notably in Indiana, all of the regular schools in the state merged into the medical department of Indiana University, while in Kentucky all of the medical schools merged into the University of Louisville. In Cincinnati the two regular schools merged into the University of Cincinnati; in Minnesota Hamline merged into the medical department of the University of Minnesota.

There are numerous other cities where mergers might be brought about if those interested in general education and those in medical education in each city would work together to secure them. For example, if all the medical colleges of any large city, such as Chicago, Philadelphia, St. Louis or others could be merged into one great university medical school, such as are to be found in Berlin, Paris or Vienna, it would be of the greatest possible advantage to medical education in America.

In the evolution of general and medical education in this country it is becoming more and more evident that a well-rounded university needs a strong medical department and it is now equally clear that a medical school can not reach the highest stage of its development except as the medical department of a strong university. It is evident that within a few years the medical schools of this country will, with few exceptions, be the medical departments of universities. Fortunately for the medical school, the university needs the medical school quite as much as the medical school needs the university, so that almost any independent medical school of real merit can secure desirable union with a university. And this change will solve most of our present problems in medical education.

PRESENT DEMANDS

Briefly, what does the present situation of medical education demand for a satisfactory solution?

1. The passing of commercial medical schools and the merging of the better schools to form strong medical departments of universities.

2. Endowments both private and state for the proper maintenance of such medical departments. The experience of the last few years has shown clearly that the modern medical school needs such endowments, as it can not be properly supported on the fees of students, and it has been demonstrated that such endowments can not be secured for the independent medical schools.

3. As the most important public health measure each state should demand through its state licensing board complete and thorough medical preparation of those seeking to practice medicine within its boundaries. This must include (a) a proper preliminary education, (b), a thorough medical course pursued in a reputable medical college, and (c) a practical and thorough examination such as will be an actual test of applicant's ability to practice medicine.

The program of to-day consists of three topics: The report of a committee of 100 on the medical curriculum, the desirability and value of such curriculum, necessary equipment, etc., from the state board standpoint, and the question of making the state board examination more of a practical test of the candidate's ability to practice medicine.

This conference is purely informal. Its purpose is to elicit the widest possible discussion of the topics considered. It is

hoped that all delegates will take an active part in the discussions. It is my great pleasure to welcome you all in the name of the American Medical Association.

(To be continued)

Medical Education and Nostrums, Eighth Letter

This is the eighth of a series of letters issued jointly by the Council on Medical Education and the Committee on Medical Teaching of the Council on Pharmacy and Chemistry:

To Medical Teachers:—This letter contains some suggestions for the departments of chemistry, biochemistry and dietetics. Failure on the part of students to obtain a practical grasp of these fundamental sciences is the failure of a most powerful protection against the nostrum evils.

Chemistry.—Unscrupulous manufacturers traffic in the assumed ignorance of the medical profession concerning the most elementary facts of chemistry. Indefinite mixtures are given the appearance of scientific discoveries by endowing them with fictitious chemical formulas (see report on Acetanilid Mixtures, *THE JOURNAL*, June 3, 1905, p. 1791); or the true formula, or a correct but unusual chemical name, is used to mystify the physician and to conceal the nature of constituents which are commonly known under other names, for instance, Alleotone (*THE JOURNAL*, Oct. 17, 1908, p. 1346). The success of these practices reflects unfavorably on the efficiency of our chemical teaching. It is not to be expected that medical students can be trained into expert chemists in the time at our disposal; but it would be quite practical to point out the more obvious and common of these pitfalls, and thus guard them from many absurd situations. The "Propaganda" pamphlets contain the most conspicuous examples of these practices. These could be introduced as a diversion, say under the subject of acetanilid and referred to incidentally in other parts of the course, without taking up a serious amount of time. The discussion of some of the reports of the Association Laboratory could be made the basis of some instructive seminars in practical analytical chemistry.

Biochemistry.—The twilight state of our knowledge of ferment-action is peculiarly congenial to the mystery-cult of the nostrum-maker. The report on the Reed & Carnrick preparations would serve as a good illustration of the absurdity of over-speculation. We do, however, know certain empirical facts about ferments, which some manufacturers find it profitable to ignore. The mutually destructive action of pepsin and trypsin is a prominent example (see "Digestive Impossibilities," *THE JOURNAL*, Feb. 9, 1907, p. 533). The inferior digestive power of these and other proprietary mixtures, the variability of the ordinary preparations, as also the practical inactivity of the pretended ferments from unusual sources, such as the "nucleo-enzymes" and ingluvin (*THE JOURNAL*, July 11, 1908, p. 142); all these are matters of profitable interest to the student and could be demonstrated with little trouble. He should also be warned against the statements of digestive strength, based on biased methods, as shown in the report of the Council on diastase ferments (*THE JOURNAL*, July 11, 1908, p. 140).

The important fact that substances can not be supposed to act directly on the body unless they are absorbed can be conveniently demonstrated with some of the formaldehyd derivatives (*THE JOURNAL*, Sept. 5, 1908, p. 818).

Dietetics.—It is very important that students should be cautioned that many of the so-called "medicinal" liquid foods have practically no nutrient value, and that a patient is more easily starved than fed with them (*THE JOURNAL*, May 11, 1907, p. 1612). Similarly, the fact should be emphasized that "cod-liver oil without the grease" can not act as a nutrient (*THE JOURNAL*, Oct. 13, 1906, p. 1207).

Marriages

STEPHEN S. BARAT, M.D., to Miss Louise Clingman, both of Chicago, April 17.

HOWARD LEWIS, M.D., Elida, Ohio, to Miss Josephine Saunier, of Cincinnati, April 5.

R. C. PAISLEY, M.D., New Athens, Ohio, to Miss Pollock, of near Uniontown, Ohio, April 21.

GEORGE F. JUENEMANN, M.D., U. S. Army, to Miss Ruby Mulkey Ireland, at Pasadena, Cal., March 18.

NATHANIEL T. DULANEY, M.D., Blountville, Tenn., to Miss Mary Emma Gammon, of Bristol, Tenn., April 7.

Deaths

Harry Ogden Fairweather, M.D. Albany (N. Y.) Medical College, 1896; captain and assistant surgeon, Second Infantry, N. G. N. Y.; rhinologist and laryngologist to Troy Hospital, St. Vincent's Orphan Asylum, and the House of the Good Shepherd, Troy; a member of the Association of Military Surgeons of the United States and a veteran of the Spanish-American War; treasurer of the local board of United States Pension Examiners; a captain in the Troy volunteer fire department; died at the Troy Hospital, April 8, from the effect of a fracture of the base of the skull, sustained in a fall from a ladder while engaged in fighting a fire, two days before, aged 35.

Allen Vinton Smith, M.D. Rush Medical College, Chicago, 1880; assistant surgeon of the Eighth Ohio Infantry, U. S. V., during the Spanish-American War; a member of the Association of Military Surgeons of the United States; visiting surgeon to the Aultman Hospital, Canton; and a member of the city council and health officer of Canton; died at his home in that city, April 10, from heart disease, aged 53.

George G. Farnandis, M.D. University of Maryland, Baltimore, 1852; physician to the Baltimore Almshouse from 1856 to 1859 and 1870 to 1875; demonstrator of anatomy at the University of Maryland in 1860; surgeon in the Confederate Service throughout the Civil War; professor of surgery in Washington University, Baltimore, from 1871 to 1873; died at his home in Baltimore, April 4, aged 80.

Louis Raoul Stark, M.D. New Orleans School of Medicine, 1867; a member of the American Medical Association; one of the founders of, and professor of gynecology in the University of Arkansas, Little Rock; a Confederate veteran and assistant surgeon general of the United Confederate Veterans; died at his home in Little Rock, April 10, from erysipelas, aged 67.

Benjamin Franklin Miesse, M.D. Bellevue Hospital Medical College, New York City, 1865; surgeon of the One-Hundred and Forty-ninth Ohio Volunteer Infantry during the Civil War; for two years health officer, and for seven years a member of the school board of Chillicothe, Ohio; died at his home in that city, April 3, from nephritis, aged 68.

Henry C. Potter, M.D. Albany (N. Y.) Medical College, 1844; and for a short time one of the health officers of Utica, N. Y.; a founder, builder and vice-president of the Pere Marquette system; for many years a resident of Saginaw, Mich.; died at the San Ysidro ranch, near Santa Barbara, Cal., April 3, from senile debility, aged 85.

Arthur Hyatt Clark, M.D. College of Physicians and Surgeons, New York City, 1877; a member of the Minnesota State Medical Association, and Southwestern Minnesota Medical Society; for many years health officer of Worthington, Minn., and local surgeon of the Rock Island System; died at his home March 4, from uremia, aged 61.

Elbert Gilbert Benson, M.D. Washington (D. C.) Homeopathic Medical College, 1896; president of the Eclectic Board of Medical Examiners of the District of Columbia, and a member of the Board of Medical Supervisors of the District; died at his home in Washington, March 27, from pneumonia, aged 50.

William Taylor Duncan, M.D. McGill University, Montreal, 1882; a member of the American Medical Association; city physician of Fergus Falls, Minn.; formerly a member of the city council and coroner of Ottertail county; died in his office, April 7, from an accidental gunshot wound of the head, aged 53.

Charles Ernest Lancaster, M.D. Medical School of Maine, Brunswick, 1888; a member of the local board of U. S. pension examining surgeons; died at his home in Brunswick, April 5, from paralysis, following an accident in which he was thrown from his carriage, three weeks before, aged 46.

Louis Benjamin Durocher, M.D. University of the Victoria College, Coburg, Ont., 1853; later a professor in that institution; and afterward a professor and emeritus professor and dean of the Medical Faculty of Laval University, Montreal; died at his home in that city, April 5, aged 78.

Louis Stern, M.D. University of Würzburg, Germany, 1878; of San Francisco; one of the founders and a member of the staff of the German Medical Society; a specialist on diseases of the eye, ear, nose and throat; died in the German Hospital, April 7, from heart disease, aged 55.

Jonas L. Kline, M.D. Bellevue Hospital Medical College, New York City, 1867; a veteran of the Civil War, and for more than thirty years a practitioner of Schuylkill county, Pa.; died at the home of his sister at Catasauqua, March 25, from cerebral hemorrhage, aged 72.

Albert William Neufeld, M.D. College of Physicians and Surgeons, New York City, 1882; for many years chief pharmacist of the New York Dispensary; a fellow of the New York Academy of Medicine; died in Mount Sinai Hospital, New York City, April 11, aged 52.

Alva Buell Mayfield, M.D. Memphis (Tenn.) Hospital Medical College, 1893; a member of the State Medical Association of Texas; local surgeon of the Missouri, Kansas and Texas Railroad; died at his home in Mineral Wells, from uremia, February 14, aged 44.

Dewitt F. Ireland, M.D. Maryland Medical College, Baltimore, 1900; died in his office in Middlebourne, W. Va., April 4, from the effects of a gunshot wound of the heart, believed to have been self-inflicted with suicidal intent, aged about 40.

John L. Logan, M.D. Kentucky School of Medicine, Louisville, 1859; of St. Joseph, Mo.; a surgeon in the Federal service during the Civil War; fell on a slippery sidewalk in St. Joseph, January 18, and died a few minutes later, aged 72.

John Madison Munday (license, Ky., 26 years of practice, 1894); for more than forty years a practitioner of Mercer county, Ky.; died at his home in Pleasant Hill, near Harrodsburg, March 20, from carcinoma of the liver, aged 69.

Charles L. Buddenbohn, M.D. Washington University School of Medicine, Baltimore, 1873; coroner of the southwestern district of Baltimore county in 1898; died at his home in South Baltimore, April 7, from angina pectoris, aged 58.

Abijah D. Scruggs, M.D. Jefferson Medical College, Philadelphia, 1867; a member of the American Medical Association; a Confederate veteran; died at his home in Knoxville, Tenn., April 9, three weeks after a surgical operation, aged 66.

David A. Williams, M.D. Miami Medical College, Cincinnati, 1888; of Franklin, Ohio; a member of the American Medical Association; died suddenly from heart disease while watching a conflagration in that place, April 9, aged 49.

Hugh J. DeVer, M.D. University of Aberdeen, Scotland, 1875; for eight years surgeon in the British Navy; afterward a surgeon on transatlantic steamers; died at his home in Waterbury, Conn., April 9, from pneumonia, aged 56.

James Knight, M.D. Iowa Medical College, Keokuk, about 1860; license, Ont., 1869; a member of the Toronto Medical Association; died at the home of his son in Jerry, Wash., Dec. 26, 1908, from valvular heart disease, aged 75.

Harry Olin Lyford, M.D. Missouri Medical College, St. Louis, 1893; a member of the Oklahoma State Medical Association; president of the Sapulpa board of health; died at his home, March 25, from meningitis, aged 49.

Thomas William Carlaw, M.D. Trinity Medical College, Toronto, 1893; L.R.C.S. and L.R.C.P., Edinburgh, 1898; L.F.P. and S., Glasgow, 1898; died at his home in Campbellford, Ont., Nov. 5, 1908, aged 45.

Howard E. Mitchell, M.D. University of Maryland, Baltimore, 1882; of Ellerslie, Md.; died at the Western Maryland Hospital, Cumberland, April 6, forty-eight hours after having been struck by a train, aged 54.

Samuel Alonzo Hazen, M.D. New York University, New York City, 1878; for five years a member of the faculty of Columbia University; died at his home in Sharon, Pa., April 7, from nephritis, aged 65.

Oscar M. Barber, M.D. New York Homeopathic Medical College, New York City, 1871; for several years health officer of Stonington, Conn.; died at his home in Mystic, Conn., April 3, from gastritis, aged 71.

George A. Starkey, M.D. Louisville (Ky.) Medical College, 1884; of Waynesville, Ill.; a member of the Illinois State Medical Society; died in Eureka Springs, Ark., March 19, from leukemia, aged 51.

Andrew Bennett Gorham, M.D. Yale University, New Haven, 1879; a member of the Connecticut State Medical Society; died at his home in Wilton, March 30, from nephritis, aged 58.

John M. Pirtle, M.D. Kentucky School of Medicine, Louisville, 1852; a veteran of the Mexican War; died at his home in Los Angeles, Cal., March 28, aged 80.

David B. Milliken, M.D. New York University, New York City, 1854; a member of the American Medical Association; died at his home in Landisburg, Pa., Dec. 14, 1908, from angina pectoris, aged 75.

George Frederick Thomin, M.D. Medical College of Ohio, Cincinnati, 1869; formerly of Williamstown, Mo.; died at the home of his daughter in Butte, Mont., April 7, from cerebral hemorrhage, aged 61.

Oscar W. Slettengren, M.D. University of Upsala, Sweden, 1885; for several years surgeon on the Hamburg-American steamship line, died at his home in Boston, April 5, from pneumonia, aged 61.

James Knox Niven, M.D. McGill University, Montreal, 1901; M. C. P. & S., Manitoba; of Minnedosa, Man.; a veteran of the Boer War; died at the home of his father, in London, Ont., March 30, aged 30.

Thomas Theodore Hay, M.D. Medical College of the State of South Carolina, Charleston, 1845; died at his home in Raleigh, N. C., from uremia, following prostatic hypertrophy, March 4, aged 85.

George M. McKenney, M.D. Rush Medical College, Chicago, 1889; of Oregon, Ill.; a member of the American Medical Association; died in Amarillo, Texas, March 23, from ptomain poisoning, aged 44.

Milton Newberry, M.D. University of Pennsylvania, Philadelphia, 1855; for fifty-four years a practitioner of Montgomery county, Pa.; died at his home in Fort Washington, April 4, aged 79.

Homer Lawrence Mathews, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1874; for more than 60 years a practitioner; died at his home in Auburn, Neb., March 30, aged 85.

Bernard J. Downey, M.D. University of Michigan, Ann Arbor, 1895; for a time city physician of Ottawa, Ill.; died at the home of his parents in that city, April 7, aged 36.

Robert E. Barnes, M.D. University of Michigan, Ann Arbor, 1857; surgeon in the Army during the Civil War; died at his home in Galesburg, Ill., April 6, aged 78.

George Emit Martin, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1882; died at his home in Newkirk, Okla., March 22, from nephritis, aged 52.

Edward Pontney Irons, M.D. University of Maryland, Baltimore, 1855; assistant surgeon in the Army in 1865; died at his home in Baltimore, April 4, aged 84.

Isaac H. Lewis, M.D. Western Homeopathic College, Cleveland, 1857; one of the earliest settlers of David City, Neb.; died at his home April 3, aged 81.

Foster P. Utley, M.D. University of Vermont, Burlington, 1883; formerly of Syracuse, N. Y.; died at his home in Taberg, N. Y., April 6, aged 54.

Kelse Monjar Hoffman, M.D. Western Reserve University, Cleveland, 1870; died at his home in Clintonville, Pa., from anemia, February 21, aged 77.

Charles Lewis Seymour, M.D. Medical College of Ohio, Cincinnati, 1894; died at his home in Kingsville, Texas, February 15, from pneumonia, aged 43.

Frank Foster Crandell, M.D. Cleveland Homeopathic Medical College, 1903; died at his home in Turtle Creek, Pa., April 10, from pleurisy, aged 40.

Joseph B. Benson, M.D. McGill University, Montreal, 1875; first mayor of Chatham, N. B.; died at his home in that city, April 7, from pneumonia.

John H. Cramer, M.D. Missouri Medical College, St. Louis, 1861; formerly of Mandeville, Mo.; died at his home in Bogard, March 30, aged 72.

James Clinton Field, M.D. Louisville (Ky.) Medical College, 1882; of Americus, Ga.; died in the Macon (Ga.) Hospital, April 7, aged about 50.

Robert J. Harris, M.D. Louisville (Ky.) Medical College, 1890; postmaster of York, Ala.; died at his home April 3, aged about 45.

David M. Lines, M.D. Eclectic Medical Institute, Cincinnati, 1882; formerly of New Orleans; died in Tampico, Mexico, Dec. 7, 1908.

Brock Carter, M.D. École de Médecine et de Chirurgie, Montreal, 1846; died suddenly at his home in Montreal, April 5, aged 83.

Duncan A. Stewart, M.D. Trinity Medical College, Toronto, 1877; died at his home in Ailsa Craig, Ont., Dec. 1, 1908, aged 59.

Hosea Hudson (license, Neb., 1891); a pioneer physician of Nebraska; died at his home in Chappell, January 7, aged 81.

John A. Rogers, M.D. Cincinnati, 1843; died at his home in Kenton, Ohio, March 16, from senile debility, aged 89.

John W. Hulme (license, Tenn., 1889); died at his home in Santa Fe, Tenn., Dec. 1, 1908, from cystitis, aged 70.

Thomas W. Bedford, M.D. University of Louisville, Ky., 1861; died at his home in Chaplin, Ky., April 10.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Medical Legislation in Various States

The following items of interest regarding medical legislation have been reported since the publication of the last summary:

ARIZONA

The Arizona Medical Association is endeavoring to secure the passage of a bill making an appropriation for a bacteriologic and chemical laboratory in connection with the University of Arizona, for the purpose of making analyses of milk, water, foods, etc. Twelve hundred dollars is asked to maintain the laboratory.

ARKANSAS

S. B. 165, creating a separate board of medical examiners for physiomedical physicians, was defeated in the senate by a vote of seven to seventeen.

CALIFORNIA

The "naturopathic" bill, previously referred to, has been defeated.

COLORADO

A bill providing for a state board of osteopathy has passed the senate. A bill empowering the University of Colorado to conduct courses in medicine, pharmacy and chemistry at Denver as well as at Boulder, has passed both houses. H. B. 185, amending the medical practice act, has passed the house.

CONNECTICUT

Among the important bills before the general assembly is one providing for the establishment of a Connecticut Colony for Epileptics, authorizing the appointment of three commissioners to select and purchase a location and erect suitable buildings. The bill provides that the state is to pay \$200 annually for each patient in the colony, while the expenses of traveling and clothing are to be paid by the towns from which they come. An antivaccination bill to make it unlawful for any board of health, board of education or other public boards to compel the vaccination of any infant or to make vaccination a condition for attendance on any public or private school in the city, and the usual optometry bill, are also before the legislature.

DELAWARE

The legislature has passed amendments to the present vital statistics act which will bring Delaware in line with the other states and probably secure its admission to the registration area.

ILLINOIS

No change has taken place in the legislative situation in this state.

IOWA

The county hospital bill has become a law. It provides that on petition of any 200 persons resident in a county the board of supervisors shall order a special election to decide whether the county shall issue bonds to build and maintain a county hospital and tuberculosis sanitarium. If the election results

in favor of a hospital, the supervisors are to appoint a board of seven hospital trustees and to issue bonds for the erection of the hospital. A bill to consolidate the state boards of pharmacy and health, the state food and dairy commission and examining boards in medicine, chemistry and veterinary surgery, the department of tuberculosis of the state board of control and the office of the state veterinarian surgeon and to put all the boards and offices under the control of a state board of health, has been prepared by the executive committee of the state society. The bill provides for a board of three members to be appointed by the governor who shall devote their entire time to the work of the commission and receive a salary of \$5,000 each. This board is to have entire charge of all health matters in the state, including vital statistics, quarantine, dairy products, food and drugs, inspection of street cars, railway cars, hotels, restaurants, sewage systems, etc., as well as a bureau of publicity. The bill is said to have the endorsement and support of Governor Carroll. It is of interest, as representing the inevitable reaction from the multiple boards which have so markedly increased in past years.

MISSOURI

The vital statistics bill, patterned after the model bill on this subject drafted by and endorsed by the Committee on Medical Legislation of the American Medical Association, has passed both houses and become a law. This is probably the most important legislative advance made this year. The addition of Missouri, with the cities of St. Louis and Kansas City, to the registration area, is an enormous gain. The medical profession of the state and particularly those having charge of the legislative work, are to be congratulated on the success of their efforts.

NEBRASKA

H. B. 322, providing for the care of indigent consumptives, has become a law. It provides that any person afflicted with tuberculosis of the respiratory tract who is without means to pay for hospital treatment may be admitted to a suitable hospital on order of the Nebraska State Board of Health and given proper care and treatment at the expense of the state. Hospitals or sanitariums to which such patients are sent are required to use the most modern means of treatment. The expense of the care of such patients falls on the county in which the patient lives. On written application to the county judge on the part of the patient or some relative or friend the judge is to order a hearing and examine witnesses under oath. If the judge is satisfied that the application complies with the requirements of the law he must prove the application in writing and certify it to the county board, which must thereupon furnish transportation to some hospital in the state approved by the State Board of Health. This law involves a new principle, viz., that of a court declaring a citizen to be an invalid and entitled to public care. S. B. 18, creating a board of osteopathic examiners of five persons and H. B. 70, providing for the registration of trained nurses under the supervision of the State Board of Health, have become laws. The latter provides that examinations shall be held at least once a year which shall be limited to nurses of twenty-one years or over, with good moral character, who have received an education equivalent to that required for admission into high schools and who have graduated from a training-school, connected with a general hospital or sanitarium, requiring at least two years' training. Nurses graduating prior to Jan. 1, 1911, are permitted to register without examination. Only those registered by the board are to be known as registered nurses. Gratuitous nursing by friends or members of a family, of invalids, as well as nursing by persons who do not assume to be registered nurses is specifically exempt.

NEW YORK

The antivivisection bills introduced early in the session of the legislature have been killed, through the decision of the assembly committee on judiciary, which did not report either of the bills restricting animal experimentation. A bill providing for the appointment of not less than 10 or more than 60 physicians in each judicial district as medical expert witnesses

to serve in any civil or criminal action in the district has been introduced into the assembly.

NORTH CAROLINA

An optometry bill, similar to the bills introduced in other states, has become a law.

PENNSYLVANIA

The discussion over the Herbst-Shreve bill, previously referred to, has occupied much attention as well as a large amount of space in the newspapers of the state, and has been discussed from all points of view. The bill was subject to so much amendment and manipulation that it is exceedingly difficult to say just what was the final status of its provisions. Unusual public interest was shown in the matter and the entire question of state regulation of the practice of medicine has been generally discussed. The bill was finally dropped from the calendar on April 14, on motion of Mr. Shreve, who introduced it. An osteopathic bill, providing for a separate board of examiners, has been signed by the governor.

WEST VIRGINIA

An osteopathic bill has been introduced, also a bill creating a state board of control and a state board of regents consisting of three members appointed by the governor, which board shall have entire charge of all state institutions, educational and charitable.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month—Fourth Weekly Meeting

PARALYTIC DEMENTIA

SYNONYMS.—Dementia paralytica; progressive general paralysis; general paresis; general paralysis of the insane.

ETIOLOGY.—Age, sex, mental strain, alcoholism, heredity. Syphilis.

SYMPTOMS.—(a) Prodromal stage: Insidious onset, sleeplessness, tremors, irritability, depression, dull headache, general pains, malaise, digestive disorders. Mental symptoms: Loss of memory, errors in speech or writing, misuse of words, indifference of proprieties and higher sentiments; becomes extravagant, indulges in excesses. Physical symptoms: Facial paralysis, ocular palsies, Argyll-Robertson pupil, changes in reflexes, muscular tremors, difficulties in articulation, slight syncope, epileptiform seizures, gastric and visceral crises, tactile and pain sensibilities diminished. Course and duration of prodromal stage. (b) Established disorder: Mental symptoms: Failure of memory, diminished number of ideas, weakened judgment, lack of orientation, delusions (exalted or depressed), hallucinations and illusions, emotional irritability, loss of ethical and esthetic feeling. Physical symptoms: Peculiar articulation and writing (poetic), tremor, pupillary irregularities, changed reflexes, muscular weakness, apoplectiform and epileptiform crises, emaciation, trophic disorders. Occurrence of remissions, duration. (c) Terminal period: Progressive changes in mind and body. PATHOLOGY.—Changes in meninges, fluid, cortex, ependyma, ganglion cells, nerve fibers, blood vessels.

PARANOIA

ETIOLOGY.—Heredity, infantile cerebral disorders, physical and mental degenerative stigmata.

SYMPTOMS.—(a) Prodromal period, "Period of subjective analysis"; morbid tendencies, eccentricities, paresthesias of entire body, tinnitus, etc., lead to introspection and hypochondriac tendencies. Seeks explanation of sensations in himself, then in environment, becomes suspicious, distrustful, develops illusions and hallucinations, particularly auditory. (b) Persecutory period, "Period of delu-

sive explication"; delusions of persecution by unknown enemies, "they" attempt to destroy him; later believes some secret or religious order responsible; auditory hallucinations increase, delusions lead to homicidal attempts. (c) Expansive period. "Period of transformation of personality": delusions of grandeur, result of his attempt to explain cause of persecution, may be religious, political, erotic, etc. Character of delusions lead to paranoia religiosa, p. inventoria, p. reformatoria, p. erotica, p. querulans, etc. Mental condition of paranoiacs aside from delusions. Course and duration of each stage.

IDIOCY

DEFINITION.—Idiocy, imbecility and feeble-mindedness.

CLASSIFICATION (CLINICO-PATHOLOGIC).—Hydrocephalic, microcephalic, paralytic, epileptic, traumatic, sensorial, meningitic, myxedematous (cretinism), amaurotic, idiots savants.

ETIOLOGY.—(a) Degenerative Causes: Heredity (nervous and mental diseases in parents); pathologic heredity (tuberculosis, alcoholism, syphilis, etc., in parents), consanguinity, etc. (b) Adventitious Causes: (1) Gestational (maternal or fetal); (2) parturitional (difficult labor, instrumental deliveries, prematurity, etc.); (3) postnatal (trauma, cerebral diseases, febrile diseases, etc.).

DIAGNOSIS.—Physical condition, shape and size of head, cranial malformations and asymmetry. Anatomical stigmata, paralysis of limbs, morbid movements, nystagmus, atheosis, etc. Imperfect sensations, perceptions, sensory organs, Diagnosis of form and cause. Diagnosis of degree.

MONTHLY MEETING

Insanity in This State: (a) as Affecting Responsibility for Crime; (b) as Affecting Civil Rights.

Medical Treatment of the Insane.

Prognosis in the Different Forms of Insanity.

Medicolegal

No Defense Under Law that Deficient Milk Was as Given by Cow

The Second Appellate Division of the Supreme Court of New York holds, in *People vs. Bosch*, that under a law which provides that the term "adulterated milk" shall mean milk containing more than 88 per cent. of water or fluids, or less than 12 per cent. of milk solids, it was no defense to a prosecution for selling adulterated milk that the milk, as given by the cow, contained too much water.

To similar effect is the decision of the Supreme Court of California in the *Hoffman* case. Here the city of Los Angeles passed an ordinance establishing the standard of milk at 87.5 per cent. water, by weight, and 12.5 per cent. milk solids, of which latter at least 3.5 per cent. should be butter fat. It was charged that the ordinance was unreasonable and in restraint of trade in exacting too high a standard for the milk permitted to be sold, it being averred "that milk may come direct and pure in its natural state from the cow, and especially from Holstein cows, and yet be below the standard fixed by the city ordinance."

Now it may be, the Supreme Court of California says, that a municipality may pass an ordinance imposing a standard for milk which would be unreasonable, oppressive, in restraint of trade, and therefore void. It may even be, for aught this court can judicially know, that this ordinance is of that character. But the mere averment that milk below standard might come from one or another cow is not sufficient to tender an issue of this character.

Nor is it any objection to the validity of the ordinance that its regulatory provisions and the penalty for its violation differ from those of the state law. If prosecution is had under the state law, a defendant is entitled to the protection which the state law affords him; if under the ordinance, then his rights and duties are governed by that enactment.

Liability Under State Pure Food Law for Damages for Sickness of Consumer

The Supreme Court of Minnesota says, in the case of *Meshbeshier vs. Channellene Oil & Manufacturing Co.*, that the defendant sold to a retail grocer a quantity of oil, knowing that the same would be sold at retail to his customers for use in cooking their food. The plaintiff purchased of the grocer a quart of the oil for such purpose which consisted of about 40 per cent. of mineral oil and 60 per cent. of cotton seed oil. It was injurious to health. His food which he ate, was cooked in the oil, and he was thereby made seriously ill. This action was then brought to recover damages for the injuries so sustained. A judgment was rendered for the plaintiff, which is here affirmed.

It may be conceded, for the purpose of this appeal only, that, except for the state pure food laws, or similar statutory provisions, the allegations of the complaint in this case would not state a cause of action against the defendant; but, read in connection with the statute, the court holds that they stated a cause of action, for they showed a neglect to discharge the duty imposed by the state pure food statute and a violation of its prohibitions by the defendant. It was not necessary to plead the statute, as it is a public act. The statute prohibits and punishes as a misdemeanor the manufacture, sale, or offering for sale of any article as food, if it in itself is injurious, or if it contains any ingredient injurious to health. This statute is intended to protect the health of all of the people of the state. Clearly the plaintiff belonged to the class for whose benefit the statute was intended, and this case came within the rule that where a statute for the protection or benefit of individuals prohibits a person from doing an act, or imposes a duty on him, if he disobeys the prohibition or neglects to perform the duty, he is liable to those for whose protection the statute was enacted for damages resulting proximately from such disobedience or neglect. Negligence is implied from a violation of the statute, and the plaintiff's injuries resulted proximately from the defendant's failure to comply with the statute, for it sold the oil to the grocer, knowing that it was to be sold by him to his customers for food purposes.

The fact that the trial court did not find that the defendant knew that the oil was impure did not affect the question of its liability; for it was bound to know whether the article, which it sold to be retailed to the customers of the purchaser for food purposes, was sound, wholesome, and complied with the statute. This is a salutary and necessary construction of this pure food statute, which in this respect is analogous to statutes prohibiting the sale of liquor to minors, in construing which courts uniformly hold that an honest belief that the minor was 21 years of age is no defense.

Power of Health Officers and Liability of Counties in Contagious Disease Emergencies

The Supreme Court of Kansas holds, in the case of *Hawthorne vs. Board of County Commissioners of Cherokee County*, that a health officer appointed by a local board of health, having knowledge of any infectious or contagious disease, is required to immediately exercise and maintain supervision of such case, seeing that it is properly cared for and isolated. The performance of these duties involves expense, and the power to care for such diseased persons implies the authority to contract for medical attendance and nursing in an emergency which requires immediate action.

The county board has authority to examine and settle all accounts chargeable against the county, and to determine whether services which it is claimed were rendered by the order of the health officer were properly performed under his direction, and their reasonable value. It has the general control of the situation and of the expenditures, but in the circumstances disclosed in this case (where it was alleged that the existence of smallpox created an emergency requiring immediate action before a meeting of the board could be held) a previous employment by order of the board itself was not a condition precedent to the liability of the county.

The court says that the provisions of the Kansas statutes designed to enforce the quarantine and to prevent the spread

of contagion evince the legislative purpose to protect the health of the people through the prompt and vigorous action of the officers intrusted with these important duties. County commissioners are elected from the several districts of their counties, and some time is usually necessary in order to call and hold a meeting. If it should be held that formal action of the board is necessary in order to establish a quarantine, obtain medical attention, and perform the like duties required by the law in each particular case, the law might, and probably would, prove inadequate to secure the end manifestly intended. The law therefore devolves these administrative duties on the health officer, requiring him to immediately exercise and maintain a supervision over such case or cases, seeing that all such cases are properly cared for and isolated.

If it should be held that the financial inability of the persons under treatment is a condition precedent to the liability of the county for their care, it should also be held that the fact that the proper officer has made an examination and taken the action raises a presumption at least that they were so unable, for public officers are presumed to have properly performed their duties. Suppose, however, a person able to pay should refuse to take the precautions, and observe the requirements of the law, although ordered by proper authority; is the health officer powerless to provide for the quarantine and the care necessary to prevent the spread of contagion? It might be that the persons benefited would be liable to refund to the county or city, as the case might be, the amount so expended. The court does not decide this matter now, for such a case was not presented in this record.

It was said that the court must presume that the county had a poor farm and that in such case relief could not be given elsewhere. The court can not presume however that the county had the necessary conveniences at such farm to isolate smallpox patients. On the other hand it must presume that the county had not or that it was impracticable to use them in the emergency because of the fact that the proper officer provided for quarantine and attendance elsewhere.

The defendant board of county commissioners relied on the opinion in *Smith vs. County of Shawnee*, 21 Kan. 669, wherein it was held that a county maintaining a poor house was not liable for such services, but that decision was made before the statutes hereinbefore referred to were enacted, and even then it was said in the opinion "that an enlightened liberality, as well as a cautious prudence, would justify the commissioners in making a reasonable appropriation for the services"; the services in that case having been rendered by a physician for a smallpox patient on the request of the township trustee.

As the services in the present case were rendered to a family residing in a township and not in a city, the county board of health had jurisdiction, and the plaintiff's services as nurse were properly chargeable against the county.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

April 10

- 1 *The Cammidge Reaction in Diseases of the Pancreas. F. P. Kinnicutt, New York.
- 2 *Rational Treatment of Tabes Dorsalis in Relation to Its Pathogenesis. T. A. Williams, Washington, D. C.
- 3 The Three Ureteral Isthmuses. B. Robinson, Chicago.
- 4 Proper Teaching of Therapeutics in Medical Schools. G. F. Lutler, Chicago.
- 5 Diagnosis and Treatment of Diabetes Mellitus. J. D. Dunham, Columbus, Ohio.
- 6 *History of Tuberculosis. G. F. Laidlaw, New York.

1. **The Cammidge Reaction.**—During the past fifteen months Cammidge's pancreatic test has been applied in all cases of suspected pancreatic disease, of cholelithiasis, cholecystitis and diabetes admitted to Kinnicutt's wards in the Presbyterian Hospital. Out of 51 cases 13 gave positive reactions, 38 negative reactions. He summarizes the cases, briefly reviews the literature, and concludes that a review of the studies, to

the present date, of the urine, both in clinical and experimental pancreatic disease, indicates that, while the pancreatic reaction is not pathognomonic, it is strongly suggestive, of inflammatory and destructive lesions of the pancreas, and is of much assistance in diagnosis in association with other clinical evidence of disease of this organ.

2. **Tabes Dorsalis.**—Williams points out that empirical treatment may succeed in curing disease when the factors are quite simple, and points to quinin in malaria, mercury in secondary syphilis and outdoor life in a good climate in tuberculosis as examples. But patients have been made quite uncomfortable by quinin, while mercury and open-air treatment have failed, respectively, in syphilis and tuberculosis. We now know that these drawbacks and failures were due to lack of understanding of the precise relationship of the remedy to the cause of the disorder. To a similar lack of knowledge must be attributed many failures in the treatment of tabes dorsalis by mercury. Now that the syphilitic origin of tabes has been put beyond doubt, many are inquiring why mercury failed in the past and whether it can not succeed in the future. Williams reviews the pathogenesis of tabes, and concludes that it is to other causes than the nature of the noxa that we must ascribe the failure until now of specific therapy. These causes he believes to be threefold: (1) Faulty methods of administration; (2) hasty generalization; (3) overexpectation. It is only by inserting mercury directly into the body in known quantities that we can commensurately antidote the noxa of syphilis with the minimum of injury to the patient's tissues. It is only by this method that it is fair to judge the specific therapy of tabes and paresis, and recent results have justified hopefulness, for numerous cures are being reported. This does not, of course, mean a restoration of degenerated tissues. The moral is the imperative need of early diagnosis of the sometimes fleeting and obscure neuralgia, vertigo, urinary and gastric difficulties, etc., which so often precede locomotor symptoms of tabes dorsalis. A careful neurologic diagnosis, sometimes including examination of cerebrospinal fluid, would enable us to anticipate many a locomotor ataxia. The Wassermann reaction will enable us to dispense with much neurodiagnostic lore and skill; but the installation for this is very complicated, and therefore not available except in certain large centers; and in any case a certain knowledge of neurologic signs is required before one can even suspect incipient tabes or paresis.

6. **Tuberculosis.**—Laidlaw reviews the history of tuberculosis, and shows that the trend is toward a vitalistic attitude to the use of remedies, which, instead of attempting to do things themselves, stimulate the body tissues to protect themselves by setting the body's own protective apparatus in motion.

New York Medical Journal

April 10

- 7 The County Medical Society. J. R. Goffe, New York.
- 8 *Economic Housing of Consumptives, with Special Reference to the Southwest. P. M. Carrington, Fort Stanton, N. M.
- 9 *Schema for Classification of Patients on Examination. L. D. Fricks, Fort Stanton, N. M.
- 10 Flatfoot. F. E. Peckham, Providence, R. I.
- 11 *Intra-Abdominal Injection of Oxygen as Studied in Animals. H. D. Mecker, New York.
- 12 *Chronic Dilatation and Prolapse of the Stomach. A. E. Benjamin, Minneapolis.
- 13 Neuroretinitis Due to Typhoid. J. V. Clothier, Philadelphia.
- 14 Paralytic Conditions of Childhood. C. Rosenheck, New York.

8. **Economic Housing of Consumptives.**—Carrington points out that the large number of health seekers suffering from tuberculosis who are crowding into the arid climate of the southwest, and particularly into New Mexico and Arizona, is making a great problem in their being cared for. A large proportion of them are indigent, and the burden falls very heavily on the public charges of small towns that are called on to support them. Moreover, the initial difficulty of impressing on the people the communicability of tuberculosis has, not unnaturally, led to a very decided phthisiophobia as a reaction. Carrington, as one who himself sought and gained health in the southwest, has a great sympathy for those poor victims of tuberculosis who come to the southwest

with barely sufficient funds to reach their destination, in the hope of finding light employment which will maintain them until the climate shall effect a cure. He suggests the solution of the problem by means of the tent house, as developed at Fort Stanton Sanatorium, and now being more extensively used in the southwest. He points out to physicians the necessity of being slow in advising such patients as have not means to pay their own expenses, from coming to the southwest until private and public charity shall have had time to provide sanatoria.

9. Classification of Tuberculous Patients.—Frieks discusses the various classifications of tuberculosis that have been suggested, including that adopted by the National Association for the Study and Prevention of Tuberculosis, and suggests the following classification:

Incipient:

1. Infiltration limited to one or both apices or a small part of one lobe.

(x) a. With slight constitutional symptoms, such as malaise, variations of temperature or acceleration of pulse.

b. Without marked constitutional symptoms, such as gastric and intestinal disturbances, high fever—101.3 F.—or rapid loss in weight.

c. Without tuberculous complications.

d. Without noticeable impairment of function.

e. With or without expectoration or tubercle bacilli.

Moderately advanced:

2. Infiltration involving more than the apices or a small part of one lobe up to two lobes.

3. Consolidation limited to one or both apices or to a small part of one lobe with or without infiltration up to two half lobes.

4. Disseminated fibroid deposits with evidence of active process.

f. Without cavity formation.

(x) g. With marked constitutional symptoms.

h. Without serious tuberculous complications.

i. Without marked impairment of function.

Far advanced:

5. Consolidation or infiltration involving more than 2 or 3.

6. Extensive fibroid process with evidence of active process.

j. With or without cavity formation.

(x) k. With marked constitutional symptom.

l. With or without serious tuberculous complication.

m. With or without marked impairment of function.

He discusses in detail those items marked (x). His suggestion is based on two years' examination and report of tuberculous patients on their arrival at the U. S. Marine-Hospital Sanatorium, Ft. Stanton, and a running discussion of the national association's classification by the different medical officers who have been stationed at the sanatorium.

11. Intra-abdominal Injection of Oxygen.—Meeker reports a case of tuberculous peritonitis in which Dr. W. S. Bainbridge injected oxygen into the abdomen with beneficial results. He records a series of experiments on animals undertaken to determine the value of the procedure and establish it on a scientific basis. He says that a study of experiments on the intra-abdominal introduction of oxygen in animals permits of the following conclusions:

1. Oxygen is completely absorbed from within the abdominal cavity.

2. Oxygen is a slight respiratory stimulant.

3. Oxygen is a slight cardiac stimulant.

4. Oxygen has but little effect on blood pressure when the pressure of the gas is moderate.

5. Oxygen tends to bring an animal out quickly from deep anesthesia.

6. Oxygen hastens the recovery of an animal after discontinuance of anesthetic.

7. A pressure of more than 1,800 mm. of water may cause collapse.

8. Oxygen tends to prevent the formation of adhesions. It does so more effectively than any inert gas.

9. Oxygen quickly changes a dark blood to scarlet in cases of anoxemia.

10. Oxygen stimulates intestinal peristalsis.

11. Oxygen is not an irritant to the peritoneum or abdominal viscera.

He describes the technic of administration in the human subject, reports five cases in which it was used, and cautions against the tendency to collapse after the oxygen has been absorbed. He holds that the animal experiments and the results witnessed in the human subject justify the intra-abdominal use of oxygen in surgical therapy.

12. Abstracted in THE JOURNAL, Jan. 16, 1909, p. 236.

Lancet-Clinic, Cincinnati

April 10

15 The Wassermann Diagnostic Test for Syphilis. M. L. Heidingsfeld, Cincinnati.

16 The Fly—An Etiologic Factor in Intestinal Disease. A. E. Osmond, Cincinnati.

17 The Child—What of Its Future? W. E. McKinley, St. Joseph, Mo.

Journal Arkansas Medical Society, Little Rock

February

18 Sarcoma of the Kidney. C. E. Bentley, Little Rock.

19 Rare Cases in Obstetrics. H. C. Dunavant, Osceola.

20 *The Management of Abnormal Labor. C. K. Caruthers, Pine Bluff.

21 Unreliability of Murmurs. N. S. Word, Camden.

20. Abstracted in THE JOURNAL, July 18, 1908, p. 249.

Journal of Biological Chemistry, Baltimore

March

22 *Spontaneous Oxidation of the Sugars. A. P. Mathews, Chicago.

23 Spontaneous Oxidation of Cystein. A. P. Mathews and S. Walker, Chicago.

24 Action of Cyanids and Nitrites on the Spontaneous Oxidation of Cystein. A. P. Mathews and S. Walker, Chicago.

25 Soil Fatigue Caused by Organic Compounds. O. Schreiner and M. X. Sullivan, Washington, D. C.

26 The Preparation of Glyoxylic Acid as a Reagent. S. R. Benedict, New Haven, Conn.

27 Critical Hydroxylion Concentrations in Diastatic Hydrolysis. C. Quinan, San Francisco, Cal.

28 *Studies on Enzymes: II. The Diastatic Enzyme of Paramecium in Relation to the Killing Concentration of Copper Sulphate. A. W. Peters and O. Burres, Champaign, Ill.

29 *Bleaching of Flour. E. T. Ladd and H. P. Bassett.

22. **Spontaneous Oxidation of the Sugars.**—Mathews tries to answer the question: Why do sugars oxidize more readily in the tissues than outside the body? Levulose oxidizes rapidly in alkaline solution and the other sugars oxidize at about the same speed in alkaline solution and about one-fourth as fast as levulose. The oxidation for sugars, except levulose, is most rapid in a solution of the concentration of about 2 N. sodium hydroxid. Stronger alkali reduces the rate of oxidation. These experiments show that the main reason for the slow oxidation of glucose in the air is, not lack of active oxygen, but the fact that the molecule of sugar is not activated. The activation is brought about by a preliminary ionization in an alkaline solution. It is possible that a similar process may take place in living matter, some substance being present which unites with the glucose molecule and brings about its dissociation. This substance may be a specific agent responsible not only for the oxidations, but for all the other more important metabolic activities of protoplasm. For such substances Mathews suggests the term *metabolases*, since they hasten metabolism. Under the term *oxidases* there have hitherto been confused two classes of substances; one which activates the oxygen, such as iron; the other, the more important class, which activates by dissociation of the reducing substances. The latter are specific, the former are not.

28. **Studies on Enzymes.**—Peters and Burres have studied the action of copper sulphate on paramecium and find that in the very low concentration of one part of hydrated copper sulphate to 20,000 parts of water the salt inhibits the action of diastase and quickly kills the animals. They suggest that inasmuch as the concentration necessary to check enzymic action is sufficient to kill the animal, it is probable that mineral poisons which kill in minute doses act by inhibiting the action of enzymes essential to life.

29. **Bleaching of Flour.**—Flour is bleached commercially by the action of the fumes of nitrous acid or nitrogen peroxid. Ladd and Bassett have shown that nitrites or nitrates or nitrite-reacting or nitrate-reacting material are among the products formed in the flour, and that bread baked by the domestic method will contain from one-third to one-half the nitrite-reacting material found in the flour. The proportion of nitrates in the bread increases as the nitrites decrease, the proportion depending on the method of baking. The bleaching agent acts both on the fat and on the gluten of the flour. The gluten of the flour is less digestible than that of unbleached flour and the baked gluten or bread made from bleached flour shows a similar but smaller difference in digestibility. The experiments show that the process of bleaching is essentially different from the natural ageing of the flour.

New York State Journal of Medicine, New York

March

30 *The Modern Hippocrates. A. Jacobi, New York City.

31 Mineral Waters of Saratoga. D. C. Moriarty, Saratoga Springs.

32 *Improvements in the Technic of the Extraction of Cataract. L. Howe, Buffalo, N. Y.

- 33 *The First Interview with the Patient. W. S. Ely, Rochester.
 34 *Intramuscular Injections in the Treatment of Syphilis. V. C. Pedersen, New York.
 35 Senile Changes in the Prostate. N. Jacobson, Syracuse.
 36 *Problems Relating to Prostatectomy. L. B. Bangs, New York.
 37 Clinical Aspect of the Enlarged Prostate, with a Review of 67 Cases. J. N. Vanderveer, Albany.

30. **The Modern Hippocrates.**—After discussing the pathology, anatomy and physiology of Hippocrates, Jacobi deals with his prognostics. That he realized the great importance of prognosis is shown by the following sentence from his works: "It seems to me best for the physician to acquire practice in the production of the termination of a disease, for when he knows before and predicts the present state of his patient, and the past, and the future, also such things as the patient omits in his report on his condition, people will have firm confidence in him and in his superior knowledge and will entrust themselves to him." Jacobi describes the range of the Hippocratic prognosis and points out that the science and knowledge of prognosis differ for the modern clinician from the Hippocratic in the same degree as his nosology. Jacobi gives numerous instances in illustration of this point. He insists on the fact that there is both for prognosis and salvation no end of legitimate hope, "the best stimulant of the nervous and circulatory system." Sixty years ago an American was held up to ridicule for his report on the incision of an accessible brain abscess; to-day the apparently inaccessible large or small tumor or abscess is diagnosticated and removed and the doomed patient is cured.

He caustically discusses the running to seed of modern specialism, and points out that the exaggeration of specialistic tendencies is more extensive among the public than among medical men.

He sums up the modern Hippocrates as follows: "Our modern Hippocrates objects both to the therapeutic pessimism of the uninformed, or the mere naturalist, and to the optimism of the dilettanti who, mostly in the pay of the manufacturers, eulogize the latest synthetic chemical, which benefits the writer and his employer, if not the sick. He is also aware that pharmacology and the clinic have got too far apart from each other."

Of the ideal teacher he says that "he knows how to distinguish functional weaknesses from genuine disease, and recognizes the fact that the latter has stages with adaptable therapeutic indications; that a scientific diagnosis can be made on hills and in hamlets, but not without previous clinical and laboratory teaching, and that for city and country we should know enough and be diligent enough, to do most of our tests ourselves, and not to rely exclusively on the knowledge or honesty of laboratories; that a close study of a moderate number of ordinary cases is best for the instruction of the doctor embryo and not the hustling through wards filled with practically inaccessible material; that the same disease is not the same disease in different seasons, climes, constitutions and ages; that with every advancing decade there are increasing complications of lesions and symptoms, and of diagnosis, simple in the infant or child, which become more difficult from year to year and whose prognosis is more problematical—indeed I do not know whether all our rising pediatric specialists have an idea of how difficult a task it is to become a real all-around doctor. The modern Hippocrates keeps his hands clean like Billroth, and cleaner than the ballroom dandy, and teaches how to do much with very little."

32. Abstracted in *THE JOURNAL*, Feb. 6, 1909, p. 496.

33. Abstracted in *THE JOURNAL*, Feb. 20, 1909, p. 657.

34. Abstracted in *THE JOURNAL*, Feb. 13, 1909, p. 580.

36. Abstracted in *THE JOURNAL*, Feb. 20, 1909, p. 657, and published also in *American Journal of Urology*, March, 1909.

Therapeutic Gazette, Detroit

March

- 38 Purulent Diseases of the Middle Ear—The Treatment of Meningeal, Sinus, and Labyrinthine Complications. S. M. Smith, Philadelphia.
 39 *Untoward Results from Diphtheria Antitoxin, with Special Reference to Its Relation to Asthma. H. F. Gillette, Cuba, N. Y.

- 40 Treatment of Acute Gonorrhea in the Male. H. M. Christian, Philadelphia.
 41 *Treatment of Convulsions in Infancy and Childhood. J. H. McKee, Philadelphia.

39. Abstracted in *THE JOURNAL*, Feb. 13, 1909, p. 580.

41. **Convulsions in Infancy and Childhood.**—McKee enumerates as follows the causes of convulsions in a "chronologic order": (1) Neurotic inheritance; (2) intrauterine affections of the brain or circulatory apparatus; (3) causes operative at birth; (4) causes that operate soon after birth; (5) the most common causes of eclampsia in infancy is rickets; (6) the diarrheal diseases (principally infectious) of the first and second years; (7) meningitis; (8) brain tumors; (9) hydrocephalus; (10) poliomyelitis; (11) poliomyelitis; (12) the infectious diseases of severe type; (13) nephritis; (14) severe hemorrhage; (15) mineral poisons such as lead; (16) alkaloidal and other drugs; (17) embolism and thrombosis; (18) epilepsy. For practical purposes, when we exclude organic affections of the brain, heart, lung or kidney, the underlying state in infantile eclampsia is usually rickets, or nervous heredity. McKee discusses preventive treatment; the instruction of the mother concerning her physical and psychical life during pregnancy, and her protection from emotional storm and mental shock; preventive possibilities of good obstetric knowledge and skill; attention to the hygiene of the baby, with its intelligent medical supervision. Most convulsions should be viewed as wholly preventable occurrences for which parents, caretakers or lack of medical foresight are to blame. McKee knows no more uniformly dependable agent, in treatment of attacks, than chloroform. It is good practice, while the patient is anesthetized, to wash out the bowel with warm normal saline solution, permitting several ounces of the fluid to be retained. In a recent case the injection of a second quart of saline solution in a 17 months' old baby brought forth to McKee's astonished gaze, 8 inches of sewing silk, 82 inches of darning cotton, and hair from the tail of a rocking horse. Washing out the stomach is safer than emetics. These measures should be supplemented with a large dose or broken doses of calomel, followed with a single dose of castor oil or spiced syrup of rhubarb. Bromid and chloral he recommends to prevent recurrences, the latter drug by the rectal route, with sufficient starch to render it unirritating. Other measures mentioned are the coal-tar products, hydrotherapeutic agents, stimulants, bloodletting, oxygen, artificial respiration and massage of the heart, lumbar puncture, and puncture of the lateral ventricle.

Journal of the Missouri State Medical Association, St. Louis

March

- 42 Endocarditis. J. S. Triplett, Harrisonville.
 43 Excision of the Lacrymal Sac as a Radical Cure for Chronic Inflammatory Processes Thereof. L. Williamson, St. Louis.
 44 Fissure in Ano. W. H. Coffey, Kansas City.
 45 *The Prostate as a Factor in Nervous Disease. J. L. Boehm, St. Louis.
 46 The Preparatory and After-Treatment of Surgical Cases. J. N. Barger, Albany.
 47 Case of Gumma of External Nose. J. S. Wever, Kansas City.
 48 *What Major Operations Should be Attempted in Private Houses. O. Putman, Marceline.
 49 The Doctor in Politics; or His Civic Responsibilities. E. G. Beers, Springfield.
 50 Optometry, or Practice of Medicine Made Easy. L. Williamson, St. Louis.

45. **The Prostate and Nervous Disease.**—Boehm says that the prostate and its appendages when diseased have a special influence on the nervous system, and are to the neurotic male what the uterus and tubes are to the female and must always be carefully examined in neuroses. Apparently simple disturbances of the prostate may cause serious reflex neurotic conditions because of the complexity of the nervous mechanism surrounding and supplying it. The question of an internal physiologic section and the possibility of the lecithin and organic constituents of prostatic secretion serving as a nutritive factor to nerve metabolism, has not as yet been scientifically determined. Spinal asthenia and cerebral exhaustion are very common, often ascribed to overwork at the office or in literary pursuits, but not always recognized as dependent on a diseased prostate. In cases of sexual crimes and criminal perversion, an intrapelvic and extrapelvic examination of the genitalia of the accused should be made by expert neurologists

at the same time that the expert neurologists examine the mentality. Jurists should recognize the mental condition of the fiend or pervert, who commits sexual crimes as not always due to a hereditary taint, but as commonly the result of some previous urethral disease, uncured at the time. From this chronic diseased condition sexual mania results. There is a medical aspect to the recent lynching and riots because the fiends responsible are diseased and not human monstrosities. Temporary sexual insanity is a reality as much as a deranged mentality caused by typhoid fever or some condition of hyperpyrexia.

48. Operation in Private Houses.—Putman divides the major operations that can be attempted in private houses into two classes: First, the emergency cases that are the result of direct violence, i. e., high amputations, trephining, gunshot wounds, etc. There is another class of emergency cases that are not the result of direct violence, but call for quick judgment, and, more often, immediate operation. This class contains the greatest number of major operations that physicians are called on to do in private houses. Among these are: (1) Obstruction of bowels; (2) operation for appendicitis during attack; (3) operation for mastoid disease; (4) Cesarean section; (5) ectopic pregnancy; (6) strangulated hernia; (7) tracheotomy. He discusses these as follows:

1. There is little to say concerning ileus, but if the classical symptoms of obstruction are present and repeated high injections of water with the patient in the knee-chest position, fail to move the bowels, then the operation should be attempted at once. The high mortality rate following this operation is often due to postponing it until the patient is too weak and the adhesions are too firm to be broken.

2. In the operation for appendicitis during the attack, we should be guided by the severity of the attack, taking into consideration the number of preceding attacks. If it is the first or second attack and the symptoms point toward rupture of the appendix the operation should be done and it will be easier than when the rupture occurs in a case where there have been several attacks before. There will not be so many adhesions and they are not likely to be so firm. On the other hand, if the appendix ruptures, after a number of previous attacks, the operation could be more safely postponed. The adhesions would have walled off the pus from the abdominal cavity.

3. Mastoid disease often calls for prompt interference. It is a life saving operation and does not demand the strict aseptic surroundings of other major operations. It is merely opening an abscess and can be done just as well in a barn as in a hospital, for after reaching the pus, the field of operation will necessarily become infected.

4 and 5. Without raising the question of when cesarean section or operation for ectopic pregnancy is demanded, I will only state that both operations can be safely carried out in private houses and are probably done there more often than in the hospital.

6. Strangulated hernia demands an early operation to be successful and no time should be consumed in transporting the patient to a distant hospital. The patient should be prepared for operation at once, after reduction under chloroform has been tried.

7. Tracheotomy is the last-named of the emergency operations that should be classed as a major operation. When indicated, it should be carried out as quickly as the consent of the parents can be gained.

American Medicine, New York

March

- 51 An Appeal for the Sake of Man and of Medicine. G. M. Gould, Ithaca, N. Y.
- 52 Leprosy in Norway. H. L. Shively, New York.
- 53 Grippe—Its Etiology and Methods of Transmission. W. C. Schoenijahn, Brooklyn, N. Y.
- 54 Critique of So-Called Modified Radical Mastoid Operations. S. J. Kopetsky, New York.
- 55 Electricity in Treatment of Exophthalmic Goiter. A. R. Rainear, Philadelphia.
- 56 Prognosis and Treatment of Laryngeal and Pulmonary Tuberculosis. D. Robinson, New York.
- 57 Von Pirquet and Moro Tests in the Diagnosis of Tuberculosis. F. L. Christian, Elmira, N. Y.
- 58 Principles and Technic of Serodiagnosis of Syphilis. G. H. Fox, New York.
- 59 Congenital Pyloric Obstruction. M. O. Magid, New York.
- 60 Primary Tuberculosis of the Conjunctiva. E. Torok, New York.

Journal of Nervous and Mental Disease, Lancaster, Pa.

March

- 61 *Study of the Axis Cylinders in Five Cases of Glioma Cerebri. C. M. Byrnes, Charlottesville, Va.
- 62 Blastomycotic Lesions of the Brain. E. R. Le Connt, Chicago.
- 63 Decompression for Cerebral Thrombosis. J. J. Thomas and F. B. Lund, Boston.

61. **The Axis Cylinders in Glioma Cerebri.**—Byrnes says that it is not infrequently observable in a variety of neuropathologic conditions—multiple sclerosis, tuberculoma, areas of compression and especially glioma—that the necropsy reveals a much more extensive process than could have been even suspected from a most thorough clinical examination. It

is known that gliomata may exist for months, or even years, without causing either general or localizing symptoms of brain tumor. He asks: How are we to explain this persistence of function and absence of degenerative changes where the cerebral tissue is extensively involved? And, how are we to account for the apparently rapid cases which show a pathologic state similar to those existing for months or even years? After reviewing the theories that have been offered in explanation of these facts, he reports a study of five specimens of glioma, to show that in simple cerebral gliomata persistence of function and absence of degenerative changes in the spinal cord may be explained on a definite histologic basis. The summary of this study and the conclusions drawn are as follows:

1. In three of his five cases nerve fibers were found in the substance of gliomatous tissue by both Weigert and Bielschowsky methods.

2. Two of the cases showed an entire absence of fibers, or even myelin droplets by the Weigert method, while unmistakable axis cylinders could be seen in the silver preparation made from the same blocks of tissue. This is due, no doubt, to the greater vulnerability of the myelin sheath and its early disappearance. Thus there is certainly not a very intimate relationship between this sheath and the axis cylinders, and Brodmann maintains that there is no relation between myelinization and the formation of fibrils. Consequently, in such cases studied by the Weigert method alone, the absence of fibers in the tumor and the failure to find degenerations in the spinal cord led to the most obvious conclusion, that the fibers had been pushed aside.

3. In all five cases a great many more nerve fibers (axis cylinders) were found by the silver method than in the Weigert preparation.

4. In the fifth case, the entire pons was involved, and there was no evidence of the pyramidal fasciculi on gross examination, yet a section from the tumor substance, treated by the Bielschowsky method, showed an enormous number of normal axis cylinders; the anterior pyramids showed no degeneration in either longitudinal or transverse sections; and the Betz cells in the greater part were quite normal. Considering, then, the location of this tumor, its long duration, the absence of marked symptoms pointing to upper segment involvement, and the microscopic findings, it seems reasonable to conclude not only that nerve fibers are retained in gliomatous tissue, but that a large number persist as uninterrupted axones, passing through the tumor substance.

Western Medical Review, Omaha

March

- 64 *The Lower Femoral Epiphysis. B. F. Lorange, Auburn, Neb.
- 65 *Acute Dilatation of the Stomach. A. I. McKinnon, Lincoln, Neb.
- 66 *Plea for More Conservatism in Appendicitis as to Time of Operation, with Treatment of Acute Cases. O. Grothau, Kearney, Neb.
- 67 *Appendicitis. H. W. Quirk, Crete, Neb.
- 68 *Management of Placenta Prævia. C. Rosewater, Omaha, Neb.
- 69 Traumatic Gangrene. H. E. McCollum and H. L. Stevens, Laramie, Wyo.

64, 65, 66, 67. Abstracted in THE JOURNAL, July 4, 1908, pp. 67-68.

68. **Placenta Prævia.**—Rosewater describes the treatment of placenta prævia as follows:

In placenta prævia centralis use vaginal and cervical tamponade, separate a portion of the placenta and do version slowly, delivering the fetus after the hip has appeared; or go boldly through the center of the placenta and do a version as already outlined; or do a cesarean section, particularly if the os will not dilate.

In placenta prævia other than central, use vaginal and cervical tampons to control hemorrhage and dilate os; then do bipolar version; or if the vertex presents, simply rupture the membranes and if pains are good leave to nature the balance of the work; if the pains are weak apply forceps and deliver cautiously.

Check postpartum hemorrhage by intrauterine tamponade, ergotin, strychnin and massage of the uterus. Sustain and support patient all through progress of the case.

Analyzing the question from another standpoint, we have four indications to fulfill: (1) To check hemorrhage before or after delivery; (2) to deliver; (3) to prevent shock; (4) to prevent sepsis.

1. *To check hemorrhage.*—Use vaginal, and when possible, cervical, tampon of aseptic or iodoform gauze before delivery. After delivery check hemorrhage by delivering placenta and packing uterus with aseptic or iodoform gauze and give ergotin and strychnin hypodermically or by mouth.

2. *To deliver.*—Dilate os by tampon, water bag, or manually. Apply forceps if vertex presents and pains are insufficient. Perform version with slow delivery as indicated. Do cesarean section when os will not dilate and hemorrhage continues.

3. *To prevent sepsis.*—Be strictly aseptic in all details of management.

4. *To prevent shock.*—Stimulate and sustain patient all through labor by light, easily digestible food, strychnin, quinin, rectal enemas of normal salt solution or by hypodermoclysis.

Journal of the Indiana State Medical Association, Fort Wayne

March

- 70 *Etiology of Chorea. W. D. Hoskins, Indianapolis.
- 71 Tuberculin Therapy. W. T. S. Dodds, Indianapolis.
- 72 Sketches of the Medical History of Indiana (continued). G. W. H. Kemper, Muncie.
- 73 *Modern View of the Etiology and Treatment of Acne Vulgaris and Acne Rosacea. A. M. Cole, Indianapolis.
- 74 The Ocular Tuberculin Test. C. G. Beall, Fort Wayne.
- 75 Tuberculosis of the Kidney. E. Walker, Evansville.

70. **Etiology of Chorea.**—Hoskins gives a historical review of recent studies into the etiology of chorea, and as a result of these studies considers it to be a safe, logical conclusion that:

1. The causation of chorea is to be found in the action of bacterial poisons on the brain.
2. The available evidence points to the occurrence of a local infection to which these widespread changes in the nervous system are due.
3. The infection is of a rheumatic nature and is due to a specific organism—the *Diplococcus rheumaticus*.

73. **Acne Vulgaris and Acne Rosacea.**—Cole sums up and emphasizes the points of his paper as follows:

1. Acne vulgaris is usually a pyogenic infection implanted on a skin whose functions are perverted by the influence of age, reflex disturbances, or seborrhea.
2. Acne rosacea is an acne implanted on a chronic hyperemia or rosacea which rises almost invariably from reflex influences from the gastrointestinal tract or pelvis.
3. Internal treatment in both varieties of acne is exceedingly important. Reflex disorders must be sought for and corrected, if possible, before the best results can be obtained.
4. External drug treatment in both diseases is usually disappointing. Sulphur is the best external preparation.
5. Mechanical treatment, such as the use of hot water, soap, massage and the dermal curette is exceedingly valuable.
6. The opsonic method in acne vulgaris is promising.
7. The Roentgen treatment of both acne vulgaris and acne rosacea is the most valuable. In its certainty of cure and infrequency of relapse it almost approaches a specific.
8. The technic of using the x-ray, say in acne, is of paramount importance. If the ray is properly applied there should be few, if any, failures and no undesirable effects.

Journal of Advanced Therapeutics, Rahway, N. J.

March

- 76 Tuberculosis and Its Treatment. J. D. Gibson, Denver, Colo.
- 77 Gout: Its Treatment by High-Frequency Currents. F. A. Davis, Boston.
- 78 The X-Ray in Dental Examinations. S. Tousey, New York.
- 79 Cataphoric Operations as Modified by the Topographic Situation of Particular Neoplasms, with Detailed Report of Cases (continued). G. B. Massey.

April

- 80 The Physiologic Action and Therapeutic Effect of Vacuum Tube Discharges. J. H. Burch, Syracuse, N. Y.
- 81 Physiotherapy in the Practice of Medicine. W. McFee, Haverhill, Mass.
- 82 Catarrhal Deafness and its Treatment. A. C. Geyser, New York.

Vermont Medical Monthly, Burlington

March

- 83 *The Anatomic Basis for Successful Repair of the Female Pelvic Outlet. I. S. Haynes, New York.
- 84 An Interesting Case of Gonorrheal Arthritis Treated with Serum. H. E. Plummer, New York.
- 85 Character of the State Board Examinations and the Competency of the State Medical Examining Boards. W. G. Tucker, Albany.

83. **Repair of the Female Pelvic Outlet.**—Haynes discusses this subject at great length and with the assistance of many illustrations. Any plastic operation, to be successful, must have a solid anatomic basis. The one fundamental idea, the only rational aim, for the surgeon in all such plastic work, is to restore the damaged parts to their normal state. He reviews in detail the anatomy of the female pelvic outlet, and discusses the function of the structure concerned in it. He next considers lacerations of the pelvic outlet and their effects, and describes the technic of operation.

Pennsylvania Medical Journal, Athens

March

- 86 *Progress in Pediatrics. T. J. Elterich, Pittsburg.
- 87 *Malignant Tumors of the Tonsils. G. B. Wood, Philadelphia.
- 88 *Acute Mastoiditis. S. M. Smith, Philadelphia.
- 89 *Surgical Complications of Pneumonia, Especially Empyema. A. R. Matheny, Pittsburg.
- 90 The Public's Gain Through the Nostrum-Suppression Agitation. A. B. Hirsh, Philadelphia.

86. Abstracted in THE JOURNAL, Oct. 3, 1908, p. 1179.

87. **Malignant Tumors of the Tonsil.**—Wood reports two cases of sarcoma of the tonsil, discusses the operations for their relief, and gives an extensive table of published cases.

88. Abstracted in THE JOURNAL, Oct. 17, 1908, p. 1356.

89. **Complications of Pneumonia.**—Matheny discusses acute otitis media, pericarditis with effusion, parotiditis, abscess and gangrene of the lung and empyema as surgical complications of pneumonia. In regard to the last-named he especially emphasizes the need of early diagnosis of empyema from delayed resolution. The error is exceedingly common,

whereas a hypodermic needle immediately clears up the diagnosis.

Washington Medical Annals

March

- 91 *The Bryce-Teacher Early Human Ova. A. F. A. King, Washington.
- 92 Internal Hemostasis: Its Physiologic and Pharmacologic Aspects. W. M. Barton, Washington.
- 93 Partial Review of Internal Medicine. S. Ruffin, Washington.
- 94 Review in Pediatrics for 1908. E. P. Copeland, Washington.
- 95 Case of Peculiar Delirium in Typhoid. F. E. Harrington, Washington.
- 96 The Value of Therapeutics. P. S. Roy, Washington.

91. **Early Human Ova.**—King discusses the observations of Bryce and Teacher in their memoir, with numerous figures and colored plates describing two early human ova, the one from a uterine and the other from an ovarian pregnancy. He suggests the extension of this research; for, while the facts of embryology may seem of little practical use, they may on the other hand be regarded as a reserve collection of old keys, one of which may at any moment unlock the door to a treasury of useful information. He suggests, therefore, that it may be well in all cases of delayed menses, even when pregnancy is not suspected, to examine the discharge for young ova, by breaking up the little clots in water and seeking for flakes of decidua with their contained blastocysts. A flake of membrane, no larger than a finger nail, containing an elevated tubercle the size of a pinhead is the thing to look for, as shown in the case of Bryce and Teacher. Should such a specimen be found, it should be immersed in a 30 per cent alcohol solution and sent to a skilled microscopist.

Providence Medical Journal

March

- 97 Displacement of the Uterus. H. C. Pitts, Providence.
- 98 Treatment of Uterine Displacements. A. T. Jones, Providence.
- 99 Blood Transfusion. L. C. Kingman, Providence.
- 100 *General Purulent Peritonitis. D. Churchill, Providence.
- 101 Medical Education in Berlin: Advantages Open to American Students. H. G. Palmer, Providence.

100. **Purulent Peritonitis.**—Churchill reports three cases and discusses the treatment of generalized purulent peritonitis, emphasizing the following points:

1. Operate quickly, making an opening into the abdominal cavity, with the single purpose of letting out the confined septic material. If the exciting cause is easily at hand and can be quickly dealt with remove it; if not, do not seek it.
2. Drain with one drain to the lowest point.
3. Put the patient into the Fowler position, so that the material to be drained shall fall to that lowest point.
4. Give nothing by mouth.
5. Give normal saline solution by rectum by the drop method constantly.
6. Do not give cathartics or enemas.
7. Do not be afraid to keep the patient comfortable and quiet with morphin.
8. Always keep in mind that the one thing you are trying to do in these cases is not an elaborate operation, but to save life.

Detroit Medical Journal

March

- 102 Diagnosis of Chronic Appendicitis. R. R. Smith, Grand Rapids.
- 103 Psychotherapy and Its Relations. C. W. Hitchcock, Detroit.
- 104 Why Benzoate of Soda is Used. E. E. Smith, New York.

Memphis Medical Monthly

March

- 105 Therapeutic and Diagnostic Use of Tuberculin. L. P. Barbour, Rocky Ford, Colo.
- 106 A Dermoid Tumor of the Conjunctiva. E. C. Ellett, Memphis.
- 107 Nervous Diseases Complicating Pregnancy and the Puerperium. S. T. Rucker, Memphis.
- 108 Tuberculosis Treated at Home. A. E. Cox, Helena, Ark.
- 109 Social Hygiene. O. Wilson, Paragould, Ark.

Woman's Medical Journal, Toledo, O.

March

- 110 *Causes Leading to Mental Degeneracy. B. C. Downing, Lexington, Mass.
- 111 The Incubator Baby. M. A. Nickerson, Rochester, N. Y.
- 112 Protective Power of the Opsonins. J. K. Qua, Amsterdam, N. Y.

110. **Causes of Mental Degeneracy.**—Downing compares the race origin in subjects of degeneracy and of insanity, and quotes Hrdlicka to the effect that in mental defectives the relative proportion to the total population is not at all, or but slightly, affected by immigration. On the other hand, in New York State 50 per cent. of the insane are of foreign parentage and 30 per cent. foreign born. The question arises:

What is the proportion of the two populations not insane? Downing thinks that we are inclined to exaggerate the causes of insanity if we do not recognize the defective nature of the immigrants, who come here because they are usually defectives and failures at home. Insanity is obviously increasing. In all cities the conditions exist which can cause nervous exhaustion and brain disease, but she points out that no one has ever called attention to the fact that modern cities have produced an environment for which the blonde type of man and some of the lighter brunettes are physically unfit. The large majority in the middle United States of congenital feeble-minded are blondes, while in Poland they are brunettes. The deterioration in the tropics is but a minor degree, and the resulting insanity is the same, melancholia predominating and indicating exhaustion as the cause. Downing calls attention to Woodruff's views on the effect of tropical light on the white man. She discusses heredity, tuberculosis and syphilis, alcohol, the period of birth, early and late marriage, order of birth and birth injuries, bottle feeding, race intermixtures, acute diseases, circulatory conditions and pigmentation in regard to their influence on mental conditions. She also discusses the fevers of feeble-minded children based on 1,000 cases, and particularly the condition of the nervous child. Children should be classified in schools by types rather than by age. Training classes should be established to fit physicians for school inspection. The feeble-minded should be weeded out into colonies. The education of children should be according to their individual needs; all do not need kindergartens or physical culture or sloyd. Where, she asks, is the university that will establish a department for the solution of these problems?

Journal Oklahoma State Medical Association, Guthrie

March

- 113 Disturbances in Equilibrium of External Ocular Muscles. E. F. Davis, Oklahoma City.
- 114 Sphenoidal Sinus Diseases. J. H. Barnes, Enid.
- 115 Glaucoma. W. M. Nagle, Muskogee.
- 116 Experiences in Cataract Extraction, Preceded by Iridectomy. A. D. Johannes, Oklahoma City.
- 117 Diagnosis in Purulent Diseases of the Nasal Sinuses. H. C. Todd, Oklahoma City.
- 118 Biliousness. I. H. Voris, Mannsville.

Journal of Cutaneous Diseases, New York

March

- 119 *Tuberculides in Relation to General Tuberculosis. A. Ravogli, Cincinnati.
- 120 Eczema of the Toes. E. W. Ruggles, Rochester, N. Y.
- 121 *Xanthoma Multiplex. J. M. Winfield, Brooklyn, N. Y.

119. **Tuberculides and General Tuberculosis.**—Ravogli concludes, from his consideration of the tuberculides, that typical tuberculides have to be separated from the atypical variety. Typical tuberculides are of the erythematous and papulo-necrotic type, generalized, affecting large surfaces of the body. They are the expression of general tuberculosis, but they bear no influence on the general disease.

121. **Xanthoma Multiplex.**—Winfield describes a case of a child of 4 years, born in America of Russian-Jewish parents. He describes the eruption and microscopic examination, and discusses the subject of xanthoma, stating as conclusions, drawn after a careful study of this case in the light of the literature, that xanthoma multiplex is not identical with xanthoma palpebrarum, and that the three types are not similar except in clinical appearances, *i. e.*, the saffron-colored tumor. He agrees with the view that xanthoma multiplex is a distinct disease, a benign tumor of non-inflammatory origin.

Wisconsin Medical Journal, Milwaukee

March

- 122 *Modern Operation for the Cure of Inguinal Hernia. E. W. Andrews, Chicago.
- 123 *Carcinoma of the Breast. C. W. Ovlatt, Oshkosh.
- 124 *Exceptions to the Rules in the Administration of Certain Drugs. W. G. Kemper, Manitowoc.
- 125 *Some Phases of the Practice of Medicine of To-day. W. S. Lincoln, Dodgeville.

122. Published in the *Northwestern Lancet*, Jan. 1, 1909.

123, 124, 125. Abstracted in *THE JOURNAL*, Aug. 8, 1908, p. 524.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

April

- 126 *Hernias Through the Pelvic Floor. C. W. Barrett, Chicago.
- 127 *Amputation of the Uterus in the Corpus to Preserve the Menstrual Function. H. Kelly, Baltimore.
- 128 *The Origin of Certain Types of Monsters. C. R. Stockard, New York.
- 129 *Preliminary Report on the Use of Bacterial Vaccines in Treatment of Septic Infections. F. R. Oastler, New York.
- 130 Three Rare Surgical Complications of Pregnancy. J. F. W. Ross, Toronto, Canada.
- 131 *Endometritis. J. J. Mundell, Anacostia, D. C.
- 132 Floating Kidney in its Relation to Pelvic Disease. A. H. Ely, New York.
- 133 *Treatment of Movable Kidney. L. G. Baldwin, New York.
- 134 Gangrene of a Pedunculated Subserous Uterine Myoma with Twisted Pedicle. R. T. Gillmore, Chicago.
- 135 *Lesions of the Cornea in Gonorrheal Ophthalmia and Pterygoid Keratitis. C. W. Cutler, New York.
- 136 Importance of Dental Orthopedics in the Normal Development of the Child. F. A. Gough, Brooklyn, N. Y.

126. **Pelvic Hernia.**—Barrett discusses the embryology and comparative anatomy of the pelvic floor, the principles to be considered in the cure of hernia, describes the technique of the repair of the pelvic floor, and lays particular emphasis in the following points:

1. The pelvic floor, while not a direct support to the uterus, is an important factor in abdominal support.
2. Comparative anatomy and clinical research demonstrate the importance of the levator ani muscle in pelvic floor support.
3. The pelvic floor support is weakened by the passage through it of certain canals called "faults."
4. The vagina may and oftentimes does become a hernial canal.
5. This tendency is greatly increased by traumatism and to a less extent by congenital defects.
6. This tendency is further increased by increased abdominal pressure, a displaced uterus, and a vertical vagina.
7. These hernias, when slight and incipient, should be treated by rest, lessening of intra-abdominal pressure, by reducing fat, curing a cough, the knee-chest positions, tampons, pessaries, etc.
8. When more extensive or when resisting treatment, the pelvic floor should be repaired, the cystocele should be reduced, the vagina made less vertical, and the uterus put at an angle with the vagina or removed according to the condition of the uterus, age of patient, etc.
9. If hysterectomy is performed the stumps of ligaments should be united to the upper part of the vagina.
10. Two points should be observed in the herniotomy of the pelvic floor: (a) the levator muscle should be reunited; (b) superficial vulvar structures should not be united, but left with the natural vulvar opening into the vagina, which may easily be accomplished by making the U-shaped incision at the lower end of the vagina instead of the usual incision in the labia majora.

127. Abstracted in *THE JOURNAL*, July 4, 1908, p. 71.

128. **Monsters.**—Stockard discusses the origin of monsters and describes his own experimental study of the influences of strange external conditions on development.

129. **Bacterial Vaccines in Septic Infection.**—Oastler summarizes his article as follows:

1. Apparently favorable clinical results have been obtained in the use of vaccines of streptococcus, staphylococcus, *Bacillus coli communis*, *Bacillus mucosus* and gonococcus.
2. All but gonococcus vaccine should be autogenous.
3. Vaccines are not "cure-alls" but seem to aid materially in combating the septic process, the effect being gradual and progressive.
4. Vaccines are required especially when the blood shows poor resistance, *i. e.*, low leucocyte count and high polymorphonuclear.
5. In violent cases of acute sepsis, no resistance can be created, and no effect obtained.
6. The negative phase is rarely obtained.
7. The positive phase is more often obtained.
8. Blood cultures are generally negative.
9. Wound discharge increases soon after injections.
10. Good results have been obtained with all the organisms tried; the least satisfactory were with the *Streptococcus longus*.
11. The pulse may remain rapid for some time after the temperature falls.
12. As yet there have appeared no ill effects from injections.
13. The dose is problematic and purely experimental. The site of the injection is the same, as is also the frequency. Too large a dose does harm, and small doses give better results than large doses.
14. Dosage: every fourth day. Staphylococcus, 160,000,000 to 325,000,000; streptococcus, 40,000,000 to 80,000,000; *B. coli communis*, 40,000,000 to 150,000,000; *B. mucosus*, 40,000,000 to 110,000,000; gonococcus, 6,000,000 to 80,000,000.
15. If negative phase appears, delay injection and reduce dosage.
16. The opsonic index is uncertain. Leucocyte count with polymorphonuclear count gives the best indication of the resistance of the patient.

131. **Endometritis.**—Mundell says that the classification of endometritis should be acute and chronic. Further subdivision leads to much confusion and does not materially aid the clinician. Uncomplicated cases are not very common and an uncomplicated chronic case is a very rare condition. Normally, the endometrium is free from bacteria. Treatment of chronic endometritis, to be successful, should always be car-

ried on in conjunction with the treatment of associated conditions.

133. **Movable Kidney.**—Baldwin's opinion is that movable kidney has had much laid at its door for want of an accurate diagnosis that should rightly have been charged to other organs and conditions; that operation is seldom the best means of treatment, and that the sooner we place "movable kidney" in the class with "dropsy," "leucorrhea," and, he suggests, "prolapsed ovary," and treat it as a symptom of an often very complex pathologic condition, the sooner shall we come to an understanding of its true significance and its proper cure.

135. **Lesions of the Cornea.**—From a comparative study of gonorrheal ophthalmia and phlyctenular keratitis, Cutler is convinced that more eyes are damaged by phlyctenular keratitis than by gonorrhea. Of course, the injury is not so severe, but an opacity or a facet in the pupillary zone among the children of the poorer classes is so common and is such a serious hindrance to higher economic usefulness, that the attention of the general practitioner and of the public may well be drawn to these fleeting and apparently insignificant eruptions.

Louisville Monthly Journal of Medicine and Surgery

April

- 137 Systemic Effects of Chronic Infections of the Throat and Nose. F. G. Stubbs, Chicago.
- 138 Cases of Progressive Pernicious Anemia. J. A. Witherspoon, Nashville, Tenn.
- 139 Traumatic Cataract in Children. A. P. Pfingst, Louisville.
- 140 Surgical Diseases of the Kidney. J. G. Sherrill, Louisville.

Military Surgeon, Richmond

April

- 141 *Sanitary Organization of the Isthmian Canal as it Bears on Antimalarial Work. W. C. Gorgas, U. S. Army.
- 142 Hygiene of Torpedo Boat Destroyers in the Philippines. F. M. Munson, U. S. Navy.
- 143 Care of the Chelsea Refugees. P. F. Butler, Boston.
- 144 Iron Aristol for Chronic Skin Ulcers. M. J. White, U. S. Public Health and Marine-Hospital Service.
- 145 *Blastomycosis of the Skin in the Philippines. J. M. Phalen and H. J. Nichols, U. S. Army.
- 146 The Medical Log of the U. S. S. *Virginia* on the Cruise to the Pacific. C. H. T. Lowndes, U. S. Navy.
- 147 Mosquito Bars. G. F. Campbell, U. S. Army.
- 148 Cocain: Its Relation to the Military Surgeon. W. D. Owens, U. S. Navy.
- 149 Plea for Specialism. E. B. Vedder, U. S. Army.
- 150 Sanitary Service of the Swiss Army. L. C. Duncan, U. S. Army.
- 151 Color Blindness. W. S. Hoen, U. S. Navy.
- 152 Origin and Beginnings of the *Military Surgeon*, with Notes on Life and Character of its First Editor. W. G. Ames.

141. **Isthmian Canal.**—Gorgas says that the antimalarial methods used on the isthmus consist (in the order of their importance) in:

1. Destroying the habitat of the anopheles during the larval stage within a hundred yards of dwellings.
2. Destroying within the same area all protection for the adult mosquito.
3. Screening all habitations so that the mosquito can not have access.
4. Where breeding places can not be done away with by draining, use is made of crude oil and sulphate of copper for the destruction of larvæ.

He describes the work of the sanitary staff in carrying out these measures and shows its effect on the malaria morbidity of the isthmus. He thinks that to a considerable extent these methods could be applied in military organizations. The most important practical point is that the sanitary officer should do the work himself; until such time as education is extended, the supervision can not be trusted to the engineer or the quartermaster, for in general, the laity are inclined to look on the minutiae of such work as trivial and to cast ridicule on it.

145. Published in the *Philippine Journal of Science*, November, 1908.

Journal of the Kansas Medical Society, Kansas City

April

- 153 Operative Displacement of the Bladder in the Treatment of Extensive Cystocele. F. A. Carmichael, Goodland, Kan.
- 154 Early Diagnosis of Tuberculosis. S. C. Emley, Lawrence, Kan.
- 155 Doctors and Medicine—Past and Present. J. Dillon, Eureka, Kan.
- 156 Abnormalities of the Gravid Uterus and Their Treatment. F. A. Harper, Pittsburg, Kan.
- 157 Gunshot Wounds of the Chest. R. S. Magee, Topeka, Kan.

St. Paul Medical Journal

April

- 158 *Embryology of the Face and Neck Region, with Reference to Congenital Malformations. A. Schwyzer, St. Paul.
- 159 *Preparation and After-Care of Surgical Patients. J. C. Munro, Boston.
- 160 The Ramsey County Medical Society; Its Privileges and Its Duties. A. Sweeney, St. Paul.
- 161 Diphtheria. T. C. Kelly, Mankato, Minn.

158. **Embryology of Face and Neck.**—Schwyzer describes the embryology of the face and neck and traces its influence in the formation of nasal furrows and clefts, harelip, transverse cleft through the cheek, median cleft of the lower lip and eventually of the lower jaw, the formation of diverticula, fistulas and cysts of the neck and pharynx, etc.

159. **Preparation of Patient.**—Munro prefers patients to enter hospital in the afternoon before operation. They are kept busy, not upset by change of diet and habit, and do not lose their *morale* by introspection. He believes that the patient who is allowed to sit around hospital day after day stands operation poorly compared with one who comes in last thing and takes it in a business-like fashion. A similar parallel may be drawn in the case of those kept in hospital after necessity for definite hospital treatment has ceased. He advises always endeavoring to obtain a general consent to be allowed to use one's own judgment as to what shall be done at operation. The patient is given a hot tub bath, has a simple supper, and is given from 1½ to 2 ounces of castor oil soon after entrance. The operative field is shaved at night or early in the morning, nervous patients being shaved under ether on the operating table. The wet antiseptic dressings have been abandoned except in operations on the head and on the knee joint. The scrubbing with stiff brushes also, soap poultices, etc., have been abandoned. Observation showed that during the period these precautions were being observed more cases healed by first intention and there were fewer stitch abscesses and the like among emergency cases that came covered with the dirt of the street and were hurriedly shaved and superficially cleansed, than among those submitted to this extreme toilet. Munro lauds the use of dry shaving and of tincture of iodine for painting the operation area, as recommended by Grossisch. Patients with jaundice are given salt solution and fresh rabbit serum before operation. Cardiac tonics are rarely called for, except in the occasional patient with a myocarditis, when digitalis is used. Strychnin as a stimulant has been given up, except in simple fainting, in which it seems especially useful. Practically all patients are given atropin and morphin when going under ether. A drop of castor oil may be put in each eye as a preventive against ether conjunctivitis, though this should not be necessary with a thoroughly trained anesthetist. Munro holds that the convalescence of major surgical patients depends to a considerable degree on the ability of the anesthetist, especially if ether is used. He anticipates the time when hospitals will have permanent instead of changing anesthetizers—"preferably a well-trained nurse who aspires to no higher position, and who can be utilized out of hours in other important work." He also discusses the after-treatment in detail and the question of disease complications.

Denver Medical Times and Utah Medical Journal

April

- 162 Management of Labor for Nurses. T. M. Burns, Denver.
- 163 Advantages of the Intravenous Over the Intramuscular Method in the Treatment of Tuberculosis with Mercury. J. Cuneo, Denver.
- 164 Origin of Bacteria. J. D. Crisp, Denver.
- 165 Value of Hourly Nursing to the Physician's Practice. F. E. Scoville, Denver.
- 166 Historical, Laboratory and Clinical Observations in Rocky-Mountain Spotted Fever. R. Anderson, Salt Lake City.
- 167 Tick Fever, or Rocky-Mountain Spotted Fever. G. W. States, Franklin, Utah.

St. Louis Medical Review

March

- 168 *Technic of Localizing Foreign Bodies in the Eye and Orbit by the X-Rays. R. D. Carman, St. Louis.
- 169 Diagnosis of Affections of the Labyrinth. C. F. Pfingsten, St. Louis.
- 170 Relationship of Law to Medicine. Gov. C. P. Johnson, Jefferson City.

168. **Localizing Foreign Bodies in the Eye.**—In an elaborately illustrated article, Carman describes Sweet's method for localizing foreign bodies in the eye, as modified by Dr. C. F. Bowen of Columbus and used in connection with the Weeks-Dixon chart. He insists on the importance of radiographing the eye as soon as possible after injury before phthorophobia has become pronounced.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

March 27

- 1 *Disinfection and Disinfectants (continued). R. T. Hewlett.
- 2 *Mechanism Underlying the Various Methods of Artificial Respiration (continued). A. Keith.
- 3 Tumor-Like Formations of Fat in Man and the Lower Animals. S. G. Shattock.
- 4 Abnormalities of Ocular Movements. J. H. Jackson and L. Paton.
- 5 Treatment of Nervous Diseases. J. Taylor.
- 6 Direct Esophagoscopy: A Unique Experience. H. Tilley.

1. **Disinfection.**—Hewlett discusses the nature of the process of disinfection and the regulation of the sale of disinfectants.

2. **Artificial Respiration.**—Keith deals with the period of mechanical movements of the chest wall, concluding with mention of Doe's method and a discussion of tongue traction. He describes the mechanism underlying Schäfer's method and suggests that experiments on the living subject do not give the conditions present in the apparently drowned who are in a state of profound anesthesia. The resiliency of the thorax differs in degree and in kind from that found in the living body, but while he holds it improbable that Schäfer's method will give a respiratory exchange in the apparently drowned at all equal to that which Schäfer obtained in living subjects, yet a sufficient change may be effected, and the method deserves to be tried because of its simplicity. The quest for the best means of artificial respiration is by no means ended. We need more experimental evidence, more exact as to the results of methods now in general application, more clinical observations on the lungs and hearts of people being resuscitated, and more exact data on the condition of the body, especially of the lungs, heart and liver, in those cases in which all means have failed or secondary failure has occurred. He especially urges those engaged at fixed stations in the work of recovery, to measure accurately by meter the air exchange effected by the methods which they apply; so that, instead of having to trust to experiments carried out on perfectly healthy apnoeic individuals, we may have the actual effect of these methods in producing a ventilation in the lungs of the apparently drowned.

British Medical Journal, London

March 27

- 7 Natural History of Ulcerative Colitis and Its Bearing on Treatment. H. P. Hawkins.
- 8 *Amoebic Dysentery with Abscess of the Liver. R. Saundby and J. Miller.
- 9 *Bilharziosis of Women and Girls in Egypt in the Light of the "Skin-Infection Theory." A. Looss.
- 10 Physiology of the Female Genital Organs. IV.—Uterine Contractions. W. B. Bell and P. Hick.
- 11 Local Anesthetics Recommended as Substitutes for Cocain. C. N. Le Brocq.

8. **Amoebic Dysentery.**—Saundby and Miller report a fatal case of amoebic dysentery that occurred in a man aged 42, who had never been away from the Birmingham district in England. The chief points of interest in the case were:

1. Ulcerative colitis, in which the smaller ulcers are circular and flask-shaped—*bouton de chemise* of French authors—with overhanging edges and relatively small circular openings into the lumen of the bowel, and adherent sloughs; one of the larger ulcers had perforated into the peritoneal cavity.

2. The presence of an enormous abscess in the posterior part of the liver, the pus of which gave no growth on inoculating in ordinary media.

3. Last, and most important, the presence of amebas in the ulcers and the liver abscess and in the tissues around these lesions.

As to the mode of infection, the authors point out that, given a case of tropical dysentery—and such cases are from time to time imported into England—there is a possible source of infection from which contamination of food or drink

during warm weather might take place. As the amoeba readily dies at temperatures below 75 F., it rarely spreads, even when imported; but that such spread can take place they hold the case in point to demonstrate.

9. **Bilharziosis of Women.**—Looss discusses the paper of Mrs. B. S. Helgood on bilharziosis among women and girls of Egypt, from the viewpoint of the "skin infection theory," and summarizes his conclusions as follows:

1. Any theory about the mode of infection with bilharziosis, in order to be at all acceptable, must (a) account for the passage of the miracidium both from man to water and from water back to man; it must (b) duly consider both the habits of the host and the biologic peculiarities of the parasite.

2. The theory of the infection taking place by the mouth (along with food and drink) must be refuted, because it is irreconcilable (a) with certain biologic peculiarities of the miracidium, (b) with the general distribution of the disease among the population of Egypt.

3. The theory of infection by the miracidium entering the urethra or the anus is (a) utterly improbable for general parasitologic reasons; (b) in contradiction with a number of biologic and anatomopathologic facts (for example, the incapability on the part of the miracidium to resist the action of acids, even if very diluted; the part played in the infection by the liver, etc.).

4. The theory of infection by the skin is in accordance with all the facts thus far known (a) of the biology of the parasite, (b) of the distribution of the disease among the population (native and foreign, town and rural) of Egypt. It shows (c) how the chief sufferers—the children in town, the adult males in the country—live under conditions which, from the epidemiologic point of view, are essentially the same, and give the miracidia (d) the opportunity of passing, within the short time of their life, from man to water and from water back to man.

Medical Press and Circular, London

March 24

- 12 Tertiary Syphilis in the Upper Air Passages. H. Law.
- 13 Differential Diagnosis and Inoculation Treatment of Tuberculous Glands in the Neck. L. C. P. Ritchie.
- 14 Early Diagnosis and Surgical Treatment of Cancer of the Stomach. D'A. Power.
- 15 Early Diagnosis of Cancer of the Stomach. A. F. Hertz.
- 16 Medical Examination of School Children. G. Carpenter.

Clinical Journal, London

March 17

- 17 Pernicious Anemia. W. P. Herringham.
- 18 Use of Congestion in Treatment: Its Disadvantages in Varicose Veins, Varicocele, Hernia, Hemorrhoids, Hydrocele, Etc. E. M. Corner.
- 19 Trigeminal Neuralgia and its Treatment by Schlösser's Method. P. Stewart.
- 20 *Popliteal Aneurism. E. Owen.

March 24

- 21 Dyspepsia Due to Alcoholic Abuse. Sir D. Duckworth.
- 22 Athletics in Relation to Disease. R. H. A. Whitlocke.

20. **Popliteal Aneurism.**—Owen reports an exceedingly interesting case of popliteal aneurism, illustrating the moral that popliteal aneurism by no means invariably calls for operation. About 20 years ago a surgeon in general practice, about 65 years of age, strong and athletic, had a recent varicose condition of the external saphena vein. The dilatation was found to be due to pressure by a large popliteal aneurism, of which the patient had no knowledge. His radial and femoral pulses showed considerable arterial tension and his heart's action was excited and tumultuous. He was sent home to bed. Mr. Savory agreed with Owen that operation was inadvisable. They contented themselves, therefore, with raising the foot of the bed to help venous return, laying the limb on a pillow. The only medicine prescribed was calomel. Nevertheless the aneurism increased in size, and amputation in the lower third of the thigh was decided on in case of bursting or mortification; but neither contingency arose, though the foot and leg became cold and pulseless. The aneurism eventually grew still and solid. After the patient had been in bed about ten days, the other popliteal artery became aneurismal. This was treated by a firm pad at the back of the knee, and by keeping the leg firmly flexed. In the course of a few days the second popliteal artery became solid, like the first, and pulsation disappeared in the arteries at the ankle. The patient made a complete recovery, and a few years later Owen saw him running after an omnibus.

British Journal of Children's Diseases, London

March

- 23 *The Need for More Prompt and Thorough Treatment of Children Suffering from Rheumatism or Chorea. D. B. Lees.
- 24 Syphilitic Synovitis. J. B. Barrett.
- 25 Forms of Chronic Lung Disease in Childhood (continued). W. H. M. Telling.

- 26 *The Heating of Milk as It Affects the Nutrition and Health of the Infant. J. M. Fortescue-Brickdale.
27 Epithelioma Developing in the Scar of a Plastic Operation for Extroversion of the Bladder. P. Sargent.
28 The Origin of the Feeble-Minded. W. A. Potts.

23. **Treatment of Rheumatism or Chorea in Children.**—Lees says that almost the whole of the heart disease which exists in patients under 30 years of age, as well as a very considerable proportion of the heart disease of later life, is the result of rheumatic infection of childhood that was either unrecognized or uneffectively treated. Every child who complains of sore throat or of pains in the joints, muscles or tendinous structures, every child who suffers from malaise and unexplained pyrexia, every child whose skin shows spots of erythema or who has subcutaneous nodules on his tendons or round his joints, or subperiosteal nodules on his bones, every child who has pain in the chest, or shortness of breath, or marked pallor, and every child exhibiting even slight choreic movements or merely weakness and inco-ordination of muscular action or emotional instability should be at once sent to bed, and his heart should be promptly and most carefully examined. Lees cites Poynton and Paine's demonstration of a diplococcus in rheumatism and chorea which is capable of producing in rabbits, not merely endocarditis, but cardiac dilatation, myocarditis, pericarditis, arthritis, pleurisy and pneumonia, also subcutaneous nodules and tenosynovitis; in short, all the severe lesions found in a rheumatic child. He adds two facts within his own knowledge: (1) A rheumatic nodule excised from a child, which gave on culture an exuberant and pure growth of a diplococcus; (2) the obtaining of a diplococcus from the blood in more than one case from rheumatic patients during life. With regard to chorea, although it has not yet been proved that chorea in a child is in all cases of rheumatic origin, yet it is quite certain that the great majority of cases are due to a rheumatic infection. Every case of chorea in childhood ought, therefore, to be considered as presumably rheumatic, and ought to have the benefit of this probability. Every such patient ought to be at once sent to bed, and treated vigorously as for rheumatism.

26. **The Heating of Milk.**—Fortescue-Brickdale deals with the alterations in the physicochemical character of milk produced by heat, not with the effect of heat on bacteria or their products. He divides the alterations into three groups:

1. Obvious taste in change and color, due to action of heat on lactose and the formation of a "skin," from the drying of protein on the surface—these are of little importance.
2. The precipitation of calcium and changes in organic phosphorus compounds. Heated milk is less acted on by pepsin and trypsin and probably less easily absorbed. The physiologic effect of changes in phosphorus is not well known, but since it is needful to the human infant, and cow's milk is poor in organic phosphorus the decomposition of these compounds may be considered a detriment.
3. Changes concerning the "vital" properties of milk. These are the least easily detected of all. Enzymes, agglutinins and precipitins are destroyed and phagocytosis by the milk cells is abolished.

The inhibitory power of fresh milk on bacterial growth is also destroyed. Clinical opinion, especially in Europe, is steadily coming to the view that clean fresh milk is better for infants than heated milk. Anemia, constipation and pyelitis are more frequently met with in children brought up entirely on sterilized milk.

Bristol Medico-Chirurgical Journal

March

- 29 *Metastatic Inflammations of the Eye. J. H. Parsons.
30 *Causes of Transient Cerebral Paralysis. G. Parker.
31 *The Physique of Boys. B. M. H. Rogers.
32 *Thomas Dover: Physician and Merchant Adventurer. J. A. Nixon.
33 Vomiting Connected with Anesthesia. A. L. Flemming.
34 Milk from a Public-Health Standpoint—City of Bristol. D. S. Davis.
35 Adulteration of Milk in Bristol. E. Russell.
36 Some Impurities of Vended Milks. I. W. Hall.
37 Value of Some Lactic Acid Ferments. W. Hall and W. A. Smith.
38 Precautions to be Observed in Administration of Milk in Disease. J. M. Clarke.
39 *Heating of Milk as It Affects the Nutrition and Health of the Infant. J. M. Fortescue-Brickdale.

29. **Metastatic Inflammations of the Eye.**—In the Long Fox Lecture Parsons takes up this subject, by which he means inflammations of the eye due to bacteria or to toxins derived

from a source in some other part of the body. He does not include transmission by direct continuity, though in cases in which the meninges of the brain are affected it is not always easy to eliminate this mode. The other paths open are by the lymph and blood streams; the former is rare. He discusses ocular tuberculosis, gonorrheal iritis, iritis due to streptococcal septicemia, in illustration of the selectivity of site in metastatic inflammation of the eye; tubercle affections of the chorioid in two forms, miliary and conglomerate, or solitary. In tuberculous meningitis the chorioidal affection must be regarded as a true metastasis. Conglomerate tubercle of the chorioid is of particular importance in the clinical diagnosis of metastatic endophthalmitis. The pneumococcal cases emphasize another feature of metastatic inflammation of the eye, on which Parsons lays special stress, namely, the strong tendency for endogenous bacterial metastases to undergo spontaneous resolution. Metastatic ophthalmia was far commoner in the days when puerperal fever and pyemia were rife, and was more frequent in the former than in the latter disease. An example of undoubted metastatic inflammation of the eye is found in so-called pseudoglioma. He discusses iridocyclitis, which is undoubtedly often a result of gross metastatic inflammation, and inquires whether the apparent idiopathic cases may not be due to a similar cause. One group is undoubtedly dependent on pyorrhea alveolaris. Other foci are found in the nasal sinuses and, especially in women, in the generative organs. Finally, he thinks that the bacterial metastatic theory best explains the facts in the case of sympathetic ophthalmia.

30. **Transient Cerebral Paralysis.**—Parker tabulates the causes of transient cerebral paralysis as follows:

A. CEREBRAL ANEMIA OR STASIS

1. General, produced by—(i) compression of the vessels of the neck; (ii) cardiac or respiratory failure; (iii) general vasomotor paresis; (iv) asphyxia by carbon dioxide and similar bodies.
2. Local obstruction or compression of cerebral vessels from—(i) arteriosclerosis or atheroma; (ii) syphilitic thickening; (iii) tumors and foreign bodies; (iv) effused blood and the edema of softening; (v) uremic edema and hydrocephalus; (vi) inflammatory effusions, as in meningitis; (vii) certain small emboli; (viii) possibly spasm in Raynaud's disease and migraine.

B. THE ACTION OF POISONS, EXHAUSTION OF NERVE CENTERS, AND UNKNOWN CAUSES AS SEEN IN:

- (1) Narcotic poisoning; (2) hysteria; (3) eclampsia; (4) general paralysis, myasthenia gravis; (5) postepileptic states, some forms of *petit mal*; (6) chorea paralytica; (7) lead encephalopathy; (8) recurrent paralysis of the third nerve.

31. **The Physique of Boys.**—Rogers' paper is a comparative study of the heights, weights and chest measurements of boys 13, 14 and 15 years of age in industrial and public schools.

32. **Thomas Dover.**—Nixon gives an interesting account of the career and adventures of the celebrated inventor of Dover's powder. He particularly protests against the ascription to him of the character of the buccaneer, or pirate, and says that "the expedition on which Thomas Dover sailed was in no sense of a piratical nature; it was one of those adventurous trading cruises of which Hakluyt in his *Principal Voyages of the English Nation* gives many instances."

39. See Abstract No. 26.

Journal of Tropical Medicine and Hygiene, London

March 15

- 40 A New Biting Fly. A. Balfour.
41 An Avian Hemoprotozoan. S. Neave.
42 Remarks on Drs. Broden and Rodhain's Paper on "*Porocephalus Moniliformis*." L. W. Sambon.
43 *Climate (Meteorologic Environment) as a Possible Cause of Pyrexia. M. D. O'Connell.

43. **Climate as a Possible Cause of Pyrexia.**—O'Connell discusses the manner in which a saturated atmosphere of 45 C. (113 F.) may cause pyrexia, the source and regulation of body temperature in health, the quantity of water in the body and its excretion, the effect of meteorologic environment on the amount of water in the blood and tissues and therefore on body temperature, the relation of meteorologic environment in nature—i. e., climate—and pyrexia, and in-

creased hemolysis from the excessive water in the blood. He holds that the belief is justified, that exposure to the hot, damp atmosphere found at certain seasons of the year in hot, and to a less extent in warm, climates, obviously produces: (1) Pyrexia of an intermittent type; (2) increased hemolysis or blood destruction; (3) the appearance in the blood of many abnormal forms of corpuscles; (4) increased production of pigment or melanemia; (5) enlargement of the spleen.

Annales de Médecine et Chirurgie Infantiles, Paris

March 1, XIII, No. 5, pp. 145-180

44 *Sclerosis in Patches in Children. (Etude de la sclérose en plaques infantile.) M. H. Gaenlinger. Commenced in No. 4.

44. Sclerosis in Patches in Children.—Gaenlinger analyzes the eighty-five cases of sclerosis in patches in children that have been recorded and comes to the conclusion that none of them actually merits this diagnosis. He does not assert that sclerosis in patches never occurs in children, but is confident that none of the cases reported to date belongs in this category. Oppenheim suggests that the affection may commence in childhood, but run such an insidious course that its existence is not suspected until adult age. Gaenlinger summarizes the details of all the material on record with full bibliography.

Archives Générales de Chirurgie, Paris

February, III, No. 2, pp. 111-220

45 *Aneurism of the Hepatic Artery. C. Villandre. Commenced in No. 1.

46 *Tumor of the Cerebellum in Children and its Surgical Treatment. (Tumeurs du cervelet chez l'enfant.) Berthaux and Burnier. Commenced in No. 1.

47 *Multiple Osteogenic Exostoses. A. Reubsact.

45. Aneurism of the Hepatic Artery.—Villandre says that in 37 cases of aneurism in the hepatic artery, of which the details are known, the lesion was outside the liver in 34 instances and generally in the main trunk. Pain, hemorrhage in the digestive tract and jaundice are the chief signs of rupture of an aneurism in the hepatic artery. The pain is spontaneous and occurs in crises and paroxysms, ranging from a simple sensation of oppression in the epigastrium to excruciating agony. There is no radiation as with gallstone colic; the pain remains localized in the epigastrium or right hypochondrium. It is the initial symptom and may come on very gradually at first. If it suddenly becomes very intense the aneurism must have ruptured into the peritoneum or bile passages. The jaundice is due to compression of the outlets for the bile or their obstruction by clots. The aneurism gives no external sign of its presence, as a rule, being generally small and deep. The correct diagnosis has been made in only one case to date during life. In the majority of the cases the aneurism developed after some infectious disease, generally pneumonia or typhoid fever. If the hemorrhagic stools are the only symptom, the occurrence of hematemesis, followed by jaundice, suggests the true diagnosis. In some cases on record, the only symptom was chronic jaundice. Seven surgeons have published descriptions of their technic for operating in cases of aneurism of the hepatic artery, but Kehr alone operated on a certain diagnosis. The results of the few operations to date indicate that the hepatic artery can be ligated or obliterated without entailing necrosis of the liver, and Villandre's experiments on dogs confirm this assumption on condition that the liver has been gradually prepared for this shutting off of the circulation by this route and collaterals have had time to develop—this explains the success in Kehr's case. When the circulation in the hepatic artery is shut off abruptly, as by an embolus, necrosis of the liver is almost inevitable as there is no time for collateral circulation to develop. An aneurism in the hepatic artery is dangerous less from its size than from the tendency it displays to invade and dissect adjacent organs, especially the biliary passages. It generally ruptures into the digestive canal and then is presented the triad of pain, hemorrhages and jaundice; the aneurism may rupture into the peritoneum. Prompt surgical intervention is the only means to save the patient, and Villandre outlines the most promising technic for the purpose,

summarizing, in conclusion, thirty-six cases from the literature, with the bibliography.

46. Tumors of the Cerebellum in Children.—Berthaux and Burnier review the history of operative treatment of tumors in the cerebellum and discuss the etiology and pathology, diagnosis and treatment, especially for cerebellar tumors in children. They have collected fifty-six operative cases of these tumors in children and summarize the details, commencing with one reported by Berthaux. The patient was a boy of 9 with a syphiloma in the left lobe of the cerebellum. The headache diminished under vigorous specific treatment, but the other symptoms persisted and a posterior craniectomy was done, but the removal of the tumor was postponed to a second operation. The child did not rally and succumbed three hours later. In 13 cases of cyst in the cerebellum all but one of the patients recovered after operative removal of the cyst, as also in a case of hydatid cyst. In 17 cases of glioma in the cerebellum in children 5 were cured by the operation, but one of these has developed a recurrence since. In 9 cases of a tubercle in the cerebellum, one of the patients, a youth of 18, was restored to comparative health by removal of an irregular tubercle in the left lobe of the cerebellum; the other patients all died. In 9 of fibroma or sarcoma 2 of the children were cured by removal of the tumor, 7 succumbed during or soon after the intervention. In 4 cases of probable tumors, one of the patients died of hemorrhage, but the others recovered after puncture and draining although no tumor was discovered. In 2 other cases in which the children did not long survive the operation the tumor was not examined after its removal. Out of the entire total of 56 cases there are thus 17 in which the children were cured by the operation. Great improvement was obtained in a few others. In the 13 cases of cysts the operation was done too late to save the eyesight in 5 cases, and these children were and remain blind.

47. Multiple Exostoses.—Reubsact reports a typical case in a young man and compares it with twenty-one similar ones on record. When the exostoses are of tuberculous origin they are inclined to be painful, to undergo phases of inflammation, and sometimes to suppurate. In rachitis, the epiphyses may swell and there may be malformation of various bones, but no true exostoses. Syphilis causes hyperostoses but not exostoses. The hypertrophy of the bone in syphilis is extensive and diffuse, while the typical osteogenic exostoses under discussion are localized and circumscribed. If there is compression of a nerve or interference with the movements of a joint, it may be necessary to apply the knife to some exostosis. P. Marie suggests that thyroid treatment might have some influence during the cartilage stage, before the bone tissue is definitely formed. He has had no success with radiotherapy or serum treatment. In the case reported in detail there was marked eosinophilia.

Bulletin de l'Académie de Médecine, Paris

March 9, LXXIII, No. 10, pp. 295-321

48 *Epidemic of Cerebrospinal Meningitis at Paris. Efficiency of Antimeningococcus Serum. A. Netter and Vaillard.

48. See Paris Letter, THE JOURNAL, April 3, p. 1119.

Presse Médicale, Paris

March 20, No. 23, pp. 203-208

49 History of Medical Inventions. (Leçon d'ouverture. Cours d'histoire de la médecine et de la chirurgie.) A. Chauffard.

Semaine Médicale, Paris

March 17, XXIX, No. 11, pp. 121-132

50 *Hepato-cholangio-duodenostomy. Lejars.

51 *Surgical Treatment of Cerebral Hemorrhage. J. Lhermitte.

March 24, No. 12, pp. 133-144

52 *Pathologic Physiology of Traumatic Plenral Hematoma: Local Hemolytic Icterus. (Bilgémie hémolytique locale.) G. Guillaumin and J. Troisier.

50. Hepato-cholangio-duodenostomy.—The experience with the case reported shows that this operation has a chance for success only when the intercellular passages in the liver are found much dilated. The operation is necessarily rare and

generally a last resort in cases of old and total obliteration of the bile ducts outside of the liver. There is danger of infection of the raw surface of the liver thus united with the intestine. No infection occurred in the operations on animals that have been reported, but the animals were healthy; the conditions are different in the clinical cases in which the patients are debilitated from the long causal trouble. He ascribes the fatal termination of the case in his own experience to this cause—a septic process from the intestine which had not been functioning properly for a long time. His patient was a woman of 55 with occlusion of the hepatic and common bile ducts of long standing, several years after removal of the gall bladder. The common bile duct had become obstructed by an inflammatory gallstone process. Permeability was restored for a time and the general condition rapidly improved, but the duct gradually became obstructed again, and the duodenum was then drawn up and sutured to the right lobe of the liver, the capsule being resected over an area of 4 by 5 cm. and the parenchyma to a depth of 7 or 8 mm. All went well for three days but then the temperature rose a little, jaundice developed and the patient succumbed quietly during the night. The liver had been large for a long time and bile spurted from the mouths of the intercellular passages as they were exposed, but these passages were of normal size and they proved insufficient for the task of diverting the bile into the intestine. Unless these intercellular passages are found dilated at first there is reason to suppose that they will retract and close up more or less and thus annul the benefit derived from the anastomosis with the intestine. In Garré's and Jordan's cases in which this operation was successfully done, these small passages were found much distended and the outcome of the operation was satisfactory. Lejars is convinced that this can not be anticipated when these intercellular passages are found of normal size or unusually small.

51. Surgical Treatment of Cerebral Hemorrhage.—Lhermitte reviews the few cases in American and British literature in which acute cerebral compression from intracranial hemorrhage was cured by evacuation of the blood, and discusses the indications. He has no personal experience to relate, but states that the measure is liable to give favorable and encouraging results in the cases which are extremely serious from the start, the patient being in deep coma, with hemiplegia persisting unmodified.

52. Local Hemolytic Icterus.—Guillain and Troisier discuss the relations between local destruction of blood and local production of bile pigments, especially in reference to the hemolytic process which results in the production of bilirubin in an aseptic pleural hematoma. In a case of the latter reported in detail a stab wound in the back of the left thorax was followed by a hemorrhagic effusion in the pleural cavity. The fluid withdrawn by six punctures in the course of seven weeks contained hemoglobin and bile pigments while the red corpuscles were seen to be extremely fragile. The conditions were identical in a second similar case, both presenting a local hemolytic icterus limited to the pleural cavity, the seat of the trauma, and independent of any morbid process originating in the liver. The puncture fluid was invariably sterile in both cases, and the symptoms observed, fever, leucocytosis, polynucleosis (78.4 per cent. in the first case three weeks after the injury) and signs of a crisis: polyuria and eosinophilia, about the same date, etc., indicate that extravasated blood corpuscles have an actual toxic action outside of any infection. It is interesting to recall in this connection, he remarks, that subarachnoid hemorrhages are also liable to give rise to aseptic inflammatory reactions, the same as a pleural hematoma. The discussion of the subject also throws light on the process known as hemolytic jaundice.

Beiträge zur klinischen Chirurgie, Tübingen

February, LXI, No. 3, pp. 529-804

53 *Bassini Operation for Hernia and its Contraindications. (Zur Anatomie und Technik der Bassini'schen Radikaloperation den Leistenhernien sowie über die Kontraindikationen der selben und über die Hernienoperation bei Kindern.) W. Noetzel.

- 54 Relations between Cicatrix of Laparotomies and Postoperative Hernia. (Beziehungen der Laparotomienarben zu den postoperativen Bauchbrüchen.) Lindenstein.
- 55 Congenital Curvature of the Spine from Cleavage of Thoracic Vertebrae. (Spina bifida anterior.) F. Oehlecker.
- 56 Arterio-mesenteric Ileus with Acute Dilatation of the Stomach. (Arterio-mesenterialer Darmverschluss mit akuter Magendilatation.) T. Nakahara.
- 57 Case of Malformation of Mesentery. (Fall mesenterialer Bildungsanomalie.) M. Kirschner.
- 58 *Multiple Hydatid Cysts in the Liver. (Zur Kasuistik der multiplen Echinokokken der Leber.) Ehrlich.
- 59 *Hemophilia and Operative Interventions on Hemophiliacs. K. Dahlgren.
- 60 *Idiopathic Dilatation of the Colon and its Surgical Treatment. (Hirschsprung'sche Krankheit; ihre chirurgische Behandlung.) J. E. Schmidt.
- 61 Retroperitoneal Abscess after Appendicitis. P. Wolff.
- 62 Operation at Two Sitzings for Pressure Diverticulum of the Esophagus. (Die zweizeitige Operation von Pulsionsdivertikeln der Speiseröhre.) E. E. Goldmann.
- 63 Importance of the Camidge Reaction for Differential Diagnosis of Pancreatic Affections. W. Hagen.
- 64 Tumors of the Branchiogenic Organs in Man. (Struma branchialis Getzowa.) O. Mühlhaeuser.
- 65 Pathogenesis of Subcutaneous Rupture of the Intestines. (Zur Pathogenese der subkutanen Darmrupturen.) K. Borszeky.
- 66 Treatment of Supracondylar Fracture of the Upper Arm. (Behandlung des suprakondylären Oberarmbruchs.) H. Hilgenreiner. Id. H. Coenen.

53. Inguinal Herniotomy.—Noetzel discusses the anatomy and technic of the Bassini radical operation for inguinal hernia and its contraindications, and the question of operations for hernia in children. His experience in the clinic and experiments on the cadaver have convinced him that the chief cause of trouble after a herniotomy is that the operator fails to clear the field of all superfluous tissues before starting to suture. There is usually considerable superfluous tissue surrounding an old hernia which is left in the inguinal ring after the hernia proper has been cared for. Anything interposing between the edges to be sutured prevents their proper coaptation. He consequently advocates dividing the cremaster muscle and also the external spermatic artery with its accompanying connective tissue and the transverse anastomoses of this with the accompanying vein. In women the round ligament should be divided and sutured to Poupart's ligament also in the same way, aiming to retain the uterus in its normal position, while the ligament sutured to the muscle below re-enforces it. He does not advise the Bassini technic for infants, preferring a purse-string suture for the hernia and a Czerny suture for the opening.

58. Multiple Hydatid Cysts in the Liver.—Ehrlich reports a case of multiple cysts in the liver in a boy of 14 cured by successful surgical intervention on the same principles as for a single cyst. The case is a record-breaker, he says, as none with more than six cysts has been recorded hitherto, although he has compiled from the literature 105 cases of multiple cysts in the liver in which an operation was attempted. The mortality was 30 per cent. He tabulates the details as to the mode of intervention and the outcome.

59. Abstracted in THE JOURNAL, Aug. 8, 1908, page 542.

60. Idiopathic Dilatation of the Colon.—Schmidt reports a case in a boy between 4 and 5, in which most excellent results were obtained by resection of 56 cm. of the excessively large descending colon. He gives the details further of 71 cases from the literature in which various surgical measures were applied with good results in many instances. Even after fairly extensive resections, approximately normal conditions in respect to the digestion are soon re-established. Out of 58 cases in which some radical operation was done, 73 per cent. of the patients were completely cured, while only 12 per cent. were cured in 59 cases treated by internal measures alone, and 60 per cent. died. Experiments on dogs indicate the feasibility of substituting a segment of the small intestine for the resected portion of the colon, but this will only rarely prove necessary.

Deutsche medizinische Wochenschrift, Berlin

March 18, XXXV, No. 11, pp. 465-512

- 67 *Puncture of the Brain and Trephining. (Hirnpunktion und Trepanation.) H. Küttner.
- 68 *Successful Experimental Transmission of Trypanosoma Brucei by Glossina Palpalis. (Positive Infektionsversuche mit Trypanosoma Brucei durch Glossina palpalis.) Kleine.
- 69 *Specific Treatment of Gonorrheal Processes. C. Bruck.

70 Acute Interstitial Gastritis. (Akute interstitielle Magenentzündung.) Munter.
71 Hemolysis of Streptococci. W. Zangemeister. Commenced in No. 10.
72 *Progress in Irrigation Endoscopy in Chronic Urethritis. (Leistungsfähigkeit der Irrigationsendoskopie bei chronischer Urethritis.) H. Lohnstein. Commenced in No. 10.

67. **Puncture of the Brain and Trephining.**—Küttner remarks that statistics show that the mortality of extradural hematoma is 90 per cent. under conservative treatment, while under operative measures over 67 per cent. of the patients recovered. Brion even cites 84 per cent. recoveries under operative treatment of intradural hematoma, but Küttner thinks this is too favorable to conform to the facts, although he adds that it is remarkable how perfectly traumatic injuries heal even when there are apparently severe complications. The improvement in asepsis and trephining technic has much improved the prognosis of traumatic intracranial hemorrhage, especially from injury of the middle meningeal artery. The hematoma in this case can be localized by a Neisser puncture. The accumulation of blood should be removed by osteoplastic trephining with finger and spoon and rinsing with salt solution. The traumatic abscesses in the brain give the best prognosis under operative measures, especially when the operation follows the route taken by the abscess in its origin and spread. The results of operation for abscess in the brain and infectious sinus thrombosis are among the most gratifying in all surgery. He regards all cases of epilepsy of pronounced Jacksonian type as requiring surgical intervention. He quotes L. Bruns that tumors in the brain can be localized in fully 75 per cent. of all cases. Success depends on rapidity in operating, correct decision as to whether to operate at one or two sittings, refraining from tamponing as much as possible, and complete closure of the external wound. Palliative trephining is particularly effectual with choked disc. The prospects of retaining vision are favorable if the operation is done when the sight first begins to suffer, but there is not much hope if the sight has already been considerably reduced. Intervention should therefore be early, as also with symptoms of compression from chronic hydrocephalus, serous meningitis or swelling of the brain. Neither lumbar puncture nor Neisser puncture of the brain gives any such results as palliative trephining. The permanent results obtained to date justify, he asserts, the highest hopes for the future from surgery of the brain.

68. **Trypanosomes and Glossina Palpalis.**—Kleine reports from German East Africa experiments which confirm Koch's statements that the *Trypanosoma brucei* passes through its phase of sexual development in the *Glossina palpalis*.

69. **Specific Treatment of Gonorrheal Processes.**—Bruek reports from Neisser's clinic at Breslau experiences which show the possibility of vaccination with gonococci to induce active immunity. The method is liable to prove valuable in gonorrheal complications and general affections which frequently prove refractory to the ordinary measures. It seems to be possible to obtain a cutaneous reaction in gonorrheal patients following inoculation of vaccine.

72. **Irrigation Endoscopy in Urethritis.**—Lohnstein reports extensive experiences with Goldschmidt's method of visual inspection of the urethra distended with a fluid. It was described in THE JOURNAL, June 8, 1907, page 1992. It gives oversight of the urethra throughout, far surpassing that obtained with any other technic of the kind.

Fortschritte der Medizin, Leipzig
March 10, XXVII, No. 7, pp. 257-304
73 *Fibrosarcoma in Cerebello-pontine Angle. (Zur Klinik des Kleinhirnbrückenwinkeltumors.) C. Velhagen.

73. **Tumor in Cerebello-pontine Angle.**—Velhagen was consulted by a girl of 16, apparently in good health, on account of a slight dimness of vision at times. There had been a little nausea and headache a few weeks before and a few months previously she had consulted a physician on account of not being able to hear quite so well with the right as with the left ear. Velhagen found pronounced choked disc in both

eyes and diagnosed a tumor at the base of the brain. For two years the failing vision was the only appreciable symptom, then the hearing became defective on both sides. A year later brain symptoms developed, leading to the fatal termination five years after the first symptoms. Autopsy revealed a fibrosarcoma in the cerebello-pontine angle which shelled out readily and probably could have been easily removed at any time. The long persistence of the eye symptoms alone is important for differentiation of such tumors. Deafness gradually spreading to the other side is also instructive, although the existence of an old perforation of the tympanum may prove misleading, as occurred in the case reported. This gradual involvement of the second ear is accounted for by the anatomic conditions as he explains in detail. Klebs estimates the frequency of these cerebello-pontine tumors as one in every fifty-five brain tumors.

Jahrbuch für Kinderheilkunde, Berlin
March, LXIX, No. 3, pp. 251-374
74 Rachitis. M. Kassowitz.
75 Basophilic Granulation of the Red Corpuscles in Embryonal Blood and in Anemic Conditions in Children. (Die basophile Granulation (Punktierung) der roten Blutkörperchen im embryonalen Blut und bei anämischen Zuständen im Kindesalter.) W. von Starck.
76 Metabolic Research on Breast-fed Child with Special Regard to Ammonia Coefficient. (Ein Stoffwechselversuch an einem Brustkinde mit besonderer Berücksichtigung des Ammoniakkoeffizienten.) S. Amberg and W. P. Morril.

Medizinische Klinik, Berlin
March 14, V, No. 11, pp. 381-418
77 *Therapeutic Action of Potassium Bitartrate. (Wirkungen des Tartarus depuratus.) H. Eichhorst.
78 Importance of Vestibular Nystagmus in the Diagnosis of Otitic and Intracranial Affections. Wagener.
79 Traumatic Affections of Acromial Bursa. L. Frennd.
80 *New Modes of Application of Traction and Compression in Medico-Mechanical Devices. A. Heermann.
81 The Cambridge Reaction in Pancreatic Affections. O. Klauber.
82 Influence of Altitude. (Wirkung des Höhenklimas.) N. Zuntz.

77. **Therapeutic Action of Potassium Bitartrate.**—Eichhorst calls attention to the remarkable efficacy of potassium bitartrate in promoting diuresis. Its influence is only gradually displayed, but it is lasting. He gives it as a routine measure in pleurisy with effusion, but its most striking effect is shown in ascites with cirrhosis of the liver. He reports three severe cases to show the remarkable efficacy of this treatment after failure of other measures. In case of ascites he first excludes tuberculosis, then has the abdomen rubbed with green soap and puts the patient on a light diet with three pints of milk a day and orders:

R.	gm. or c.c.	
Decocti radiceis althææ, 10:.....	180	℥xii
Potassii bitartratis	15	or ʒss
Syrupi simplicis	20	ʒv

The dose is 15 c.c. every two hours, thoroughly shaking the bottle each time. This medication was kept up for four months in one of the cases described and with great benefit. The patients with advanced cirrhosis of the liver lose the ascites, get a good color and appetite, with normal bowel functioning, and gain in strength so that they feel well and hearty. Eichhorst's experience with operative treatment of these cases and with other drugs has been disappointing. Sakaki in Japan uses the bitartrate in much higher dosage. The benefit with Eichhorst's dosage comes on so gradually that one must not be discouraged at first; after a few days the action of the drug is abundantly evident.

80. **Medico-mechanical Apparatus.**—Herrmann gives fourteen illustrations of his application of new principles for medico-mechanical apparatus that can be made and used at home. The first system is a combination of a long lever with a long elastic band as he shows in three illustrations. It is especially useful for active exercise of the elbow, shoulder, hip and knee joints, while reclining. The second principle is a footstool or seat on a cradle rocking base. The foot is placed on a cradle shaped stool which exercises the joints of the ankle and knee in a most surprising manner as it rocks, and sitting or reclining on the rocking seat permits a remarkable variety of exercises of the trunk. The third system

holds the hands and fingers firm while the forearm can be exercised. The fourth is an exercise for the ankle, the foot resting on small balls running in a groove in a long frame. Other devices permit adjustable extension with weights for sciatica. Even more effectual is his method of applying gentle constant compression by means of a row of inelastic straps with buckles, with or without an interposed rubber sponge. He calls this the "comb bandage"; its special advantage is the adjustability of the separate straps. He uses twelve for the leg in phlebitis and three wider ones for the abdomen. The straps can be applied over the underclothes. For hemorrhoids he introduces a sponge into the rectum, leaving it in place up to twenty-four hours. He insists that the efficacy of this "partial stasis" far surpasses that of massage.

Monatsschrift für Geburtshilfe und Gynäkologie, Berlin

March, XXIX, No. 3, pp. 265-404

- 83 *Treatment of Placenta Prævia. (Zur Diskussion über die neueren Vorschläge von Krönig und Sellheim.) J. Pfannenstiel. Id. J. Thies.
- 84 Case of Vaginal Ovariectomy during Childbirth. (Vaginale Ovariectomie während der Geburt.) W. Rühl.
- 85 Delivery with Contracted Pelvis. (Geburten bei engem Becken.) W. Konopka.
- 86 *Treatment of Rupture of Uterus. (Zur Behandlung der Uterusruptur im Anschluss an sechs eigene Fälle.) G. Petren.
- 87 Anatomy and Clinical Importance of Chorioma of the Placenta. E. Eicke.
- 88 Treatment of Myoma. K. Torkel.
- 89 *Recurring Tubal Pregnancy. (Wiederholte Tubargravidität.) E. Puppel.

83. **Treatment of Placenta Prævia.**—Pfannenstiel declares that the use of the metreurynter should be taught during the medical course so that all physicians may be able to apply this technic in urgent cases, especially with placenta prævia. The inflatable bag is best introduced, he says, through the speculum after the cervix has been drawn down for the purpose. Special forceps are required of suitable length, curved to fit the pelvis, and smooth on the inner side. An attempt should be made to rupture the fetal membranes and introduce the bag into the ovum. If this proves impossible, the bag may be left below the ovum in the cavity of the uterus without fear of undue separation of the placenta, only the amniotic sac must be ruptured. The fetal membranes are best opened with the forceps carrying the inflatable bag. If this fails, dressing forceps will answer the purpose, the hole being enlarged with the fingers and the bag then introduced. As a general thing it is sufficient to fill the inflatable bag with 500 c.c. of sterile salt solution and hang a weight of 2.2 pounds to it. The bag should not be removed later to allow version or other measures to promote delivery; when the metreurynter is in place it should be left undisturbed until the os enlarges so that the bag is spontaneously expelled. When this occurs the os is then so dilated that the delivery can be terminated at once, possibly requiring internal version and extraction. Thies discusses Cesarean section for placenta prævia, remarking in conclusion that the mortality of the mothers with placenta prævia has already been reduced to 3 or 5 per cent. without Cesarean section and that of the viable children to 10 or 20 per cent. He advocates restricting combined version to extremely urgent cases, those with excessive loss of blood, or hemorrhage during the early part of pregnancy—this broadens still further the field of the metreurynter. Even the most serious hemorrhage can be arrested, he says, by introducing the inflatable bag and pulling lightly on it. The results are less constantly favorable in primiparæ and in women with rigid cervix; vaginal Cesarean section promises well in these cases. It is simple and harmless when the placenta is located on the posterior wall of the uterus. If located on the anterior wall the anterior hysterotomy is best done after a metreurynter has been introduced and the uterus pulled down, making the incision over the inflatable bag and then waiting for its expulsion before terminating the childbirth.

86. **Treatment of Rupture of the Uterus.**—In two of Petren's six cases the rupture followed obstetric maneuvers, but in the others it occurred spontaneously after from ten to thirty-two hours of vigorous labor. There was no sign of the

impending rupture in any case except that the contraction ring was almost half way up to the umbilicus in one case over three hours before the rupture finally occurred. This was disregarded, however, as there were no other signs such as taut round ligaments, the persisting character of the labor pains and restlessness on the part of the patient, consequently no attempt was made to perforate and deliver the woman at once. In three instances the rupture was not diagnosed for several hours; in the others collapse or anemia attracted attention to the rupture almost immediately. In three cases labor ceased at once after the rupture; in one case the uterine contractions continued with regular intervals for at least fifteen minutes after the rupture. This is not unusual when the rupture—as in this case—is located in the upper extremity of the vagina. The child escaped into the abdominal cavity in most of his cases and was delivered by a laparotomy as soon as the condition was diagnosed. Oversight of the literature on rupture of the uterus seems to show, he says, that conservative treatment gives better results than operative, but this is a deceptive conclusion as it is invalidated by the prevailing tendency to report only the successful cases.

89. **Recurring Tubal Pregnancy.**—Puppel has encountered two cases of recurring tubal pregnancy. In order to prevent such an occurrence he advocates removing the other tube if it is involved in adhesions or if there is a large hematocele or if drainage of the small pelvis is necessary. The other tube should always be examined, and the abdominal route is preferable on this account.

Münchener medizinische Wochenschrift

March 16, LVI, No. 11, pp. 545-592

- 90 *Paroxysmal Hemoglobinuria and Hemolysis in the Test Tube. E. Moro and S. Noda.
- 91 *Influence of Alcohol on Starving Organism. (Einfluss des Alkohols auf den hungernden Organismus.) M. Kochmann.
- 92 Serodiagnosis of Syphilis. J. K. Beckers.
- 93 Acute Dilatation of Heart from Overexertion. (Akute Dilatation des Herzens durch Ueberanstrengung.) L. Raab.
- 94 Hitherto Undescribed Variety of Amenorrhea and its Operative Treatment. A. Rieck.
- 95 Apparatus for Graphic Registration of the Blood Pressure. (Apparat zur graphischen Blutdruckbestimmung.) H. Stursberg.
- 96 Nature of Alternating Heart Rhythm. (Wesen des Herzalternans.) G. Galli. Id. H. E. Hering.
- 97 Roentgen Examination of Gastric Motor Functioning. (Die peristaltische Funktion des Magens im Röntgenbilde.) F. Groedel.

90. **Paroxysmal Hemoglobinuria.**—Moro and Noda relate experimental and clinical experiences which confirm in every respect the assumption that the amboceptor in these cases is bound to the erythrocytes only when unheated. When they are warmed the amboceptor is liberated. The temperature tests give classical examples for the clinical relationship between toxic injuries and injuries from chilling—a relationship of which we are constantly encountering evidences in our daily practice. The changes in the blood during the hemoglobinuria paroxysms resembled in every respect those observed in most infections.

91. **Influence of Alcohol on the Starving Organism.**—Kochmann's experiments on rabbits showed that large amounts of alcohol hastened the death of the animals, while small amounts postponed the fatal termination. He thinks that these results throw light on the benefit from small amounts of alcohol during febrile affections, etc., in which the intake of food must be reduced, while large doses have a directly injurious action.

Wiener klinische Wochenschrift, Vienna

March 18, XXII, No. 11, pp. 363-400

- 98 *Nature of Anaphylaxis. (Experimentelle Studien über Anaphylaxis.) A. Biedl and R. Kraus.
- 99 *Transplantation of Thyroid. (Zur Frage der Schilddrüsen-transplantation.) H. Salzer.
- 100 Nature of Syphilis. (Ueber das Wesen der luetischen Erkrankung auf Grund der neueren Forschungen.) E. Weil and H. Brann.
- 101 Differential Diagnosis of Appendicitis, Nervous Pseudoappendicitis and Diseases of the Ovaries and Fallopian Tubes. P. Profanter.

98. **Nature of Anaphylaxis.**—Biedl and Kraus report the details of experimental research which has shown that the so-called anaphylactic reaction is characterized by a symptom-

complex consisting of vasodilation and its consequences, from peripheral paralysis of the vessels, reduction of the coagulating power of the blood and changes in the morphologic blood picture. It is further distinguished by the fact that it can be induced once and only once within a certain period of time. They further call attention to the fact that this syndrome is identical in every respect with the well known action of the peptone produced by artificial digestion of albumin; most of the experiments recorded were made with the commercial Witte peptone. The syndrome induced in dogs by injection of this peptone is identical, to the smallest details, with the reaction known as anaphylaxis. It seems evident that the anaphylactic intoxication is induced by some poison, which may be regarded as identical with Witte's peptone.

99. Transplantation of Thyroid.—Salzer has been experimenting on rabbits, the results encouraging further attempts to supply the missing function by implantation of thyroid tissue. The best results will certainly be obtained with repeated implantation of small scraps, and for this it is better to implant the scraps in the subcutaneous tissue (Cristiani) or in the peritoneal tissue (von Eiselsberg).

Zentralblatt für Chirurgie, Leipsic

March 13, XXXVI, No. 11, pp. 369-408

- 102 *Ether Anesthesia by Rectum. (Zur rektalen Aethernarkose.) E. W. Baum.
103 Transperitoneal Incision of Bladder. (Zur transperitonealen Eröffnung der Blase.) L. R. v. R. Rydygier.
104 Device for Supporting Pelvis in Operations. (Eine neue Beckenstütze.) Langemak.
105 Modification of Dohlgrén's Forceps. (Zur Modifikation der Dohlgrén'schen Zange.) M. Borchardt.

102. Ether Anesthesia by the Rectum.—Baum was encouraged by the favorable experience of Dumont, summarized in THE JOURNAL, Feb. 6, 1909, page 515, to give ether by way of the rectum. He followed Dumont's technic in eight cases. The results were apparently ideal in the first few cases, but then occurred two fatalities which opened his eyes to the immense danger of attempting to anesthetize a patient by this route. In these two cases the intestines had been so injured by the action of the ether that profuse hemorrhage (680 c.c. within forty-eight hours) followed in one case, and in the other the cecum became gangrenous and perforated. Besides these two fatal cases the autopsy in another case in which the anesthesia had been apparently ideal showed that the large intestine was spasmodically contracted and covered with numerous ulcerations, partly healed. The patient had succumbed to the heart complications of cancer of the breast. He believes that if any of the other patients had happened to die not long after the anesthesia similar lesions in the intestines would have been discovered. He attended to the rectal anesthesia himself and is confident that no fluid ether got into the rectum. He warns that rectal anesthesia—at least in its present form—is altogether too dangerous for ordinary use.

Zentralblatt für Gynäkologie, Leipsic

March 13, XXXIII, No. 11, pp. 377-408

- 106 Injurious Influence of Scopolamin on Pulse and Temperature. (Ueber den angeblichen nachteiligen Einfluss des Skopolamins auf Puls und Temperatur.) H. Sieber.
107 *Ventrofixation of Vagina in Absence of Uterus. (Ventrifixur bei fehlendem Uterus.) M. Gerschun.
108 Date of First and Last Menses in Jewish and other Russian Women. (Menarche und Menopause bei Jüdinnen und Russinnen in Südrussland.) S. Weissenberg.

107. Treatment of Uterine Prolapse.—Gerschun declares that total removal of the uterus is not the best treatment for prolapse, as prolapse of the walls of the vagina is liable to follow. This has occurred in two cases on record, and he reports a third requiring ventrofixation long after hysterectomy.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 23, XXX, No. 23, pp. 241-248

- 109 Advantages of Local Anesthesia in Extirpation of Goiter. (Osservazioni sull'estirpazione del gozzo.) E. Truffi.
February 25, No. 24, pp. 249-256
110 Hysterical Hematemesis. G. Pomarico.
February 28, No. 25, pp. 257-272
111 Complement Fixation in Diagnosis of Anthrax. (Studi sul carbonchio.) A. Paccanaro.

March 4, No. 27, pp. 281-288

- 113 Pathogenesis of Arteriosclerosis and Atheromasia. S. Lavagna.

March 7, No. 28, pp. 289-304

- 114 Therapeutic Value of Scarlet Red. (Scharlachrot.) Sprecher.

March 14, No. 31, pp. 321-336

- 115 *Autocholecystectomy. (Colelsectomia per via naturale colica?) E. Leonardi.

115. Autocholecystectomy.—Leonardi gives an illustration of a bunch of tissue passed through the rectum by a man of 57 who had suffered for a few years from pains suggesting cholelithiasis. He took a course of mineral waters and not long after passed the specimen described. It proved to be the inflamed and ruptured gall bladder. Leonardi thinks that the gall bladder must have sunk down into the adjoining loop of intestine, causing invagination, and final segregation and expulsion of the gall bladder as a foreign body.

Riforma Medica, Naples

March 15, XXV, No. 11, pp. 281-308

- 116 *Action of Extract of Tuberculous Lymph Glands on Course of Experimental Tuberculosis. (Dell'azione che gli estratti di tessuto linfatico tubercolare esercitano sulla evoluzione della tubercolosi sperimentale.) S. Livierato.

116. Extract of Tuberculous Lymphatics in Experimental Tuberculosis.—Livierato found that injection of an extract of tuberculous lymph glands had a notable effect in attenuating the tuberculous process in guinea-pigs injected with it.

Hospitalstidende, Copenhagen

February 17, LII, No. 7, pp. 177-224

- 117 *Specific Action of Serum in Anaphylaxis and Possibility of Utilizing it to Distinguish Between Human and Animal Origin of Blood Stains. (Om Serumanafylaxiens Specifitet og om Muligheden af at anvende denne i den medicoforensiske Praxis til Afskillelse mellem Menneske- og Dyrblod i Blodpletter, etc.) O. Thomsen.

March 3, No. 9, pp. 249-296

- 118 *Vaccine Therapy of Staphylococcus Affections. V. Jensen.
119 *Value of Preventive Injections of Diphtheria Antitoxin. (Om en Difteriepidemi paa Middelfart Sindsygeanstalt.) A. T. Jacobsen.

March 10, No. 10, pp. 297-320

- 120 Sickness among Printers and Typesetters at Copenhagen. (Sygeligheden hos de mandlige Arbejdere i de københavnske Bogtrykkerier.) H. Bille-Topp.
121 Importance of Serodiagnosis of Syphilis from Standpoint of Treatment. (Betydningen af Wassermanns Reaktion for Behandlingen af Syphilis.) H. Boas.

March 17, No. 11, pp. 321-360

- 122 Connection between the Number of White Corpuscles and Variations in the Pulse Pressure. (Om Sammenhæng mellem Antal af hvide Blodlegemer og Variationer i Pulstryk.) S. A. Heyerdahl.
123 Radical Operation for Femoral Hernia. O. V. Lassen.

117. Forensic Tests of Blood Stains with Anaphylactic Serum.—In this communication from the state serum institute, Thomsen relates extensive experiments which confirm the possibility of utilizing the "quantitative specificity" of the serum of animals in which anaphylaxis has been induced as a means to determine the human or animal origin of blood spots. The technic is comparatively simple, as guinea-pigs can be easily rendered anaphylactic to the homologous serum by means of an aqueous extract of the blood spot in question. The technic he found best adapted for the purpose is described in detail and also the tests made with blood from six different species of animals or fowls and with human blood, the specific findings with each confirming the reliability of the test.

118. Vaccine Treatment of Staphylococcus Affections.—Jensen has applied Wright's method of vaccine treatment in twenty cases, as he relates with particulars, the results encouraging the further use of this method of treatment, especially for recurring furuncles, etc.

119. Preventive Injections of Diphtheria Antitoxin.—Jacobsen states that only 18 patients developed diphtheria among the 818 inmates of an insane asylum treated with preventive injections of antitoxin to arrest an epidemic of diphtheria in the asylum. In the 18 cases in which diphtheria developed notwithstanding the injections the disease had an unusually mild course. In one case the symptoms appeared two days after the injection, showing that the infection must have been

already under way; in the others the first symptoms appeared between the eleventh and thirty-seventh day afterward. Maag has reported 3 cases developing after preventive injection of 423 patients. All agree that to abort an epidemic, isolation of the sick is necessary until they are free from bacilli. He adds in conclusion that the cannulas used to make the injections sometimes become clogged with coagulated serum as they are boiled. This can be prevented by placing the cannulas in a solution of pepsin after using; this will eat out the serum in the interior. He also describes a simple box method of disinfecting the letters sent out by the sick.

Norsk Magazin for Lægevidenskaben, Christiania

March, LXX, No. 3, pp. 169-296

- 124 Low Bronchoscopy for Removal of Foreign Bodies in the Lungs. (Fremmedlegeme i lungen. Bronchoscopia inferior. Fjernelse af fremmedlegemet, helbredelse.) V. Uchermann.
- 125 The Art of Embalming, Past and Present. (Om fortids og nutids balsameringskunst.) H. Hopstock.
- 126 *Tumors in the Nerves and Multiple Neurofibromatosis. (Neurofibromatose.) F. Harbitz. Commenced in No. 2.
- 127 Fifty-four Cases of Acute Appendicitis. J. Roll.
- 128 *Opsonic Index in Tuberculosis. S. Widerøe.

126. General Neurofibromatosis.—In this second installment of his monograph Harbitz gives 21 photographs of several cases of multiple neurofibromatosis, his experience including 15 patients with this affection. The 11 cases described in detail represent the various types of von Recklinghausen's syndrome. In one case of congenital elephantiasis the affection had occurred in five generations, affecting 6 female and 3 male members of the family. The legs alone were involved in the present case. The nerves were unmistakably the source of the elephantiasis, as was shown by the postmortem microscopic examination, in addition to the multiple neuromas and pigment spots found scattered over the body and the pronounced inherited taint. There is no doubt that this is merely one form of general neurofibromatosis. The article is to be continued.

128. Opsonic Index in Tuberculosis.—Widerøe found that the opsonic index in 50 tuberculous patients ranged from 0.51 to 1.30, averaging 1.01, while in 50 non-tuberculous the range was from 0.46 to 1.44, the average 0.92.

Ugeskrift for Læger, Copenhagen

March 4, LXXI, No. 9, pp. 219-246

- 129 *Nature and Treatment of Paralytic Dementia. (Nyere Bidrag til Spørgsmaalet om Dementia paretica's Natur og Behandling.) F. Hallager. Commenced in No. 7.

129. Nature and Treatment of Paralytic Dementia.—Hallager expresses surprise that more attention has not been paid to the theory advanced by W. Ford Robertson, on the ground of bacteriologic and clinical evidence, that general paralysis is the result of chronic toxic infection dependent especially on the abundant growth of a diphtheroid bacillus or other germ which gives the disease its special paralytic character. It is evident that the majority of paralytics have or have had syphilis. But the paralysis can not be regarded as the direct consequence of the syphilitic infection. The syphilis is merely one agent that contributes to the weakening of the natural immunity by impairing the general and local defensive mechanisms. Hallager says that there are no theoretic objections to accepting Robertson's *Bacillus paralyticus* as the direct causal agent. But the question can not be decided until Robertson's results have been confirmed by others. His success with the vaccine and antiserum made from the patient's own bacteria are so striking that they deserve wide attention. Hallager comments on the striking similarity between sleeping sickness and general paralysis. Both come on with weakness, ataxia, epileptiform attacks and spastic contractures; in both diseases there is a striking lymphocytosis in the cerebrospinal fluid and autopsy shows a diffuse inflammatory process in the brain. Robertson's experiments with mice and rats have resulted in the production of an affection which both clinically and in its pathologic and anatomic aspects resembles very closely paralytic dementia in man. Hallager is now cooperating with Madsen to apply this vaccine treatment according to Robertson on an extensive scale, the state serum institute and insane asylum at Aarhus working together. The

pathologic changes will probably be found irreparable, but the symptoms due to the direct action of toxins may be arrested by the antitoxin. It is even possible, he adds, that a similar antitoxin may be made for alcoholics, which will counteract or neutralize the toxic action of the alcohol.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE PSYCHOLOGY OF DEMENTIA PRÆCOX. By Dr. C. G. Jung, Privat-Docent in Psychiatry, University of Zurich. Authorized Translation with Introduction by Frederick Peterson, M.D., Professor of Psychiatry, Columbia University, New York, and A. A. Brill, Ph.B., M.D., Assistant in Psychiatry, Columbia University, New York. Paper. Pp. 153. Price, \$2. New York: The Journal of Nervous and Mental Diseases Publishing Co., 1909.

RUDIMENTS OF LATIN. With Special Reference to the Nomenclature of the U. S. Pharmacopeia, the National Formulary and the Text-Books in Materia Medica and Botany. Including also Prescription Writing and Notes on the Nomenclature of the German Pharmacopeia. By Julius Williams Sturmer, Ph.G., Professor of Pharmacy, Purdue University, Lafayette, Ind. Cloth. Pp. 92. Price, \$1. Published by the author.

TEXT-BOOK OF EMBRYOLOGY. By Frederick Randolph Bailey, A.M., M.D., Adjunct Professor of Histology and Embryology, College of Physicians and Surgeons (Med. Dept. Columbia Univ.) and Adam Marion Miller, A.M., Instructor in Histology and Embryology, College of Physicians and Surgeons (Med. Dept. Columbia Univ.). Cloth. Pp. 672, with illustrations. Price, \$4.50. New York: William Wood & Co., 1909.

DISEASES OF THE PHARYNX AND LARYNX. By Dr. E. J. Moure, Surgeon in Charge of the Nose, Ear and Throat Department of the Faculty of Medicine, Bordeaux. Translated and Adapted by J. Malcolm Farquharson, M.B., F.R.C.P., Lecturer on Diseases of the Nose, Ear and Throat in the School of Medicine of the Royal College, Edinburgh. Cloth. Pp. 403, with illustrations. Price, \$4. New York: Rebman Co., 1909.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION AT THE FIFTY-SIXTH ANNUAL MEETING, HOT SPRINGS, ARK., SEPTEMBER, 1908. Also the Constitution, By-Laws and Roll of Members. Cloth. Pp. 1203. Baltimore: Published by the American Pharmaceutical Association, 1908.

A MANUAL OF PRACTICAL X-RAY WORK. By David Arthur, M.D., D. P. H., Medical Officer in Charge of X-Ray Department, West London Hospital, and John Muir, M.B., Ch.B., and B.Sc. (Pub. Health.) Cloth. Pp. 244, with illustrations. Price, \$2.50. New York: Rebman Co., 1909.

MEDICO-CHIRURGICAL TRANSACTIONS. Published by the Royal Medical and Chirurgical Society of London. Volume the Ninetieth and Last. (Series 2, Vol. LXXII.) Session 1906-7. Cloth. Pp. 721. London: Longmans, Green & Co., Paternoster Row, 1907.

SPECIAL HOSPITALS—THEIR ORIGIN, DEVELOPMENT AND RELATIONSHIP TO MEDICAL EDUCATION, THEIR ECONOMIC ASPECTS AND RELATIVE FREEDOM FROM ABUSE. By Richard Kershaw. Paper. Pp. 72. London: Geo. Pulman & Sons, Ltd.

THE THEORY OF IONS. A Consideration of Its Place in Biology and Therapeutics. By William Tibbles, M.D. (Hon. Causa), Chicago, LL.D., LL.R.C.P.E., M.R.C.S., L.S.A., etc. Cloth. Pp. 131. Price, \$1. New York: Rebman & Co., 1909.

ERADICATING PLAGUE FROM SAN FRANCISCO. Report of the Citizens' Health Committee and an Account of Its Work. Cloth. Pp. 313, with illustrations. Prepared by Frank Morton Todd, Historian for the Committee, 1909.

THE EMMANUEL MOVEMENT IN A NEW ENGLAND TOWN. By Lyman P. Powell, Rector of St. John's Church, Northampton, Mass. Cloth. Pp. 194, with illustrations. Price, \$1.25. New York: G. P. Putnam's Sons, 1909.

THE MATTER WITH NERVOUSNESS. By H. C. Sawyer, M.D., Member of the American Medical Association. Cloth. Pp. 210. Price, \$1. San Francisco: Cunningham, Curtiss & Welch, 1909.

MEDIZINAL-BERICHTE ÜBER DIE DEUTSCHEN SCHUTZGEBIETE FÜR DAS JAHR 1906/07. Herausgegeben vom Reichs-Kolonialamt. Berlin, 1908. Cloth. Pp. 324. Price, 7.50 marks.

AN EPITOME OF DRUGLESS METHODS USED SUCCESSFULLY IN TREATMENT OF ACUTE AND CHRONIC DISEASES. By J. W. Bolton, M.D. Paper. Pp. 32. Price, 25 cents.

THE INTERNATIONAL MEDICAL ANNUAL; 1909. Twenty-seventh Year. Cloth. Pp. 683, with illustrations. Price, \$3.50. New York: E. B. Treat & Co.

REASONS FOR FOOD REFORM. Paper. Pp. 40. Price, three pence. London: National Food Reform Association, 40 Chandos Street, Charing Cross.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA. Vols. for 1907 and 1908. (State Board of Health.) Cloth.

THIRTY-FIFTH ANNUAL REPORT OF THE MEDICAL DIRECTOR OF THE CINCINNATI SANITARIUM, 1908. Paper. Pp. 16.

SAINT MARY'S GENERAL HOSPITAL, LEWISTON, ME. SIXTEENTH ANNUAL REPORT, 1908. Paper. Pp. 71.

NINETEENTH ANNUAL REPORT EASTERN INDIANA HOSPITAL FOR THE INSANE, 1908. Paper. Pp. 82.

TWENTIETH ANNUAL REPORT OF THE GRACE HOSPITAL, DETROIT, MICHIGAN. Paper. Pp. 61.

ANNUAL REPORT OF THE CANTON HOSPITAL, 1908. Paper. Pp. 36.

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Original Articles

REMARKS ON TIC AND CHOREA

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The tic of this paper, be it understood, is not tic douloureux or trifacial neuralgia, but painless and purely motor tic, sometimes called "convulsive tic," but generally just "tic." There being no really good English term for the disorder, the French word has been almost universally adopted. "Habit spasm" is perhaps the best that we have, but the trouble is more than a habit, less than a spasm, or rather not a spasm at all. Tic belongs to the hyperkinesias; that is, it is a disorder of movement pathologic in its excess or exuberance. It is a motor obsession, an imperative impulsion voicing itself in movement. Although chorea has little in common with tic except excess of movement, the latter is not infrequently mistaken for the former. This fact is the only justification for the following trite remarks.

The movements of chorea are involuntary and not amenable to control by the patient. Those of tic, however bad, are always volitional, even if not voluntary, and may always, at least for a short time, be controlled by the will. The first statement needs a little qualification. Long ago Weir Mitchell called attention to the fact that in some cases of chorea the choreic movements are aggravated by voluntary motion, in others rather diminished during voluntary movement and in still others the patient can, to some degree for a very short while, hold the abnormal movements in abeyance. But there never is the complete control which can always, in some way or other, be shown to exist in tic. As a rule the patient with tic says he "can't help it," and it is perfectly true that the tic movement often is unconscious, just as the man with the fixed habit of profanity swears involuntarily and unconsciously; but in the one case, as in the other, it is always possible to awaken consciousness and inhibition. In the presence of a clergyman or of ladies the most profane man will talk for an indefinite time and never utter an oath. Many a time I have sat by a youngster with tic, holding a pin in my hand and, the child understanding that the result of a jerk or twitch on his part would be a jab with the pin, I have waited long in vain for the movement which was accustomed to come every minute or less. This maneuver never succeeds in chorea.

In chorea the movements are incoordinate, purposeless; pathologic in the association and sequence of muscular contraction. They are grotesque because of their incoherence and disorder. In tic the movements are coordinate and purposive; physiologic in the association and sequence of muscular contraction. They are

grotesque only because malapropos. To elaborate a bit: the movements of chorea are of a perfect type of irregular movements such as a well person never makes. One can imagine no purpose for which they would be appropriate. Whether the jerkings and writhings be of the fingers, an arm or the entire body, they have no analogy in normal function. If perchance an isolated movement looks like a natural one it is only casual and does not happen again. The very visage of the movements, if one may use such an expression, is pathologic.

On the other hand, the movements of tic are coordinate and such as well persons do often execute. They are movements adapted to an end, a natural and ordinary end, only an end which is no longer there. They are unnatural in frequency of repetition without obvious cause, but from looking at a single movement one could not know that it was pathologic; its aspect is normal. To state it another way: the movement itself may be blameless, but lacking proper parentage, it is illegitimate. For instance, a frequent tic in children is a peculiar shrug of the shoulder involving the arm, such as a nervous or sensitive child makes when the armhole is too tight. Indeed, the tight armhole, as we shall see, often starts the tic. When there is no irritant from the clothing, no physical cause for the shrug, when the movement is oft repeated, uncontrollable and has become a tic, it still preserves its coordinate and purposive character. It looks the same; but it may become greatly exaggerated, pathologic in its excess.

In chorea, as the movements are entirely disordered and neither have nor have had any object, no two movements in succession are just alike. In tic the same movement is repeated over and over. This is perfectly natural from the nature and origin of the disorder, presently to be spoken of.

When choreic movements grow worse and spread, they do so without relation to anatomic or physiologic groupings, except that in the beginning and in mild cases they are apt to be limited to one side of the body. A tic extends in one of two ways. Ordinarily it spreads by involving adjacent and functionally related groups; by adding correlated physiologic acts. A tic of the nose is apt soon to involve the lips and adjoining facial muscles. The sounds of snuffing or sniffing are produced and if the disease grows worse pharyngeal or laryngeal sounds may be expected with strong inspiratory or expiratory efforts. Possibly it spreads by another physiologic group: face, platysma, neck muscles, shoulder girdle, etc. Or a tic may become worse by the starting of a really new tic in some other part of the body, due to some other exciting cause acting on a susceptible individual. The same child may have a tic of the orbicularis palpebrarum started by a blepharitis marginalis and then a tic of the neck started by a tight collar, just as an individual may have a furuncle on the nose and a boil on the back.

Along the line of differentiation as regards volitional control is the distinction that chorea notoriously is disabling while tic is not. Frequently one of the earliest signs of chorea is the unexpected dropping of things. A patient with bad chorea simply can not write. Tic is troublesome but scarcely disabling. The patient with tic of the arm writes as well as ever. His malady does not jerk his hand unawares. Indeed, I may say that his malady does not jerk his hand at all. When the impulsion to jerk can no longer be inhibited, he takes pen from paper, then he jerks his hand once, twice, thrice—and resumes his writing. I once knew a very successful artist with an almost generalized tic. It sometimes delayed his work but did not impair its quality. Tic is not rare in successful musicians.

A striking difference between tic and chorea is that whereas the movements of the latter are uncontrollable, physically distressing and wearing, the movement of a tic, the yielding to the impulse, is attended with a certain sense of gratification or relief. It is the restraint of a tic that constitutes the strain, not the movement itself. This is well illustrated by an occurrence which I have observed many times. Owing to surroundings, command of the physician or some other motive the patient suppresses his tic, in whole or in part, for a considerable period, say fifteen to thirty minutes. Relieved from surveillance or his embarrassing surroundings, the patient at once goes on a little spree of tics, the strain is relieved and he feels more comfortable. The same sort of effort to gratify his abnormal appetite without the indulgence being apparent is seen in the little tricks by which the tiqueur tries to cover up his tic. The most frequent is immediately to add some ordinary movement to the tic. The patient will make an uncalled for and consequently abnormal shrug or twist or jerk less apparent by suddenly changing his position, or by stooping to pick up an imaginary object, or readjusting the clothing. A tic or phonation is disguised by clearing the throat or coughing; that is, by grafting a simulated normal manifestation onto the pathologic, he produces a plausible *tout ensemble*.

A generalized and violent chorea is profoundly exhausting. It can be endured for a relatively short time. Generalized and violent tic, which is really the association in the same individual of many tics, the *maladie des tics* of the French, may last for years and not even interfere with ordinary pursuits. I have known a successful business man who was in almost constant motion. As he walked the street the arms were thrown about in various directions, one foot would suddenly be raised as if the man had stepped on a live coal; he emitted various sounds, sometimes almost rising to a shout, and jerked the head about as if to throw the hat from his head. His conversation was broken by sundry snorts, ahems and exclamations. Yet he continued to attend to his affairs day after day as if in good health.

While convulsive tic is almost purely motor in manifestation, its inception, in the vast majority of cases, I believe to be sensory. Take one of the most frequent and simple examples. A child acquires a nasal catarrh which causes a little irritation and slight discomfort about the nostrils. This, not unnaturally, begets the familiar drawing, wrinkling, twisting movements of nose, lip and adjoining parts. But this response is not yet tic. When the irritation has been relieved, when there is no longer a local sensory stimulus and the twitching still continues; when the patient has great trouble in controlling it and the indulgence is attended

with a sense of relief, then it is tic. When this twitching spreads to near-by and associated groups of muscles and the individual has become the slave of his tic appetite, then he is a confirmed tiqueur, a tic maniac, and hard to cure. In this stage of the affection the original sensory impression which pulled the trigger may be, often is, entirely forgotten, but none the less it was there.

Some cases of tic seem to start as a mere nervous restlessness or fidgetiness or perhaps as only a vague sense of bodily discomfort or embarrassment. This, too, it will be conceded, is essentially a sensory condition. Some tics begin as something which looks like occupation neurosis, but these cases likewise are really of sensory origin. The occupation or, rather, excess of occupation, causes a more or less localized pain, ache, discomfort or fatigue, and this sensation starts the repeated muscular contraction which is some relief to the patient and which ultimately develops into a tic. Occasionally the disorder seems to arise from imitation. In the ultimate analysis I believe that this, like the others, is a sensory origin, but I shall not stop to insist on it. I do wish to insist that tic never is a "reflex neurosis;" that is, a tic of one part caused by irritation or disease of a distant and not obviously related part of the body. For instance, that a uterine fibroid or hemorrhoids may have as a "reflex" a tic of the orbicular palpebrarum is utterly absurd. On the other hand, I can readily imagine that disease of a viscus, by causing pain or discomfort in one of the superficial areas as described by Head, may cause a tic of the muscles underlying this area, although I do not recall having seen such a case.

I dislike to leave the subject of tic without a word concerning spasmodic torticollis—granting that it never could be mistaken for chorea. Though this distressing disorder seems to be something *sui generis*, a thing apart, personally I believe that it belongs with the tics. If it be not a true tic certainly the relationship is very close. Clearly it is not, what it often is thought to be, a local disease, an affection of the spinal accessory nerve or of the neck muscles. When Brissaud called it "mental torticollis" he did a helpful thing in emphasizing its essentially psychic nature. On the other hand, it can not be denied that the disorder in some ways approaches writer's cramp and allied disorders. Still, the points of resemblance with tic are, to my mind, much more striking. I briefly mention just half a dozen of them:

1. The subject of spasmodic torticollis, as the subject of tic, is always a neuropath. He shows the same sort of abnormal susceptibility, the same psychomotor inability, the same lack of inhibition. Several times I have thought that I had found an exception to this rule, but in each case more intimate acquaintance with the patient has shown me the error of my first impression.

2. What has been said of the sensory origin of tic applies to spasmodic torticollis. For example, muscular rheumatism, the ordinary "stiff neck," is not rarely the origin of the trouble.

3. The emotional state of the patient has much to do with the neck spasm. It is always worse when the patient is self-conscious or "upset." On the other hand, intense mental preoccupation may entirely abolish the trouble—for a brief space.

4. In torticollis there is the same strain in repressing the muscular drawings as in other tics, and the same sense of relief in "letting it go." A patient riding in a street car will repress the movements until he can stand

it no longer. Then he will hide behind his newspaper and have a little motor indulgence—which gives him a measure of sensory satisfaction or relief.

5. The muscular contractions of spasmodic torticollis are not true spasms; they are volitional. And they always are more or less under voluntary control. I can not take time to elaborate this point, but the following two perfectly characteristic incidents will serve as an illustration: In a crowded railway station I was watching a man with typical spasmodic wry neck. The contractions almost constantly rotated his head strongly to the right so that he had some trouble in moving about among the many people. In the height of one of the so-called spasms a locomotive bell suddenly sounded to his left. Instantly he turned his head to look in that direction, and the movement was as prompt, as smooth and as complete as it could possibly be.

Quite recently, by means of rest and educative exercises, a patient under my care had very considerably improved; that is, under my direction she could move the head in any direction and hold it in any position at will or to dictation. But her husband complained that at home and on the street she was very little better. One day he came with her. With growing impatience and irritation he watched her go through her exercises without a hitch, then quietly sit and converse with me without a trace of the old jerking and drawing. And when I said, "There, can't you make her do that?" he replied, "Not by a d—d sight; you'd better take her and keep her."

6. The patient with spasmodic torticollis invariably has some trick of restraint: what Brissaud has called a restraining gesture. It is one of the most striking things connected with this peculiar neurosis. A man whose neck muscles are twisting his head around with the greatest violence will gently place a finger against his chin or lay his palm over the occiput, when the muscles at once relax and the head assumes its normal position. Oftentimes if the head can merely touch the back of a chair or the wall the trouble is suspended.

Elsewhere¹ I have related the most striking example of this restraining gesture with which I am acquainted. It seems sufficiently illustrative for repetition: An unusually muscular man had a torticollis which repeatedly—indeed, almost constantly—powerfully rotated his head to the right. But at any stage of this "spasm," which no manual force could possibly overcome, if the patient extended the right arm, pointed the index finger horizontally at his nose and then moved the hand rapidly toward this feature, the head would immediately move in unison with the hand and rotate into its proper position.

As tic and chorea are in nowise related, the proper treatment of the two affections is radically different. In foundation the tic is a mental disease or, as possibly a somewhat broader expression, we may say a psychic disease. As I have already stated, the exciting cause may be a local sensory irritation or discomfort or pain; but such an exciting cause had no effect in a normally resistant individual. For the development of a tic there must be an underlying hypersensitiveness or lack of balance and the fully developed affection belongs essentially to the obsessions or imperative impulses.

Above I have likened the local irritation to a trigger which sets off the tic; but the individual must previ-

ously have been loaded—by misfortune of inheritance or other influence.

Still, as a local difficulty is often the exciting cause, the disease never would begin were such local trouble not there, and, consequently, it is reasonable to assume that the discovery and removal of any and every local disturbance must be the primary move in the treatment of tic. Equally, of course, must everything be done to promote the general health, vigor, vitality and tranquility. These things having been done, the rational treatment must really be a system of education or training, a training to decrease sensitiveness, to strengthen inhibition and increase self-control. This is quickly said, but the task itself may be a time-destroying, tact-demanding one. Sometimes it is a hopeless one. To this must often be added some element which will awaken the consciousness of the patient to the presence of his tic. As I have already said, while a tic is always volitional, it may be unconscious or subconscious, and, naturally, the patient can not control the movements unless he knows that he makes them.

Harking back to the simplest example which I adduced a few minutes ago, of a child with nasal catarrh and irritated nares, such a patient may frequently be cured by removal of the nasal catarrh, rendering the parts perfectly comfortable, followed by repeated admonition by parents and teachers. If the case be more confirmed, the impulse more imperative and self-control feebler, it is necessary to attach some discomfort to the gratification of the appetite to tic. What I have found to be the readiest and most effective means is the simple prick of a pin, but this must be repeated every time that the patient indulges in his so-called spasm; that is, each indulgence in the tic movement must be accompanied by a discomfort. Soon the patient finds that the satisfaction of the tic is exceeded by the dissatisfaction of the prick. Naturally, he strives for the greater comfort. When the patient's knowledge that every abnormal movement is accompanied by a penalty becomes part of his consciousness he is far on toward recovery. When this knowledge becomes subconscious and the patient instinctively, subconsciously, automatically acts on it, the tic disappears. And when the impulse to make the movement, the appetite for it, has ceased, he is cured.

The principles involved in this every-day example apply to all cases, mild or severe. An elaboration of detail seems unnecessary. But it is only fair to add that in a severe case success depends on attention to all of the details involved in carrying out the principles above outlined.

34 Washington Street.

Prophylaxis of Seasickness.—A letter from Holland in the *Wiener klinische Rundschau*, Jan. 20, 1908, states that a naval surgeon, van Trotsenburg, has been testing the sensitiveness of different individuals to shifting levels by having them stand blindfolded on a platform arranged to change its level noiselessly in various ways. Neither age nor other physical conditions seemed to affect the findings of the test, but persons accustomed to ships were much less sensitive to the movements of the platform than others. He is convinced that a little exercise on such a platform, before starting on a sea voyage, would have a powerful influence in warding off seasickness, and he recommends the installation of a swinging platform of this kind in connection with the floating sanatoria.

1. Convulsive Tic, *THE JOURNAL A. M. A.*, Feb. 11, 1905, xliv, 435.

THE ANAMNESIS OF SURGICAL CASES

ITS PECULIAR IMPORTANCE TO THE HOUSE PUPILS OF
HOSPITALS AS A MEANS OF STIMULATING
INTEREST IN HISTORY-TAKING

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In Dr. M. H. Richardson's article¹ on "The Significance of Clinical Histories Before and After the Operative Demonstration of the Real Lesion," attention is called from a high place to a much-neglected part of medical education and medical practice. So essential is the importance of careful, intelligent history-taking that our wonder must be the greater at its relative neglect not only in our medical schools but, strange to say, in the wards of our great hospitals. It should be somewhat of a reproach to us that such an article as Dr. Richardson's should be considered necessary. That it is both necessary and timely the visiting staffs of our hospitals will bear ample testimony.

I think we may safely assume that the average medical history in the record-books of a hospital is better taken than the average surgical history. A cursory examination of hospital records will indicate this. The reason is apparent. Aside from history-taking in that period of his house officership, the medical house pupil has much less to do than his surgical confrère. Dressings, bandaging, accident work, etc., do not fall to his lot. It does not follow, however, that the clinical history of a surgical patient is any less important than that of a medical patient. In fact, it is with the great importance of properly taken clinical histories in the surgical wards that this paper has to do, and when in the course of the article I speak of house pupils, surgical house pupils only are meant.

The average house pupil does not look with favor on his history-taking period. He regards it as a dark place through which he must pass to reach regions of light beyond, a sort of unpleasant chore to be done with as little or as much thoroughness as may suffice to satisfy the occasional hasty glance or question of the busy visiting surgeon, an occupation of far less dignity than the more objective portion of his duty (bandaging, dressing, accident work, assisting, etc.). If my memory serves me well, my ideas in my apprentice days were not unlike these just expressed. My records of those times doubtless bear witness to the fact. That the last decade has brought improvement in this regard is not to be denied. But that the present standard of clinical histories is entirely satisfactory is very far from being true. Undertake, if you will, the study of a series of surgical cases extending back over a few years of hospital records and prepare yourself for disappointment. Errors of omission and of commission are so frequent and so flagrant that much otherwise valuable material is for many purposes rendered almost worthless. It is discouraging to find that perhaps in four out of ten clinical records the presence or absence of important, essential features of a case has gone unrecorded.

Who has been to blame for this condition of affairs? If it is to continue, on whose shoulders is the responsibility to rest? Occasionally the patient is at fault either through inability to express himself in English or through dense ignorance. It is possible, too, that there may be house pupils who do not take sufficient interest in their work to make an effort to take a good

history; the lazy house pupil will be with us always. But, speaking generally, it is the visiting men who must be indicted here. It is their failure to give competent instruction, their neglect to make intelligent criticism, their almost total lack of interest in the matter, that has allowed history-taking to become and continue unsatisfactory. If we make no attempt or take no pains to teach the why and the how of history-taking, how can we expect the house pupils to grasp its importance, and why should we expect improvement in their work?

As we go on in years, the why grows more and more evident. No one can doubt the value to patients, present and future, of good history-taking. That is the prime why. But in a purely selfish sense, for the house pupil himself there can be no more valuable training, no more fruitful experience, than this opportunity of checking up by operative findings, by living pathology, his story of the patient's ills, his objective findings and his conclusions from both premises. His senses will be trained to observe accurately, his mind to deduce soundly. It lies within his grasp to learn from both his successes and his failures and to broaden and strengthen his whole professional foundation. The better his histories, the more accurate his observations, the sounder his deductions, the more useful will he be to humanity, the more satisfactory to himself.

A recent article by Mr. B. G. A. Moynihan² of Leeds should be carefully read by every surgical house pupil and, for that matter, by every surgeon. He calls attention to the urgent need of an earnest investigation into the inaugural symptoms of disease, to the paramount importance of the patient's own story, to the great opportunity that legitimate surgery has of demonstrating the living pathology of all stages of disease, and by comparison with the sufferer's story, by cross-examination of the patient after recovery from operation, to work the knowledge thus gained into such a form as will enable us to recognize and treat disease earlier and with increased chance of permanent relief. Says Mr. Moynihan:

The surgeon, when he is about to operate on a patient suffering from any abdominal disease, has the opportunity to observe not only those parts for which his operative interference is immediately necessary, but also all other viscera which can be laid bare through the same incision. If a morbid process in its earliest stage be then discovered, perhaps in parts other than those primarily concerned in the operation, the patient's story of his sufferings may be retold and cross-examination conducted thereon, as soon as recovery from the operation is complete. It rests, therefore, in no small degree with the surgeon to elicit the inaugural symptoms associated with the pathologic changes which he finds within the abdomen and by making sure of their significance and of the due order of their appearance to furnish the knowledge that will ensure clinical recognition of visceral diseases in their early stages, in the stages when they are surely amenable to curative treatment.

What an added interest this should give to history-taking! What a live subject it should make of it! What an opportunity for the house pupil of this day, when operations are so frequent and varied! What a change this should bring about in the house pupil's idea of what is the vitally important part of his hospital training! How far wrong our training of house pupils has been is evidenced by the present-day measure of value put by them on hospital service. This or that hospital service is judged good or bad, worth taking or not worth taking, by the amount of major operative

1. Boston Med. and Surg. Jour., civiii, Nos. 15 and 16.

2. Brit. Med. Jour., Nov. 28, 1908.

work given to the house pupil. Social and other influences enter into the matter to a greater or less extent. But the chief question the prospective house pupil asks himself is: "How much major operative work am I to get?" Of what really small moment to him is his doing one or, perhaps, more appendicectomies, cholecystectomies, herniotomies or whatever operation you will — of what little relative importance is that compared with his opportunity of acquiring the ability to take a good clinical history, to make sound deductions from the patient's story and his own objective finding and to care properly for his patients before and after operation! I do not mean to say that a surgical house pupil should go out wholly untrained in the technic of his specialty. But I do intend to say that the technical part has been magnified (at least in the house pupil's eye) out of all proportion to its relative importance. Surgery is all technic only to the operator who lacks a conscience or to the heedless onlooker. To the honest surgeon his profession is very far from being entirely technical. The average house pupil evidently often fails to fully comprehend the truth of this statement.

Almost three-quarters of a century ago Sir Benjamin Brodie, in his "Introductory Discourse at St. George's Hospital," expressed a truth which is as potent to-day as it was then. "It is not," he said, "by going through the form of walking round the wards daily with the physician and surgeon that you will be enabled to avail yourselves of the opportunities of obtaining knowledge which the hospital affords. You should investigate cases for yourselves; you should converse on them with each other; you should take written notes of them, and in doing so you should make even what are regarded as the more trifling cases the subjects of reflection. Some individuals are more, others less, endowed by nature with the power of reflection; but there are none in whom the faculty may not be improved by exercise, and whoever neglects it is unfitted for the medical profession. You will be at once sensible of the great advantage arising from your written notes of cases." Comment is quite unnecessary.

It manifestly devolves on hospital staffs to teach the how of history-taking to house pupils. This should be a part of our routine work, at least until each surgical service has its resident surgeon. Right here it may be said that by no means the least important of the arguments in favor of having resident surgeons is this very fact that men, trained as they would be, could be safely entrusted with the duty of teaching house pupils not only history-taking and examination-making, but also the general care of patients. Surgeons, house pupils, patients, all would be the better for it. But until the day of the resident surgeon has come hospital staffs must do this portion of their duty. Many of us have been remiss, we at the Carney Hospital no less than others. Realization of the fact has led us to adopt corrective means. In the first place a resident surgeon has been appointed. In the second place a card system of typewritten cards has been adopted which we believe has helped house pupils in their clinical history-taking. Examples are appended below. The scheme is presented not as an infallible method of assuring an intelligent history, but only as a useful way of directing the trend of a house pupil's questioning and inquiry and as a means of making certain the recording of the more important features of cases.

It may well be objected that an intelligent use of the cards presupposes (e. g., in abdominal affections) at

least a probable diagnosis. It must be admitted that in abdominal cases the house pupil would have to make a preliminary loose diagnosis, as, for instance, the probable general localization of the trouble (upper abdomen, right iliac region, etc.). But his use of the cards covering affections of this or that region, his obtaining the answers to the questions required would lead him to the making of a more exact diagnosis. A house pupil in his general talk with a patient can in the great majority of cases get an idea of the region affected and can usually come to the conclusion that the symptoms are those of one of two or three diseases. Besides, it is not necessary that a complete history, with all the minutiae, should be obtained at one sitting, so to speak. Both the resident surgeon and the visiting man may see the case in the meantime and aid by suggestion and opinion.

The cards are not intended to cover every possible point in a clinical history; they seek to call the house pupil's attention to the kind of knowledge to be sought from the patient, to the essential points in a story, and to indicate certain lines along which the questions may

BREAST TUMORS

HISTORY

Family History—Cancer? Tuberculosis?
Marital and Menstrual History.
Lactation—Inflammation? Abscess?
Trauma?
What first called attention to trouble? How long ago?
Rate of growth? Any increase in size during menstruation?
Pain. If present, how long? location, character, transmission.
Cough?
Any loss of weight or strength?

BREAST TUMORS

EXAMINATION

Location of tumor (which quadrant?). Its size, shape, consistency, movability (adherent to skin or to deeper tissues?), tender? Dimpling or discoloration of skin over tumor?
Ulceration? Sinuses? Character of any discharge.
Nipple. Eroded? Ulcerated? Retracted? Character of discharge from it, if present.
Any involvement of axillary, supraclavicular or cervical glands?
Chest examination.
Arm. Edema?
Metastases anywhere? Liver. Size. Nodular?

STOMACH AND DUODENUM

HISTORY

Family History—Cancer, etc.?
Past History—Dyspepsia? Indigestion? Gas? Pain? Character and duration of attacks? Food preferences?
Present illness—Pain or distress—location—character (constant, intermittent, dull, sharp, etc.). Transmission—relation to ingestion of food (before? after? relieved or increased by? How long after ingestion?—"Girdle pain"?
Any attacks of sudden, sharp, prostrating pains?
Belching gas—When?
Vomiting—When? Does it give relief? Relation to ingestion of food? Frequency?
Vomitus—Amount? Color? Contents? Acid? Blood?
Food?
Nausea? Water-brash? Hematemesis?
Ever jaundiced? Chills? Sweats?
Appetite—Character of diet. Loss of weight or strength?
Constipation? Diarrhea?
Ever felt tumor? Ever seen blood in stools?

STOMACH AND DUODENUM

EXAMINATION

General—Cachexia? Anæmia? Palpable supraclavicular glands on left?
Tumor? If present, location, size, movability (of itself? with respiration?), tenderness, consistency, etc.
Tenderness—Location? Degree?
Visible pulsation? Visible peristalsis?
Outline of stomach, (a) empty, (b) distended.
Liver—Enlarged? Nodular?
Findings in stomach washings after ordinary meals, after test-meals, etc.
Examination of stools for blood.
Blood examination.
Signs of locomotor ataxia?

lead. The cards,³ therefore, are to be regarded as indicators rather than as absolute guides.

These cards, covering a wide range of subjects, are perforated and hung on a large ring which the house pupil carries with him on his history-taking errand. There are also cards which indicate the points to be noted in the postoperative course of patients, e. g., the immediate and more remote postoperative symptoms, the treatment and its result, the placing and withdrawing of wicks, sutures, etc., the character and amount of discharges, etc.

Furthermore, if in connection with any disease some new point of diagnosis, etc., is brought out, the placing of this on the proper card calls the attention of the house pupil to it, its presence or absence is noted and statistics bearing on its importance are thus obtained.

Our experience thus far has led us to feel that the use of these cards puts the house pupil in the way of taking an intelligent history and aids him in the formation of good habits in that direction. If further experience corroborates this view, we shall feel that something needed has been accomplished.

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OPERATIVE TREATMENT OF TUBERCULOUS JOINTS

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CINCINNATI

The treatment of tuberculous-joint disease has long been a disputed question, and the profession is not to-day agreed on a uniform plan of action.

Many methods of treatment have been advanced and these methods have been supported and resupported by long series of statistics and by thoroughly credible reports of results.

When the complete review has been made it seems to me that we must conclude that there is no one correct line of treatment for tuberculous-joint disease, but that the method selected must depend on the nature and stage of the lesion, the age and social position of the patient, facilities for treatment, the individual experience of the physician in charge, or that results must be accomplished by a combination of all available methods.

Treatment by rest, diet and in favorable hygienic conditions, by Bier's congestion hyperemia, by iodoform injection, by vaccine therapy and by cutting operations must each have a definite field of applicability or be used in proper combination.

It is not my purpose to discuss the comparative value of the different methods of treatment that have been advanced, nor does my experience justify me in drawing conclusions regarding the entire field of application of the operative treatment. My experience has been largely confined to the operative treatment of adults who have suffered from this disease. Inasmuch as seven-eighths of all patients who suffer from joint tuberculosis are less than fourteen years of age, it will be readily seen that my experience and results can not justify general conclusions.

Twenty-five patients have come under my care in whom the operative treatment has been used, and it has seemed desirable to me to report the results in these cases as a contribution to the general subject.

Of the lesions, 13 have been in the knee, 7 in the ankle, 3 in the elbow, 1 in the wrist and 1 in the hip. Inasmuch as a fairly uniform method of procedure has been used in these cases, I wish first to describe the operative technic in each joint.

TECHNIC OF OPERATIONS ON THE KNEE JOINT

In the knee joint the incision is uniformly made from condyle to condyle across the center of the patella, the lateral quadriceps expansions are divided, the patella is sawed through, the knee is acutely flexed, the fragments of the patella are drawn upward and downward and a complete exposure of the ends of both bones and of the entire joint is obtained. A correct estimate of the nature of the lesion can now be promptly obtained, and the points considered are (1) bone involvement, (2) extensions outside the joint into the soft tissues. A tourniquet is always used for the purpose of giving a bloodless field for accurate dissection.

My experience includes an unusually large percentage of purely synovial cases (fifteen out of twenty-five), under which heading I would include those cases in which there is merely a superficial erosion of bone. When the case is of this type a sharp knife dissection begins in the lower half of the joint, just behind the patella, progresses in a systematic manner and removes the synovial membrane, together with all thickened tissue, out to the quadriceps aponeurosis.

When the dissection reaches the head of the tibia a heavily bladed yet sharp knife is used and the bone is pared, not only around its borders, but over the upper surface, when the articular cartilage is diseased or loosened from the bone.

When this dissection reaches the posterior border of the tibia it is discontinued for the time being. The dissection then begins first on one side, then on the other, then between the condyles, and all tuberculous or suspected tissue is in the same manner dissected around the head of the condyle to the popliteal soft tissues.

When this point has been reached the bones can be much more freely separated than previously, and the same sharp dissection is continued over the entire posterior portion of the joint, particular attention being given to the posterior border of the tibia.

Caution must be used in this part of the dissection not to injure the popliteal structures. When this part of the dissection has been completed the upper fragment of the patella is drawn strongly upward and the quadriceps bursa is accurately dissected out. In some instances this cannot be completely accomplished without a lateral longitudinal incision at the outer border of the patella. Any superficial erosion of either bone or small area of necrosis is cut out with a sharp knife; never with a curette. Indeed, a curette is never used in this operation unless there should be a sinus or cavity extending into the soft tissues in such a way that free incision and dissection is impossible. The curette necessarily mashes the tissues and exposes the patient to the risk of having tubercle bacilli jammed into deeper tissues, which are left behind. I would make a special point of clean-cut, sharp dissection with a knife. A most careful search is always made for bone foci or minute sinuses extending into the deeper bone structures. The bone-paring is always made down in perfectly healthy bone.

When there is a focus of bone tuberculosis in the head of the tibia or in either condyle and the focus is not of a size sufficient to necessitate the re-

3. Cards 5 7/8 inches by 3 15/16 inches.

removal of the end of the bone, the area is likewise excised by cutting around with a sharp knife well below the deepest point of the focus; then a sharp gouge is used to hit out this cylinder or one of bone tissue. I consider this decision as to the extent of bone involvement a heavy responsibility and one not to be undertaken until careful microscopic study of such tissues has justified a fair degree of accuracy in such judgments.

When the dissection has been completed, pure carbolic acid is swabbed over the entire area of dissection and left in contact with the tissues for three minutes. Alcohol is then applied to neutralize the carbolic acid. The entire dissection has been conducted according to the same principles followed in malignant disease.

When cavities are left in the bone these are carefully dried and filled with the Mosetig-Moorhof iodoform bone-plugging mass, which is allowed to harden. The tourniquet is now removed, all bleeding points are secured, and the wound is ready for closure.

Conservatism in the removal of bone has been my rule in all these operations, and the end of the bone must be very seriously damaged to justify sawing it off. Those patients in whom erosion or atypical excision is done heal as satisfactorily as after a typical excision, and the function has seemed to me so much improved by maintaining an extremity of normal length that I consider this to be a very important point. Those patients who have not had bone removed get along almost without a limp. Indeed, one young woman whose occupation was that of elocutionist has continued her professional work on the New York stage and very few people know that she has a stiff knee. Even her manager did not know this fact until he saw her going upstairs.

Bone foci of considerable size can be cut out and filled in with iodoform mass without great sacrifice in the length of the bone. In Case 10 the upper surface of the tibia was sawed off in an excision and the focus was seen to extend much deeper into the head of the tibia. When this focus was removed a cavity was left which was, I think, about the size of an egg. This was carefully filled in with iodoform mass. This patient has had perfect recovery and has a solid, well healed leg.

The wound is usually closed with interrupted No. 3 plain catgut. In excisions two chromic gut sutures are usually put into the bone through drill holes to maintain position until the splint can be applied. The patella is not wired, since a heavy suture on either side and suture of the soft tissues in front are usually sufficient to maintain the apposition. A drainage tube is regularly placed on one side or the other to take care of the blood and serum for the first three to seven days; then it is removed. A strip of sheet rubber or gutta-percha tissue is usually placed on the opposite side of the joint for a similar reason and left for the same length of time.

After the wound is closed dressings are applied in such a way as to facilitate subsequent change. Plaster-of-Paris bandages, four to five inches wide, are then made into a strap long enough to extend from the gluteal fold to the tips of the toes. This strap is made of about twenty layers of gauze and a heavy piece of strap iron about eighteen inches long is included. This reinforced plaster-of-Paris strap is then placed on the posterior surface of the extremity, which has been well wrapped with ordinary splint cotton; then plaster-of-Paris bandages are used to make an encasing splint,

which extends from the perineum to the tip of the toes but does not include the knee.

When a sufficient number of turns have been made to give solidity a second strip of hoop iron is placed on the anterior surface. This strip is bent in such way as to make a high arch over the knee, the arch being six to eight inches broad at the base, and the strip is curled up at each end to make a hook. More plaster-of-Paris bandages are now rolled on to incorporate this anterior iron strip. When the splint is completed and the plaster hardened immobilization is complete; the arch at the knee gives free access to the wound and the hooks at either end, together with the arch at the middle, give three points from which the entire extremity can be suspended by rubber cords to a longitudinal bar which is placed over the bed. This swinging position adds greatly to the comfort of the patient.

The wound is dressed on the third day, drainage removed on the fifth to the seventh day. The sutures are removed on the tenth day; the wound is healed, as a rule, in three weeks. The splint is removed in three to five weeks and replaced by a simple encasing splint which extends from the ankle to the middle of the thigh.

Bony union is often very slow and may not be complete until eight to twelve weeks after operation.

TECHNIC OF OPERATION ON THE ANKLE JOINT

By far the best exposure of the ankle joint is given by an anterior incision which extends from one malleolus to the other, directly across the instep. I have sometimes modified this in such way as to make an anterior skin flap extending somewhat downward on the dorsum of the foot and have divided the tendons and other structures on a higher level, yet both methods seem to be efficient. The incision extends first through the skin and subcutaneous tissues, the tendons are exposed and sutures are placed well above and below the point of division in each tendon and so marked that identification will be easy when they are to be reunited. The ligaments and other surrounding tissues are now divided and the joint opened. The same careful dissection is now instituted as has been described for the knee, and every vestige of tuberculous tissue is most carefully removed. Particular attention is given to the calcaneo-astragaloid articulation, which is frequently secondarily involved and may be the primary focus of infection. Whenever the patient complains of great pain in standing and inability to walk, this joint is probably involved.

In Case 20 it became necessary to remove a practically normal astragalus in order to thoroughly expose and dissect out this joint. Attention is likewise called to the great importance of the tibiofibular articulation. This articulation must be thoroughly exposed, since it is regularly involved. When cavities are found in the astragalus, os calcis, tibia or fibula they are cut out with a sharp knife and the cavity filled with iodoform mass.

After the dissection is completed the joint is treated with pure carbolic acid and alcohol, the tourniquet is removed, vessels secured and the joint closed. The dressings are applied in two sets, one on the anterior surface, which can be removed without disturbing the foot in the cast; the other set are laid in the cast before it is applied. The splint used after this operation is a posterior strap of plaster-of-Paris, which has incorporated within it a strip of hoop iron; then several

rolls of plaster bandage are put on as an encasing splint, or an anterior strap is first applied; then the circular turns are used to hold the anterior and posterior straps in place. This joint is likewise treated by tube drainage for from five days to one week. The after-treatment of the ankle is practically the same as that of the knee. The results in this joint, as in the knee, are much more satisfactory when a mixed infection has not taken place.

TECHNIC OF OPERATION ON THE ELBOW JOINT

The elbow joint is best exposed for careful dissection of all rarifications of the synovial membrane by posterior incisions. A longitudinal incision is first made along the inner border of the olecranon, extending about two and one-half inches below and three inches above the tip of the process. A second transverse incision is then made on a level with the radiohumeral articulation and extends from the first incision to the outer border of this articulation. The longitudinal incision extends through into the joint. The transverse incision is first made through the soft parts; then with a chisel or saw the olecranon is divided on a line with the superficial incision. This gives a flap above which includes the olecranon the triceps muscle and overlying skin. This flap is retracted upward and strong flexure of the elbow causes the three bones to stand out distinctly. Careful attention must be given to the ulna nerve during this flexure, and it may be necessary to do a subperiosteal dissection beneath the nerve and lift it over the inner condyle, or to clip off the inner epicondyle before completing the flexion.

The dissection of the synovial membrane is now carefully completed in the same manner as has been described for the other joints, great care being given to the radioulnar articulation.

The joint is closed with drainage and all parts are sutured back into position. The olecranon is reunited with gut, which is used in the soft tissues only. A strap plaster splint is applied with the elbow at a right angle. The after-treatment of this joint differs in no way from that given for the knee, except that I have endeavored to get motion in this joint, and begin with gentle movements about three weeks after operation.

SUMMARY OF TWENTY-FIVE CASES

Detailed case reports can not be included in this paper, and the following summary of important points may be of interest:

There were 12 female patients and 13 males. All except one were of the working class and were dependent on their own or their parents' daily labor for support.

There was no family history of tuberculosis in 19 cases. There had been a definite injury to the joint in but 7 cases. The duration of the joint trouble ranged from five weeks to twenty-one years. In fifteen cases it had been more than one year. The general health was bad in 10, fairly good in 6, good in 9. There were tuberculous lesions elsewhere in 5 cases, 1 in lung, 1 in opposite knee, 1 in opposite ankle, 1 in Fallopian tube, 1 in spine and lung.

There were three children whose ages were 6, 7 and 15. The ages of the remaining patients varied from 18 to 40. Three were under 20. Thirteen were between 20 and 30; 6 were over 30. There were no sinuses present in 19 cases.

Some of these cases have been reported incompletely in a previous paper, but are included in the present re-

port in order to give the conditions of the patients to-day.

Twenty-five cases are reported. Of this number 18 may be considered to justify a conclusion as to the cure of the disease. It would seem justifiable to consider a patient cured when the wound has healed and remains healed and painless for many months and when the extremity has been restored to its function for a sufficient period to justify the conclusion that it will be permanent. I realize that exceptions may be taken to such conclusion and that a much longer period may be demanded by some.

Of this number 12 are completely cured and are using the extremity without support in their ordinary duties. Two have a single persistent sinus of minor importance, but have good function. In one the result is not known, but the progress was favorable up to the time of the patient's disappearance, one year after operation. In three the extremity was amputated subsequently, but I am not convinced as to the justification for amputation in two.

In the remaining seven recent cases the wounds have healed satisfactorily, the primary result is good and a cure is confidently expected in all, but a sufficient length of time has not elapsed since operation to justify a report of final results.

In the three cases in which amputation was done two showed extensive and extreme destructions of the joint at the time of the excision, and the general condition of the patient was bad. Excision became in these cases a trial measure of conservatism. There were other cases in this list, however, in which that joint seemed to be as extensively involved, cases in which amputation had been advised, yet excision and erosion accomplished a cure.

Seven erosions or, more properly speaking, atypical erosions have been done in the knee, 7 in the ankle, 3 in the elbow, and 1 in the wrist.

No flexures have developed and useful motion has been developed in three knees and two elbows. The motion is perfect in one elbow. The motion in other cases is slight, varying from 10 to 25 degrees, but is much prized by these patients. The endurance in the recovered cases seems good.

In one case a secondary operation was necessary, and in two I have cured a persistent sinus by local applications and without the use of a general anesthetic. I do not know what might have been indicated in the cases of amputation.

There have been no deaths from operation. No patient has developed tuberculosis elsewhere by metastasis. Patient 5 showed some pulmonary symptoms for a time within a year after her operation, but they were never clearly tuberculous and I believe that from the facts that they disappeared promptly and that the girl has remained in perfect health, we may safely assume that they were not. Patient 1 had the physical signs of tuberculosis at the time of her operation, but these signs disappeared and she has been in excellent health for almost four years since operation. Patient 16, whose ankle was amputated subsequently to the original operation, suffered from tuberculosis elsewhere at the time of her operation and died of tuberculosis of the bowel. This patient was in wretched health as a result of generalized tuberculosis and the bowel condition developed more than one year after operation.

The operative method of treatment has been recommended and adopted in these cases for a variety of

reasons. In many it has been adopted after a careful application of the accepted non-operative methods of treatment. In Case 7 the patient has been under treatment by competent men for eight years, yet she came to me on crutches. In this case I found such marked evidence of pelvic tuberculosis that I first operated on the abdomen and removed a tuberculous right Fallopian tube. I then used immobilization and Bier's congestive hyperemia on the knee for a period of almost six months without the slightest improvement. At the time of operation the inner one-half of the joint showed an active fungous tuberculosis. The outer half showed well-advanced healing within the joint, but the outer portion of the tibia immediately beneath the healed portion of the joint showed an active bone focus the size of the last phalanx of my index finger. Again in Cases 18 and 19 under long continued hygienic conditions the joints grew worse or failed to improve.

In other cases operative treatment has been recommended because of the seriously destructive nature of the lesion at the time the patient came for treatment.

In the third group of cases the social position of the patients demanded an early restoration to a wage-earning capacity and after a thorough explanation of the situation the patient has selected the operative course.

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PHOSPHORUS COMPOUNDS AS BRAIN
FOODS *

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Our knowledge of the nutritional requirements of the nervous system may be said to be very incomplete. As it is probable that the efficiency of any tissue as a working machine is largely dependent on a proper state of nutrition, it may be of interest to review critically, in the light of recent work, some of the suggestions that have been put forward with regard to the nervous system. Two general methods of procedure may be observed, the one depending purely on stimulants, such as caffein, strychnin, cocain, alcohol and similar substances; the other using as its basis the supply of such substances as the nervous system is supposed to use in its function, namely, phosphorus in different combinations; the one attempting to stimulate the nervous system to activity, the other to increase its efficiency by giving it the proper food.

We all naturally wish to have our nervous systems in the best of condition at all times, and the correct knowledge of how to accomplish this will add greatly to our efficiency. The difficulty of obtaining accurate knowledge on this point makes it appear likely that this field may pass into the hands of the psychologists altogether. No one will deny that the development of proper habits¹ will add greatly to our efficiency as workers and that to cultivate habits of day-dreaming is bad and probably can not be cured by the administration of phosphorus in any convenient form. At the same time a normal healthy person with a nervous system in a good state of nutrition is very apt to be an efficient working machine. When such a machine becomes fatigued as the result of use the question arises whether it needs stimulation or

food. Our present knowledge does not permit us to give an answer to this question. We do know, however, that those stimulants which we at present use have a deleterious effect when taken in excess, but there may be other stimulants normally manufactured in the body which are not open to that objection. We are just beginning to acquire some knowledge as to the extent to which the tissues of the body are dependent on one another for their activity.

The work carried on in this laboratory on chemistry of the nervous system has so far not taken up the first point, but has followed the question of the nutrition of the brain during growth and as the result of mental disease. A brief statement of the bearing which the results so far obtained have on our present-day ideas may be of interest.

The idea of the relation of mental activity to phosphorus is old, and as far back as 1869 there appeared an article by L. H. Wood² on the influence of mental activity on the excretion of phosphoric acid. Now it is apparent to any one that a tissue which represents only about 2 per cent. of the total body weight can not possibly influence to a considerable extent the composition of a fluid which derives its material from all the other tissues of the body, unless such a tissue is very much richer in phosphorus than in the other tissues or has a much more active metabolism. That such is not the case, in spite of popular notions to the contrary, is well illustrated by Table 1.

TABLE 1.—PERCENTAGE OF PHOSPHORUS IN BODY TISSUES

	—Total Phosphorus.—	
	Per Cent. in Dry Fat Free Tissue.	In Moist Tissue.
Muscle	0.90-1.50	0.22-0.38
Liver	1.34-1.60	0.34-0.40
Kidney	1.34	0.42
Pancreas	1.70	0.40
Brain	1.44-1.50	0.33-0.35

From Table 1 it is evident that the brain has by no means an unusual amount of phosphorus in comparison to the other tissues. As the above figures apply to the normal brain the question arises whether it may not be necessary sometimes to supply the brain with phosphorus when its total store has become decreased. Before answering this, let us see if there are any special forms of phosphorus compounds in which the brain is especially rich and of which, reasoning teleologically, it would therefore be in greater need. The figures in Table 2 do, indeed, lend some support to such a notion.

TABLE 2.—PERCENTAGE OF LECITHIN IN BODY TISSUES

Tissue.	—Percentage of Lecithin.—	
	In Dry Matter.	Total Phosphorus.
Pancreas	5.0	12.
Muscle	5.0	15.
Kidney	8.0	25.
Liver	10.0	26.
Brain	27.0	73.

The brain, both relatively and absolutely, is richer in lecithin than are the other tissues. The adrenal, which is not given in this table, comes nearest with 12 per cent. of lecithin. The term "lecithin" is here used collectively and designates a group of phosphorized fats with the properties of colloids now coming to be grouped under the more general term "phosphatids."

In studying the brain, therefore, in conditions of exhaustion it is necessary to determine not only its total but also its lecithin phosphorus content. Also on ac-

* From the Laboratory of Bio-Chemistry and Pharmacology, University of Chicago.

1. James: Psychology: chapter on Habit.

2. Proc. Conn. Med. Soc., 1869. Reprint kindly loaned by Dr. L. B. Mendel.

count of the relative crudity of chemical methods it becomes necessary to study the brain under very extreme conditions of exhaustion in order to insure the greatest chance of discovering differences. With regard to the daily requirements we know very little, but all indications go to show that the metabolic activity of the brain is not great.

Two mental diseases are known which represent the extreme stage of exhaustion at which the nervous system may arrive:

1. General paralysis of the insane, in which a frequent cause of death is sheer exhaustion supervening on a large number of seizures. In this disease we also have an actual destruction of nerve tissue that can be demonstrated anatomically.

2. Dementia præcox, which in its severe or hebephrenic type also runs a fairly rapid course, so that we very often find that a comparatively intelligent young man will in a few years come to a state in which he loses all initiative and sits day-dreaming, dribbling saliva for days and weeks without the mental energy to make the least effort. In this disease no very large amount of actual destruction of nerve tissue can be demonstrated anatomically.

In the following table two normal brains are compared with brains from a case of each one of these two diseases, picked out from a large list:

TABLE 3.—COMPOSITION OF BRAIN TISSUE IN NORMAL AND DISEASED BRAINS

	Normal. Age 16.	Dementia Præcox. Age 17.	Normal. Age 43.	General Paralysis. Age 44.
Proteins	37.1	39.0	38.0	39.1
Lipoids	52.0	51.6	52.0	50.8
Extractives and Ash...	10.9	9.4	10.0	10.1
Total Phosphorus	1.50	1.47	1.50	1.44
Lecithins	27.3	27.8	27.0	24.8

There is practically no difference between the lecithin content of the brain in dementia præcox and that in health, while in general paralysis there is a slight decrease in total phosphorus and a larger one in lecithin phosphorus. Even the latter, however, is nothing like what one would expect, considering the severity of the disease; indeed, not all cases of general paralysis show as much change. The actual amount of lecithin lost is not indicated in the above figures, which are relative; but on account of the inability of the central nervous system to regenerate, this could not be replaced in any case. We come, therefore, to the rather surprising conclusion that even in extreme states of exhaustion the brain is plentifully supplied, not only with phosphorus, but also with its special form of phosphorus, namely, lecithin. Such results as these might indicate that chemical methods are not capable of detecting differences of physiologic significance and consequently are to be discredited. That such is not the case I shall have occasion to demonstrate in reporting a case of dementia præcox in a subsequent article, in which very marked chemical differences of another kind, which distinguished this subject from the normal, will be described. Furthermore, that those methods are capable of detecting differences when such differences exist is well illustrated in Table 4, where the brains at different ages are compared.

Table 4 indicates that the brain does change in composition as well as weight until adolescence; after that, however, the variation is within analytical errors. For its growth the brain requires, therefore, among other things, about 42 grams of protein, 135 grams of lipoids,

TABLE 4.—VARIATION OF THE BRAIN DURING GROWTH

Case:	At Birth. No. 13.*		Sixteen Years. No. 20.*		Forty Years. No. 70.*	
	Wt. of Brain:	%	Wt. of Brain:	%	Wt. of Brain:	%
	640 Grams.		1,440 Grams.		1,400 Grams.	
Solids	11.2	71.68	21.2	305.28	23.0	322.0
Proteins	46.6	33.40	37.1	113.26	38.0	122.36
Lipoids	33.1	23.72	52.0	158.74	52.0	167.44
Extractives and Ash	20.3	14.56	10.9	33.27	10.0	32.20
Total P.....	1.72	1.23	1.50	4.58	1.50	4.83
Lecithins	24.2	17.3	27.3	83.3	27.0	86.9

*The subject in Case 13 died at birth. In Case 20 the subject was a boy employed in hotel. In Case 70 the subject was a physician.

of which 66 grams are lecithin and 3.35 grams phosphorus. This, of course, takes into consideration only that which is actually built up into tissues. Much more is really used. The attempts to supply this demand have led to the introduction into practice of a number of commercial preparations, some of which I will review:

1. Hypophosphites: Calcium hypophosphite, N. F., p. 24: Dose 0.5 gm.; three doses per day (1.5 gm.) would represent at a maximum 0.5 gm. of phosphorus a day. Folin gives the daily phosphorus output at about 1.5 to 2 gm. So at best this would only represent an addition of 33 per cent.

2. Elixir glycerophosphatum, N. F., p. 44: Dose 4 c.c.; three doses per day (12 c.c.) would represent at a maximum .05 gm. of phosphorus a day, an addition of 3 per cent.

3. An organic phosphoric acid combination has recently been obtained from the bran of wheat and a number of vegetable substances. It is not yet very generally used. Mendel³ has shown that this substance when taken by the stomach is completely converted into phosphate and excreted as such in the urine shortly after ingestion.

4. Lecithin: On account of its presence in large quantities in brain tissue this might be the most rational substance to use, provided it could be demonstrated that it reaches the brain. On account of its cost the dose of this substance when recommended commercially is quite small, from 0.1 to 0.3 gram. We ingest daily with our food about 5 grams of lecithin, which by the addition of two eggs can easily be raised to 10 grams.

A number of other compounds and combinations have been recommended, and there will no doubt be an addition to the list as new phosphorus compounds are discovered. The significant thing about all these substances is that they represent, with one exception, an insignificant addition to the daily phosphorus diet. If we wished to overfeed a person on nitrogen we would at least double his daily consumption and not be satisfied with an addition of 33 per cent. as a maximum. The recent work of Hart⁴ is also significant as showing that even in extreme phosphorus starvation the tissues will keep their supply of phosphorus constant at the expense of the bones.

We may summarize the results of these experiments in the following conclusion:

1. There is no evidence of any need to supply phosphorus to the brain in conditions of exhaustion, as a lack of that element has not yet been demonstrated. The actual amount lost in the exhaustion of general paralysis can not, of course, be replaced on account of

3. Am. Jour. Physiol., 1906, xvii, 75.
4. Am. Jour. Physiol., 1908, xxiii, 246.

the inability of the central nervous system to regenerate.

2. The phosphorus required for the growth of the brain is amply supplied by the phosphorus of our daily diet. If desired, the addition of phosphorus-rich foods, such as eggs, sweetbreads (pancreas), liver, and some meats, can be made to meet further requirements, and will far exceed in amount the phosphorus obtained in less natural form from the prescribed doses of any of the various drugs in commercial use. The use of such foods is, however, limited by their richness and their tendency, on account of their rich fat content, to interfere with gastric digestion.

3. As far as the nervous system is concerned, the addition to the diet of commercial phosphorus compounds, such as hypophosphites, glycerophosphate, phytin, lecithin, etc., is to be discouraged because, in the first place, there is no conclusive evidence that they have any effect on the growth of the brain, and, second, the amount usually recommended means only a very insignificant addition to the amount of phosphorus (even in its special forms such as lecithin) taken with the daily food.

RELATION OF ANOMALOUS RENAL BLOOD VESSELS TO HYDRONEPHROSIS

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SURGICAL CONSIDERATIONS

My attention was first called to the relation existing between anomalous blood vessels and intermittent hydronephrosis some six years ago, while I was exploring the pelvis of a kidney which was bound down by adhesions producing a kink in the ureter. The ureter was separated just at the pelvis of the kidney, and all the tissues concerned outside of the ureter were divided without previously catching them in forceps. The result was a very smart hemorrhage which was difficult to control because the artery in this case, one of two, came directly from the aorta. The vessel was about the size of the radial. After this, in operating for such conditions, the ureter was separated and any tissue present was carefully inspected before division.

It is a significant fact that in twenty out of the twenty-seven cases of hydronephrosis herewith reported anomalous blood vessels were present, and the obstruction in each instance was at a point where these vessels crossed the ureteropelvic juncture. The vessels passed to the lower pole of the kidney a little to one side of the midline, and varied from the size of a knitting needle to that of the radial. In all but two the arteries came from the renal, sometimes passing in front and sometimes behind the ureter, but in either of these positions the pressure of the artery on the ureter or adhesions between the vessels and pelvis seemed quite capable of developing the kink. In a few of the cases adhesions between these vessels and the margins of the pelvis were responsible for the obstruction.

I have no doubt that many patients have been operated on without recognition of the rôle played by such anomalous blood vessels and that these vessels were separated, tied and divided by the operator without his attention being called to the exact condition.

Admitting the possibility of error as to the actual nature of the obstruction, or that we have in some instances overestimated the importance of the vascular anomaly, there is no getting away from the fact that such blood vessels were present and abnormal. In nearly every case it was possible to prove absolutely the etiologic relationship of the blood vessel to the kink.

In our series no patient was accepted for operation in whom the kidney pelvis did not easily contain 50 c.c. or more of fluid, and in the greater number of them the pelvis had a capacity of from 60 to 180 c.c. or more.

The kidney was exposed by an oblique incision parallel with the quadratus lumborum muscle, extending high up into the costovertebral angle, avoiding the ilioinguinal and the iliohypogastric nerves. If necessary, the twelfth rib was divided behind the erector spinae muscle. In doing this the pleura was sometimes opened, but such accidental pleurotomy, in which the lung was easily seen, did not result in pneumothorax or any other ill effects, if the patient was lying face downward during operation.

The kidney was drawn well out on the loin and the ureter isolated next to the pelvis from the posterior side. Careful dissection revealed the blood vessels, if they were present. In 12 of the 27 cases it was considered wise to enlarge the ureteropelvic juncture by a plastic operation in addition to the division of the blood vessels which were present in 7 of the 12. In 9 the operation was that proposed and carried out by the late Christian Fenger, whose early description of valve formation of the pelvis of the kidney is classical.

We found that the easiest way to accomplish this procedure was to open the dilated pelvis half an inch above the ureter, passing a grooved director down into it. The strictured portion was then split for three-fourths of an inch in length, half on the ureter and half in the pelvis, and closed by plastic suturing with No. 1 catgut through all the coats after the plan of the Heinke-Mikulicz interrupted sutures pyloroplasty. Such fat and fascia as lies in the neighborhood connected with the pelvis was raised as a plastic flap, planted across the line of union and held in place by a few catgut sutures.

After the ureteropelvic sutures had been placed the union sometimes looked unreliable, as though leakage might occur, but in our experience if the suture line was properly covered with this fatty fascial flap there has been no leakage. Before using this latter device, in two cases following operations, there was leakage of urine. One leaked for ten days, and a second, a large infected hydronephrosis, for seven weeks, but with spontaneous healing in each instance.

In three of the patients with very large hydronephrotic sacs, the ureter was completely detached, its end split for half an inch like a cuff, and then reimplanted into an opening made in the lateral wall of the pelvis, using the two-row interrupted suture method with No. 1 catgut, much like gastrojejunostomy. This was covered with the fatty fascial flap previously described. Primary union took place in all three.

After the plastic operation the kidney was anchored in such position as to keep the site of union without tension or bending. Folds of rubber tissue were used for drainage, never gauze.

In two large infected hydronephroses the remnant of the kidney was removed with the sac.

CLINICAL CONSIDERATIONS OF INTERMITTENT HYDRONEPHROSIS CAUSED BY ANOMALOUS RENAL BLOOD VESSELS

W. F. BRAASCH, M. D.

Cases of hydronephrosis are usually grouped under two anatomic headings: congenital and acquired.

CONGENITAL HYDRONEPHROSIS

In the light of recent investigation the number of cases in the congenital class has become much larger than that of cases in the acquired. The etiologic congenital conditions commonly observed are (1) anomalous renal blood vessels; (2) atresia of the ureter near the renopelvic juncture, and (3) displaced kidneys.

ACQUIRED HYDRONEPHROSIS

The non-congenital conditions which may be found in the urinary tract causing renopelvic distention are (1) strictures following inflammatory and traumatic lesions, (2) stones partially occluding the tract, (3) tumors within the urinary tract or exerting extraneous pressure on it. Thus it will be seen that there is a large number of causes for and conditions in which hydronephrosis in the broad sense of the term may be found.

These various etiologic factors have been observed, however, to a great extent at postmortem examination. The observations at autopsy differ quite widely from clinical and surgical reports. Morris quotes the Middlesex Hospital Reports to the effect that almost 90 per cent. of the cases of hydronephrosis found at autopsy were due to extraneous pressure of abdominal tumors. On the other hand, Israel reports but one of his series of forty cases in which operation was performed for hydronephrosis as due to extraneous tumor pressure.

On reviewing the list of operations for hydronephrosis performed by Drs. W. J. and C. H. Mayo at St. Mary's Hospital, one is impressed with the number of cases in which anomalous blood vessels were found to be the only visible cause of renopelvic distention.

Of the 27 cases of definite hydronephrosis collected from the operation records, 20 were due to such blood vessels. To prove that these blood vessels were the cause of the hydronephrosis it was shown that in 13 of these 20 cases, severing the anomalous vessels sufficed to remedy the condition.

It is only within the last few years that our attention has been called clinically to the comparatively frequent existence of hydronephrosis. Patients frequently appear complaining of intermittent attacks of pain in the upper lateral abdomen the causes of which have remained unidentified for years. The condition has been regarded variously as a diseased condition of the appendix, gall-bladder, pelvic organs, or as a renal or ureteral lithiasis. With these various diagnoses surgeons have repeatedly opened the abdomen only to find a hydronephrotic kidney, or to overlook the underlying condition entirely. The patient frequently appears with the appendix removed, but with no cessation of symptoms. While it is often difficult to distinguish intermittent hydronephrosis clinically from some diseases of the neighboring organs, nevertheless the condition presents certain clinical data which are very suggestive.

DIAGNOSTIC DATA—SUBJECTIVE

Age.—The symptoms usually manifest themselves in the young adult at about the time when the body has reached its fullest growth, a fact which is strongly sug-

gestive of congenital etiology. The average age at which the symptoms commenced was 22 years. Most of the patients, however, had had their trouble a number of years, ranging from one to twenty.

Attacks.—Intermittent hydronephrosis manifests itself by attacks of acute abdominal pain. The frequency of attack is variable, appearing at intervals of a week or two to years, although the usual interval is a month or two. In several instances patients with long-standing trouble complained of a steady ache continuing between the acute attacks. The onset is usually sudden, although some patients give a history of premonitory ache in the affected side. The attacks frequently come on toward evening, and often after some unusual exertion. In twelve cases the right side was affected, and in eight the left side. There is no evident reason why one side should be oftener affected than the other. All the patients except three referred the pain to the upper abdominal quadrant and to the back near the costovertebral angle. In nine of the cases the pain was referred to the lower quadrant as well, and in one case to the lower quadrant alone. As a rule the pain is not referred along the course of the ureter as distinctly as in a kidney or ureteral stone, but remains localized. It is usually acute for hours, and a soreness in the affected side may continue during a day or two following the attack. The pain is not, as a rule, as acute as in that attending gallstone and kidney-stone colic. Again, the pain may be absent in the affected side, the condition remaining latent until the retention becomes so great that the patient notices a tumor in the abdomen. The non-affected side may also be the seat of some pain, which is usually due to the engorgement of the normal kidney as the result of a compensatory hypertrophy, although the possibility of a bilateral hydronephrosis is always to be considered.

In women, as a rule, the attacks appear independent of menstruation; in fact, if the patient states that they usually come on at the menstrual period one might suspect either pelvic trouble or neurosis.

Gastric Symptoms.—Gastric disturbance is frequently quite prominent, vomiting or nausea accompanying the attacks in nearly every case; in fact, one patient complained only of stomach symptoms, but with closer investigation it was discovered that he also had pain referred to the lateral abdomen accompanying his gastric disturbance.

DIAGNOSTIC DATA—OBJECTIVE

In many cases of intermittent hydronephrosis the objective symptoms are of little value. Where there is more or less permanent distention of the sac, however, the tumor may be palpable in the upper abdominal quadrant and kidney zone. This is so in about a third of our cases. The mass has a distinct cystic soft feel, and with one hand on the back may be palpable through the abdomen with gentle pressure. In several instances the tumor was quite easily palpable one day and the next could be scarcely felt, the variation in the size of the sac being, of course, dependent on the degree of obstruction to urinary drainage. If the tumor is palpable as a cystic mass, occupying more or less of the upper abdominal quadrant, it will probably have but little secreting substance left.

Slight tenderness on pressure over the kidney area was complained of by a few of the patients, in marked distinction to the tenderness of an inflamed appendix. Marked renal dystopia and scoliosis was not noticed in

the series of cases; in fact, no pronounced congenital anomalies were noted in any case excepting one in which the kidney was found to have two distinct pelves and ureters. One pelvis was hydronephrotic and the other was normal.

X-Ray Examination.—X-ray examination in itself is of no value in diagnosis unless the kidney shadow can be made definite enough to bring out the outline of the kidney. It can be employed to some advantage, if there is any doubt after the cystoscopic examination, by combining the two methods.

Argyrol and bismuth solutions have been injected into the pelvis and radiographs made to demonstrate the size of the pelvis. The ureteral catheter may likewise be radiographed as it lies coiled in the dilated pelvis. The data acquired from pelvic distention as described below, however, are much simpler.

DIFFERENTIAL DIAGNOSIS

1. *Appendicitis.*—Strange as it may seem, the condition with which intermittent hydronephrosis is most frequently confounded is appendicitis. About one-fourth of the patients in our series had their appendices removed previously. Many others had been told that their symptoms were due to appendicitis and were advised to have the appendix removed. Hydronephrosis is differentiated by (1) location of pain, which is higher up and is referred usually to the costovertebral angle, (2) intermittence of attacks, (3) absence of fever and prolonged prostration, (4) absence of marked tenderness over the appendix, (5) presence of pus in the urine, and (6) cystoscopic findings.

2. *Gallstones.*—The confusion of this condition with hydronephrosis is possible if the pains are localized below the right costal margin and if accompanied by gastric symptoms. Gallstones may usually be differentiated by (1) the fact that the pain is referred more to the pit of the stomach, radiating thence to the back, (2) the more irregular periodicity of attack, (3) the fact that this is more pronounced with constant nausea and vomiting, (4) the fact that the attack, as a rule, is more acute, (5) the more rapid onset and disappearance of pain, and (6) icterus. If the symptoms of gallstones are doubtful and the pains are referred below, however, it is advisable to examine the urine carefully for pus and to measure the size of the renal pelvis.

3. *Nephrolithiasis.*—Hydronephrosis and renal calculi will frequently be manifested by similar symptoms. The location and character of the pain, intermittence of attack and accompanying gastric symptoms may all be similar. The history in cases of calculus does not, as a rule, however, extend over so long a period of time, nor is there such frequent occurrence as with hydronephrosis. Furthermore, lithiasis is to be differentiated by the facts that (1) the symptoms are usually more severe, (2) there is a history of blood in urine, (3) the microscopic urine examination usually shows a few blood cells. After all, the radiograph is the essential method of diagnosis of lithiasis, and when checked by the ureteral catheter is about infallible.

Pancreatic and ovarian cysts may, in exceptional cases, be confused with a latent symptomless hydronephrosis, since a large hydronephrosis may extend to the center of the abdomen, and a pancreatic cyst may, on examination, give a similar "through-and-through" feel. The clinical symptoms, as a rule, suffice to differentiate the conditions, while the reno-pelvic distention establishes the diagnosis.

URINARY DATA

1. *Subjective Urinary Data.*—These are of comparatively little value, as but few of the patients complain of even the slightest bladder irritation. In several cases it was possible to obtain a history of diminution in amount of urine just preceding and during the attack with a polyuria following. The polyuria is probably due more to the reflex inhibition of secretion in the unaffected kidney rather than to occlusion of the contents of the hydronephrotic sac and its consequent liberation. In one case a large hydronephrotic sac was distinctly palpable, which on pressure would decrease in size and the patient would immediately urinate a quantity of fluid of low specific gravity containing pus cells. Gross blood was not reported in any of the series of cases.

2. *Microscopic Examination of Urine.*—The urine is not usually distinctly purulent on macroscopic examination. Microscopic examination will, however, reveal pus cells in the urine, though it may require repeated examinations to demonstrate their presence. The number of pus cells varies continually; they may even be absent for a period depending to a great extent on the drainage. Their presence is of much more importance than that of casts, of which there are usually but a few present. Blood cells are not often found, although in three cases a few were present. In several cases no pus cells were found in the mixed urine, whereas in the specimen obtained by ureteral catheterization the urine of the affected kidney showed a considerable number of pus cells.

3. *Phloridzin Test.*—An attempt was made in five cases of hydronephrosis to ascertain the functional capacity of the two kidneys by means of the phloridzin test. In every case the sugar remained absent from the urine in both kidneys for an hour after injection—a peculiarity of secretion in cases of hydronephrosis in which Albarran was first to call attention.

4. *Cystoscopic Examination.*—In some cases intermittent hydronephrosis can be diagnosed with comparative certainty from the clinical picture, particularly if the kidney tumor is distinctly palpable. Nevertheless, since renopelvic distention is frequently not definitely palpable, and since the symptoms simulate those of various renal conditions, a more exact method of diagnosis should be employed. This is given us in cystoscopic examination, including ureteral catheterization and measurement of the size of the renal pelvis.

The bladder mucosa is usually normal in appearance unless some local cystitis should incidentally complicate it. The ureteral meatus next attracts our attention. In about half of our cases it was found long and more or less pendulous. The ureteral peristaltic contraction about the meatus is usually indistinct and the urine dribbles or comes with an occasional weak spurt. The whole is suggestive of lack of tone, in contradistinction to the hyperirritable meatus one frequently sees with a stone in the lower ureter. Still, too much stress should not be laid on meatoscopy, for its findings are often misleading.

A catheter is next slipped into the ureter and slowly passed up toward the renal pelvis. In about two-thirds of the cases more or less obstruction was encountered near the ureteropelvic juncture. With but one exception it was possible to slip the ureteral catheter by the obstruction and enter the renal pelvis. Although it is impossible definitely to differentiate the character of the obstruction caused by the stone from that of constrict-

ing anomalous blood vessels, still the former obstruction is abrupt, and a grafting may be palpable, while the latter, which is smooth, may give way on a little pressure.

Whereas in the normal ureter and pelvis the ureteral catheter can be inserted to a length of from 30 to 40 cm., the dilated pelvis will permit 50 cm. or more to be coiled up within itself. The only exception to this was noted in a case in which the obstruction of ureteropelvic juncture was so great that a catheter could not be passed by it. The obstruction is usually felt at a length of from 20 to 25 cm. of catheter, however, and is easily pushed by. Below the obstruction it will frequently happen that little or no urine will come through the catheter. As soon as the obstruction is passed the urine will usually run freely with a steady drip and without the ureteral contraction. An ounce or so of fluid will frequently drop away without peristaltic hesitation. A similar rapid secretion is, however, sometimes observed with the nervous hypersecretion of oversensitive individuals, in whose cases the urine may flow incessantly for a long time without any ureteral contraction. The urine thus collected is extremely pale and will, in most cases, show at least a slight turbidity on close inspection. Such turbidity may be due to pus, but in some cases it is due to phosphates which frequently are precipitated in the more or less alkaline residual urine. The urine so-called may appear clear on inspection, and yet there may be enough pus cells in it to determine an infected condition. Therefore, a microscopic examination is necessary in every case. After collecting sufficient urine for examination and letting enough urine run out to empty the hydronephrotic sac, at least partially, the next step is to determine the degree of pelvic dilatation.

Pelvic Distention.—Kelly first called attention in this country to the fact that if the pelvis of the kidney is overdistended an artificial renal colic is produced. This fact is taken advantage of to measure the size of the renal pelvis. The normal pelvis will hold from 5 to 15 c.c. before pain is caused. At times the otherwise normal pelvis will be distended to 30 or even 40 c.c. before the patient complains of any definite pain. This occurs usually in more or less hysterical subjects and may possibly be explained by an hysterical anesthesia similar to that observed in the cornea or pharynx. After the pelvis has been partially drained one should be able to inject at least 50 c.c. of fluid into the renal pelvis before pain is caused, to determine an abnormal dilatation.

The distending fluid is colored with methylene blue to determine whether there is any return flow alongside the catheter. This return flow is, as a rule, not present to any noticeable extent, but if markedly so will negate the value of the findings.

After the degree of dilatation has been determined, the injected fluid is allowed to drain partially through the catheter. It escapes with a steady flow resembling that of a syphon and without any expulsive force. The amount of fluid injected before pain is produced varies, of course, with the degree of renal dilatation. In several cases 200 c.c. were injected without causing pain. If more than 150 c.c. can be injected but little secreting substance remains in the affected kidney.

The typical cystoscopic findings in hydronephrosis would consist of (1) an occasional weak spurt of urine from the pendant meatus, (2) a slight obstruction to the catheter near the ureteropelvic juncture, (3) about 50 cm. of catheter inserted into the ureter and pelvis, (4) a rapid drainage through the catheter of a pale

urine containing a variable amount of pus, (5) at least 40 c.c. of fluid injected without return flow before producing renal colic.

SUMMARY

The frequency with which a type of renopelvic distention is observed, caused by anomalous blood vessels constricting the upper ureter and characterized by intermittent attacks of abdominal pain, is so marked that the condition deserves to be considered as clinically distinct at least, if not anatomically so. The diagnostic data are:

1. Appearance of symptoms in the young adult.
2. Intermittent attacks of abdominal pain referred to the kidney zone and occurring with more or less regularity during a number of years.
3. Cystic tumor palpable in about a third of cases.
4. Presence of small amounts of pus in urine.
5. Usual absence of hemorrhagic urine, temperature and bladder irritability.
6. Cystoscopic findings as outlined above.

RELATION OF ANOMALOUS RENAL BLOOD VESSELS TO HYDRONEPHROSIS

WILLIAM CARPENTER MAC CARTY, M.D.

For many years both extensive and mild grades of hydronephrosis have been observed at autopsy, and extensive grades have been seen at operation. These latter observations, however, were usually made in cases in which the original pathologic condition has been marked by further changes, such as adhesions, distention of the pelvis and kidney. In many of them it was impossible to determine the exact etiology.

Since the early experience of Dr. Mayo in encountering a severe hemorrhage during separation of adhesions, which may or may not have been the sole factor in the production of the hydronephrosis, our attention has been drawn to the vessels which he so frequently encountered extending from the aorta or renal vessels to the lower pole of the kidney.

These observations led to a careful study of the relation of the vessels to the obstruction in the ureter.

Irregularities of the renal arteries are encountered in about 25 per cent. of dissected bodies (Quain). Of these Quain states that branches of the renal artery, or an accessory artery, instead of entering at the hilus, sometimes reach and penetrate the gland near its upper or lower end, or on its anterior surface.

Such anomalies we have found also at operation, but associated with distention of the kidney-pelvis which had been previously diagnosed by artificial distention.

In some cases it is impossible to determine whether the anomalous vessel was from the aorta itself or from the renal on account of the limited field of operation.

During the last year in four of the cases described by Drs. Mayo and Braasch, I made sketches during operation. In these cases the vessel ran anteriorly to the ureter and entered the lower pole (see illustration). In about 75 per cent. of all of our cases this was true.

Merkel describes early cases of hydronephrosis at autopsy in which the vessels were also posterior to the ureter.

Ekehorn, in twenty-five cases of hydronephrosis, found the accessory vessels anterior to the ureter in 64 per cent. and posterior in 28 per cent.

The pathologic sequence in cases of hydronephrosis associated with anomalous vessels seems to be dependent on some other factor than the anomalous vessel—that is

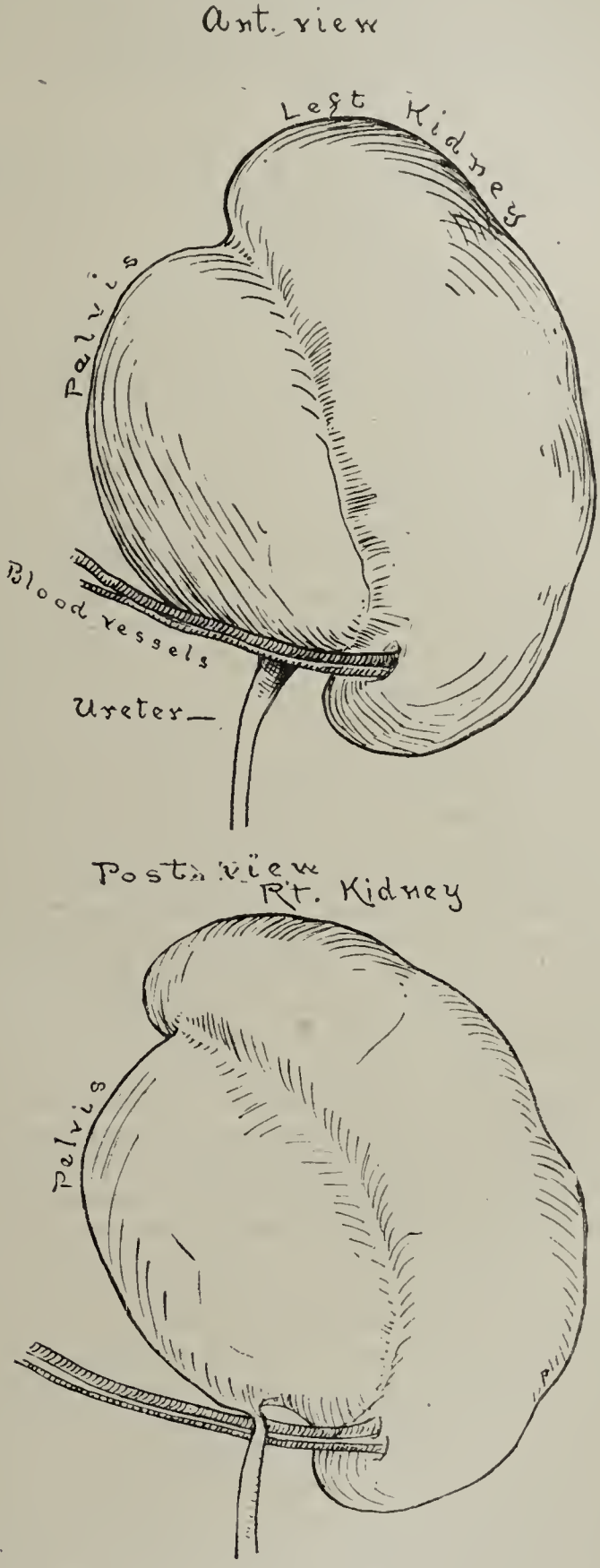
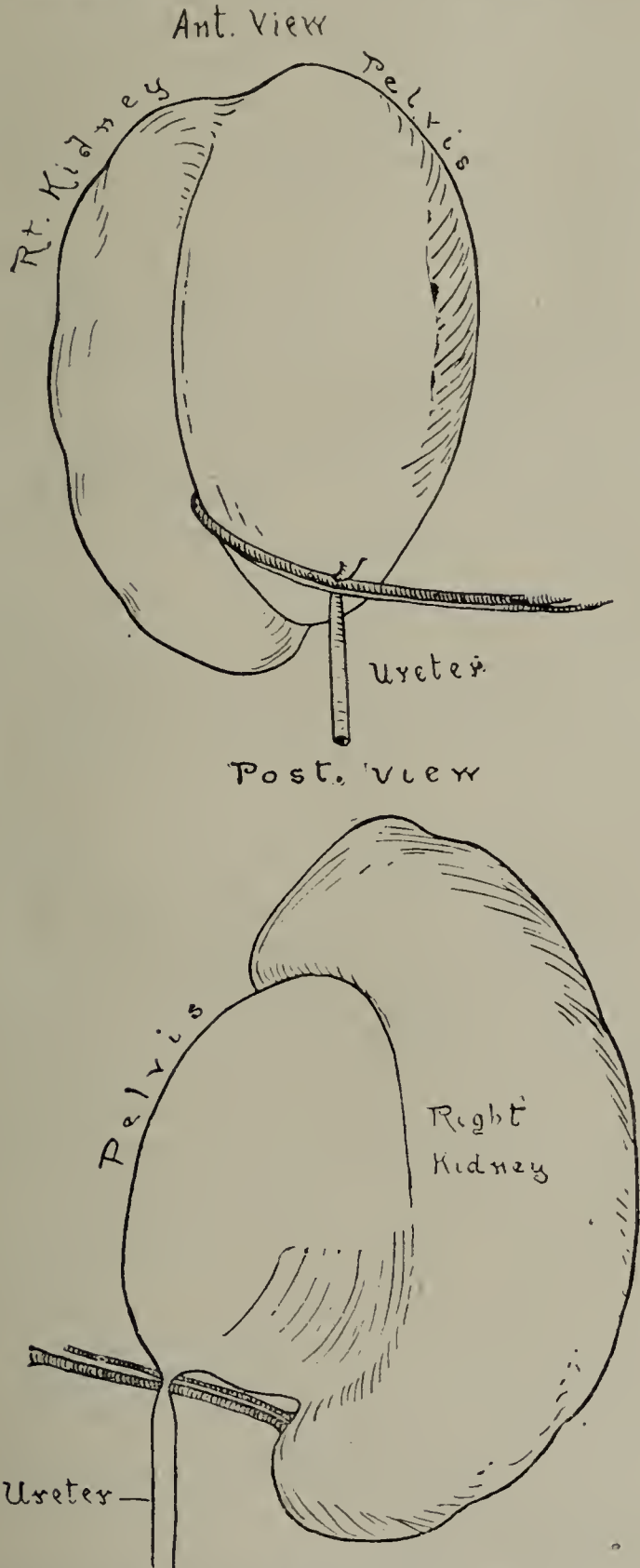
to say, anomalous vessels in the kidney occur in a larger percentage of normal kidneys than in kidneys showing hydronephrosis.

There is some reason for the sagging of the kidney, thus allowing the ureter to come in contact with the vessel, which normally is usually not in contact with the ureteropelvic juncture.

Most of those who have studied the condition of hydronephrosis believe that the attacks not infrequently occur following diminution of perirenal fat or general

At the point of suspension the ureter is bent on itself, thus forming a kink. As the angulation of the bend becomes more acute the inner wall of the approximating sides of the ureter form a valve, the *Klappenmechanismus* of the German.

Around the vessels and ureter adhesions are usually found. These are not marked and do not obscure the relation of vessels to the formation of the kink in mild cases.



Hydronephrosis: sketches made during operations in four cases, showing anomalous blood vessels running anteriorly to the ureter and entering the lower pole of the kidney.

laxity of the abdominal organs after pregnancy or illness.

We do not know how much this factor is responsible for hydronephrosis, but the fact remains that the anomalous vessels form a suspension bridge over which the ureter hangs. Whether the point of contact of the ureter with the vessel is at the normal ureteropelvic juncture is difficult, perhaps impossible, to say.

Not all pathologists and surgeons believe that a vessel ventrally placed in relation to the ureter can cause hydronephrosis, but all agree that a vessel dorsally to the ureter may cause such a condition.

The facts remain, however, that mild grades of intermittent hydronephrosis clinically occur, and at operation show distention of the pelvis, a kink in the ureter, an anomalous blood vessel anterior or posterior at the

point of kinking, extending from the renal vessel or aorta to the lower pole of the kidney. After ligation and section of the vessel the cases do not show any tendency to recurrence of the condition.

NOTE.—The following references may be found of interest on this subject:

1. Fenger: Konservative Operation für renale Retention infolge von Stricturen oder Klappenbildung am Ureter, Arch. f. klin. Chir. (Langenbeck's), 1900, lxii, 528.
2. Ekehorn: Die anomalen Nierengefäße können eine entscheidende Bedeutung für die Entstehung der Hydronephrose haben. Arch. f. klin. Chir. (Langenbeck's), 1907, lxxxii, 955.
3. Merkel: Die Hydronephrose und ihre Beziehung zu akzessorischen Nierengefäßen, Virchow's Arch. f. Path. Anat., 1908, cxci, 534.

ANKYLOSTOMIASIS IN MEXICO AND ITS DIAGNOSIS

W. C. ALVAREZ, M.D.

CANANEA, SONORA, MEXICO

Before the war with Spain ankylostomiasis was a disease almost unknown to American physicians, although in the literature of the South reports of "dirt-eating," accompanied by a severe anemia, can be traced as far back as 1808. The war brought the responsibility of making Cuba, Porto Rico and the Philippines habitable, and the fascinating new science of tropical medicine came to the fore in this country. The sanitation of the Canal Zone and the banishment of yellow fever from Havana has called the attention of the world at large to this subject and to the men who have accomplished so much in so short a time. The great work of Stiles, with the identification of the *Uncinaria Americana* and demonstration of its prevalence in the Southern States, and the investigations of Herbert Gunn and others in California, which show that almost all the common tropical diseases can be studied in San Francisco, gave a great impetus to the study of these diseases. American physicians now realize that they must more frequently examine the stools of patients and inquire for a history of residence in the tropics. Sir Patrick Manson, on his visit to California four years ago, urged the need of special schools for tropical medicine in this country.

Granting, then, the importance of this subject in the United States, it may be of interest to the physicians of California, Arizona, New Mexico and Texas, especially, to know that across the border there are endemic foci of ankylostomiasis; also that as soon as the Mexicans learn a little English they desire to get across the line to higher wages.

Besides a few isolated reports of this disease seen in natives of Mexico I can find only one paper¹ on this subject in English, that by Dr. Ricardo E. Manuell, who has been carrying on a campaign of instruction in this subject since his discovery of the disease in the City of Mexico in 1902. In answer to my request for a reprint of his article, with true Spanish courtesy he sent me marked copies of the journals containing the Mexican literature on the subject.²

So far cases have been reported from almost all the most southern states (Mexican)—from the Isthmus of Tehuantepec and Yucatan to the states just above the City of Mexico. No cases have yet been reported from the immense northern states of Coahuila, Chihuahua,

Sonora and Durango. As these states have a more temperate climate and severe winter, owing to their great altitude above sea level, the ankylostoma may never get hold on the higher plateaus. A careful watch for nearly two years has not been rewarded, so far, by a single case from Sonora, the large state adjoining Arizona, and I have to report my cases from Lower California and from Sinaloa, a state that forms a good part of the western seaboard. The discovery of the great prevalence of the disease in Lower California is of importance here because most of the people of northern Sonora have come from the mines of Santa Rosalia, in that peninsula, and they are the people who are now crossing into the United States. It is also of interest to note that railroads are being rapidly extended along the western seaboard, and Guaymas, where the disease is undoubtedly prevalent, is but a day's journey from Tucson, Arizona.

Dr. Manuell states that all the worms observed so far in Mexico are of the old world type; he believes that the parasites were introduced by foreign miners and have since been spread by the floating mining population. He thinks that sanitary regulations aimed at the disease should be inserted in the mining code. The mining camp privy is often an old abandoned tunnel, and as there is frequently a little stream of water running out of these tunnels, the conditions for the spread of the disease are ideal.

I had expected to find the new world species, but a careful examination of almost all my specimens shows only the *ankylostoma duodenale*. These are very large; they have two pairs of curved hook-like teeth; the vulva is situated about the posterior third of the body, and the caudal bursa of the male has the dorsal ray only partly divided.

The diagnosis is the most important thing, because once it is made the worms are far easier to remove than are most tæniæ. Whenever the diagnosis of a complaint in a patient from the tropics is not perfectly clear, and often when it seems to be easy, a differential blood count is indicated. One of my patients, a woman, had been to the United States and had been treated by several physicians and specialists for an obstinate tinnitus aurium. From her description of the treatment she must have had all the most approved methods used on her ears, nose and Eustachian tubes, but without improvement. As she was a large, stout woman, anemia had probably been ruled out in the diagnosis. I had small hope of helping her after all the special work had failed, but a routine examination discovered a hemic murmur and the differential count showed 18 per cent. eosinophiles. She had been brought up in Lower California and was infected with ankylostoma.

A blood count, to a man who does not make one several times a day or week, seems a great undertaking, and he is sure he could not find time for one, much less for several. A little practice will enable the physician to do a practical blood count while the patient waits, and he will frequently dismiss him much sooner than if he had tried to make the diagnosis by the history and physical examination alone. The physician should always carry with him a box of new slides and an ear lancet; a little vaccination scarificator with all the teeth but one broken off will do. On a convenient shelf in his office should be two dropping bottles, one containing Wright's or Hasting's blood stain and the other distilled water.

After the ear is pricked the hemoglobin may be estimated accurately enough in a moment with the Tall-

1. Ankylostomiasis in Mexico, Am. Pub. Health Assn. Rep., xxxii, part 1, pp. 201-204.

2. Besides his own communications, Rev. med., November, 1902, there are papers by Dr. Andres G. Castro, one of his students, Rev. med., September, 1903; Dr. A. Matienzo, Rev. med., January, 1904; and Dr. G. Castaneda y Escobar, Rev. med., April, 1904.

quist scale, and then a thin smear should be made, preferably with the edge of another slide. This should not be held firmly, but should rest on the finger, at the proper angle to the blood slide, which is also slightly inclined. Thus the blood is spread by the weight of the slide and not by the uncertain pressure of the hand, and the specimens are uniform in thickness and in the distribution of the leucocytes. The commonest fault is to take too large a drop of blood.

The absolute alcohol in the stain will fix the smear almost immediately, and the dilution with distilled water can be made. In a few minutes this active stain is washed off, the specimen is dried and it is ready for the oil. Half a minute's examination reveals a great deal to the eye that is at all accustomed to this work. It is better to use the mechanical stage so as to run across the smear, taking in both edges where the larger leucocytes concentrate, and where they would otherwise be overlooked.

This quick review will show the presence or absence of anemia, as the erythrocytes will be either well-shaped and full, or pale, malformed, polychromatic or even nucleated. The extent and character of these changes will greatly modify the prognosis. The relations of the whites to the reds should be observed at the same time, and with a little practice in this way one can estimate a leucocytosis almost as accurately as with a blood counter, especially if not in daily practice with that instrument. The practiced eye can tell in a moment if there is or is not a definite leucocytosis. If not, there is generally little to be gleaned from a full differential count. The man with a large practice can not take a full history and make a complete examination in every case, much as he might like to do so, and as he avoids unnecessary work there, so should he do in his laboratory.

Not all laboratory work is of practical benefit, and a large part of it is accessible only to the trained specialist in this branch, this rapid blood examination, however, is of immense value and can be done by any busy physician while he is talking to the patient on his first visit. It will prevent many mistakes and oversights, as is illustrated by one of my cases.

Mr. K. had been working on a railroad in the state of Sinaloa and was being treated for what seemed to be a fairly typical case of typhoid fever. A blood smear showed severe anemia with nucleated reds; there was also a marked leucopenia. The latter finding indicated typhoid but the discovery of estivoautumnal signet rings and crescents corrected the diagnosis. With appropriate treatment the patient was soon up and about. While the blood was being watched every few days for the final disappearance of crescents, it was noticed that as the leucocytes reappeared in the circulation, more and more were eosinophiles. When they reached 14 per cent., the stools were examined and ova of the ankylostoma were found in large numbers. Following the progress of the case with the microscope here prevented a serious oversight.

In tropical cases, after the quick review has shown the blood to be normal in most respects, there is no need of a complete differential count, as the important thing is the percentage of eosinophiles. A hundred cells can be quickly run over, noting only eosinophiles, and if the number be less than three, the probabilities are against the presence of intestinal parasites. A count between four and six demands the examination of another hundred and suggests the examination of the feces, while

a count over this demands it. This would seem a very repugnant undertaking even to a physician, but the addition of a small amount of formaldehyd solution will soon remove the offensive odor. A small amount of feces should be taken so that it reaches to the edge of the cover-slip when spread out, and makes a thin smear. The condenser should be swung out, the diaphragm opened and the entire specimen should be examined, preferably with a mechanical stage. One should learn to use the $2/3$ objective as with the $1/6$ too much time would be required to examine the four specimens which should be studied before recourse is had to the concentration of the ova. The main difficulty with the searcher after uncinaria ova is that he is looking for an opaque object, and finds, among other things, stone cells which, with their facets, seem to be ova of some kind. He must look for what seems at first to be a tiny oval clear space in the surrounding opaque mass. He should swing the $1/6$ on this and shut off a little of the light, then he would see the clear hyaline ring with the granular segmented center. Text-books are at fault in picturing hookworm ova with almost as heavy shades as are used for the trichocephalus or other ova. Students would be greatly aided by pictures of the eggs shown light on a dark background. A useful axiom in searching for animal parasites and ova is: If there is any doubt, the finding is negative. Nature's work is too perfect to be mistaken.

Many writers on this subject say that when there are very few eggs in the specimen, especially after the expulsion of most of the worms, the ova should be concentrated. A trial of all the methods² suggested in the last four years convinced me that even a physician accustomed to this work could do better with the usual smears, because the methods also concentrate the stone cells and other small bodies, and it is almost impossible to distinguish the ova in this rubbish. A recent discovery has solved the problem of cleaning the concentrate, and this method may now be used to advantage by any physician.

C. C. Bass³ suggests the use of a strong solution of sodium chlorid which will float the ova so that they may be skimmed off. It is difficult to get the specific gravity just right so that it will float the eggs and not everything else. Telemann⁴ mixes a small piece of feces with equal parts of ether and hydrochloric acid, and centrifuges after passing through a fine sieve. This will not concentrate very much and the acid is objectionable to handle.

B. B. Bagby⁵ breaks up two grams of feces in a pint of water, and allowing five minutes each time to settle, washes the specimen three or four times besides straining through gauze to remove larger masses of undigested food. A little of the precipitate is taken from the very bottom with a pipette and the first drop from this is taken after standing a moment. This is the best way to concentrate the ova as a large amount of feces may be taken. The objection is that the concentrate is too full of small bodies resembling ova. The sedimentation also takes about half an hour. This time, however, need not be wasted. I observed while studying these concentrates that if the cover-slip were touched, everything moved but the ova, so this procedure was an aid to finding ova with the low-power objective,

3. Bass, C. C.: Uncinariasis in Mississippi, THE JOURNAL A. M. A., July 21, 1906, 185.

4. Deutsch. med. Wchnschr., Aug. 27, 1908; abstr. in THE JOURNAL A. M. A., Oct. 3, 1908, 1193.

5. A Simple Method of Finding the Ova of Uncinaria, THE JOURNAL A. M. A., Jan. 26, 1907, 325.

but the more valuable application of this observation did not occur to me.

Pepper⁶ makes a most important contribution to this subject in showing that the ova seem to stick to the slide, and everything else may be floated off. He concentrates with the centrifuge and washes six times. The ordinary centrifuge tube holds very little, and it will generally be found more satisfactory to use a pint graduate and the force of gravity. If the centrifuge be used, a very few revolutions are needed for each washing.

I recently undertook a series of experiments in which each one of the reported methods and some combinations were given a thorough trial. The feces used in all the tests were taken from a man who had received a course of treatment and was supposedly cured, as eight ordinary smears showed no ova. Every method showed an ovum or two, but the results were uncertain. The same technic and the same care would at one time reveal a few ova and again none could be found. This is a great disadvantage for the busy practitioner as the results should be worthy of the time spent to obtain them.

A combination of Bagby's method of concentration and Pepper's scheme for cleaning the concentrate gave the best results by far, and some beautiful specimens were secured. The whole concentrate was placed on the center of a slide, and after a moment, the fluid was drawn off, keeping the mouth of the pipette as far away from the slide as possible. Water being added and drawn off again several times, nothing was left but eight or ten ova which could easily have been preserved for class instruction.

Under diagnosis may be mentioned a procedure recommended for physicians who do not possess a microscope; that is, to give a small dose of an anthelmintic and search for the worms in the evacuations. If uncinariasis be strongly suspected and the diagnosis can not be made microscopically, it would probably be better to give the full dose, because an anthelmintic energetically given, with the fasting before and the gastroenteritis after, is a thing the patient is liable to refuse a second time.

The treatment has seen some four periods in which male fern, thymol, chloroform and eucalyptus oil, and betanaphthol have been most highly recommended; but more important possibly than the drug employed is the skill in its administration and the thoroughness of the preparation of the patient. If one wishes to follow his cases carefully, he should have the patient bring the evacuations of the next two days. He will save himself much trouble if he orders that no paper be thrown in the vessel. If the physician do much of this work, his laboratory outfit should include a wire sieve about seven inches in diameter, which can be suspended over a bucket by wire handles which draw out. Such a sieve may be found in any hardware store; and with it, the feces can be put under the tap and thoroughly washed. The worms can now be easily seen.

If an eosinophile count be made shortly after a successful treatment, one may be surprised to find that they have not decreased but increased in number. This point has not been mentioned much in the literature but it is constantly seen and is of interest in the study of eosinophilia. It may be due to the fact that in some diseases, such as typhoid, the return of the eosino-

philes speaks for a favorable prognosis, and is a sign of recovery. Or it may be that the worms are stimulated by the anthelmintic to excrete more of the toxin which they probably elaborate, and which may be the substance that attracts the eosinophiles. In this connection it would be interesting to note if this increased eosinophilia occurs after an unsuccessful attempt to expel the parasites.

It is also interesting to study the relations of the degree of eosinophilia to the number of worms present. This relation is far from constant, and after a few years, there may be an acquired tolerance to the toxins of this and possibly other similar parasites. A. Hocart Brehaut⁷ suggests that the low average eosinophilia observed in ankylostomiasis in Egypt is due to the tolerance that the natives have acquired to the toxins of the *Bilharzia hematobium*.

One often is surprised to see a patient with a very high eosinophilia recover completely after the expulsion of a dozen worms. These must have produced an unusually large amount of toxin, or else the patient was particularly sensitive.

THE SCOPE OF A MATERNITY HOSPITAL AND OF OBSTETRICS AS A SUR- GICAL SPECIALTY *

BARTON COOKE HIRST, M.D.

PHILADELPHIA

While clinical experience is not everything in medicine, it is so much more important than any other single factor in the physician's equipment, that I would hesitate, before a hospital staff with such a large service as that of the New York Lying-in Hospital to express views, or advocate measures, which must have been formed or adopted by all of us in pretty much the same shape to meet the exigencies of our kind of practice. It is profitable however, occasionally to contemplate the present status of any of the broad divisions of medicine, to study critically the achievements of the past, the possibilities and limitations of the present and the probable direction of future progress.

It is to the last particularly, that I shall attempt to call attention. No single branch of medicine is standing still for a moment. The Scotch surgeon and the American obstetrician who, in final addresses to their students in the first half of the nineteenth century, declared that there was nothing more to learn, would be properly humiliated if confronted to-day by the asepsis, the knowledge of bacteria, physiologic chemistry, instruments of precision and operative technic of which they never dreamed; and I dare say our successors will look on us with the same mixture of pity and wonder with which we regard our predecessors.

While the whole art and science of medicine are steadily advancing, it is noticeable that certain branches at times display unusual activity and progress. So-called gynecology—a misnomer, for only a part of the pathologic phenomena peculiar to women was understood by this term—so-called gynecology showed a feverish and precipitate development up to a few years ago. General medicine and general surgery had their turn.

Now, it seems to me, there is an unwonted interest in obstetrics, a more rapid progress than has ever been

6. Jour. Med. Research, March, 1908; abstr. in THE JOURNAL A. M. A., May 16, 1908, 1650.

7. Lancet, London, Aug. 1, 1908.

* Read before the Alumni Society of the Lying-in Hospital of New York City, March 9, 1909, at its first annual meeting.

observed before in this oldest branch of medicine and a more hopeful outlook for the future.

For ages our guild has contended with the difficulties and dangers of parturition itself. Slowly, laboriously, but with an increasing impetus, we have learned how to deal with all of them in one way or another. In recent years the physiology and pathology of conception and gestation have been mastered, with the single exception of the gestational toxemias, but of them we have learned so much that we are on the verge of complete comprehension. Our knowledge of the etiology and pathology of the puerperal infections is fairly complete. In the preventive and curative treatment, however, there is room for improvement.

But where we have been and are weakest is in the recognition and prompt correction of all the pathologic consequences of the child-bearing process that have reduced to invalidism millions of women, who ought to have been as well and sound after delivery as they were before conception. Here is the greatest room for improvement; and this, I am convinced, is the direction of future progress.

The injuries of the genital canal, malpositions of the uterus, pathologic conditions of the broad ligaments and appendages, lack of tonicity in the abdominal walls, enfeebled support of the abdominal viscera, injury of the coccyx, impairment of function in the pelvic nerves, are all diseases which we must trace directly to child-bearing as *the* etiologic factor. But how often does the average practitioner bear these facts in mind in his routine care of child-bearing women? How many of the maternity hospital staffs in this country realize that it is as much a part of their duty to watch for all the immediate and remote consequences and complications of the child-bearing act at all periods, and to correct them in their incipency, as it is to deliver a woman safely and to guard her against the dangers of immediate infection? To speak well within bounds, it is safe to say, not all of them.

It might be objected that it is utopian to expect so much of institutions merely designed to shelter women during childbirth and for the few days afterwards required to put them on their feet. But it is perfectly practicable to give our hospital patients this kind of care, and moreover so advantageous to the patients, to the institution, and to the physicians in charge that self-interest alone must work in this direction aside from higher considerations. Take the New York Lying-In Hospital, for example. Suppose that every woman cared for in this great clinical service was subjected to as careful a gynecologic examination after labor to detect all the possible injuries of the genital canal as the competent gynecologist would make to establish such a diagnosis in one of his office patients; that every one of their injuries was completely and successfully repaired as they all can be during the puerperium; suppose that every patient was examined about three weeks after the termination of gestation to determine the position of the uterus; that a final examination was made at the conclusion of the puerperium, the end of six weeks, to learn the condition of the pelvic floor, vaginal walls, cervix, uterus, broad ligaments, appendages, abdominal walls, abdominal viscera and the coccyx; and that all the abnormalities thus discovered were appropriately treated without delay. What an enormous gain must accrue to the individual in the preservation of perfect health and usefulness; what a wide-spread influence on the family and therefore on the community

must result if the mother is made competent to care for her children, the housekeeper enabled to perform her duties, the wife preserved as a cheerful and uncomplaining companion for her husband! Think of the reputation of the institution dealing thus with large numbers of such cases, its hold on the community, its command of material support, if it is recognized as the source of such blessings to the numerous patients in its beneficent charge!

Finally what opportunity is greater in medicine today than that of the master of the modern maternity hospital? He can truthfully claim to be the only specialist qualified as an expert in all the pathologic phenomena peculiar to women; the only specialist deserving the title of gynecologist. No one else can approach him in command of clinical material, in extent and variety of experience. No one, therefore, can rival him in efficiency. This seems so self-evident that insistence on it seems superfluous. But it must be remembered that it is only in the last decade or so that we have had any maternity hospitals in America properly equipped for all the work that it is their duty to perform. In Europe the great maternities have naturally provided for the treatment of all the pathologic conditions in women; their equipment and their medical officers have undergone the necessary evolution required for the surgical treatment of conditions, the majority of which are traceable to child-bearing. But here, as one of the signs of our newer and cruder civilization, the absurdly illogical system has prevailed of one set of specialists devoting its attention to the act of childbirth itself, but so neglecting its pathologic consequences that another set of specialists had to be developed to do the work properly belonging to the first.

Another argument that should appeal to us forcibly is that the great specialty of gynecology can be rescued from extinction as a specialty in America, if those of us who devote ourselves to it will learn the whole subject in its entirety, as it can be learned in the properly equipped, properly constructed and properly conducted modern maternity hospital, and nowhere else.

Two or three years ago the superintendent of a new general hospital was showing me the building. I asked him what arrangements had been made for a gynecologic department. He replied that there was none. He had investigated the matter, he said, and had found a gynecologist in one of the Boston hospitals removing gallstones and a general surgeon in another removing pus tubes. He could see, therefore, no difference between the two and recommended that the gynecologic work be put in the hands of the general surgeons, which was done.

A story is told of a Philadelphia hospital that on the same day one gynecologist took a stone from a man's ureter and another amputated a leg. It is no wonder that the general surgeon derides the pretensions of the kind of gynecologist we have had in America to a special skill and knowledge of the pathology of woman: a specialist who has learned but a part of his subject and finds his field so limited that he is forced to make excursions into general surgery. But the best solution of this problem is not the absorption of gynecologic surgery by the general surgeon, although I think it would be, if we, who are in charge of the maternities of the country do not undertake the work ourselves. While the general surgeon and the limited gynecologic surgeon are often equally inexperienced in the relations

of pelvic and abdominal surgery in women to the child-bearing process with which the condition to be treated surgically are almost always intimately associated, the general surgeon at least has the advantage of broader surgical training.

We should be incapable of making mistakes, the result of limited experience and training. If the gynecologic surgeon has a broad education in all the physiologic and pathologic phenomena of women, experience in the intimate relationship between the diseases of women and the child-bearing process, ability to judge of the effects of various procedures on future conceptions and labors, and a command of clinical material that no one else can equal, not only is the patient safer in his hands, but the progress of gynecologic surgery must be more rapid and more certain.

After all these generalities let us discuss practical details and the application of these principles to the work being done in the New York Lying-In Hospital, if an outsider, who is earnestly interested in seeing the greatest hospital of its kind in this hemisphere fulfill its mission as primate among all the maternity hospitals of America, may be permitted to express his views.

The last annual report of the New York Lying-In Hospital shows that 6,274 women were delivered in the in-patient and out-patient departments. I know from a number of years' experience in this work in Philadelphia, done as I am convinced it ought to be done, that one-fourth of this number required some sort of surgical treatment for the various consequences and complications of the child-bearing process. There ought, therefore, to be provided for this important part of the work, which can not be ignored without shirking an obvious duty, accommodation for 1,500 surgical cases a year in the hospital in addition to the space set aside for the women during child-birth and the puerperal convalescence and for their infants. Allowing an average of two weeks for convalescence from the surgical treatment, which, however, can be considerably reduced in many instances by combining surgical and puerperal convalescence, there ought to be enough beds for about fifty surgical cases at one time. In an institution of this size such an accommodation as this ought easily to be provided.

But I would not stop there. Without special effort and from the material already under the control of the hospital, it can begin with a larger amount of clinical material in the diseases of women than any other hospital in the community. Therefore, the bulk of all this material would naturally gravitate to the New York Lying-In Hospital as it does to the Charité and to the Frauenklinik in Berlin or to the Allgemeines Krankenhaus in Vienna.

In justice to the institution and to the staff, accommodation should be provided for these patients who seek relief from a greater experience and a hence a greater skill than they can find elsewhere. One hundred beds would not be too many as a beginning for this department of the work.

I am aware that this proposition is open to two objections, one that such a space devoted to the treatment of diseases of women might crowd out the patients for whom the hospital was originally intended; the other that the expense of construction and maintenance, if additional accommodation were provided, might be prohibitive.

The answer to the first objection is that additional

space should be provided. The second objection can not be valid in a community like this, of enormous wealth, scornful of material obstacles, of progressive ideas, responding magnificently to any appeal to humanity, to progress, to civic pride.

A concerted and determined effort on the part of the officers and the alumni would quickly remove this difficulty.

Another objection that I have heard from one of the medical officers is that the women who have been cared for in childbirth by the hospital staff can not be induced to remain in or to return to the hospital for the surgical treatment of the consequences of childbirth. On this point I can again speak from personal experience. A certain proportion of the patients are unable to leave their homes for a sufficient time, or are unwilling to submit to an operation or callously endure discomfort and actual suffering, but this is true only of a minority, and this minority can steadily be reduced in time by persistent effort. It is first necessary to provide adequate dispensary facilities; second, to pay extra visits in the homes of the out-patients at a much later period after childbirth than is customary; and, third, to inculcate in each patient the importance to herself, her added usefulness, her increased ability to work and her greater wage-earning capacity if she keeps herself under medical observation long enough to establish the fact that she is in a satisfactory condition or is put in such a condition by appropriate surgical or other treatment. Finally, each patient so cared for is a missionary among her neighbors, who are impressed with the object-lesson of her superior physical condition contrasted with their own.

All this takes time, but there is a steady and constant progression each year. It would not be long before an institution with the advantages already possessed by the New York Lying-In Hospital would become the greatest center in the country for the study and the treatment of all the pathologic phenomena peculiar to women.

If the opportunity is unimproved, the primacy in this work will probably pass to Chicago, where a frauenklinik is about to be erected and developed, I understand, on the lines I have advocated. I wish I could think it might pass to Philadelphia.

By refusing to be discouraged or rebuffed, by working steadily according to the plan just outlined, I have established a clinical service of more than 2,000 cases a year, which gives me sole control of the largest amount of clinical material in all the pathologic phenomena peculiar to women possessed by any one in my community. From March 1, 1908, to March 1, 1909, I have had in two of my hospital services, the University and Howard, 1,122 gynecologic operations, using that term in its correct sense to indicate all the operations required for all the pathologic phenomena peculiar to women, and this is exclusive of other hospital work and private practice.

My excuse for intruding advice on the conduct of an institution such as the New York Lying-In Hospital must be an earnest interest in the work it is doing, an honest enthusiasm in contemplating its opportunities and a patriotic pride in the wish that the largest and richest maternity hospital in America shall rise above the level of a training school for midwives, as so many of them in this country are, to be at least the equal of any hospital of its kind in the world.

1821 Spruce Street.

NATIONAL FORMULARY NOMENCLATURE *

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It is with the utmost reluctance and diffidence that I undertake the task assigned me of criticizing the nomenclature of the National Formulary, a recognized federal legal standard. I have a keen perception of the high ideals, sterling integrity and noble purposes of the members of the committee which compiled this volume, and to comment adversely on the work of men who have had a much larger experience in some lines than I have had, might be considered impetuous impertinence on my part. I feel, however, that it is the duty of every member to point out such defects and shortcomings as come to his attention; otherwise progress would indeed be slow. I further realize that there are few members in the pharmaceutical profession who have been brought so intimately in contact, in a matter-of-fact way, not only with the excellent features of the National Formulary, but also with the shortcomings of its nomenclature, as I have been, and it is some of the information and experience gained during the past few years that I desire to put in evidence.

Many changes have been wrought during the last few years. What was considered permissible to a certain degree ten years ago—yea, three years ago—might be in violation of the present law, and the leading association of the pharmaceutical profession should be in the lead in rectifying such transgressions. The argument is at times advanced that some of the titles may be slightly inconsistent or misleading or even deceptive, yet they have long been in use and for that reason are entitled to recognition. This hereditary argument is interesting but invalid. In this communication I shall utilize largely representative, practical illustrations met in my work.

NAME OF DRUG VERSUS ITS CONSTITUENTS

Soon after the federal law was enacted a manufacturer desired to know whether the use of the name "mandragorin" was permissible under the act. He was advised that if the preparation was mandragorin, in fact, prepared from mandragora root, such name would be considered proper; otherwise, its use would be misleading and therefore forbidden. He then informed us that the product to which he was applying the name "mandragorin" was a mixture, containing, among other ingredients, the alkaloids present in mandragora root, but that the preparation was not made directly from this root; and he was advised that the use of the name "mandragorin" for such a mixture was improper. The question raised in connection with this product was the authoritative nature of the National Formulary and whether the principles embodied in its nomenclature would be restricted to N. F. preparations, or if they would be applicable to other products. Attention was called to the fact that "elixir of cinchona," synonym "elixir calisaya" was prepared by dissolving salts of the three principal alkaloids of cinchona bark in aromatic elixir and coloring the mixture to imitate an elixir prepared from cinchona bark proper. Without continuing the subject further, suffice it to say that the name "mandragorin" is no longer applied to the mixture in question: but there is no gainsaying the fact, that the manufacturer here has a good basis for an argument.

A moment's reflection will convince even the skeptic that the principle in question would open the field for innumerable improper, if not absolutely deceptive and misleading practices. For example, according to this principle it would be perfectly proper to prepare "tincture of nux vomica" by dissolving a suitable quantity of strychnin sulphate in an alcoholic solution of proper strength and coloring the same with burnt sugar. Again, it would be just as logical to dissolve a certain amount of vanillin in a suitable menstruum, to color the mixture with caramel and call the product "vanilla extract." Again, a tablet containing any salt of the alkaloid berberin could justly be named hydrastis tablet." From this, it is only a step to the "formerly" so-called "bitterless quinin" preparations which did not contain any quinin at all, but cinchonin or possibly some other cinchona bark alkaloid. The above products are plain imitations, the sale of which, in the case of drugs, is declared illegal by the federal and many state laws. No hesitation would be entertained in bringing a prosecution against a dealer in such improperly named commodities. In fact, so-called vanilla extracts, consisting of vanillin, with or without coumarin, dissolved in a suitable menstruum and colored in imitation of genuine products, have been adjudged adulterated and misbranded by the courts in that such articles were not real vanilla extracts, but imitations designed to deceive the public. A case of this character is reported in "Notice of Judgment No. 14" of the United States Department of Agriculture.

Elixir of cinchona is, however, only one of a number of preparations of this class found in the National Formulary. This same principle underlies eight other elixirs of which the name "cinchona" constitutes a part of the title. Other examples are: 1. "Wine of beef, iron and cinchona," synonym "beef, wine, iron and cinchona." There is no cinchona whatever in this product, but it is represented by the sulphates of quinin and cinchonidin. 2. "Tartro-citric lemonade." This preparation is a sweetened, aqueous mixture of tartaric acid, citric acid and sodium bicarbonate. I see no good reason whatever for appending to this product the name "lemonade," either qualified or otherwise. 3. "Emulsion of petroleum." This product does not contain any petroleum whatever, but "petrolatum album." The chief active agent of this preparation appears to be the expressed oil of almond. Petroleum proper and kerosene are believed by some to be of service as remedial agents, but I myself question very much whether any medicinal value that may be ascribed to this emulsion is due to the petrolatum it contains. The name certainly is not in harmony with its composition, and is therefore misleading.

USE OF THE WORD "COMPOUND"

It has long been the practice to name medicinal preparations after a valuable constituent, even though such constituent is only one of a number, and is frequently present in small quantities and in some cases not at all. In view of recent legislation, it soon began to be realized that such names were improper and information was sought relative to the proper use of the word "compound" in connection with certain mixtures. It is clearly evident that the naming of a preparation after a constituent which is either not present, or is virtually inactive or is present in such a small quantity as to impart little if any activity to the product, a practice formerly not uncommon, with or without the use of the word "compound," is improper and

* Read before the March meeting of the Washington branch of the American Pharmaceutical Association.

misleading. This subject calls to mind many improper and deceptive names; for example, "castor oil pills" and "castor oil tablets," with little if any castor oil, except such as may have been used in lubricating the machinery; "copaiba pearls" with only a nominal amount of copaiba; quinin products in which other cinchona alkaloids have been largely substituted for the quinin, etc. I desire also to direct attention to a protracted correspondence in connection with a so-called "rattlesnake oil liniment," the object of which was to justify the use of the term "rattlesnake oil" as a part of the name of the preparation. The reason why the dealer was so anxious to use the term "rattlesnake oil" was the belief entertained by many that this oil is of great efficacy in the treatment of rheumatism. It finally developed that the preparation contained 1/3 of 1 per cent. or one ounce of the oil to three hundred ounces of the finished product. This amount of rattlesnake oil in the liniment appears certainly to be small justification to name the preparation "rattlesnake oil liniment," either with or without the word "compound," and its use has been discontinued.

On referring to the National Formulary we find that in the manufacture of "compound syrup of Irish moss," only 0.1 per cent., or one part in one thousand, of Irish moss, which at most possesses only demulcent properties, is used. If the name "compound syrup of Irish moss," which represents such a trivial amount of Irish moss, is correct, why is not "rattlesnake oil liniment compound"? As can readily be seen, the above involves a very important principle. The Irish moss preparation may be a comparatively innocent and, as some one says "an isolated case," but it should be remembered that it is practically impossible to draw a line of demarcation when a precedent is established. This is exceedingly difficult, even with the National Formulary preparations, to say nothing of the host of proprietary remedies involving this principle. It is not the ninety and nine that give the trouble but the one black sheep. Compound syrup of Irish moss is, however, not the only offending "compounded" name in the National Formulary, as will shortly be seen.

Attention is now called to a personal interview which recently took place in connection with a headache remedy containing the word "celery" in its title. The manufacturer recognized the shortcomings of the original name and believed that the addition of the word "compound" would rectify the difficulty. He well realized that the celery present in the product did not constitute any material portion of the activity of the drug but that its potent agents at different times were acetanilid or acetphenetidin and caffeine and other ingredients. When the question was raised as to the propriety of using the term "celery" in the name of this mixture, the manufacturer stated that a large proportion of the commercial value of the preparation resided in this word, in that the consumer had been taught from youth up that celery was a valuable remedial agent and the elimination of this word from the name of the product, long in use, would mean a serious loss. Reference was then made to the National Formulary "compound elixir of celery," which might more properly be called "elixir of coca and kola compound." The headache remedy represented a substantial amount of celery and the manufacturer was willing to increase it if necessary. The principle involved in the two cases is apparently the same, and if it is proper in one it is difficult to see why it is not in the other. Another

National Formulary preparation referred to at times in similar cases is "compound pills of colocynth." It can readily be imagined that parallelisms of the above character may at times become embarrassing.

After considering various schemes and numerous arguments presented by dealers relative to the origin and existence of deceptive and misleading names and the justifications offered for using the word "compound" to cover up the defects, it was decided on January 3, 1907, to address a letter to the chairman of the National Formulary committee, calling attention to the abuses which took shelter behind the nomenclature of the National Formulary, particularly in connection with the use of the word "compound" and asking that the committee take the subject under advisement and define its attitude on the question. In reply on February 21, 1907, I received a letter from the chairman containing among others the following paragraphs:

While the committee deprecates and would discountenance the use of any misleading titles whatsoever, it does not concede that such exists in the National Formulary, and particularly not such in which the term "compound" is used.

Although the pharmaceutical practice is not strongly defined and while manufacturers do not always adhere to the generally accepted limitations of the word "compound," yet it is understood that the dominant medicinal agent, irrespective of its mere quantitative relation, gives title to the preparation, and that the other ingredients—the synergic, corrective or adjuvant—in a compound preparation, are the ones that come under the generic title "compound."

As regards the innovations of manufacturers, the committee can not see how the text of the National Formulary can be held as being conducive to the innovation of fraudulent titles, simply because, in connection with the titles of preparations there may appear some well-known and long-used synonyms that are slightly inconsistent. It is respectfully submitted that manufacturers who can give as good reasons for the use of the term "compound" as has been herein offered, may be allowed its use without jeopardy to the public.

From the above it was quite apparent that the committee did not intend to give much relief to the embarrassment. It is not clear what is meant by the phrase "slightly inconsistent," but the committee can be assured that manufacturers with the aid of their attorneys give just as plausible reasons for the names they are using as any that have yet come to my attention justifying the use of certain National Formulary names. In order to relieve the situation it was necessary to issue a decision limiting the use of the word "compound" in connection with mixtures, and the following principles were set forth in Food Inspection Decision No. 63:

In no case can a preparation be named after an ingredient or drug which is not present. The word "compound" should not be used in connection with a name, which in itself, or together with representations and designs accompanying same, would be construed as a form of misbranding under the act.

It is held that if a mixture of drugs is named after one or more but not all of the active medicinal constituents (not vehicle) present in a preparation, the word "compound" can be used in connection with the name, (a) provided the active constituent after which the product is named is present in an amount at least equal to that of any other active medicinal agent present. Example: If it is desired to make a mixture consisting of oil of sandalwood, balsam copaiba, and castor oil, and call this product "oil of sandalwood compound," the oil of sandalwood should constitute at least 33 1/3 per cent. of the entire mixture. Or (b) provided the potent active constituent after which the product is named is present in sufficient amount to impart the preponderating medicinal effect. Example: If a product is named after the active constituent,

strychnin, the strychnin or one of its salts should be present in sufficient amount to produce the preponderating medicinal effect of the preparation.

If the above principles were adhered to there would be little improper use of this word. In order to provide for contingencies that were constantly arising in connection with the National Formulary nomenclature, it was necessary to include in this decision the following paragraph:

Or (c) provided the complete quantitative formula as outlined in the United States Pharmacopeia and National Formulary, be given on the principal label.

The latter requirement eliminated controversies relative to the improper use of the word "compound" in connection with trade-names bearing the name or names of one or more drugs. The manufacturer of proprietary remedies seldom voluntarily discloses such information and usually resorts to some other expedient. This proviso in Food Inspection Decision No. 63 can not, however, be construed to mean that when the quantitative working formula is given, any form of compounded deceptive and misleading name may be used.

At this juncture it is desirable to note the attitude of the highest court towards deceptive and misleading names, by quoting extracts from the opinion of the United States Supreme Court:¹

On this point the contention of the plaintiff is that its (the company's) preparation is not a syrup of figs, since it contains only a very small percentage of the juice of the fig; that the laxative ingredient in it is senna. The evidence shows that the compound is not a syrup of figs. It might more properly be termed a "syrup of senna," if the words were intended to be descriptive of the article. But, assuming this not a syrup of figs, we are met with the inquiry whether these words, as applied to this preparation are not deceptive.

The popularity of this medicine arises from the belief in the mind of the ordinary purchaser that he is buying a laxative compound, the essential ingredient of which is the California fig, whereas, in fact, he is buying a medicine the active property of which is senna.

It has intended the public to understand that the preparation which it sells has, as an important medicinal agent in its composition, the juice of California figs. This has undoubtedly led the public into the purchase of the preparation. The statement is wholly untrue. Just a suspicion of fig juice has been put into the preparation, not for the purpose of changing its medicinal character, or even its flavor, but merely to give a weak support to the statement that the article sold is syrup of figs. This is a fraud on the public. It is true, it may be a harmless humbug to palm off on the public as syrup of figs what is syrup of senna, but it is nevertheless of such a character that a court of equity will not encourage it by extending any relief to the person who seeks to protect a business which has grown out of and is dependent on such deceit.

We are not much impressed with the force of this attempted distinction. Even if it were true that, at the time the medicine in question was first made and put on the market, the juice of figs was so largely used as one of the ingredients, as to have warranted the adoption of the name "Syrup of Figs" as descriptive of the nature of the medicine, that would be no justification for continuing the use of the term after the manufacturers and vendors of the medicine ceased to use fig juice as a material ingredient. Even if the term was honestly applied in the first instance, as descriptive, it would none the less be deceptive and misleading when, as is shown in the present case, it ceased to be a truthful statement of the nature of the compound. Nor are we disposed to concede that, under the evidence in the present case, the term

"syrup of figs" or "fig syrup" was properly used as descriptive of the nature of the medicine when it was first made. Then, as now, the operative laxative element was senna, and the addition of fig juice was, at the best, experimental, and apparently was intended to attract the patronage of the public by holding out the name of the medicine as "syrup of figs."

On such allegations and the admissions of the complainant's principal witness, some of which are hereinbefore quoted, and on the entire evidence in the case, and in the light of the authorities cited by the counsel of the respective parties, our conclusions are that the name "syrup of figs" does not, in fact, properly designate or describe the preparation made and sold by the California Fig Syrup Company, so as to be susceptible of appropriation as a trade-mark, and that the marks and names, used on the bottles containing complainant's preparation, and on the cartons and wrappers containing the bottles, are so plainly descriptive as to deprive the complainant company of a right to a remedy by way of an injunction by a court of equity.

PRIORITY IN NAME

The federal and a number of state laws specify that if an article is sold under a name recognized by the National Formulary, such article is adulterated if it differs from the standard of strength of this authority, excepting in those cases in which its own standard of strength, quality or purity is plainly stated on the box, bottle or other container. From this it follows that a preparation bearing a National Formulary name must be prepared either in accordance with the formula recognized by this authority, or give its own standard of strength, quality, etc., on the label. If, for example, "essence of pepsin" (or "pepsine") should be prepared by any other method than that prescribed by the National Formulary there appears to be only one course left, and that is to state plainly its own standard of strength, quality or purity on the label. Soon after the enactment of the law several manufacturers who had marketed preparations under certain trade names many years before the third edition of the National Formulary was published raised the question as to the status of such names. There appears to be no difficulty whatever in supplying authentic information to the effect that certain trade names had long been in use by certain manufacturers at the time the titles were incorporated in the National Formulary. For example, "phenol sodique," according to United States trade-mark No. 45,704, has been in use since 1863; certainly sufficiently long to acquire a property right that a court of equity would protect. It is well established that a proper trade-mark, whether registered or not, is protected by common law and it is highly questionable whether any court in equity would entertain a case in criminal prosecution in which such a trade-mark had been appropriated for use by the National Formulary, and subsequent legislation required either that the manufacturer disclose the nature of his manufacturing process or employ the National Formulary formula. It should be noted that in "errata" issued by the committee in 1907 it is directed to strike out "phenol sodique," but whether this will relieve the difficulty is not clear. In a number of instances the state courts have held that in case the United States Pharmacopeia is specified an authority by law the edition in force at the time the law was passed is legal, and no other.

Another trade name similar to the one above found its way into the National Formulary, namely, "essence of pepsin." This name can not be trade-marked in the United States because of its descriptive or generic character. The name, however, has been long in use by at least two manufacturers for distinctive products, in one

1. Worden versus California Fig Syrup Company, 1902, found in United States Reports, c'xxvii, 516, et seq.

case for about thirty years. An article made according to the National Formulary formula is, furthermore, not an "essence of pepsin," but a solution of pepsin and rennin. Many labor under the impression that owners of proprietary remedies deserve little consideration, but I submit that they have rights which should be respected and which are deserving of at least a square deal. The federal as well as a number of state laws are mandatory relative to the proper use of National Formulary names, and those directed to enforce them have no option. It is the plain duty of the committee to apply a proper remedy.

GEOGRAPHIC NAMES

It has been a common practice to use a geographic name as part of a trade name, even though the preparation to which such name is applied has no connection whatever with the geographic locality indicated by the name; for example, "German diphtheria remedy," "Swedish asthma cure," "Japanese oil," etc. The use of such names is misleading and a number of regulations were promulgated forbidding their use. One regulation permits the use of any name recognized in the United States Pharmacopeia or National Formulary, while another forbids the use of a geographic name in connection with a drug product which is not manufactured or produced. On referring to the National Formulary we find two geographic names, viz., "Canada liniment" and "French mixture," which complicate the regulations referred to above. There appears to be little justification for retaining these names.

In order to indicate the attitude of the courts relative to the improper use of geographic names, many years before the Food and Drug Act became effective, extracts from several court decisions will be cited.

In *Connell vs. Read*, 1880, 128 Mass., p. 477, an effort was made to establish an exclusive right to the words "East Indian." The opinion of the court in disposing of this case contains the following statement:

The conclusive answer to this suit is that the plaintiffs have adopted and used these words to denote, and to indicate to the public, that the medicines were used in the East Indies, and that the formula for them was obtained there, neither of which is the fact. Under these circumstances, to maintain this bill would be to lend the aid of the court to a scheme to defraud the public.

In a Supreme Court decision² the above case with others is cited with approval in the following language:

The doctrine enunciated in all these cases is founded in honesty and good sense; it rebukes fraud and encourages fair dealing with the public. In conformity with it, this case has no standing before a court of equity.

The United States Supreme Court (1883), in its opinion relative to granting the exclusive right to a certain trade-mark,³ says:

A court of equity will extend no aid to sustain a claim to a trade-mark of an article which is put forth with a misrepresentation to the public as to the manufacturers of the article, and as to the place where it is manufactured, both of which particulars were originally circumstances to guide the purchaser of the medicine.

It is admitted that whatever value the medicine possesses was given to it by its original manufacturer, Moses Atwood. He lived in Georgetown, Mass. He manufactured the medicine there. He sold it with the designation that it was his preparation, "Atwood's Vegetable Physic Jaundice Bitters," and was manufactured there by him. As the medicine was tried

and proved to be useful, it was sought for under that designation, and that purchasers might not be misled, it was always accompanied with a label, showing by whom and at what place it was prepared. These statements were deemed important in promoting the use of the article and its sale, or they would not have been continued by the assignees of the original inventor. And yet they could not be used with any honest purpose when both statements had ceased to be true. It is not honest to state that a medicine is manufactured by Moses Atwood of Georgetown, Mass., when it is manufactured by the Manhattan Medicine Company, in the City of New York.

The extracts contained in this communication, taken from the court decisions, are clear, succinct, to the point and do not need any comment.

SUGGESTIVE THERAPEUTIC NAMES AND HABIT-FORMING DRUGS

A number of preparations are named either after some anatomical portion of the body or suggest some diseased condition; for example, "pectoral tincture," "mistura pectoralis," "anti-neuralgic pill," "catarrh powder," etc. Are these suggestive names intended for the benefit of the physician or the druggist? In either case they are uncalled-for, particularly in view of the fact that most of the preparations contain habit-forming agents. The practice of concealing the presence of these insidious drugs by various innocent names should be looked on with disfavor. In my opinion preparations of this class are responsible for many cases of drug addiction.

MEDICINE VERSUS BRACERS

There is a host of commodities on the market which owe their virtue chiefly to the alcohol contained therein. They are usually sold under generic names, such as medicinal wines, bitters, tonics, vermouths, etc., many of which contain only traces of certain medicinal agents, such as extract of cinchona, gentian, beef, calumba, various combinations of iron, etc., or very small amounts of one or more of the cinchona alkaloids. One of the products recently examined was found to contain not more than one-fortieth of a grain of total alkaloidal matter to the fluid ounce. Another preparation contained very small amounts of cinchona extracts and iron salts. The dealer was requested to show cause why the name of his preparation should not be adjudged a misnomer. One of the arguments presented to justify the use of his name was the National Formulary "beef, wine and iron" product. A careful comparison showed that the amount of actual iron compound present in the product under consideration was less than the amount represented by the National Formulary product but not sufficient to warrant holding one misbranded if the other was not. The former was intended largely for beverage purposes and it is well known that the Commissioner of Internal Revenue seriously considered classing "beef, wine and iron" as a beverage also. The point raised in connection with these two products is an exceedingly important one and requires adjustment. If it is permissible to add simply enough of an agent to merely suggest a certain physiologic action, be it ever so remote, primarily for the purpose of using the name of a substance possessing recognized medicinal properties, in conjunction with the trade name of a commodity, one helpful feature of the law would be largely negated and an ever-increasing number of so-called medicinal products of the most absurd character could be placed on the market. When it is remembered that the best element of the pharma-

2. *Manhattan Medicine Co. vs. Wood*, local citation.

3. *Manhattan Medicine Co. vs. Wood*, U. S. Reports, civil, 218.

ceutical profession is making strenuous efforts to remove the odious name "liquor dealers" from the members of their profession it is difficult to comprehend why products of the type referred to above should be retained in an authorized publication of any pharmaceutical organization. The above should not be construed in any manner as referring to liquor proper when sold and used as such for medicinal purposes.

In conclusion, I desire to state that the National Formulary nomenclature contains many excellent features which are not referred to in this communication, because its chief purpose is to call attention to the shortcomings of the nomenclature, leaving mention of the good features to others. I fully realize that the criticisms are largely of a general character, but if carefully applied they will rectify many undesirable features existing at present.

THE PHILOSOPHIC ANATOMY OF THE TONGUE

EDMOND SOUCHON, M.D.

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The aim of philosophic anatomy is the study of the reason of things, of the principles, of the general laws of anatomy, of the relation of cause and effect. It includes also, last but not least, the singling out of the peculiarities, i. e., the special features presented by organs, and it endeavors to explain their reason, their why, their wherefore. The task is not an easy one in the present condition of our knowledge. Studied from this point of view, the dryness of anatomy vanishes and it becomes a revelation to the student. In this study, it is assumed that the reader is familiar with the peculiarities and no description of them shall be repeated.

The philosophic anatomy of the tongue, given below, is an attempt to illustrate this idea. It will be followed later by other similar descriptions of a subject which has never been touched before by any one, as far as I am informed.

Esop, the great fabulist, being one day ordered by his master to serve on his table the best thing he knew, served him a tongue. Then the master ordered him to serve the next day the worst thing he knew, and Esop served a tongue again. He meant thereby that the tongue was the best and worst thing he knew. We can not recall any other organ of which we could say as much, except, perhaps, the brain. But Esop was speaking figuratively.

The tongue, the nose and the skin are the only organs of special sense which perform also other functions. The eye and ear do nothing else but see and hear. The tongue acts also in prehension, mastication, deglutition and speech. The skin acts also in perspiration and elimination.

The tongue is one of the organs which present a base, a body and an apex, the other organ presenting such divisions being the heart. It is a single or whole organ in the human species, but in some of the lower animals its point is bifid. The point of the heart, however, is often slightly grooved. The tongue is sometimes too large for the cavity of the mouth, and that causes a peculiar kind of articulation. We say of some people, who talk too much, that they have too much tongue; also that they have sharp tongues.

In the condition of rest the tongue is in the mouth proper, but it is readily and rapidly protruded out of it. It is the only organ that can be made to protrude out of the cavity that contains it.

No other organ can assume more various directions and shapes than the tongue. No other organ has so many of its parts attached to its surroundings, the base being attached to the hyoid bone; most of its under surface to the floor of the mouth. It presents a frenum, or bridle. The other organs that have a frenum are, the glans penis, the clitoris, the lips; but the frenum of the tongue is most marked. This frenum presents the twisted papillæ of Wharton's duct, and no such peculiarity is seen along any other frenum or bridle.

Yet the tongue is the most movable of all organs of the body. No other organ can assume so many different shapes. The hand and fingers come next, but the tongue can assume more various shapes and positions than the hand can. The tongue moves also with the hyoid bone during deglutition. The other organs which possess such extrinsic movements are, the pharynx, larynx, trachea, thyroid body, and the liver.

The shape of the tongue must be specially noted. It is used to describe other organs. We say of some that they are tongue-shaped. The uvula is a miniature tongue.

We must particularly mention the great differences between the posterior third of the organ behind the circumvallate papillæ, which is deprived of papillæ, and the anterior two-thirds which are covered with papillæ; the differences also between the dorsal aspect of the tongue, covered with papillæ, and the under surface, which is smooth. The under surface presents a peculiar blue streak, due to the presence of the superficial submucous ranine vein, which is not seen anywhere else.

The borders of the tongue, being in contact with the teeth, often retain their imprint temporarily, which no other organ does with its surroundings. Whereas the base of the tongue is fixed in position and shape, the point, on the contrary, is most movable and changeable in size and shape.

The tongue is one of the organs which presents a dual structure, in accordance with its dual functions, the functions of an organ of special sense and those of an organ of motion participating in the acts of prehension, mastication, deglutition and speech.

That the color of the tongue varies more than that of any other organ, is worthy of note. Its different shades are familiar to the clinician. Some people have a remarkably bluish tongue. I will only mention here the would-be beauties that dye their tongue to give it a bright hue, as they paint their faces and their eyes.

The tongue has a firmer consistency than any other viscus, being a solid organ and a muscle. The other muscular viscus is the heart, but it is a hollow organ. The tongue has only one envelop, the mucous membrane, and it is to be remarked that it is very adherent on the dorsal surface, more so than anywhere else, except the gums and the hard palate; on its under surface its looseness is greater than in any other situation.

The characteristic elements in the structure of the tongue are the papillæ. It is to be noted that they are situated only in the anterior two-thirds of the back of the tongue; that there are three varieties of them; that the larger they are, the less numerous they are, and the further back they are situated; that the most numerous, the filiform or conical, exist everywhere.

Their names are truly well chosen; the circumvallate represent a circumvallation, but it is to be noted that the real papilla, which occupies the circumvallation, is a truncated cone which stands on, i. e., is implanted by its apex and not by its base.

We must bear in mind that taste goblets exist only in the hemispheric and the circumvallate papillæ, and not in the conical; that these are provided with long epithelial processes, the object of which seems to be to retard the course of the fluids on the surface of the tongue, thereby giving the taste goblets time to be thoroughly impressed by the special taste of the fluids. These long epithelial processes are characteristic and unique. No other organ presents them.

The papillæ of the tongue are the same as the small microscopic papillæ seen on the surface of almost all mucous membranes, being projections of all the elements of the mucous membrane, only on the tongue they are much larger. The villi of the intestines are similar to the papillæ of the tongue and have the same fundamental structure, but they are characterized by a cecal lacteal in their center, instead of presenting taste goblets or epithelial processes.

The appearance of the capillaries of the tongue is notable and characteristic, resembling a large oak-tree in the circumvallate, a smaller oak in the hemispheric, and a poplar tree in the conical.

That the whole tongue is formed of a solid mass of muscles is noteworthy, being covered only by a mucous membrane. We must also take notice that the tongue has intrinsic fibers. The stomach and the heart also present intrinsic fibers.

We must recall here the importance of that portion of the lingual artery which runs above the great horn of the hyoid bone and below the hypoglossal nerve, because that is where the artery is ligated whenever any operation on the tongue extends beyond the anterior half. It is also to be noted that when the two linguals are ligated simultaneously, as must be done when the operation extends beyond its posterior half on both sides, the organ does not slough although there is no anastomosis of any consequence with any other large artery, owing to the isolated condition of the tongue in the mouth. We can not here consider the anastomosis of the dorsal of the tongue with its fellow of the opposite side, because those arteries usually originate beyond the hyoid portion of the lingual. It is because the lingual arteries in their posterior half are large and, being deeply seated, are not easily secured in all operations of the posterior half, that the linguals must be ligated in their hyoid portions previous to operating on the posterior half of the tongue. We must notice also the rather serpentine course of the artery in the tongue, which enables it to accommodate itself to the numerous and various changes in the length of the organ. The cavernous arteries of the penis are also serpentine for the same reasons.

The superficial ranine vein is the only submucous vein visible to the naked eye and giving the membrane a bluish tinge. The lingual veins are interesting because they cross over the external carotid artery to reach the jugular, sometimes necessitating their section between two ligatures to make it possible to reach the artery underneath conveniently.

The tongue is the only organ presenting the three kinds of nerves, i. e., nerve of special sense, the gustatory, or lingual; nerve of ordinary sensation, the glosso-

pharyngeal; and nerve of motion, the hypoglossal. We here recall that the gustatory is the only nerve of special sense originating in common with other nerves from the inferior maxillary, a compound nerve; also that it receives the peculiar cord of the tympanum from the facial, the only instance of a motor nerve anastomosing with a nerve of special sense. The termination of the filaments of the gustatory by hair cells into the taste goblets is seen only in the olfactory and the cochlear branch of the auditory. Finally, we must remark that the gustatory is the only nerve of special sense that is a hard nerve, the others, the olfactory, the optic and the auditory, being remarkably soft nerves.

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SOME OF THE POSSIBILITIES AND LIMITATIONS OF THE X-RAYS AS A THERAPEUTIC AGENT *

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I wish to state, first of all, two self-evident propositions:

First: The administration of a therapeutic agent in a disease, the pathology of which is known, is attended with a greater or less degree of success, depending on the potency of this agent to remedy the pathological condition present.

Second: However potent an agent we may possess, for its use to be attended with the desired result, it must be applied in such dosage, with such frequency, and for so long a period as the pathology of the condition and the ends in view seem to require.

Mercury and iodine are the two remedies that are productive of more good in syphilis than all the other drugs of the Pharmacopeia. They were found to cause a disappearance of the manifestations of this disease long before its pathology or etiology was ascertained. Few patients, however, were permanently cured by these potent agents before there was some knowledge of the pathology of the disease and at least an idea of the causative factor in its production. With how much greater confidence do we administer these remedies now than formerly!

Having agents whose potency is established, we have but to apply them in proper dosage, with proper frequency, and for a sufficient period, and the cure is effected.

When the x-rays began to be experimented with in the treatment of disease, about 10 years ago, it was found out empirically that certain pathologic conditions were relieved by the application to the area involved, of this agent, for a greater or less length of time. Following this discovery, tissues were examined and the changes in them, produced by exposure to the light, were carefully studied. Gradually, from these investigations, the general principle was evolved, that in this new light, we had an agent that could be made to produce a variety of effects, depending on the method of application. Briefly, these effects on living matter may be said to be anesthetic, alterative, stimulant, and destructive. All the results so far obtained may be accounted for, I think, by one or more of these actions.

It has been ascertained that the radiant energy from the Crooke's tube is not homogeneous, but consists of

* Read at the Tri-State Medical Association of Virginia and the Carolinas, Charleston, S. C., February, 1909.

several kinds of rays, which possess different properties. Just as sunlight is composed of rays possessing different characteristics, *e. g.* red, the greatest heating, and violet, the greatest chemical properties, so in the *x*-rays. there is one ray which produces marked physiologic activity, while another shows greater penetrating qualities. Those which produce the greatest physiologic effect are the most readily absorbed by the skin, and possess the greatest therapeutic properties. The skin seems to filter out the major part of these rays, while the most penetrating, having very slight physiologic activity, are allowed to pass quite readily. This is evidenced by the facts that *x*-ray "burns" are confined to the skin and most superficial structures. By means of certain materials, *e. g.* aluminum and wet leather, interposed in the path of the rays, those which produce the so-called burn may be filtered out, with very slight obstruction to the penetrating rays; other substances, such as silver, are said to absorb the penetrating rays, while those affecting the skin are largely transmitted.

It is easy, therefore, to see the cause of failure in the treatment of deep-seated disease, whereas the same pathologic condition readily responds, if the lesion be superficial.

The time has passed when a Roentgenologist was justified in applying the rays to conditions, concerning the pathology of which he knew nothing. He would be equally as culpable as if he were to administer mercury and iodine under the same circumstances.

Considering that the effects produced by the *x*-rays depend in their nature on the quantity applied, the dosage must be suited to the effect that it is desired to produce.

Would anyone expect to cure a case of syphilis with 1/100 grain of bichlorid of mercury, daily for a week, or 5 grains three times a day for a month? Neither is any more absurd than to expect to produce a definite effect with an indefinite dose of the *x*-rays, and yet it is being done daily by many possessors of *x*-ray machines throughout the country. Since mercury and iodine are specifics for syphilis, does it follow that they must also be beneficial in diphtheria when administered in the same way? There are physicians who would resent the insinuation that they would be guilty of such folly as this, who are treating with the *x*-rays, almost any disease that happens to fall into their hands. Is it a wonder that failure is oftener than otherwise the result and a "black eye" given to *x*-rays and *x*-ray operators everywhere?

While there is yet no satisfactory unit of quantity by which the *x*-rays may be accurately measured, the time is not far distant when one will be established so that the dosage may be applied as so many *x*-ray units. There are certain factors that by proper regulation enable us to vary with a fair degree of accuracy, the output of a certain equipment, but there is no fixed rule that applies to all. Each set of apparatus is a law unto itself and its characteristics must be ascertained before this outfit can be intelligently employed. A little care in the use of a new equipment will enable the operator to determine the reaction point with that equipment working under the same circumstances, within the limits of a few minutes. From this he can easily compile a table for that apparatus that will guide him in the application of the rays to pathologic conditions.

To determine whether or not a condition will probably be benefited by *x*-ray treatment, it is only necessary

to make mental application of the known effect of the *x*-rays to the pathologic condition present.

The rays manifest their effects on cells to an extent proportional to the resistance of the cells; different kinds possess this resistance in a widely different degree. It is on this fact that we rely to destroy malignant cells without causing a similar destruction of the normal. Epithelial cells are much more readily affected by the rays than those of connective tissue or muscle; glandular epithelium is especially susceptible, while fibrous tissue is very resistant.

From the foregoing we may conclude that: Those pathologic conditions which involve the epithelial structures may be influenced by the *x*-rays when sufficiently superficial to be reached by those which are active. Fibrous growths and lesions in which fibrous tissue involvement is largely present, are very slightly affected except by pushing the treatment to the point of "burning" when the effect is very similar to other cauterizing agents.

In accordance with the facts and theories, as given, it may be deduced:

First: Malignant disease, while yet local, may be treated with the assurance of good results, provided the lesion is in the skin or very near the surface, and the age of the patient or condition of the general health is not such as to render the reparative powers too low. The treatment of deep-seated primary cancers should never be undertaken except in inoperable cases, or when the patient will not consent to surgical procedure. In these cases it is best to remove the diseased parts as radically as possible, and if practicable, leave the wound open to be treated by the Roentgen method, and if necessary, resort to a second plastic operation to close it.

Second: Such skin diseases as involve the epithelial and glandular structures are more or less amenable to treatment. Those involving the fibrous tissue of the corium respond with great difficulty, or not at all.

Third: Glandular enlargements, so long as they are due to gland-cell hyperplasia, will be greatly benefited by *x*-ray treatment; when the hyperplasia involves the connective tissue element, very little result will ensue.

I trust the principles that I have attempted to bring out may serve to lessen the tendency to approach fakery that is sometimes too evident in *x*-ray operators, and especially to establish the fact that definite *x*-ray effects are due to definite *x*-ray causes, and that in the Roentgen rays, we have an agent, limited in its usefulness, but of maximum efficiency when confined within its proper scope.

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The Cranial and Facial Characteristics of the Neanderthal Race.—W. J. Sollas (Phil. Tr. Roy. Soc. Lond., 1908; Series B, excix, 281), has made further study on the Neanderthal race and its probable significance in the evolutionary history of man. The skull of the Neanderthal race possesses many features in common with certain flattened skulls met with in certain Southern Australian tribes; it differs in breadth, in the glabellar region, and in thickness. But the Neanderthal large orbits, projecting broad nose, retreating cheek bones, absence of depression beneath orbits, long face and low degree of prognathism are peculiar. The Neanderthal race and the Australian probably represent diverging branches of the same original stock. In regard to cranial capacity the two races are almost identical—"the Neanderthal and the Pithecanthropus skulls stand like the piers of a ruined bridge which once continuously connected the kingdom of man with the rest of the animal world."

Special Article

TRAVEL NOTES

A PHYSICIAN'S HOLIDAY IN THE ENGADINE

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The words, St. Moritz in the Engadine, had been ringing in my ears ever since, as a young physician, I first read them in the *Medical Times and Gazette*, that excellent journal then published by the Churchills, but long since discontinued, while Ragatz and the equally eaeophonious Pfäfers have been staring at me from the pages of text-books for so many years that I determined my next holiday should make me more familiar with this district. Landing at Antwerp, I could not resist the temptation to spend a day in beautiful Brussels, to peep again into Cologne Cathedral and repeat the Rhine trip, but by August 5 I was in Ragatz, whose waters have long had a reputation for the cure of a long list of maladies, including chronic rheumatism and gout, joint affections of traumatic origin, nervous diseases, including neurasthenia and neuritis, especially sciatic neuritis, diseases of the brain and spinal cord, gastric intestinal and bronchial catarrh, renal and bladder affections and diseases of women. The number is too many and varied to inspire confidence, although it is not unlikely that any one or all of these ills may be favorably influenced by the hydrotherapy here practiced, associated as it is with mechanotherapeutics by the Zanders' apparatus, scientific massage, electricity and various dietetic cures. Nor does the chemical composition of the thermal waters of Ragatz inspire more confidence, for although the ingredients are many they are not present in quantity sufficient to justify the term "mineral," since the water has a total of only three parts of solid matter in 10,000. The solids include iron, aluminium, calcium, strontium, barium, magnesium, potassium, sodium, lithium, ammonium, and numerous others, all in very minute proportions, not omitting radium, as attested by the attendant who showed me the baths. The most abundant constituent is carbonic acid, which is represented by one of the three parts. To this and to the temperature of the water may be due its efficiency. Its source is Pfäfers a couple of miles distant, where the water gushes out of the earth with a temperature of 98.6° F., whence it is piped down to Ragatz. A cure house was built at Pfäfers in 1242 by the abbots of Pfäfers, and remnants of it still remain. The present house was built in 1714, and is still a popular resort, although much shmt in and therefore gloomy on other than bright days. The valley of the Tamina which connects the two health resorts of Ragatz and Pfäfers, widens out from the famous Tamina gorge into a broad valley, in which lies the pretty town of Ragatz, with its two large hotels, the Quellen hof and Hof Ragatz, with their extensive grounds, Cursalle, Casino, and baths, into which is poured an abundant supply of hot water from Pfäfers by the method above described.

There is nothing peculiar in the baths themselves. They are taken in porcelain lined tubs sunken below the floor, and are available not only on the grounds of the two great hotels, but as well at the cure house in the center of the town, where, too, the fine orchestra gives its concerts, alternating with those at the Casino on the hotel grounds. In the latter there is a large swimming pool. The popularity of the baths is attested by the annual visitation of 30,000 visitors, of whom presumably a number are tourists and observers. The season of Pfäfers is from June 1 to September 1; at Ragatz from May 1 to October 1. English visitors are more numerous early in the season. When I was there in early August there were a few of the latter, German and French being almost the only languages spoken. Numerous walks and drives, the ravishing music, and the grand mountain scenery made easily accessible by a funicular railroad make the two places most attractive residences for a time.

From Ragatz to St. Moritz, in the heart of the Engadine, is a four hours' journey over the Albula pass by the Rhaetian railroad in which scenery and marvelous construction vie with

each other in absorbing the attention of the traveller. The railway climbs by many windings upward, until one is dizzy with the height, and a curious sensation in the ears when talking, and a feeling of nervousness indicate that the circulation is being influenced. It is, however, a matter of a few minutes only, for soon the descent is commenced, and as it is made more rapidly than the ascent, the equilibrium is soon re-established.

Almost every one forms a conception of a place of which he has heard much and looked forward to visiting, a picture generally quite erroneous. Such was my conception of St. Moritz. I had supposed that by stage one would travel slowly upward from the railroad station to an expanded plateau in the center of which would be a single or perhaps two hotels and a *Kursaal* where there were many invalids including consumptives, and that in winter this plateau was covered with snow. Instead I found many omnibuses at the station representing as many hotels. It is true we wound our way upward, passing several huge and luxuriously appointed hotels to our own, which was the highest in the *Dorf*, or village, not on a plateau, but on the mountain side. There are others equally large and sumptuous as well as many smaller hotels collected about the site of the springs or St. Moritz-Bad. This, at one time isolated from the *Dorf*, has become continuous by the hotels and shops lining the road down from the latter, the whole forming a handsome village of white houses over 6,000 feet above the sea—a village scattered over the hillside and around the lake, with a permanent population of several hundred and a summer population of as many thousands—but nowhere any evidence of patients or sick people. Instead are seen gaily dressed women and natty men, with here and there a man or woman more appropriately dressed for mountain climbing, armed with the familiar Alpine stock.

Not that there are no sick to be found here. They may be seen at the baths, none looking very ill, and apparently no consumptives at all. For what then do persons go to St. Moritz? The largest number doubtless for the bracing air and the delightful pastimes of golf, tennis, mountain climbing and walking. Moreover, the sick are not very sick. This was not only my conclusion in my daily visits to the baths, for I took them myself, but it was the testimony of the old *diener* who prepared the baths in the men's sections. When asked why they did not make use of the Zander and other more complicated apparatus for mechanotherapy and hydrotherapy, he replied that the invalids who came here were more especially those who needed rest and the simpler therapy of tub bathing in carbonated water as a sort of after-cure. Nor was there any specialized bathing as prescribed by physicians, such as douche and needle baths, but the bather himself gave directions as to the temperature and duration, perhaps after consultation with a physician.

The waters have as their distinctive constituents iron and carbonic acid. The former is easily recognized by the taste and constitutes the chief object for the internal use of the water by drinking. For bathing purposes, it is commonly used at a temperature of 28 Reaumer, 35 C. or 95 F. As to actual conditions for which the baths are taken, in addition to simple anemia, asthenia and weariness, chronic rheumatism and cardiac weakness are conspicuous. I can testify in my own case as to the rejuvenation which succeeded a course of ten baths at a temperature of 97 F. each of ten minutes' duration. The bathers rest quietly in the bath in order to permit the attachment to the skin of little bubbles of gas which arise in a shower of millions with the least movement. The skin is rendered visibly red by the attached bubbles which thus act as a gentle but widely diffused counterirritant.

As is usual in Europe, the baths are divided into first, second and third class, the only difference being in the appointments of the bath room. The first-class baths are provided with porcelain-lined tubs, the second class with tin-lined tubs and the third class with wooden tubs, all scrupulously clean and almost equally inviting. The first-class baths are provided, too, with warm towels, which are very agreeable.

Another health resort in the Engadine worthy of mention is Tarasp in the lower Engadine, which has received the appellation of the "Karlsbad of the Engadine," from the fact that the waters are of like composition, though cold instead of hot, and are used internally and externally for like purposes, viz., chronic gastric and intestinal catarrh, enlargement of the liver, gout, rheumatism and diabetes. Tarasp and Schultztarasp in the near vicinity have the advantage of Karlsbad in the more bracing air, while they are at a disadvantage because of more limited choice of pleasurable diversion, exercise and diet. A medical friend who had taken the Karlsbad treatment took this year the Tarasp treatment with like beneficial results.

Where, then are the consumptive patients for whose treatment the Engadine has become so famous, and for whom I looked in vain at St. Moritz, and likewise at Pontresina and the adjacent Samaden? Davos Platz in the Davos valley 20 miles distant, has become the haven of consumptives. It, too, is 5,000 feet above the sea and well sheltered. Here the amusement as well as treatment of consumptives is provided in winter and summer in the well-appointed and sun-exposed sanatorium. Patients with allied and associated conditions, such as bronchial catarrh, pleurisy and its products, scrofuloses, nervous asthma and neurasthenia are received.

A few words in conclusion on the rare beauty of the Engadine. The word Engadine means the Valley of the Inn—the river Inn, which arises in the melting ice and snow of the Italian border and gathers strength and volume as it flows northward and eastward to Innsbruck, the Tyrol and Danube into which it ultimately flows at Passau. At St. Moritz, 6,000 feet above the sea, it widens out into the beautiful azure Engadiner See, a lake about a mile long and a quarter of a mile wide, in which of a clear day one can see reflected the bordering Alpine peaks; over its surface move numerous and varied crafts, usually manned by Italian boatmen and propelled by sail and oar and freighted with pleasure seekers. From the porticos of the Engadiner Kulm Hotel a beautiful panorama of snow-capped peaks stretches away to the south and beyond. In midsummer the air is cool, sometimes almost too cool for comfort, but clear, invigorating and rejuvenating, and it is not surprising that summer after summer and even winter after winter the same families resort to St. Moritz for the bracing air and summer and winter sports. The valley is about 60 miles in length and includes the adjacent villages of Pontresina, Samaden, Cresta, Silva Plana, Sils and Maloja in the upper Engadine, and in the lower Engadine Tarasp and Schulztarasp.

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Clinical Notes

RECOVERY FROM RUPTURE OF KIDNEY AND FRACTURE OF PELVIS

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Patient.—A boy, aged 17, was first seen about 3 p. m. Nov. 3, 1908. He had been thrown and dragged some distance in a collision between his wagon and a street car.

Examination.—Patient had been given morphin, gr. $\frac{1}{4}$, and was resting quietly. He had no severe pain, breathing was regular; pulse was 88, regular, rhythmic, and of good volume. There were numerous skin abrasions over the lower back, left thigh and knee; none in left kidney region; some swelling was apparent just below the crest of the left ilium, which latter showed preternatural mobility, with crepitus and considerable pain on manipulation. Apparently there was a transverse fracture just below the crest. The patient was examined for other injuries but none was found. He had not voided urine so that diagnosis of injury in the urinary tract was held in abeyance. The left side of the pelvis was strapped, using gentle pressure, the intention being later to apply a plaster-of-Paris dressing.

Hospital History.—At 7:30 p. m. the patient was found in evident shock from hemorrhage. Pulse ranged from 120 to 140 and over, and was of very low volume and tension. There was anemia and there were also some signs of air hunger. He had voided four ounces of practically pure blood. The swelling over the ilium had increased and there was ecchymosis; there was also dulness in the lower left quadrant extending to the midline and above to the level of the umbilicus, no dulness was apparent in the right flank. Evidently there was a retroperitoneal collection of fluid. The abdomen was not distended. A direct transfusion and exploratory operation was considered but delayed as the pulse was improving slightly.

Treatment.—Infusion, bandaging of legs, elevation, ice-bag over ilium and morphin. At 3:30 a. m. the boy was found to be more anemic, pulse was very faint and there was considerable air hunger. He passed two ounces of practically pure blood. A blood transfusion was then done but very little blood passed. We considered the patient to be in too profound shock to warrant any operative interference and he was taken from the operating room in very serious condition. Continuous rectal saline solution apparently did some good as he slowly improved and after 11 a. m. the urine was clear. The area of dulness receded.

Subsequent History.—From this time on there was a steady improvement. The urine remained clear until November 8, when blood reappeared and continued almost constant in spite of various internal medication until November 18, when it permanently disappeared. The dulness in left lower quadrant had gradually receded but about November 20 a small tumor appeared in this region just to the left of the rectus and above Poupart's ligament. This was movable, dull, irreducible and rather tender. There was no dulness in the right flank. No important rise of temperature occurred, but the patient vomited twice on November 22 and did not seem so well. The tumor increased in size and on November 25 operation was decided on.

Operation.—An incision four inches long was made from the left anterior, superior, spinous process upward and outward to the costal margin. Incision into the peritoneum revealed a localized collection of clear straw-colored slightly urinous fluid which was drained off and an opening in the posterior parietal peritoneum was found; this was enlarged and in the cavity found there was considerable blood clot, brownish fluid and blood; this was evacuated and a large tear in the inner side of the lower pole of the kidney was found. It appeared to be filled with blood clot and to be in process of healing. The inner edge of the tear in the peritoneum was then stitched to the inner edge of the anterior incision in the peritoneum, thus closing off the peritoneal cavity; the retroperitoneal cavity was packed with iodoform gauze.

Postoperative History.—November 26, condition was good, pulse was 100; temperature 100. There was very free discharge. On November 27: Very free drainage. Part of packing was removed. All the gauze was removed November 30. Drainage was very free and assumed a decided urinous odor. Patient continued to improve. Some pus appeared in the discharge about December 2, but it gradually lessened in amount and on December 22 the patient went home with wound practically healed. There was a very slight discharge until about January 14, 1909, when the wound was entirely closed. The fractured pelvis gave no trouble; the scar is solid, the urine normal and the patient apparently well.

Delbet,¹ in a very thorough consideration of this subject, gave a complete résumé of the reported cases up to 1901. These consisted of 320 cases, divided as follows:

Recovery without surgical treatment.....	122 cases
Death without surgical treatment.....	105 cases
Recovery with operation, but without nephrectomy; incision and drainage.....	31 cases
Death after nephrotomy.....	2 cases
Recovery after nephrectomy.....	28 cases
Death after nephrectomy.....	10 cases

1. Delbet: Ann. des Maladies des Organes Génito-Uriinaires, xix, 805-839.

There have been eight cases reported since 1901.

Including in the conservative treatment of these cases those in which there was no surgical interference and those in which simple incision and drainage was done, we get apparently the largest number of recoveries. However, the proper treatment in these cases is a disputed point, Keen³ stating that in the most cases an exploratory operation should be done. In our opinion, death would have followed an immediate operation in our case, and it seems to us that no fixed rule should be laid down; each case should be treated on its own merits.

It should be borne in mind that only cases of subentaneous rupture of the kidney are considered in these reports and remarks.

AN UNUSUAL RUPTURE OF THE UTERUS

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Patient.—A woman, aged 35, was sent into the Clara Barton Hospital, Dec. 4, 1908, with the tentative diagnosis of ruptured ectopic pregnancy.

Condition on Admission.—When seen by us she was in a state of collapse with weak, thready, and intermittent pulse; rapid respiration, and a temperature of 98 F. She was not particularly anemic, however. Her abdomen was very much distended and she complained of pain over the enlarged uterus. No fetal heart could be heard and no movement of the child could be detected.

History.—The patient gave a history of an uneventful pregnancy of seven months duration. At about five months she began to notice fetal motion which continued irregularly up to her present illness. At 3 a. m., Wednesday, Dec. 2, 1908, she was taken with a sudden pain in the lower abdomen and collapsed. Since when she had noticed no fetal motion and her bowels had not acted. Her attending physician had treated her expectantly until a consultation had decided the presence of a surgical phase, and she was sent into the hospital for observation. Ectopic pregnancy was ruled out owing to the patient's history, and the normal, symmetrical enlargement of the uterus. Rupture of the uterus seemed most probable with rupture of some of the other viscera as a possible alternative. However, the fact that the woman was not in labor and had not been; had sustained no accidents, and had been perfectly well throughout her pregnancy made us hesitate in making a positive diagnosis.

Termination of Case.—It was clearly a surgical case, but the woman was practically moribund and operation was out of the question. Four hours later she died.

Autopsy.—The peritoneum showed signs of inflammation. About 500 c.c. of blood and exudate was taken from the pelvic cavity. The tubes were folded behind the uterus, enlarged and adherent and at the fundus the fetal head was protruding.

Careful questioning of the husband elicited the fact that the woman had had an instrumental delivery several years previous, after which she was ill for several weeks.

She probably then had a severe infection which produced the adherent tubes and the fixed uterus which the autopsy disclosed.

The cause of rupture was probably a degeneration of the uterine muscle, together with fixation of the uterus by inflammatory adhesions and a consequent inability of the womb to grow in the same ratio as did the fetus.

Rupture of the uterus under any circumstances is a rare accident of pregnancy. Authorities range in their statistics from 1 in 1,200 to 1 in 4,000 of cases of pregnancy.

Presumably, spontaneous rupture is so unusual that separate statistics of this condition were not given by the authorities consulted. When the site of rupture is considered the fundus is the rarest of all; and the time of rupture is almost invariably during labor. The causes of spontaneous rupture are: a previous endometritis, an atrophy or degeneration of the uterine muscle, a previous myomectomy or a Cesarean section.

447 South Olive Street.

A CASE OF PURPURA

THEODORE C. MERRILL, M.D.
COLORADO, TEXAS

In the following case I have regarded the condition as a distinct malady for descriptive purposes, since hemorrhages were the dominating feature. Symptoms of slight fever and weakness seemed not causative, but natural results respectively of ferment in the ecchymoses and loss of blood.

Family History.—The patient's family consisted of father, mother and four children. The patient was the eldest child. The second child, aged 6½ years, had marked mitral insufficiency. The mother's pulse-rate was 90 and above. Otherwise the family was without abnormality, peculiarity of predisposition, or taint of previous disease.

Patient.—A boy, aged 8, first seen April 27, 1906. At this time the patient had frequent and severe hemorrhage from the nose, gums and palate. Blood exuded from the gums during sleep, soiling the pillow, and leaving small clots distributed generally over the mucous membrane of the mouth and pharynx. There were many ecchymoses in the skin without order as to distribution. The general condition was one of prostration. The temperature varied from subnormal to 100. The parents stated that the condition had been present in the spring, recurring at this period for the previous four years, and that it tended to spontaneous improvement as summer came on. No treatment seemed to have the slightest influence. There was no previous history of rheumatism, no apparent cause for scurvy, and no discoverable toxic influence. There was no pain, swelling, arthritis, diarrhea or constipation. Nervous symptoms and involvement of special senses were absent. The urinary apparatus and excretion were normal. Unfortunately, it was impossible to make blood examination. The coagulation period of the blood was normal. Hemorrhage was the dominating symptom; occurring frequently through the day from nose and mouth, it seemed to defy attempt at treatment. The slightest contusion in the cuticular tissues was followed by a large ecchymosis. Secondary infection and abscess formation, fortunately, did not occur.

Treatment.—This was necessarily directed first of all to control of hemorrhage. Nasal tampons and the use of various styptics gave results only after many trials and with much difficulty. General antiscorbutic diet was arranged. The patient was fed gelatin, but no gelatin injections were used. Various drugs were employed, Bland's pill for anemia seeming to have a helpful influence in recovery from the hemorrhages. Calcium sulphid and hydrastis after a time seemed gradually to reduce the frequency and amount of the hemorrhages, and the patient was treated by them consistently and persistently. Adrenalin seemed without effect.

Course of Disease.—The patient gradually improved from April to November. In the following spring (1907) a slight

2. *Flaschen-Beitr. z. klin. Chir.*, 1907, liv, 308: One case, incision, suture, drainage, recovery.
Andrew: *Lancet*, 1907, p. 213: Two cases. Case 1, single kidney, death. Case 2, incision, drainage, recovery.
Geauert, Kiel, 1901: One case, incision, drainage, recovery.
Barclay: *Louisville Month. Jour. Med. and Surg.*, January, 1907, p. 253. Four cases. Case 1, incision, drainage, recovery. Case 2, nephrectomy (also had ruptured colon and peritonitis), death. Case 3, nephrectomy (also had tuberculosis), death. Case 4, incision, drainage, death.
3. *Annals of Surgery*, 1896, xxiv, 138.

hemorrhage was treated promptly with calcium sulphid and hydrastis. The hemorrhages disappeared. Occasionally during the spring of 1907 there was a slight hemorrhage, which received the treatment mentioned, and yielded as stated. After the spring of 1907 there was no recurrence, and the patient presented the normal appearance of a healthy boy.

CONCLUSIONS

1. The condition was clearly not hemophilic.
2. The condition perhaps might be called a constitutional scurvy, as opposed to a dietetic scurvy; but if so, it was without the epiphyseal and other scorbutic characters.
3. It seemed certain that there were no rheumatic factors.
4. The absence of blood examination was a serious omission.
5. The unsolved question is: Was the disorder fundamentally due to hemic abnormality, vascular abnormality, or both?
6. Calcium sulphid and hydrastis apparently influenced the condition favorably.

POLYDACTYLISM EXTENDING THROUGH FIVE SUCCESSIVE GENERATIONS

A. G. BLODGETT, M.D.
WARE, MASS.

It has been my intention for years to report this case of an evident atavistic tendency as it is unique in character. Now that it reappears in the fifth successive generation it would seem to be proper that it be reported in order that it may go on record as an evident "freak" in Nature's law of hereditary descent.

Generation 1.—This malformation manifested itself in a single male, in a supernumerary thumb on the right hand and an additional finger on the outer side of the little finger of the left hand. This man lived to be 92 years of age and never married. He had evident pride in his multiplicity of members and bore the inconveniences with a commendable patience.

Generation 2.—His niece had a supernumerary finger on her left hand. She had it removed when a child.

Generation 3.—The grandnieces had each an additional finger on the left hand, but the parents had them removed when the children were infants.

Generation 4.—Of eight children in three families this peculiarity is present in only one, a girl, who had a supernumerary toe on the outer side of the little toe of the right foot, which I removed when she was six months old.

Generation 5.—In this generation, so far, there are three children, all in one family; in one only, a boy, is this hereditary peculiarity present; he has a superfluous toe.

In my opinion the woman of the second generation believed that her child or children would have this malformation, and the daughters both manifested it. The two sons did not, nor did their children after them.

Of the five children of the older of the two grandnieces but one, a girl, showed the family characteristic. She had never married. Her older sister married and only one of her three children, a boy, showed polydactylism.

The fear of this peculiarity runs through all the female members of each succeeding generation and a lively interest is manifested in each new comer. As a matter of fact, it has never shown itself outside of the females in any generation but the first and the fifth.

Is it the result of a strong maternal impression or a mere coincidence, or does it bear out the principle of atavism?

20 Park Street.

A NEW VAGINAL DOUCHE

GEORGE H. TUTTLE, M.D.
BOSTON

The device here described consists of a pear-shaped dilatable rubber bag perforated along the long axis of its fundus by forty small holes, and tapering at its neck so as to act under the influence of the downward pressure of the water in the vagina as a plug for the vulvar orifice. Its elasticity renders it adaptable to practically any size or shape of orifice, while its extreme flexibility prevents any harmful degree of pressure in the vagina. Being made from the finest rubber it is readily dilatable to more than twice its natural size. It serves as a simple attachment to any syringe being placed on the adult rectal nozzle, or may be at-

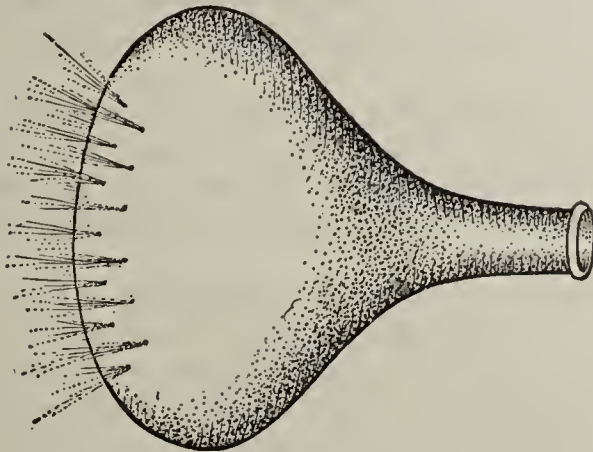


Fig. 1.—The dilatable rubber bag.

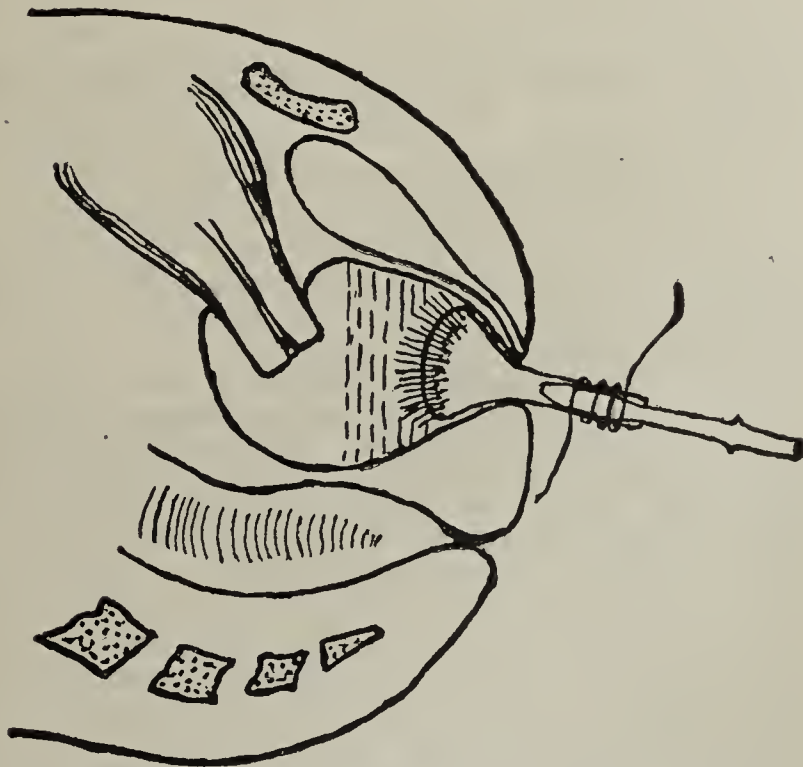


Fig. 2.—Diagrammatic representation of douche in use.

tached to a bulbar nozzle of similar caliber, being secured by a piece of silk or soft string. These points are plainly shown in the illustrations.

The amount of expansion of the douche bag is controlled entirely by the elevation of the reservoir. For a common douche, unless otherwise ordered, it is from three to four feet.

The douche bag may be made by traction to fit the vaginal outlet perfectly, or, as in the case of a long douche, may lie loosely, allowing water to flow in and out. A two-quart syringe bag is usually used, and at the end of the douche this is lowered, and the small bag collapses and falls out.

There are two uses for this device to give, (1) the regular warm water vaginal douche; (2) the medicated douche.

When used for a simple warm douche of short duration (from 3 to 5 minutes), it produces hyperemia, and by the longer douche (from 15 to 20 minutes), produces ischemia of the pelvic organs. By its use the application of warm or hot water is rendered accurate and scientific. By prescribing the duration and temperature of the douche it renders the result certain.

The medicated douche is made more effective by the dilatation of the vaginal mucous membranes, and the opening of the fold therein as the bag expands, and thus retains the solution in the vagina under pressure for any desired length of time. In gonorrheal vaginitis, a preliminary douche of 15 minutes, of simple hot water poultices the membranes and relieves pain, after which drug solutions may be applied to the thoroughly cleansed parts.

Lastly, this douche, or rather its sprinkle, is very gentle, as the pressure from the reservoir is held under control by the elasticity of the bag, and is finally divided into forty different parts represented by the separate streams.

Some advantages to the patient are: (1) In traveling, cumbersome douche apparatus need not be carried; (2) it is effective in the sitting as well as in the recumbent position; (3) No assistants are needed; (4) There is great saving in expense, the cost of the bag is inconsiderable; (5) Can be sterilized by boiling.

172 Tremont Street.

ACUTE PANCREATITIS DIAGNOSED DURING LIFE

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ARGENTA, ARK.

Patient.—T. L., aged 31, a cook, Company C, Sixteenth Infantry, U. S. Army.

Complaint.—Rheumatism and ringworm.

History.—Family history was negative and his childhood was healthy. In the summer of 1898, at Manila, P. I., he had diarrhea lasting three months. There was no blood or mucous in stools. In December, 1898, he had biliary colic with jaundice lasting four weeks. In August, 1899, he had dengue and was ill for twelve days. In June, 1900, he had an attack of dysentery lasting three months, with blood and mucous in stools. In March, 1901, he began to have chills and fever which lasted until June, 1903, when sprue developed, lasting until August, 1903. In November, 1903, he had dhotie itch. January, 1905, "ringworm" (psoriasis) began and lasted until November, 1907. On April 15, 1908, he had gonorrhea and was in hospital for 24 days. In June, 1908, came the first attack of sciatica on the right side. This has annoyed him ever since, being better and worse at times. In August, 1908, psoriasis developed. From Oct. 1, to Oct. 21, 1908, the patient was on march and was troubled much by rheumatism and sciatica. On Oct. 22, 1908, he came on sick report, and a diagnosis was made of "psoriasis and sciatica on right side."

Present Illness.—On Oct. 31, 1908, at 3 a. m., the patient was suddenly awakened by a violent attack of orthopnea and dyspnea; he sat up in bed, grasping at the precordial region with both hands. He said that he could not lie down on account of difficult breathing and pain. His face was deeply congested. At intervals he would get up and walk the floor, bent over with severe pains. He was nauseated but did not vomit. The pain extended from the left epigastrium to the heart and up to the left clavicular region. The man said that it was like a vise gripping his heart. He had collapse symp-

toms with rapid pulse, short respirations, and cold sweat. Temperature varied from 100 to 101 F.

Diagnosis.—The first diagnosis thought of was pulmonary embolism, but careful percussion and auscultation of the chest failed to support it. Gallstones, renal colic, gastric ulcer, appendicitis, and intestinal obstruction were easily eliminated. Tabetic crisis was reluctantly relinquished for want of support. The diagnosis was therefore narrowed down to angina pectoris and pancreatitis.

Course of Disease.—At 7 a. m. the patient got out of bed and said that the pain shot from his heart to his left jaw. It extended up the left neck muscles to the base of the skull. It was severe at the left clavicle, and made the jaws clamp as in tetanus. The jaws were not painful. Nitroglycerin and amyl nitrite were used freely without effect. This weakened the probability of angina. Morphine was given frequently in $\frac{1}{4}$ grain doses and modified but did not relieve the pain. The stools showed nothing abnormal. Urine examination was negative.

Nov. 1, 1908: Symptoms continued about the same.

Nov. 2, 1908: A positive diagnosis of pancreatitis was made, on the strength of the sudden onset, anginoid pains, temperature range from 99 to 101 F., left epigastric tenderness, sciatica, nausea, shock and collapse. These, with the absence of any other positive symptoms, gave a pretty clear picture of pancreatitis. This diagnosis, although suspected from the first, was not made positive until now, after having read all the available literature.

Nov. 3, 1908: Symptoms continued.

Nov. 4, 1908: Patient consented to operation.

Operation.—A rectus incision was made about four inches long, one inch to left of the median line, above the umbilicus. The omentum was torn through in its thin part. The stomach and transverse colon coming into view were separated, and between them was seen something pulsating like an aneurism and oozing blood. To determine the pancreas the spleen was found. From this the tail of the pancreas was traced up to the pulsating body, which was a vascular, hemorrhagic and pulsating pancreas. On closer inspection, the lobulations could be seen. The organ was so vascular that no incisions were made for fear of dangerous hemorrhage. The omentum did not show any fat necrosis. The gall bladder and ducts were palpated and found negative. Rubber and gauze drains were applied to the pancreas, and the wound was closed with catgut and silkworm gut. Chloroform and ether were the anesthetics.

Postoperative History.—When the patient regained consciousness the symptoms were milder. There was a free flow of colorless fluid from the drain which wet the dressings and irritated the skin.

Nov. 5, 1908: The patient was a little better but still badly shocked.

Nov. 6, 1908: Dressings and drainage were changed. The psoriasis had improved. Other symptoms gradually improved.

Nov. 20, 1908: The temperature, which had varied from 99 to 101 F., reached normal and remained so.

Dec. 1, 1908: The pulse, which had been very rapid and weak at first and which ran about 100 a minute for three weeks, dropped to 78 a minute, and morphine which had been gradually decreased in amount was now discontinued.

Dec. 20, 1908: Sciatica troubled the patient. The psoriasis had disappeared.

Jan. 17, 1909: Patient was sent to duty, all symptoms gone.

Mar. 4, 1909: Patient has been well since but complains of sciatica as stormy weather is approaching.

The interesting features of the case are: (1) the usual accompaniment of pancreatitis with previous biliary disease; (2) sciatica as one of the recognized symptoms of pancreatitis; (3) the disappearance of the psoriasis with the improvement of the pancreatic symptoms; (4) the anginoid character of the attack which makes one believe that in all unexplained anginoid attacks pancreatitis should be suspected; (5) the free use of morphine with favorable results, although some writers object to its use.

AN UNDEVELOPED FIRST DORSAL RIB SIMULATING A CERVICAL RIB

GEORGE F. THOMAS, Ph.B., M.D.

Radiographer to Charly Hospital and Cleveland City Hospital
CLEVELAND, OHIO

The accompanying radiograph shows a rather unusual and interesting anomaly:

The patient, Van S., was a white man, aged 40. In the course of the routine physical examination there was discovered a hard immovable mass in the left supraclavicular space. It could be traced to the back of the neck and felt like a cervical rib. When the left shoulder was raised the mass disappeared behind the clavicle, showing that there was no attachment. There was no palpable difference between the right and left sides of the upper part of the sternum, except that the left clavicle seemed to be slightly lower than the right. The pulsation of the subclavian artery could be felt in the supraclavicular space and a soft thrill was palpable. The left radial pulse was not affected. The swelling apparently never caused symptoms. No other physical anomalies were discovered.



Undeveloped first dorsal rib simulating a cervical rib.

A similar case was reported by Dr. W. W. Keen.¹ Wiedersheim in the "Der Bau des Menschen" shows a drawing of another case of an undeveloped first rib and points out the tendency of evolution to a shortening of the thorax and a decrease in the number of thoracic ribs.

X-RAY IN ERYTHEMA MULTIFORME

W. S. LAIN, M.D., OKLAHOMA CITY, OKLA.

As the text-books on dermatology, so far as I am aware, do not mention the x-ray in treatment of erythema multiforme, this report may be of interest:

Mrs. O. was referred to me by another physician. She had been suffering for two weeks with a rather extreme case of erythema multiforme, involving the extensor surfaces of the fingers, the hands and the arms to the elbows. Many of the usual internal eliminants and local applications had been tried without any subsidence of the symptoms. I began the application of the x-ray on Jan. 23, 1909, and continued giving treatments, each ten minutes in length, on January 24, 25 and 28. By the last date the eruption had disappeared except for the brownish color. On February 10 there was a recurrence of all the former trouble at the same localities. I renewed the x-ray treatment on February 11, 12 and 13. All indications of the disease then ceased, and there has been no recurrence since. No other treatment was used except salines internally and plain gauze bandages moistened with calamine lotion externally, which had been used from the beginning.

1. Am. Jour. Med. Sc., February, 1907, p. 193.

Therapeutics

OTITIS MEDIA

In spite of the increased knowledge of the seriousness of any inflammation in the middle ear, and in spite of the increased tendency of middle-ear inflammations to cause mastoid trouble, since the influenza germ has been prevalent in this country the laity, and even (we regret to say) many physicians still neglect an ear inflammation. So much can be done in the incipency of a middle-ear congestion, and evacuation of the primary exudate is so sure to prevent actual suppuration and serious trouble, that it is little less than astounding that the profession as a whole does not more strongly advocate, urge and carry out these preventive measures. It is also astonishing that mild inflammation in the middle ear, with more or less continuous discharge through a perforation in the drum, is allowed to become chronic without treatment and allowed perhaps to cause permanent deafness. Such neglect, it is also regrettable to say, occurs mostly in children too young to determine for themselves whether they will have permanent deafness the rest of their lives or be properly treated.

We insist to-day that every child should be vaccinated. There is plenty of agitation to prevent and control serious inflammations in the eyes of babies and children. There is gradually accumulating sufficient knowledge of the necessity for glasses for children with defective eyes. The seriousness of obstructive adenoid conditions in the nasopharynx is also being generally recognized. The necessity for fresh air and good hygiene for the prevention of tuberculosis is now most constantly in evidence. But an inflamed ear is very frequently, if it will only rupture, allowed to take care of itself. Nature's healing power often, fortunately, does effect a cure and the hearing is not impaired and serious middle-ear or mastoid trouble does not occur, but the chances of such a happy outcome are too uncertain and too precarious to be tolerated for one moment in this age of prophylaxis. As so aptly remarked by a surgeon of New York recently: Nature is working as hard to continue the growth of what we call pathogenic germs as she is to kill them and eradicate them for our health.

It is not the purpose of this article to advise exactly how an inflamed ear should be treated, as we believe that the average practitioner is not equipped to care properly for middle-ear inflammation, but we would urge the immediate reference of such inflammations to the ear specialist.

All kinds of bacteria may reach the middle ear, but the most frequent infections are the streptococci and the pneumococci. In a healthy ear the bacteria reach the tympanic cavity through the Eustachian tube, and this presupposes a nasopharyngeal infection and inflammation. Obstruction at the mouths of the Eustachian tubes, or swelling in the tubes, then inhibits the normal aëration of the tympanic chamber and predisposes to infection of the middle ear. Hence prophylaxis of middle-ear inflammations consists in the removal of obstructive adenoids in the nasopharynx, in the removal of obstructive hypertrophies of the nasal passages so as to cause proper nasal respiration and the correction, so far as possible, of nasal and nasopharyngeal chronic inflammations.

In acute inflammations of the nose and nasopharynx when the Eustachian tubes are likely to become obstructed and bacteria are likely to reach the middle ear, a proper cleansing of the nose and nasopharynx with

warm, mildly antiseptic and alkaline sprays and gargles is the proper treatment. Nasal douches as generally applied are likely to force fluid, pus and bacteria into the middle ear, and, in fact, a douche should never be taken through the nostrils with any but the most gentle pressure. Snuffing mild, warm, alkaline fluids through the nostrils, or gently spraying and then snuffing, or possibly the pouring of such a fluid from a spoon or small vial into the nostrils can do nothing but good and no harm to the Eustachian tubes. Or gentle spraying into the nasopharynx with such solutions or gargling and throwing the head forward so that the liquid washes the roof of the pharynx, will also remove products of inflammation, pus and mucus from these parts and from the mouths of the Eustachian tubes.

If middle-ear congestion occurs the diagnosis must be made as to whether serum or other fluid is present or not. If fluid is present, as shown by bulging of the tympanic membrane and by deafness, incision of the drum must be immediately made. If no fluid is present in the tympanic cavity, but the drum shows congestion and there is pain, the following ear drops may be used:

R.	gm. or c.c.	
Acidi borici	1	gr. xv
Glycerini	25	or fl. ʒi
Aquæ	ad 50	ad fl. ʒii

M. et Sig.: Warm, and pour half a teaspoonful into the ear once in three or four hours.

This fluid should be held in the ear a minute or two and then allowed to run out. The outer part of the canal is then gently dried with absorbent cotton and a plug of cotton left in the orifice.

If preferred, either of the following prescriptions may be used:

R.	gm. or c.c.	
Acidi borici	1	gr. xv
Tincturæ opii	5	or fl. ʒiiss
Glycerini	10	fl. ʒiii
Aquæ	ad 25	ad fl. ʒi

M. et Sig.: Warm, and place a few drops in the ear every hour, if needed, and then plug with cotton.

Or:

R.	gm. or c.c.	
Adrenalin chloridi	0.03	gr. ss
Glycerini	20	or fl. ʒv
Aquæ	ad 50	ad fl. ʒii

M. et Sig.: Warm, and pour half a teaspoonful into the ear every three hours.

It should again be emphasized that treatment, even as simple as the above, should only be used to relieve congestion and pain, but such temporizing measures should not be used if the drum is bulging and there is liquid in the middle ear. The only treatment for this condition is incision.

Treatment after incision or after perforation of the drum, or of mastoid congestion, and of mastoid inflammation, belongs to the specialist. The restoration of a perfect drum and the recovery of perfect hearing after middle-ear disturbance, and especially after mastoid inflammation, marks a success as great as in any branch of medicine. The general physician's duty ends when he has referred a patient with either acute or chronic ear disturbance to the specialist, and after he has impressed on his patient that the time to prevent, if possible, deafness and the danger of a possible cerebral abscess is now. If the patient neglects his own treatment after warnings, he has only himself to thank, but let him never be allowed the opportunity to blame his physician.

INDICANURIA

The formation and absorption of intestinal toxins due to fermentation and putrefaction of maldigested foods, and largely, at least primarily, caused by a sluggish action of the bowels and consequent constipation is understood by all, but it is not frequently enough nor seriously enough considered as a cause of general bad feelings. These toxins doubtless vary in kind as well as in the symptoms which they cause. These symptoms may be headaches; disinclination to do mental work; sleeplessness, or sleep disturbed by dreams; coated tongue; loss of appetite; various kinds of neuralgias or joint pains; myalgias; muscular weakness or debility; a tendency to dry skin on the one hand, or to sweatings on the other; itchings; fornications; urticaria, and irritability of the bladder.

An indication of the intestinal condition can readily be obtained by an examination of the urine for indican, but this examination is too often omitted. There can be constipation without indicanuria, and there can be indicanuria when there are frequent movements of the bowels. It would seem, then, advisable to examine for indican the urine of patients who are vaguely miserable, or do not feel well, and yet have no tangible illness. A simple, easy office method is as follows:

Place in an ordinary test tube 1 c.c. (15 minims) of chloroform, then fill the test tube half full with equal parts of the urine to be tested and concentrated hydrochloric acid. To this add slowly, shaking meanwhile, the official solution of peroxid of hydrogen. If indican is present, the mixture more or less rapidly assumes a bluish color, which will be taken up by the chloroform, if the test tube is allowed to stand for a few moments, and show as a blue mass at the bottom of the test tube. The intensity of this blue color will denote approximately the amount of indican present. The bluer the chloroform segment in the test tube, the greater the amount of indican.

It is the liver which generally prevents both normal and abnormal products of digestion from reaching the general circulation in such form as to cause toxic irritations or poisonings. If the liver is repeatedly or continuously disturbed in its function by efforts to render innocuous an abnormal amount of these toxins it sooner or later becomes irritated and congested to the extent of doing this work imperfectly, and then these toxins reach the general circulation and cause symptoms.

Abnormal fermentation or putrefaction having been diagnosed as taking place in the intestines, the indications for treatment are, of course, calomel, at least once, followed by a saline, and the saline is perhaps well repeated on one or two successive mornings, or perhaps once a week for some time. The diet needs generally to be modified, and especially should meat be abstained from temporarily, or at least limited to once a day. Such restrictions of diet need not be long continued if there is no organic reason. Three small doses a day of salol (phenylis salicylas), each perhaps 0.30 gram (5 grains), will aid in inhibiting the fermentation in the intestines.

It has been noted that massage of the abdomen, especially of the liver, and electrical applications to the abdomen (Albert Abrams, *Medical Record*, April 25, 1908) will increase the amount of indican in the urine, if indican was previously present. This shows that the intestines and liver harbor indican. A day or two after such massage the urine, if the diet is corrected, will be free from indican.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1909," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(Continued from page 1258)

ENZYMOL.—A glycerin-aqueous acid extract prepared directly from the mucous membrane of the fresh animal stomach, free from alcohol, but containing a trace of thymol and having an acidity due to combined hydrochloric acid equivalent to 0.26 to 0.3 per cent. of actual hydrochloric acid. It contains no free hydrochloric acid, but does contain a slight excess of protein over that combined with the acid. It is adjusted to a definite proteolytic power and contains 25 per cent. of glycerin by weight.

Enzymol is a light straw-colored fluid.

The presence of proteins is shown by coagulation by heat or by the addition of alcohol. The proteolytic power when acidified and tested by the method of the U. S. P. for pepsin should be such that 4 Cc. will dissolve 800 Gm. of coagulated egg-albumin in two and one-half hours.

Action and Uses.—When applied to morbid tissues enzymol is said to have the power of dissolving them by its proteolytic action even without the addition of acid. It is said to dissolve necrotic bone, by virtue of the combined acid which it contains. Its physiologic action is said to cease in contact with living tissue.

Enzymol is said to be useful as an application to purulent and necrotic surfaces for the removal of the morbid materials.

Dosage.—It is made ready for use by the addition of one-half to one or two volumes of water; for the solution of necrotic and carious bone it may be applied undiluted.

Manufactured by Fairchild Bros. & Foster, New York. U. S. trademark No. 44,769.

SABROMIN — Dibrombehenate of Calcium. — Sabromin, $(C_{21}H_{41}Br_2COO)_2Ca = C_{44}H_{82}O_4Br_4Ca$, is the calcium salt of dibrombehenic acid.

It is prepared from erucic acid by the addition of bromine and transformation of the dibrombehenic acid thus obtained into the calcium salt.

Sabromin is a colorless, odorless and tasteless powder claimed to contain about 29 per cent. bromine and about 3.8 per cent. calcium. It is insoluble in water and alcohol, soluble in ether, acetone, benzol, ligroin and tetrachloride of carbon. On heating on platinum foil it is decomposed with liberation of bromine.

Tests: Sabromin is recognized by its solubilities and the liberation of bromine on heating.

Action and Uses.—Sabromin is converted into dibrombehenic acid in the stomach, a substance which is free from any action on that organ, but which is absorbed from the intestine. Its effect is less rapid than that of the bromides, but more prolonged. It is said to be devoid of the disadvantages of the bromides, such as their unpleasant taste, irritating action on the stomach, and systemic by-effects.

Sabromin is indicated in the same class of cases in which the bromides are useful.

Dosage.—The dose is about the same as that of potassium bromide.

Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany (Farbenfabriken of Elberfeld Co., New York). U. S. patent and trademark applied for.

AGARIC ACID—*Acidum Agaricum*.—*Acidum Agaricinicum* (Pharm. Helv., edit. 4.) *Agaricinum*¹ (Pharm. Danica, edit. 1907). A tribasic acid $C_{19}H_{30}OH(COOH)_3 + 1\frac{1}{2}H_2O$, derived from *Polyporus officinalis*, Fries (Order Hymenomycetes; fam. Polyporeæ) a fungus growing on the European Larch and other species of larch.

Agaric acid occurs as an odorless, tasteless, glistening microcrystalline powder, which melts at $141.5-142^\circ C.$ ($286.5-287.5^\circ F.$).

1. The substance commonly sold as agaricin is an impure alcoholic extract.

When heated to a high temperature it is volatilized in the form of a white pungent vapor.

Agaric acid is slightly soluble in cold water; when heated with 50-100 parts of water, it becomes gelatinous and finally dissolves to a weakly acid solution, which possesses the characteristic property of foaming strongly when shaken. The addition of acids to hot aqueous solutions of agaric acid causes white flocculent precipitate, but a tannic acid solution (1:100) produces neither coloration nor turbidity. With alkalis agaric acid forms water soluble salts.

Agaric acid is slightly soluble in ether, chloroform, carbon-disulphide and in 130 parts 90 per cent. alcohol. It is soluble in hot acetic acid, acetic ether, oil of turpentine and in about 10 parts of alcohol.

If to a mixture of about 0.2 gm. of agaric acid with 3 Cc. of water 2 drops of alcoholic alpha-naphthol solution (1:8) are added and then gradually 5 Cc. of concentrated sulphuric acid added the mixture should not take on a marked blue-violet color.

If 0.10 gm. agaric acid be boiled with 10 Cc. dilute sulphuric acid a turbid solution results, from which on standing on a water bath, oily drops separate, and they crystallize on cooling.

0.1 gm. agaric acid upon ignition should leave no weighable residue.

Action and Uses.—Agaric acid is a local irritant and in large doses produces vomiting and purging and death through central paralysis. It paralyzes the peripheral nerves of the sweat glands, arresting the secretion of sweat. It is used to arrest colliquative sweats. The experience of most clinicians is favorable, but some report that they were unable to obtain any favorable effects. The action appears in a few hours and is not lasting. Agaric acid is one-twentieth as active as atropine and does not influence other secretions.

Dosage.—The maximal single dose of agaric acid should not exceed 0.03 gm. ($\frac{1}{2}$ grain) and the total daily dose should not exceed 0.10 gm. ($1\frac{1}{2}$ grains) (Pharm. Helv.). Owing to its irritant action it can not be given hypodermically.

CONIINE HYDROBROMIDE—*Coniinæ Hydrobromidum*.—The hydrobromide, $C_8H_{17}N.HBr$, of an alkaloid found in conium.

Coniine hydrobromide occurs as colorless, transparent, glistening rhombic crystals, or as a white crystalline powder, melting at $210-214^\circ C.$ ($410-417.2^\circ F.$). It is soluble in two parts of water, in three parts of alcohol, and in ether-alcohol, but insoluble in ether. The solutions are colorless and neutral. The salt contains 61.09 per cent. of coniine.

Evaporated with an excess of sulphuric acid, coniine hydrobromide becomes red, violet, blue and finally brown. An aqueous solution of the salt mixed with magnesium carbonate or oxide, and shaken with carbon bisulphide, colors the latter yellow. Addition of silver nitrate solution to a solution of coniine hydrobromide causes precipitation of yellow silver bromide; Mayer's reagent precipitates a reddish-brown body and tannic acid a yellowish-white compound. Coniine hydrobromide should burn when ignited, leaving no residue.

Action and Uses.—Coniine hydrobromide paralyzes the peripheral endings of the motor nerves, producing an ever-increasing muscle weakness. To a less degree it affects the sensory nerves, and with lethal doses consciousness is retained to the last. It probably depresses the spinal cord feebly and usually dilates the pupils. In lethal doses it lowers the temperature, but in therapeutic doses it is said to increase it, convulsions may appear and death results from paralysis of respiration.

Coniine hydrobromide may be used for the same purpose as conium. It has been tried in chorea, paralysis agitans, whooping cough, and is said to produce a condition of calm and relaxation in maniacal and hysterical excitement.

Dosage.—0.001-0.003 Gm. ($1/60$ to $1/20$ grain) three times a day. Maximum single dose 0.005 Gm. ($1/12$ grain); maximum daily dose 0.015 Gm. ($1/4$ grain). For hypodermic use a 5 per cent. solution is used.

ARTICLES ACCEPTED FOR N. N. R. APPENDIX Sharp & Dohme, Baltimore, Md.

Compressed Tablets Anesthesin, $2\frac{1}{2}$ grains.—Each tablet contains anesthesin in 0.162 Gm. ($2\frac{1}{2}$ grains).

Solution Atoxyl, 10% (Sterilized).—Each 100 Cc. contain: Atoxyl 10 Gm. (each fluidounce contains Atoxyl, 48 grains) dissolved in distilled water.

Solution Atoxyl, 10%, with Novocaine, 1% (Sterilized).—Each 100 Cc. contain: Atoxyl 10 Gm. and Novocaine 1 Gm. (each fluidounce contains Atoxyl, 48 grains and Novocaine $4\frac{8}{10}$ grains) dissolved in distilled water.

Compressed Tablets Atoxyl and Quinine Comp.—Each tablet contains: Atoxyl 0.01 Gm. ($1/6$ grain), Quinine hydrochlor. 0.022 Gm. ($\frac{1}{3}$ grain), Strychn. nitrate 0.0043 Gm. ($1-150$ grain), Ferrous carbonate mass (Blaud) 0.162 Gm. ($2\frac{1}{2}$ grains).

Compressed Tablets Benzosol, $2\frac{1}{2}$ grains.—Each tablet contains benzosol 0.162 Gm. ($2\frac{1}{2}$ grains).

Compressed Tablets Benzosol and Codein.—Each tablet contains: Codeine Sulph. 0.0054 Gm. ($1/12$ grain) and Benzosol 0.162 Gm. ($2\frac{1}{2}$ grains).

Compressed Tablet Bland with Atoxyl.—Each tablet contains: Ferrous carb. mass (Blaud) 0.162 Gm. ($2\frac{1}{2}$ grains) and Atoxyl 0.022 Gm. ($\frac{1}{3}$ grain).

Compressed Tablets Pyramidon, $1\frac{1}{2}$ gr.—Each tablet contains Pyramidon 0.097 Gm. ($1\frac{1}{2}$ grains).

Compressed Lozenges Orthoform, 1 gr.—Each Lozenge contains Orthoform 0.065 Gm. (1 grain).

(To be continued)

THE ATLANTIC CITY SESSION

AMERICAN MEDICAL ASSOCIATION, SIXTIETH ANNUAL SESSION, ATLANTIC CITY, JUNE 8-11, 1909.

OFFICIAL CALL

Sixtieth Annual Session of the American Medical Association,
Atlantic City, N. J., June 8-11, 1909

The sixtieth annual session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June 8, 9, 10 and 11, 1909, at Atlantic City, N. J.

The House of Delegates will convene at 10 a. m., Monday, June 7. In the House, the representation of the various constituent associations for the years 1907, 1908 and 1909 is as follows:

Alabama	3	Nebraska	2
Arizona	1	New Hampshire	1
Arkansas	2	New Jersey	3
California	3	New Mexico	1
Colorado	2	New York	11
Connecticut	2	Nevada	1
Delaware	1	North Carolina	3
Dist. Columbia	1	North Dakota	1
Florida	1	Ohio	6
Georgia	2	Oklahoma	2
Hawaii	1	Oregon	1
Idaho	1	Pennsylvania	8
Illinois	7	Rhode Island	1
Indiana	4	South Carolina	2
Iowa	3	South Dakota	1
Kansas	3	Tennessee	2
Kentucky	3	Texas	5
Louisiana	2	Utah	1
Maine	1	Vermont	1
Maryland	2	Virginia	3
Massachusetts	6	Washington	1
Michigan	4	West Virginia	1
Minnesota	2	Wisconsin	3
Mississippi	2	Wyoming	1
Missouri	4	Philippine Islands	1
Montana	1		

The twelve sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health and Marine-Hospital Service are entitled to one delegate each.

The General Meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10:30 a. m., Tuesday, June 8.

The Registration Department will be open from 8:30 a. m. until 5 p. m., on Monday, Tuesday, Wednesday and Thursday, June 7, 8, 9 and 10, and from 9 to 10 a. m., on Friday, June 11.

HERBERT L. BURRELL, President.

GEORGE H. SIMMONS, General Secretary.

HOUSE OF DELEGATES

Membership of the Legislative Body of the American Medical Association, 1909

As a number of the state associations have not yet held their meetings for 1909, it is impossible, at this time, to give a complete list of the members of the House of Delegates for the Atlantic City session. The following is a list of the hold-over delegates and of the newly elected members who have been reported to THE JOURNAL up to the time of going to press:

ARKANSAS	DISTRICT OF COLUMBIA
C. C. Stephenson, Little Rock.	G. Wythe Cook, Washington.
CALIFORNIA	FLORIDA
O. D. Hamlin, Oakland.	J. Harris Pierpont, Pensacola.
COLORADO	IDAHO
Crum Epler, Pueblo.	E. W. Kleinman, Hailey.
Edward Jackson, Denver.	ILLINOIS
CONNECTICUT	R. T. Gillmore, Chicago.
Everett J. McKnight, Hartford.	J. F. Percy, Galesburg.
DELAWARE	L. H. A. Nickerson, Quincy.
James H. Wilson, Dover.	E. W. Weis, Ottawa.

INDIANA

W. N. Wishard, Indianapolis.
Edwin Walker, Evansville.
G. W. Thompson, Winamac.
Harry C. Sharp, Indianapolis.

IOWA

G. E. Crawford, Cedar Rapids.
M. J. Kenefick, Algona.

KANSAS

J. E. Sawtell, Kansas City.
Geo. E. Tooley, Washington.

KENTUCKY

L. S. McMurtry, Louisville.
W. W. Richmond, Clinton.
A. T. McCormack, Bowling Green.

LOUISIANA

Oscar Dowling, Shreveport.

MAINE

Eugene C. Holt, Portland.

MARYLAND

G. Lane Taneyhill, Baltimore.

MASSACHUSETTS

H. D. Arnold, Boston.
J. A. Gage, Lowell.
O. J. Brown, North Adams.
J. L. Morse, Boston.
R. P. M. Ames, Springfield.
C. E. Durant, Haverhill.

MICHIGAN

A. M. Hume, Owosso.
T. A. Felch, Ishpeming.
F. W. Robbins, Detroit.
S. C. Graves, Grand Rapids.

MINNESOTA

R. C. Dugan, Eyota.
Arthur Sweeney, St. Paul.

MISSISSIPPI

H. L. Sutherland, Rosedale.

MISSOURI

C. Lester Hall, Kansas City.
J. D. Griffith, Kansas City.

NEBRASKA

Harold Gifford, Omaha.

NEVADA

B. F. Cunningham, Reno.

NEW HAMPSHIRE

Wm. T. Smith, Hanover.

NEW JERSEY

Claudius R. P. Fisher, Bound Brook.
Frank D. Gray, Jersey City.
Luther M. Halsey, Williams-town.

NEW MEXICO

R. E. McBride, Las Cruces.

NEW YORK

E. B. Angell, Rochester.
J. C. Bierwirth, Brooklyn.
D. C. Moriarta, Saratoga.
Floyd M. Crandall, New York.
A. Vander Veer, Albany.
A. T. Bristow, Brooklyn.
Charles Jewett, Brooklyn.
W. S. Ely, Rochester.
E. H. Bartley, Brooklyn.
H. L. Elsner, Syracuse.
J. E. Sadlier, Poughkeepsie.

NORTH CAROLINA

J. F. Highsmith, Fayetteville.
H. T. Bahnson, Winston-Salem.
Albert Anderson, Raleigh.

OKLAHOMA

C. S. Bobo, Norman.

OREGON

Andrew C. Smith, Portland.

PENNSYLVANIA

Alexander R. Craig, Philadelphia.

Philip Y. Eisenberg, Norristown.

George W. Guthrie, Wilkes-Barre.

Edward B. Heckel, Pittsburg.
Thomas D. Davis, Pittsburg.
William L. Estes, South Bethlehem.

F. W. Frankhauser, Reading.
Samuel Wolfe, Philadelphia.

RHODE ISLAND

John Champlin, Westerly.

SOUTH CAROLINA

Walter Cheyne, Sumter.
R. S. Cathcart, Charleston.

SOUTH DAKOTA

R. D. Alway, Aberdeen.

TEXAS

C. E. Cantrell, Greenville.
S. T. Turner, El Paso.

UTAH

S. C. Baldwin, Salt Lake City.

VERMONT

J. N. Jenne, Burlington.

VIRGINIA

Wm. E. Anderson, Farmville.
J. Shelton Horsley, Richmond.

WASHINGTON

J. R. Yocum, Tacoma.

WEST VIRGINIA

O. F. Covert, Moundsville.

WISCONSIN

L. H. Pelton, Waupaca.
Karl Doege, Marshfield.
C. A. Richards, Rhinelander.

SECTION DELEGATES

PRACTICE OF MEDICINE

George Dock, Ann Arbor, Mich.

OBSTETRICS AND DISEASES OF WOMEN

J. H. Carstens, Detroit.

SURGERY AND ANATOMY

John T. Bottomley, Boston.

OPHTHALMOLOGY

T. A. Woodruff, Chicago.

LARYNGOLOGY AND OTOL- OGY

H. W. Loeb, St. Louis.

NERVOUS AND MENTAL DISEASES

T. H. Weisenburg, Philadelphia.

STOMATOLOGY

G. V. I. Brown, Milwaukee, Wis.

CUTANEOUS MEDICINE AND SURGERY

R. R. Campbell, Chicago.

DISEASES OF CHILDREN

R. B. Gilbert, Louisville, Ky.

HYGIENE AND SANITARY SCIENCE

Clarence L. Wheaton, Chicago.

PHARMACOLOGY AND THERA- PEUTICS

M. H. Fussell, Philadelphia.

PATHOLOGY AND PHYSIOL- OGY

H. A. Christian, Boston.

REGISTRATION

The Registration Department will be on Young's Old Pier. It will be necessary for a member of the Association to register in order to obtain the official badge and program. No one will be admitted to any entertainment without a badge. Members are urged to register as soon as they can name their hotels.

The Registration Department will be open from 8:30 to 5 on Monday, Tuesday, Wednesday and Thursday, June 7, 8, 9 and 10, and from 9 to 10 a. m. on Friday, June 11.

Attention is called to the following directions:

1. Each physician desiring to register will first fill out a registration card.

2. Each member who has paid his annual dues in full will present his pocket card and registration card at a window marked "Registration by Receipt."

3. The registration of members who have paid their dues, but who have failed to bring their pocket cards, will be delayed while the records are consulted. Hence, be sure to bring your "pocket card."

4. Members who have not paid their dues will present registration card and make payment at a window marked "Cash."

5. Each applicant for membership will present his registration card at a window marked "New Members," with a certificate of membership in his state society. Prospective members, however, will save delay and annoyance by sending in their applications before the session. All such applications should be mailed to the American Medical Association, 103 Dearborn Avenue, Chicago, so as to arrive not later than May 25.

6. Each member on registration will receive a badge, a copy of the Official Program, and such other announcements as may be necessary.

RAILROAD RATES TO ATLANTIC CITY

Transportation Committee Announces Rate of One and a Half Fares for the Round Trip

The Transportation Committee announces that it has secured a rate of one and a half fares for the round trip to the Atlantic City session. Tickets are good to leave Atlantic City on the return trip up to June 19.

On a two cent basis, this rate is equivalent to the one fare rate on the old three cent basis. This rate applies to all parts of the United States, with the exception of the extreme western or Trans-Continental Passenger Association territory, for which a special rate has been made to the gate-ways of the Western Passenger Association territory, where the one and a half fare rate applies.

A special train (or more if necessary) has been arranged for from Chicago direct to Atlantic City, without change, via the Pennsylvania Lines. This is the only line reaching Atlantic City from the West without transferring and changing at Philadelphia. This train will leave Chicago Sunday, June 6, arriving at Atlantic City Monday, June 7.

A special train will be run by the Chicago & Alton from the West and Southwest, from Kansas City and St. Louis, and special sleepers by the Chicago, Milwaukee and St. Paul, from the Northwest to Chicago, connecting directly with the Pennsylvania Special, thus providing for all who wish the most direct routes and the best possible accommodations.

A stop over of ten days in Washington or Baltimore may be arranged for on the return trip, by requesting the same at the time ticket is purchased.

M. L. HARRIS, Chairman.

Other Trains

A special train will run from St. Louis Saturday, June 5, at noon, via the Big Four and the Chesapeake & Ohio Railways. Sunday will be spent at Hot Springs, Va. Special cars will connect with this train from Omaha, Kansas City, etc. Further details may be secured from Dr. Charles W. Fassett, St. Joseph, Mo.

Doubtless other trains will be arranged, of which we have received no notification.

LOCAL COMMITTEE ON ARRANGEMENTS

J. A. Joy, Chairman, 1920 Pacific Avenue.

E. J. Porteous, Secretary. E. H. Harvey, Treasurer.

COMMITTEE ON FINANCE.

W. B. Stewart, Chairman.

W. E. Darnall, George Scott, W. P. Conaway.

COMMITTEE ON HALLS AND MEETING PLACES.

Thomas G. Dunlap, Chairman.

E. E. Parker, W. M. Pollard, J. W. Snowball, Victor Metzler, A. B. Shimer.

COMMITTEE ON COMMERCIAL EXHIBITS.

Edward Guion, Chairman.

S. V. Clevenger, W. H. Walling.

COMMITTEE ON ENTERTAINMENT.

Emery Marvel, Chairman.

David Berner, F. W. Bennett, E. H. Harvey, B. R. Lee, David Jenifer, Victor Metzler, J. C. Marshall.

COMMITTEE ON PRINTING.

B. R. Lee, Chairman.

J. F. De Silver, W. P. Davis, Jay I. Durand, D. J. M. Miller.

COMMITTEE ON PROGRAM.

George Scott, Chairman.

J. C. Marshall, W. E. Darnall, Eugene Reed.

COMMITTEE ON BUREAU OF INFORMATION.

M. S. Ireland, Chairman.

J. C. MeVay, T. G. Dunlap, A. D. Cuskaden, Victor Metzler.

COMMITTEE ON BADGES.

E. C. Chew, Chairman.

A. E. Ewens, T. D. Taggart.

COMMITTEE ON REGISTRATION.

J. C. MeVay, Chairman.

E. H. Harvey, M. S. Ireland, G. W. Stimson.

COMMITTEE ON SCIENTIFIC EXHIBIT.

I. E. Leonard, Chairman.

C. Garrabrant, H. A. Doherty, W. M. Mason.

COMMITTEE ON HOTELS AND HEADQUARTERS.

William E. Jonah, Chairman.

George W. Stimson, A. L. Atherton.

COMMITTEE ON SECTION MEETINGS.

W. P. Conaway, Chairman.

E. H. Harvey, I. E. Leonard, A. E. Ewens, Daniel Jenifer, Stokes Doriss.

COMMITTEE ON SECTION ENTERTAINMENTS.

A. L. Atherton, Chairman.

G. W. Stimson, E. E. Parker, J. F. De Silver.

COMMITTEE ON ALUMNI ENTERTAINMENTS.

F. W. Bennett, Chairman.

C. M. Fish, J. C. Marshall.

COMMITTEE ON POSTOFFICE, TELEPHONE, ETC.

Samuel Barbash, W. A. Hickman, Daniel Jenifer.
Assistant Editor of Daily.—E. GUION.

COMMITTEE ON LADIES' ENTERTAINMENT.

Dr. Clara K. Bartlett, Chairman.

Mrs. A. L. Atherton, Mrs. F. W. Bennett, Mrs. E. C. Chew, Mrs. W. P. Conaway, Mrs. W. E. Darnall, Mrs. Joseph F. De Silver, Mrs. T. G. Dunlap, Mrs. Edward Guion, Mrs. W. A. Hickman, Mrs. J. A. Joy, Mrs. I. E. Leonard, Mrs. J. C. Marshall, Mrs. Philip Marvel, Mrs. D. J. M. Miller, Mrs. W. M. Pollard, Mrs. T. K. Reed, Mrs. E. S. Sharpe, Mrs. George Scott, Dr. Mary E. Townsend, Mrs. William C. Westcott, Mrs. S. Barbash, Mrs. D. Berner, Mrs. S. V. Clevenger, Mrs. A. D. Cuskaden, Mrs. W. Price Davis, Mrs. H. Stokes Doriss, Mrs. C. Garrabrant, Mrs. E. H. Harvey, Mrs. M. L. Ireland, Mrs. H. R. Lawrence, Mrs. H. D. Marcus, Mrs. Emery Marvel, Mrs. J. C. MeVay, Mrs. James North, Mrs. E. J. Porteous, Miss Reiley, Mrs. M. L. Somers, Mrs. W. Blair Stewart, Mrs. W. H. Walling, Mrs. R. Woolbert.

ATLANTIC CITY HOTELS

A List of the Hotels, Showing Rates and Location

The list of hotels published in this issue for the session of the American Medical Association and affiliated societies at Atlantic City, N. J., is cordially commended to all those who attend. It is furnished by the Local Committee of Arrangements, and comprises those which are assisting the local

committee in defraying the expenses and in doing the things necessary to be done for the success of the meetings.

Those going to Atlantic City should engage their accommodations in advance direct with the hotel selected. The earlier this is attended to the better.

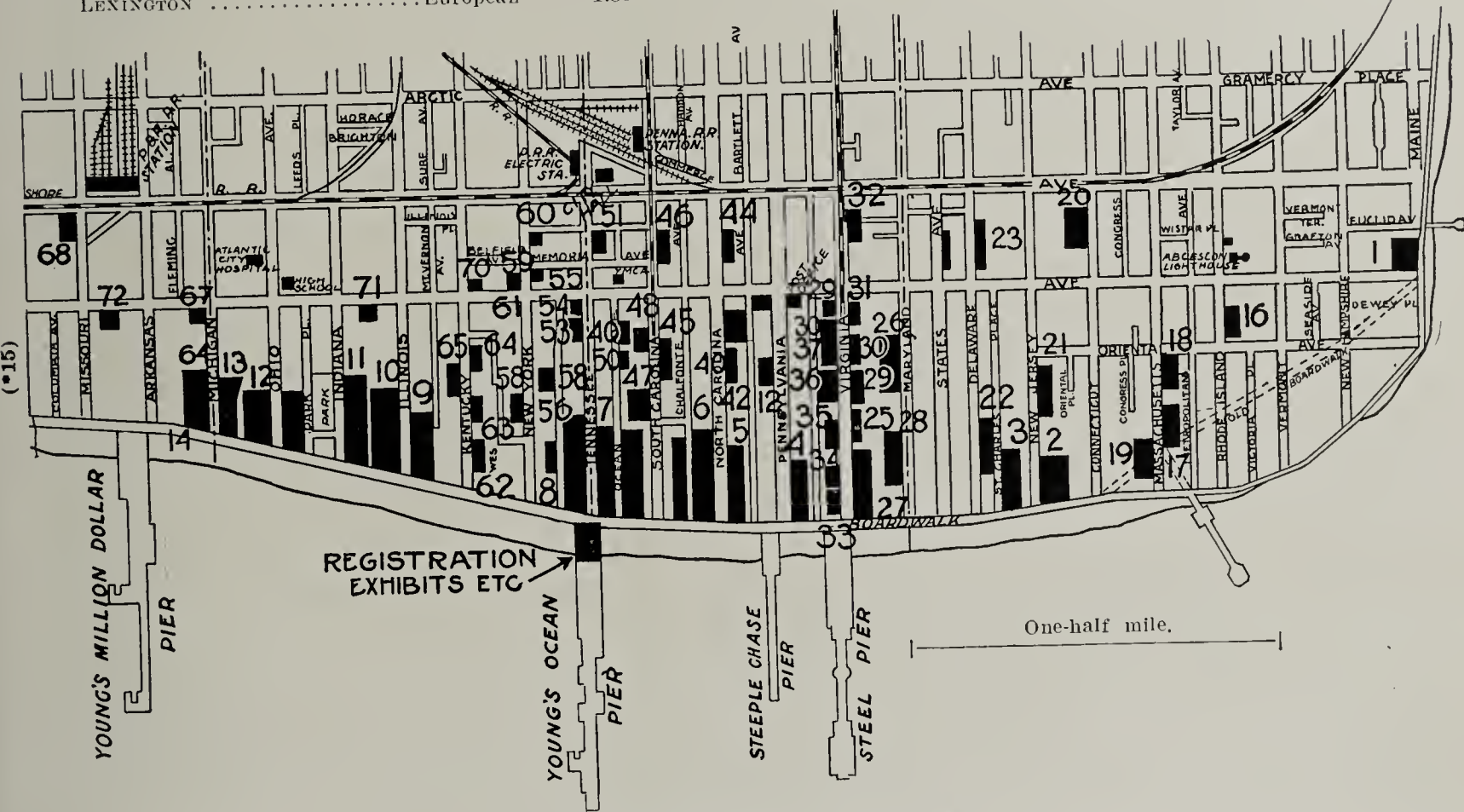
By securing hotel quarters well in advance there will be more satisfaction all around.

TABLE OF DAILY RATES AND ACCOMMODATIONS OFFERED BY ATLANTIC CITY HOTELS

		—Rooms Without Private Bath.—				—Rooms With Private Bath.—				
		For 1 Person.		For 2 Persons.		For 1 Person.		For 2 Persons.		
	Plan.	Single Room.	Double Room.	Double Room.	Extra Large Room.	Single Room.	Double Room.	Double Room.	Extra Large Room.	
On the Boardwalk:										
	ROYAL PALACE	American	\$3.50	\$4-5	\$7.00	\$8.00	\$5.00	\$6.00	\$10.00	\$12.00
	RUDOLF	American	3.50	4.00	7.00	8.00	4.50	5.00	9.00	10.00
	RUDOLF	European	2.00	2.50	3.50	4.50	2.50	3.50	4.00	6.00
	ST. CHARLES	American	3-3.50	4-4.50	6.00	9.00	6.00	7-10	8.00	14.00
	SEASIDE	American	3.50	4-5.00	7-8	...	5.00	6-7	10.00	12.00
	HADDON HALL	American	3.50	5.00	6.00	8.00	6.00	7.00	10.00	12-16
	CHALFONTE	American	3.50	4.50	6-7	8.00	...	6.00	10.00	12.00
	POINSETTIA	European	1.50	2.00	3.00	4.00	2.50	3.50	4.00	5.00
	YOUNG'S	European	1.50	2.00	3.00	3.50	2.50	3.00	4.00	5.00
	WINDSOR	American	4.00	5.00	7.00	8.00	6.00	7.00	10.00	12.00
	WINDSOR	European	2.00	3.00	4.00	5.00	4.00	5.00	6.00	7.00
	TRAYMORE	American	4.00	6.00	8.00	9.00	5.00	to 13.00	10.00	to 16.00
	BRIGHTON	American	4.00	to 7.00	8-12	12-16	6.50-9	...	11.00	to 18.00
	MARLBOROUGH-BLENHEIM	American	4-6	5-7	8-10	9-11	6-8	7-9	10-12	12-20
	MARLBOROUGH-BLENHEIM	European	2-4	3-5	4-6	5-7	4-6	5-7	6-8	8-16
	DENNIS	American	4-5	...	7-8	...	6-8	...	9-12	...
	SHELburne	American	4-5	8.00	8-9	10.00	6-7	10.00	10-12	15.00
	SHELburne	European	2-3	4.00	4-5	6.00	4-5	6.00	6-8	10.00
	CHELSEA	American	4.00	5.00	8.00	10.00	6.00	7.00	10.00	12.00
Rhode Island Avenue:										
	WESTMONT	American	3.00	...	5.00	...	4.00	...	7.00	...
Massachusetts Avenue:										
	LELANDE	American	2.50	3.00	5.00	6.00	4.00	4.00	8.00	8.00
	LELANDE	European	1.00	1.25	1.75	2.25	2.50	3.00	4.00	4.00
	PHILLIPS HOUSE	American	2.00	2.50	4.00	5.00	...	...	...	...
	NEW AVALON	American	1.50	2.00	4.00	...	...	...	...	...
	NEW AVALON	European	1.00	...	...	...	...	...	...	...
Connecticut Avenue:										
	TRONELL HALL	American	2.00	2.50	4.00	4.00	2.50	3.00	5.00	5.00
New Jersey Avenue:										
	PIERREPONT	American	3.00	3.50	6.00	7.00	3.50	4.00	7.00	8.00
St. Charles Place:										
	RALEIGH	American	3.00	...	5.00	6.00	4.00	...	7.00	8.00
Delaware Avenue:										
	LEITH VILLA	American	1.25	1.50	2.50	3.50	...	...	...	...
States Avenue:										
	THE HANLON	European	1.00	1.50	1.50	2.00	...	...	...	...
Maryland Avenue:										
	IMPERIAL	American	1.50-2	2.50	3-4	5.00	3.00	3.50	5-6	7.00
	IMPERIAL	European	1.00	1.50	1.50	2.00	2.00	...	3.00	...
Maryland Avenue:										
	ALLENHURST	American	2-2.50	3.00	2.00	2.50	...	...	...	...
Virginia Avenue:										
	ISLESWORTH	American	3.00	4.00	6.00	7.00	4.00	6.00	7.00	8.00
	ISLESWORTH	European	2.00	3.50	4.00	5.00	3.50	4.00	5.00	6.00
	PONCE DE LEON	American	2.50	3.00	5.00	6.00	3.50	4.50	6.00	7.00
	PONCE DE LEON	European	1.00	1.50	2.00	3.00	2.00	3.00	3.00	4.00
	AVON INN	American	2.50	3.50	4.00	6.00	3.00	5.00	6.00	8.00
	AVON INN	European	1.00	2.00	4-5	4-5	...	...	3-3.50	6-7
	BERKSHIRE INN	American	2-2.50	2-2.50	2-3	2-3	...	...	...	...
	BERKSHIRE INN	European	1-1.50	1-1.50	1.50-1	1.50-1	...	...	...	...
	VICTORIA	American	1.50	...	3.00	...	2.50	...	...	2.50
	COLONADE	American	...	2.00	3.50	4.00	...	...	...	...
	COLONADE	European	...	1.00	1.25	1.50	...	...	...	...
	JACKSON	American	3-3.50	4.00	6-7	8.00	4.00	5.00	7-8	9.00
	JACKSON	European	1.50-2	2.50	3-4	5.00	3.00	4.00	4-5	6.00
	BOTHWELL	American	3.00	3.00	5.00	6.00	4.00	5.00	8.00	9.00
	WILTSHIRE	American	2.50	4.00	5.00	7.00	5.00	7.00	8.00	10.00
	MORTON	American	2.50-3	4-5	...	6.00	...	7-8	...	...
	NEW BELMONT	American	2.00	2.50-3	3.50	4-4.50	2.50	3.50	6.00	7.00
	NEW BELMONT	European	1.00	1.50	2.00	2.50	2.00	2.50	3.50	4.00
	SHOREHAM	American	2.50	2.50	5.00	6.00	5.00	...	6.00	...
	CLARENDON	American	2.00	2.50-3	4.00	5-5.50	3.00	3.50	6.00	6.50-7
	SOTHERN .....	...	2.50	3.00	5.00	6.00	4.00	5.00	7.00	8.00
Pennsylvania Avenue:										
	CRAIG HALL	American	2.50	...	5.00	5.00	3.00	...	6.00	6.00
	NEW CHATHAM	American	2.50	3.00	4.00	...	...	4.00	6.00	...
	ST. CLARE	American	2.50	3.00	5.00	6.00	3.50	4.00	7.00	8.00
	HAMPTON TERRACE	American	2.50	...	4.00	5.00	...	...	...	...
North Carolina Avenue:										
	PEMBROKE	American	1.00	1.00	2.00	2.50	...	...	...	...
	PEMBROKE	European	.50	.50	1.00	1.50	...	...	...	...
	COLONIAL	American	3.00	4.00	5.00	6.00	...	...	...	...
	COLONIAL	European	2.00	2.50	3.00	4.00	...	...	...	...
South Carolina Avenue:										
	ROXBOROUGH	American	2.00	...	4.00	...	...	...	...	...
	ROXBOROUGH	European	1-1.50	...	2-3	...	...	...	...	...
	LLOYD	American	1.50	2.00	3.00	3.00	...	...	...	...
	LLOYD	European	1.00	1.25	2.00	2.00	...	...	...	...
	IROQUOIS	American	2.50	3.00	4.00	5.00	...	...	...	...
	IROQUOIS	European	1-1.50	1.50-2	2-2.50	2-2.50-3	3.00	3.50	6.00	7.00
	RADNOR	American	1.50	2.00	3.00	...	2.00	2.50	3.00	4.00
	RADNOR	European	.75	1.00	1.50	...	...	...	...	...
Ocean Avenue:										
	BON AIR	American	1.50	...	3.00	...	...	...	...	...
	RENOVO	American	2.00	...	3.00	...	...	...	...	...
Tennessee Avenue:										
	CONTINENTAL	American	2.00	3.00	4.00	5.00	3.00	5.00	5.00	8.00
	CONTINENTAL	European	1.00	1.50	2.00	2.50	2.00	3.00	3.00	4.00
	FREDONIA	American	2.00	2.50	4.00	5.00	3.00	3.50	5.00	6.00
	FREDONIA	European	1.00	1.50	2.00	3.00	2.00	2.50	3.00	4.00
	HOWARD HOUSE	American	1.50	2.00	3.00	4.00	...	...	...	...
	LOUVAN	American	1.50	...	3.00	...	...	...	...	...

TABLE OF DAILY RATES AND ACCOMMODATIONS OFFERED BY ATLANTIC CITY HOTELS—(Continued)

	Plan.	For 1 Person.		Double Room.	Extra Large Room.	Single Room.	Double Room.	Double Room.	Extra Large Room.
		Single Room.	Double Room.						
BEAUMONT	American	1.50	3.00	3.00	4.00	...	...	...	...
WILSON	American	2.00	3.00	3.00	...	...	...	...	...
St. James Place:									
SEA CREST	American	2.00	3.00	4.00	...	3.00	4.00	5.00	...
SEA CREST	European	1.00	2.00	3.00	...	2.00	3.00	4.00	...
DE LA MAR	American	1.50	2.00	3.00	4.00	...	2.50	5.00	...
RALSTON	American	1.75	2.25	3.50	5.00	...	...	...	...
New York Avenue:									
MORRIS	American	2.00	2.50	4.00	5.00	...	3.00	5.00	5.00
MORRIS	European	1.00	1.50	2.00	2.50	...	1.75	2.50	2.50
BINGHAM	American	1.50	2.00	3.00	5.00	...	...	...	...
BINGHAM	European	1.00	...	...	...	...	...	...	...
ROANOKE	American	2.00	2.50	3.50	4.50	...	...	...	...
ROANOKE	European	1.00	1.50	2.00	2.50	...	...	...	...
HYGEIA	American	1.50	2.00	3.00	4.00	...	...	...	...
HYGEIA	European	1.00	1.50	1.50	2.50	...	...	...	...
NETHERLAND	American	2.50	3.00	4.00	...	...	4.00	7.00	...
Kentucky Avenue:									
BRETTON HALL	American	2.00	2.50	3.00	4.00	...	...	...	...
BRETTON HALL	European	1.00	1.50	1.50	2.50	...	...	...	...
ACME	American	2.50	3.00	4.00	5.00	...	...	...	...
WESTMINSTER	American	2.00	...	3.00	4.00	...	...	...	...
WESTMINSTER	European	1.00	1.50	2.00	2.00	...	...	...	...
STICKNEY	American	2.00	2.50	4.00	5.00	3.00	4.00	6.00	...
STICKNEY	European	1.25	2.00	3.00	3.00	...	...	...	...
Michigan Avenue:									
PENNHURST	American	2.50	3.00	5.00	6.00	4.00	5.00	7.00	8.00
EDISON	American	2.00	2.50	4.00	4.00	3.00	3.00	5.00	5.00
EDISON	European	1.50	1.50	3.00	3.00	2.00	2.50	4.00	4.00
Missouri Avenue:									
SPEIDEL	American	2.00	2.00	4.00	4.00	...	...	...	...
Pacific Avenue:									
HALL'S (No. 1311)	American	2.00	2.50	4.00	5.00	...	...	...	...
HALL'S (No. 1311)	European	1.00	2.00	2.00	3.00	...	...	...	...
WITTIG'S (No. 1421)	European	1.00	...	1.50	...	...	...	...	...
McCLELLAND'S (No. 1722)	American	1.75	3.00	4.00	4.50	...	...	...	...
McCLELLAND'S (No. 1722)	European	1.00	2.00	2.50	3.00	...	...	...	...
LXINGTON	American	2.00	3.00	4.00	5.00	...	...	...	...
LXINGTON	European	1.50	2.00	2.00	2.50	...	...	...	...



KEY TO ATLANTIC CITY HOTEL MAP.

- ON THE BOARD WALK:
1. Royal Palace
 2. Rudolf
 3. St. Charles
 4. Seaside House
 5. Haddon Hall
 6. Chalfonte
 7. Poinsettia
 8. Young's
 9. Windsor
 10. Traymore
 11. Brighton
 12. Marlborough-Blenheim
 13. Dennis
 14. Shelburne
 - *15. Chelsea. (Hotel is one-half mile down board walk from termination of map.)
- RHODE ISLAND AVENUE:
16. Westmont
- MASSACHUSETTS AVENUE:
17. Lelande
 18. Phillips House
 19. New Avalon

- CONNECTICUT AVENUE:
20. Troxell Hall
- NEW JERSEY AVENUE:
21. Pierrepont
- ST. CHARLES PLACE:
22. Raleigh
- DELAWARE AVENUE:
23. Leith Villa
- STATES AVENUE:
24. Hanlon
- MARYLAND AVENUE:
25. Imperial
 26. Allenhurst
- VIRGINIA AVENUE:
27. Islesworth
 28. Ponce de Leon
 29. Avon Inn
 30. Berkshire Inn.
 31. Victoria
 32. Colonnade
 33. Jackson
 34. Rothwell
 35. Wiltshire
 36. Morton

37. Belmont
 38. Shoreham
 39. Clarendon
- PENNSYLVANIA AVENUE:
40. Craig Hall
 41. New Chatham
 42. St. Clare
 43. Hampton Terrace
- NORTH CAROLINA AVENUE:
44. Pembroke
- SOUTH CAROLINA AVENUE:
45. Roxborough
 46. Lloyd
 47. Iroquois
 48. Radnor
- OCEAN AVENUE:
49. Bon Air
 50. Renovo
- TENNESSEE AVENUE:
51. Continental
 52. Fredonia
 53. Howard House
 54. Louvan
 55. Beaumont

- ST. JAMES PLACE:
56. De La Mar
 57. Ralston
- NEW YORK AVENUE:
58. Morris
 59. Bingham
 60. Roanoke
 61. Hygeia
- KENTUCKY AVENUE:
62. Bretton Hall
 63. Acme
 64. Westminster
 65. Stickney
- MICHIGAN AVENUE:
66. Pennhurst
 67. Edison
- MISSOURI AVENUE:
68. Speidel
- PACIFIC AVENUE:
69. Hall's (No. 1311)
 70. Wittig's (No. 1421)
 71. McClelland's (No. 1722)
 72. Lexington

THE MEETING PLACES

The following is a list of the various meeting-places arranged by the Local Committee of Arrangements at Atlantic City for the various meetings:

- OPENING SESSION—(Tuesday at 10:30 a. m.), Auditorium, Young's New Pier.
 HOUSE OF DELEGATES—Traymore Solarium.
 BOARD OF TRUSTEES—Marlborough-Blenheim (Committee Room).
 JUDICIAL COUNCIL—Marlborough-Blenheim.
 PRACTICE OF MEDICINE—Marine Hall, Steel Pier.
 SURGERY AND ANATOMY—Ocean Hall, Steel Pier.
 OBSTETRICS AND DISEASES OF WOMEN—Casino Hall, Steel Pier.
 DISEASES OF CHILDREN—First Presbyterian Church, Pacific and Pennsylvania Avenues.
 NERVOUS AND MENTAL DISEASES—Brighton Casino.
 PHARMACOLOGY AND THERAPEUTICS—Jewish Synagogue, Pacific and Pennsylvania Avenues.
 HYGIENE AND SANITARY SCIENCE—Baptist Church, Pacific Avenue, near Pennsylvania Avenue.
 PATHOLOGY AND PHYSIOLOGY—Central M. E. Church, 1213 Pacific Avenue.
 OPHTHALMOLOGY—Parochial Hall No. 1, Top Floor, Tennessee and Pacific Avenues.
 LARYNGOLOGY AND OTOTOLOGY—Parochial Hall No. 2, Second Floor, Tennessee and Pacific Avenues.
 CUTANEOUS MEDICINE AND SURGERY—Olivet Church, Tennessee and Pacific Avenues.
 STOMATOLOGY—Olivet Church Sunday School Room, Tennessee and Pacific Avenues.
 REGISTRATION AND BUREAU OF INFORMATION—Young's Old Pier.
 POSTOFFICE, TELEGRAPH AND TELEPHONE—Young's Old Pier.
 COMMERCIAL AND SCIENTIFIC EXHIBITS—Young's Old Pier.
 PRESIDENT'S RECEPTION—Wednesday night, Steel Pier.
 LADIES' AFTERNOON TEA—Marlborough-Blenheim.

THE SCIENTIFIC EXHIBIT

Prospect of an Excellent Display—Announcement of Prizes to Be Awarded

The prospects for the Scientific Exhibit at the Atlantic City Session are most flattering. Generous contributions are already assured from Philadelphia, New York, Boston and other cities. To prospective exhibitors it may be said that as a rule serial exhibits, in illumination of some phase of pathology or experimental investigation, prove most instructive. On the other hand, however, very rare specimens of whatever sort are acceptable.

To stimulate wholesome competition the plan of a year ago will be followed of granting awards of honor to a few exhibitors presenting unusually meritorious work.

Diplomas of Honor.—To a very limited number of institutions or individuals presenting exhibits of superior merit, the committee on awards will grant illuminated diplomas bearing engravings of Harvey, Pasteur, Koch and Davis, formally signed by officials of the Association.

Gold Medals.—For the best exhibit of research work, and for the best tuberculosis exhibit.

The latter, however, must comply with the following requirements: (a) The exhibit must be comprehensive and complete in elucidating the whole tuberculosis problem, in a manner plain and convincing to the lay mind; covering the causation, nature, prevention and cure of the disease. (b) The exhibit must excel in stability, compactness and adaptability for installation in railway stations, postoffice buildings and public libraries. The usual tuberculosis exhibits are cumbersome and expensive to maintain. Necessarily they have only been presented in large cities, and then at long intervals and for brief periods. It is hoped to develop a model exhibit, which will occupy small space and can be maintained constantly at small expense by public health authorities in the public buildings of smaller cities.

FRANK B. WYNN, Director, Indianapolis.

ENTERTAINMENTS

The Usual Program of Entertainments Arranged for the Coming Session

The usual cordial hospitality of Atlantic City will be extended to the visiting physicians and the ladies who accompany them. The President's reception, the principal and most formal social function of the meeting, will be held Wednesday night on the Steel Pier. This is an opportunity for meeting the President, as well as the other officials of the Association, and, with its accompaniment of music and dancing, provides a most delightful relaxation from the study of medical subjects in the various section meetings during the day.

The Ladies' Afternoon Tea will be given this year at the Marlborough-Blenheim Hotel. Other events have been arranged for the entertainment of the ladies, in accordance with the custom of providing special attractions for the wives, daughters and other ladies who accompany members of the Association.

A complete and detailed list of entertainments provided is not yet ready for publication, but there will be no lack of entertainment of this sort at the coming session.

A number of the sections, as usual, will hold banquets on Tuesday evening. An announcement of these will be made later. Some sections will hold formal dinners and others will have informal smokers, in some cases different sections meeting together. The Section on Nervous and Mental Diseases will hold its dinner Tuesday evening at 7:30 at the Marlborough-Blenheim Hotel.

THE ORATIONS

New Arrangements for Presentation of the Annual Orations Before the Sections

By a change in the arrangements effective with the last session, the Oration on Medicine, the Oration on Surgery, and the Oration on State Medicine will not be delivered in the evenings, but will be delivered before the sections. These will be scheduled in the official program, so that all may make arrangements to hear these formal addresses.

The Oration on Medicine will be delivered by Dr. James B. McElroy, Memphis. The Oration on State Medicine will be delivered by Dr. John S. Fulton, Baltimore. The Oration on Surgery will be delivered by Dr. Harvey Cushing, Baltimore.

Excursions

Attendance at the annual session is always made an opportunity to combine pleasure and instruction. Many members have arranged side trips of various sorts, but no special endeavor has been made to record these. The Association has met three times before this in Atlantic City and members are somewhat familiar with the opportunities for side trips and excursions. The railroads are ready, as usual, to aid in the planning of these side trips.

Bureau of Information

A Bureau of Information will be maintained adjoining the Registration Bureau, on Young's Old Pier, where information with regard to hotels, transportation, registration, meeting places, exhibits, entertainments, etc., may be obtained. In connection with this bureau branch telegraph and telephone offices will be maintained.

Postoffice and Telegraph

Mail matter and telegrams may be addressed in care of the American Medical Association, Young's Old Pier, Atlantic City. They will be sent direct to the postoffice, which adjoins the Registration Bureau. Telegrams and special delivery letters will be forwarded from there to the hotels or other stopping places of those whose addresses are recorded at the Registration Department or the Bureau of Information. It is preferable, however, to arrange hotel accommodations in advance so that one's friends and business acquaintances may use the hotel address.

ATLANTIC CITY

The Next Meeting Place of the American Medical Association

JAMES NORTH, M.D., D.D.S.

ATLANTIC CITY

There is no city in the United States which possesses, for the medical practitioner, the varied charms of this "Queen City by the Sea," America's greatest pleasure and health resort. Atlantic City. Not that it is a great center of learning, with famous universities, colleges and hospitals; not that, from it radiates the teachings of world-famous masters of the healing art; nor that its soil holds the honored dust of the great disciples of Æsculapius. No, none of these, but a subtler, more indefinable charm that woos the mind from the cares of life, and the exactions of the profession; a charm of

spects the most unique and interesting. In this result, the medical profession has been the chief factor, not only in its conception but in its growth and popularity. From the inspiration of Dr. Jonathan Pitney of Absecon, who, back in the forties, saw with prophetic vision its possibilities and preached the evangel of this island of health, to the enthusiastic gatherings of the American Medical Association within its gates, is but a few score years; but that period contains the epitome of the city's fame, and of the splendid fidelity of the profession, that believed in it first, last and all the time.

In its many-sided variety, Atlantic City surpasses, in the charms of novelty and ever-shifting life, the most celebrated watering-places of either this country or of the old world, and above all, is the most cosmopolitan, the most democratic. Most generously favored by nature in its geographical situation, outside the earthquake, hurricane and tidal-wave zones;



Fig. 2.—Young's Old Pier, containing Registration Bureau, Information Bureau, Scientific Exhibit, Commercial Exhibit, Telegraph and Telephone Booths, Branch Postoffice, etc. These illustrations are reproduced from copyrighted photographs kindly furnished by Harper B. Smith Co., photographers, Atlantic City.

unalloyed rest that engenders a strength and determination to return to one's duties and to live up to one's possibilities.

It is not alone the supposedly hopeless patients, who, amid its environments gain a new lease of life, that sound the praises of its invigorating, health-restoring climate; but the great multitude of overworked, nervous, broken-down human beings, who come as skeptics and go away believers, to whom a day, a week, a month gives new energy, new joy. To these add the millions who come for pleasure alone, and who take away with them, memories never to be forgotten, of joyous days and still more joyous nights.

It is no idle boast to say that, "Atlantic City is the greatest health and pleasure resort in the world," and in many re-

surrounded by the waters of the Atlantic Ocean, blessed with a climate of rare equability, 61 per cent. of sunshine and an annual average temperature of 52 degrees; bountifully supplied with pure spring water, which is pumped through eighty-two miles of mains into every building within its limits; protected as regards its sewerage of over sixty miles of pipes, with the most approved appliances and methods of modern science; well lighted; well paved; it enjoys not only superb physical advantages, but the no less important ones of up-to-date hygiene.

Absecon Beach, on which the city is built, is in very truth a gift of the sea, whose every incoming wave for ages past has deposited its tribute of glistening sand until an island

ten miles long, from one-half to three-quarters of a mile wide, covering 5,575 acres, rises safe and secure above the tumbling combs of the ever-rolling surf. Extending nearly due east and west, it faces the south and catches the prevailing southwest breezes, fresh and cool from the ocean, through the long summer days and nights, while the inhabitants of the inland towns suffer from excessive heat. In winter, it lies exposed to the tempering rays of the sun and the warm currents of the Gulf Stream which lave its shores, making the temperature a number of degrees warmer than on the mainland seven miles away. Seaward, the waves stretch for three thousand miles or more to the shores of the eastern continents, while landward it is separated from the main shore of New Jersey by a wide thoroughfare, or channel, through which vessels pass and the salt tides ebb and flow ceaselessly.

Still beyond this is a great expanse, seven miles wide, of salt bays and meadow land, green in spring and red as a sunset sky in autumn, widening out to meet the uplands, whose vast forests of fragrant pine mingle their balsamic odors with the ocean's briny breath. The broad and shelving beach, "the

and steam launches—a hundred and fifty or more—are always in readiness to take visitors sailing on the smooth and quiet waters of the bays or out beyond the white capped breakers and beyond the sight of land. These boats are equipped with fishing-tackle and bait, and the skippers are familiar with the waters and the best fishing grounds along the coast. The ocean promenade, or Boardwalk, is peculiarly and distinctly an Atlantic City invention, or better, inspiration, and is known the wide world round. Here the idea originated, and from a few loose boards laid along the beach to keep the visitors from sinking in the soft sand, it has grown into its present proportions, seven miles long and at no point less than twenty feet wide.

It presents in all its length an unobstructed view of the strand and sea. This monument of municipal achievement cost some three hundred thousand dollars and is securely built on steel piling, elevated ten or fifteen feet above the strand and is brilliantly lighted every night in the year by myriads of incandescent electric lights, festooned above. Arrangements are about completed to extend the walk to Long-



Fig. 3.—Atlantic Yacht Club.

world's playground," affords not only a safe, but the finest surf-bathing-ground in the world, on which it is no uncommon sight to see from forty to fifty thousand happy mortals disporting and revelling amid the tossing, cooling waves, or sitting and strolling on the clean white sand. Modern bathing establishments, where costumes and all conveniences are provided, render it possible for a hundred and fifty thousand persons to bathe during a day without crowding or discomfort. For the comfort and protection of this multitude, the city maintains a beach patrol of fifty-five trained men equipped with boats and life-saving apparatus, as well as a beach hospital under the direction of an able surgeon, though there is little demand for such services.

The open sea and many bays and inlets render sailing, fishing, crabbing and gunning delightful features of Atlantic City life. At the inlet a fleet of swift and safe pleasure yachts

port, the extreme end of the island, which will give it a total length of ten miles, the most complete, most beautiful and grandest walk on earth. The walk is lined on the inside with hundreds of stores, shops and bazaars stacked with the richest wares from all quarters of the globe; Oriental porcelains and rugs; Italian mosaics and statuary; French jewelry and gowns; English, German, Russian and Scandinavian art works; Mexican and Indian handiwork—in fact, no nation of the world but contributes to the innumerable beautiful and useful articles here displayed to the best advantage.

On this promenade in the eventide of spring and summer march and countermarch the most cosmopolitan, the most fashionable throug to be seen anywhere. Here, beneath the glow of the festooned lights, mid the enchanting strains of music wafted from the crowded and brilliantly lighted piers, garbed in the coors of the rainbow, joyous and happy with

laughter and jest, this human garland of health and beauty stretches itself along the walk to admire and be admired.

On Easter Sunday the display of rich and fashionable gowns and beautiful millinery is unsurpassed, even in the Bois de Boulogne of Paris, or Rotten Row in London.

An advantage possessed by Atlantic City over her sister cities, is her permanence. The resident population is now over 45,000; it is doubling every ten years, and developing wide-awake business men who, by their energy and foresight, are striving to make this, not only the most popular, but the most beautiful of seaside cities, a consummation soon to be realized, if the plans adopted are worked out. The ever increasing number of wealthy and intellectual residents is forming a social community which adds its charm to those who enjoy an atmosphere of education and refinement, while the transient sojourners, in some years numbering ten millions or more from all lands of the earth, gives it a truly cosmopolitan coloring that might be envied by older cities of

carriage and automobile rides, which are kept clean and in good repair, and in the summer are well sprinkled daily. The streets are regularly laid out at right angles, and lined with buildings great and small that present the greatest and most pleasing variety of architecture imaginable. Over ten thousand buildings grace the streets, one thousand of which are hotels ranging from the great beach-front houses which cost millions to erect, and which are capable of accommodating a thousand or more guests at one time, in all the comfort and luxury obtainable in the great metropolis of the world, to the modest boarding houses, homelike and inexpensive. There are five national banks and three trust companies, the deposits in which amount to \$10,000,000 at the height of the season; thirty-three churches of all denominations; twelve public school buildings; a public library, five theaters, five ocean piers, extending into the sea from one thousand to two thousand eight hundred and four feet, two city hospitals, a lighthouse one hundred and sixty-seven feet high, the light



Fig. 4.—Easter Parade on the Board Walk, April 11, 1909, showing also Hotel Chalfonte, headquarters for the Section on Surgery and Anatomy.

Continental Europe. With a municipal government, interested in the comfort and welfare of all who visit the city, there is an efficient police force for the preservation of order, a competent lifeguard of selected men to look after the bathers; an excellent paid fire department, well-manned and well-equipped with the most improved fire-fighting apparatus; and a well-organized Publicity Bureau to answer every question and to tell a thousand interesting things, which this short article can not undertake.

Electric lights at night on all the streets make this one of the best-lighted cities in the country and as safe for visitors as by daylight. Electric cars run the whole length of the island and from the beach to the mainland, giving opportunity for cheap trolley rides of many miles, while busses and other vehicles are to be found at all points.

There are over sixty miles of broad avenues, paved with asphalt, bitulithic, brick and wooden blocks, delightful for

of which is visible nineteen miles at sea, a postoffice where the sale of stamps alone amounts to over two hundred thousand dollars annually, seven newspapers, three daily and four weekly, one of the finest golf courses in the country, eight holes 6,000 yards, a wireless station, and everything else that adds to the pleasure and comfort of man.

Railroad facilities constitute a most important factor in the development of every city and in that respect Atlantic City is especially favored. With two third-rail electric roads, two double-tracked steam lines to Philadelphia, and two to New York, the city is brought into immediate rail connection with the 35,000,000 people who reside within a radius of five hundred miles from the city hall, about 10,000,000 of whom visit Atlantic City annually. The nine fastest trains in the world run to and from Atlantic City and cover the distance of sixty miles to Philadelphia in less than an hour and to New York City in three hours; in all respects, luxury,

comfort, speed and safety—the most complete system to be found anywhere.

The amusements are many and varied. Horse shows at which the finest stables of the country are represented; dog shows, with canines from the best kennels; baseball and golf contests, yacht races, carnivals, etc. Excellent dramatic and musical entertainments claim the attention of visitors; five theaters cater to the public and the best companies—dramatic and operatic—appear on their boards. In fact, it is quite the vogue to make Atlantic City the place for the premier performances of new plays, many having phenomenal success in the great cities were successfully launched here. Balls on the piers and at the hotels, as well as orchestra and band concerts, are of nightly occurrence; in fact, there is not a minute of the day or night that may not be filled with mirth and enjoyment. The larger hotels maintain excellent orchestras throughout the season, and at the piers and casino they perform the year round.

City lies at least twenty miles east, the farthest point out, in a southeasterly direction and nearest the Gulf Stream, which approaches at that point within thirty miles. The effect of this great ocean current on the climate of Atlantic City is most apparent, making it similar and in many respects like that of Ireland and parts of England, save the moisture, which is here at the minimum, the average rainfall being about 51 inches and the average temperature 51.6 degrees.

The soil is sandy and porous, readily and quickly absorbing what little fog and dew falls, as well as the slight snowfalls which rarely last long enough for a good day's sleighing, while mud is something almost unknown, as the heaviest rains disappear like magic. The city water is pumped from artesian wells; some of the larger hotels supply their own water from a stratum 900 feet deep, and from the mainland out of the primitive cedar forests. It is clear and remarkably free from impurities, the total dissolved solids are equivalent to less than two grains per gallon in the cedar water, and three



Fig. 5.—Scene on the Board Walk in January, showing in the foreground Hotel Traymore, headquarters for the Section on Diseases of Children; in the center, the Brighton Casino, meeting place for the Section on Nervous and Mental Diseases and beyond, with the dome, the Marlborough-Blenheim, the general headquarters.

The rolling chair has become a permanent feature of the walk; not only invalids patronize them, but the well and strong indulge in the exhilarating pastime, and the floral parades, in which the chairs are decked with the most beautiful of flowers and gorgeous streamers, are sights well worth seeing. It takes the memories of the aged back to the days of Bath, when the beaux and belles of England rode in their sedan chairs; while the younger generations are reminded of the carnivals of the lands of flowers.

Atlantic City is the health resort par excellence of the east. The general direction of all the islands of the coast is from southwest to northwest, save Absecon Beach, which runs more to the west, facing nearly to the south. If a line be drawn from Irvington-on-the-Hudson to Cape May, giving the general trend of the coast, it will be seen that Atlantic

City lies at least twenty miles east, the farthest point out, in a southeasterly direction and nearest the Gulf Stream, which approaches at that point within thirty miles. The effect of this great ocean current on the climate of Atlantic City is most apparent, making it similar and in many respects like that of Ireland and parts of England, save the moisture, which is here at the minimum, the average rainfall being about 51 inches and the average temperature 51.6 degrees.

The reputation Atlantic City is gaining as a convention city is becoming world wide. Its central location and proximity to the great cities of the east and middle west, with its excellent train connections and all the advantages heretofore mentioned, bids fair to place it first in this respect. It now

averages over one hundred important state and national conventions annually.

The prevailing winds are from the southwest and in their passage over the wide expanse of ocean are purified and laden with ozone, which strengthens the vital processes and stimulates the nervous system. This is the paradise for patients suffering from functional disturbances, nervous prostration, overwork of either mind or body, depression, indigestion, insomnia or torpid states of the system, convalescents from whatever disease—in fact, invalids needing change of climate and the peculiar benefits of this, the most healthful spot on earth. The personal testimony of thousands of physicians all over the world, who have visited and sent their patients here, and still better, the corroboration of the tens of thousands of patients themselves, living examples of the assertions herein set forth, will be most conclusive to the worried, overtaxed physician who is baffled in his treatment of such patients, and the sufferers themselves, whose pain and discomfort is so miraculously relieved by the balmy air and the ideal environments of this Queen City by the Sea.

SECTION ON PRACTICE OF MEDICINE

CHAIRMAN, JOSEPH L. MILLER, CHICAGO; SECRETARY, WILDER TILESTON, BOSTON.

Medical Supervision of Boarding Schools and of Athletic Contests Among School Boys (10 minutes). Nathaniel Bowditch Potter, New York.

An Experimental Study of Gastric Tetany (15 minutes). W. G. MacCallum, Baltimore.

Chronic Infections Endocarditis (15 minutes). Frank Billings, Chicago.

Diverticulum of the Pylorus (5 minutes). Allen A. Jones, Buffalo.

Cardiac and Vascular Complications in Pneumonia with Special Reference to Treatment (15 minutes). Frederick Forchheimer, Cincinnati.

Clinical Significance of Indicanuria (10 minutes). Judson Daland, Philadelphia.

The Diagnostic Value and Limitations of Analysis of the Gastric Contents (15 minutes). Charles G. Stockton, Buffalo.

X-Ray Evidence in Gastric Cancer (15 minutes). A. W. Crane, Kalamazoo, Mich.



Fig. 6.—View of the Board Walk and the strand, showing hotels from left to right: Shelburne, Dennis, Marlborough-Blenheim and Traymore.

SECTION PROGRAMS

The following is a partial list of titles of papers to be read before the various sections. The order here is not necessarily the order which will be followed in the Official Program. This Official Program will be similar to those issued in previous years, and will contain the final program of each section, with abstracts of the papers, lists of committees, programs of the General Meetings and of the meetings of the House of Delegates, lists of entertainments, map of Atlantic City, etc. To prevent misunderstandings and to protect the interests of advertisers, etc., it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each member on registration.

The Diagnostic Importance of Examination of the Feces (15 minutes). Charles P. Emerson, Clifton Springs, N. Y.

The Diagnostic Value of Stained Specimens of Stools in Cancer of the Stomach (5 minutes). Philip King Brown, San Francisco.

Resorption of Proteids, Carbohydrates and Fats in the Chronic Alcoholic (15 minutes). Alexander Lambert, New York.

The Determination of Trypsin in the Stomach Contents After the Oil Test Meal (10 minutes). Clifford B. Farr, Philadelphia.

Oration in Medicine: Tropical Diseases, America's Opportunities and Obligations. James B. McElroy, Memphis.

Transmission of Malarial Fever in the Canal Zone by Anopheles Mosquitoes (15 minutes). Samuel T. Darling, Ancon, Canal Zone, Panama.

The Present Status of the Serum Treatment of Epidemic Cerebrospinal Meningitis (15 minutes). Simon Flexner, New York.

- The Retention of Alkali by the Kidney, with Special Reference to Acidosis (15 minutes). Herman M. Adler and Gerald Blake, Boston.
- Amebic Dysentery (15 minutes). Sidney K. Simon, New Orleans.
- The Association of Aortic Insufficiency with Syphilitic Aortitis (10 minutes). Warfield T. Longcope, Philadelphia.
- Clinical Value of Recent Studies in Experimental Nephritis (15 minutes). Henry A. Christian, Boston.
- Hypertension in Nephritis: Its Cause and Treatment (15 minutes). John H. Musser, Philadelphia.
- The Value and Limitations of Salt-Free Diet and Restriction of Fluid in Nephritis (15 minutes). Victor C. Vaughan, Ann Arbor, Mich.
- The Management of Uremia (15 minutes). Edward F. Wells, Chicago.
- Report of Committee on Revision of the Pharmacopeia (20 minutes). Thomas McCrae, Baltimore.
- Rocky-Mountain Spotted Fever, with Lantern Slide Demonstration (20 minutes). H. T. Ricketts, Chicago.
- The Talma-Morison Operation in the Treatment of Cirrhosis of the Liver (15 minutes). George Dock, New Orleans.
- Algid Forms of Malaria, with Report of Cases (15 minutes). Thomas D. Coleman, Augusta, Ga.
- A Study of the Anatomy and Clinical Importance of the Sacro-iliac Joint. Fred H. Aibee, New York City.
- The Endometrium and Some of Its Variations. William S. Gardner and Emil Novak, Baltimore.
- The Treatment of Certain Vesical Affections by Means of Hydraulic Distension. Edgar Garceau, Boston.
- Chronic Appendicitis with Chronic Perienteritis and Intestinal Obstruction Due to Infolding of Mucosa. Report of a Case. Presentation of Specimens. Francis D. Donoghue, Boston.
- The Pathology of Eclampsia and Toxemia of Pregnancy. J. E. Welch, New York City.
- Study of Eclampsia, With Results in Two Hundred and Fifty Cases, From the Wards of the Lying-In Hospital of New York City. Ross McPherson, New York City.
- The Present Status of Irrigation and Drainage in Obstetric and Gynecologic Operations. Horace G. Wetherill, Denver.
- Some Factors Which Contribute to Low Mortality in Abdominal Surgery. F. F. Simpson, Pittsburg.
- Remote Results of Conservative Surgery of the Ovaries. John Osborn Polak, Brooklyn.
- The Etiology and Prophylaxis of Postoperative Thrombo-Phlebitis. Daniel H. Craig, Boston.
- Curettage for Uterine Hemorrhage. Howard A. Kelly, Baltimore.



Fig. 7.—A view of the beach in summer, thousands enjoying themselves playing in the water on the strand.

- The Value of Alimentary Levulosuria in the Diagnosis of Hepatic Cirrhosis (10 minutes). John H. Musser and Edward H. Goodman, Philadelphia.
- The Nature and Treatment of Anemia (15 minutes). S. P. Beebe and W. Gilman Thompson, New York.
- The Value of Baths and Exercises in the Treatment of Heart Disease (15 minutes). Robert H. Babcock, Chicago.
- Value of Physical Training (15 minutes). H. B. Favill, Chicago.
- The Value of Bier's Hyperemia in the Treatment of Joint Affections (15 minutes). Willy Meyer, New York.
- Massage in General Medicine (15 minutes). John K. Mitchell, Philadelphia.
- The Work of a Cooperative Hydrotherapeutic Establishment (15 minutes). Joseph H. Pratt, Boston.
- SECTION ON OBSTETRICS AND DISEASES OF WOMEN**
- CHAIRMAN, WALTER P. MANTON, DETROIT; SECRETARY, C. JEFF MILLER, NEW ORLEANS.
- Chairman's Address: Mental Alienation in Women and Abdomino-Pelvic Disease. Walter P. Manton, Detroit.
- The Operation of Choice for Retrodisplacements of the Uterus. A. E. Benjamin, Minneapolis.
- Some Minor Gynecologic Matters Which Are Often Overlooked. I. S. Stone, Washington, D. C.
- A Method of Complete Nephroureterectomy in Women. J. Wesley Bovée, Washington, D. C.
- Perineorrhaphy by the Flap-Splitting Method. Charles P. Noble, Philadelphia.
- Fibromyoma of the Uterus. Elliee McDonald, New York.
- Enucleation of Uterine Myomata, Why and When Performed. E. E. Montgomery, Philadelphia.
- Ovariectomy and Myomectomy Early in Pregnancy with Full-Term Delivery. H. Grad, New York City.
- Cancer of the Uterus Too Far Advanced for Radical Operation. H. J. Boldt, New York City.
- Palliative Treatment of Cancer of the Uterus. Walter B. Chase, Brooklyn.
- An Ovarian Abscess Containing a Lumbricoid Worm Within the Cavity. Henry D. Fry, Washington, D. C.
- Tetanus Developing Twelve Days After Shortening of the Round Ligaments. Recovery. Reuben Peterson, Ann Arbor.
- Pelvic Inflammation Apparently Due to Infection from the Rectum. Paul Michinard, New Orleans.

Final Word on the Stem Pessary for Dysmenorrhea, Amenorrhea, Sterility, Etc. J. H. Carstens, Detroit.
Cesarean Section. Wm. H. Wathen, Louisville.
Conditions Simulating Tubal Pregnancy. H. S. Crossen, St. Louis.
Extruterine Pregnancy with Especial Reference to the Proper Operative Period After Tubal Rupture, with Report of Cases. L. G. Bowers, Dayton.
Abdominal Surgery in America. A Historical Review, Largely Personal. H. O. Marey, Boston.
Cystocele. George R. White, Savannah.
An Imbricating and Coaptation Suture as a Safeguard Against Hernia. D. Tod Gilliam, Columbus, Ohio.

SECTION ON SURGERY AND ANATOMY

CHAIRMAN, JOHN C. MUNRO, BOSTON; SECRETARY, JOHN F. BINNIE, KANSAS CITY, MO.

Chairman's Address: John C. Munro, Boston.

Localized Subphrenic Tuberculosis. C. A. Powers, Denver, Colo.

Treatment of Tuberculous Pleuritis and Empyema. Emil G. Beck, Chicago.

Report of Twenty Cases of Perforated Gastric and Duodenal Ulcer. J. H. Gibbon and F. T. Stewart, Philadelphia.
Intussusception. W. J. Frick, Kansas City, Mo.
Infections of the Joints. Experimental and Clinical Study. J. B. Murphy, Chicago.
Arthritis Deformans. E. H. Nichols, Boston.
Conservative Treatment of Sarcoma of the Long Bones. W. B. Coley, New York.
The Transperitoneal Operation for the Removal of Bladder Neoplasms. E. S. Judd, Rochester, Minn.
A Radical Operation for Certain Forms of Hydrocele. Willard Bartlett, St. Louis, Mo.
Dilatation Treatment of Urethral Stricture. V. C. Pederson, New York.
Some Therapeutic Possibilities of Cholecystostomy. L. L. McArthur, Chicago.
Surgery of the Large Intestine. W. J. Mayo, Rochester, Minn.
The Treatment of the Appendix Stump. Van Buren Knott, Sioux City, Iowa.
Consideration of the Mortality of Appendicitis. LeGrand Guerry, Columbia, S. C.
Causes of Death in Acute Intestinal Obstruction and Kindred Conditions (10 minutes). J. W. D. Maury, New York.



Fig. 8.—Another view of the beach, this one taken in August.

Address on Thoracic Surgery. Prof. P. L. Friedrich, Marburg, Germany.

Pneumectomy with the Aid of Differential Pressure; An Experimental Study. The New Type of Apparatus Used. Willy Meyer, New York.

Anastomotic Button in Intrathoracic Surgery (10 minutes). J. W. D. Maury, New York.

Electrical Anesthesia. Raymond Russ, San Francisco.

Report of Anesthesia Committee (10 minutes).

The Operative Treatment of Fractures. W. Arbuthnot Lane, Esq., London, Eng.

Operative Treatment of Fractures. William Darrach, New York.

A Plea for the More Careful Diagnosis of Fractures and Their Treatment. E. D. Martin, New Orleans.

Metallic Clips for the Closure of Wounds of the Skin and Hollow Viscera. E. Wyllys Andrews, Chicago.

The Pseudoperitoneum. A. E. Hertzler, Kansas City, Mo.

The Early Symptoms of Upper Abdominal Disease. J. B. Deaver, Philadelphia.

Pancreatitis. A. J. Ochsner, Chicago.

Hypertrophic Stenosis of the Pylorus in Infants. Report of Cases Occurring on the Pacific Coast. Stanley Stillman, San Francisco.

Neurectomy for the Relief of Pain in Intra-abdominal Adhesions and in Certain Forms of Dysmenorrhea. M. L. Harris, Chicago.

The Radical Treatment of Epithelioma of the Lip. J. C. Stewart, Minneapolis.

Report of a Case of Sarcoma of the Tonsil. John E. Summers, Jr., Omaha, Neb.

Method of Procedure in Mammary Neoplasms of Doubtful Nature. Wm. L. Rodman, Philadelphia.

Radical Operation in Mammary Cancer. J. N. Jackson, Kansas City, Mo.

Primary Sarcoma of the Spleen. Camillus Bush, San Francisco.

SECTION ON OPHTHALMOLOGY

CHAIRMAN, ALVIN A. HUBBELL, BUFFALO; SECRETARY, ALBERT E. BULSON, JR., FT. WAYNE, IND.

Chairman's Address: Alvin A. Hubbell, Buffalo, N. Y.

The Visual Fields in Hysteria—A Clinical Study of Fifty Cases. Walter R. Parker, Detroit, Mich.

Regeneration of the Cornea. M. Wiener, St. Louis, Mo.

Scissors-Magnet Extraction of Iron from Eyeball. Edward Jackson, Denver, Colo.

Prophylaxis of Interstitial Keratitis. H. Gifford, Omaha, Neb.

The Accommodation and Donder's Curve, and the Need of Revising Our Ideas Regarding Them—An Experimental Study. Alexander Duane, New York, N. Y.

Exhibition of New Instruments and Appliances.

Isolated and Complete Paralysis of the Third Nerve of Traumatic Origin. Lee M. Francis, Buffalo, N. Y.

Unreliability of Astigmatic Fan or Clock Dial Test. David W. Stevenson, Richmond, Ind.

Simple Fibroma of the Orbit. William E. Gamble, Chicago, Ill.

Dropsy of the Optic Nerve Sheath. J. A. Tenney, Boston.

Reflex Aural Neuroses Caused by Eye-Strain—with Report of Cases. Samuel Theobald, Baltimore, Md.

Amethyst Tinted Lenses—A Preliminary Communication. L. Webster Fox, Philadelphia, Pa.

Some Minor Points in the Surgery of Cataract. H. F. Hansell, Philadelphia, Pa.

The Expression of Cataract in Its Capsule—with Report of Forty Operations. H. V. Würdemann, Seattle, Wash.

Expression of Cataracts in the Capsule by the Smith Method. D. W. Greene, Dayton, Ohio.

Galvano-Cautery Puncture in Ectropion and Entropion. S. Lewis Ziegler, Philadelphia.

Rodent Ulcer of the Cornea. R. L. Randolph, Baltimore, Md.



Fig. 9.—Parochial School, meeting place for the Sections on Ophthalmology and on Laryngology and Otology.

Epibulbar Leucosarcoma. Exenteration of the Orbit. No Recurrence at the Original Site. Death in Three Months from Metastases. Casey A. Wood, Chicago, Ill.

Operative Treatment of Glaucoma by Cyclodialysis. Arnold Knapp, New York, N. Y.

The Management of Acute Hemorrhagic Glaucoma in the Presence of Advanced Arteriosclerosis. Charles S. Bull, New York, N. Y.

Primary Hemorrhagic Glaucoma with Probable Sympathetic Inflammation. Mortimer Frank, Chicago, Ill.

Nodular Opacity of Cornea—Etiology. John Green, Jr., St. Louis, Mo.

Practical Importance of Hyperphoria in Prescribing Lenses for Use at Particular Distances and in Different Directions. Mark D. Stevenson, Akron, Ohio.

Tenotomy or Advancement? Lucien Howe, Buffalo, N. Y.

Report of Committee on Collective Investigation Concerning the Ocular Muscles. Lucien Howe, Buffalo, N. Y.

Preliminary Report of Committee on Collective Investigation Concerning Tuberculosis of the Eye. William H. Wilder, Chicago.

Operative Treatment of Papillo-Edema Dependent on Increased Intracranial Tension. G. E. de Schweinitz, Philadelphia.

Surgical Aspects of Cerebral Decompression. Charles H. Frazier, Philadelphia.

A Clinical Investigation on the Relationship of Tuberculosis to Certain Diseases of the Eye. G. S. Derby and T. H. Ayer, Boston.

Neuropathic Keratitis and Some Allied Conditions, with Special Reference to Treatment. F. H. Verhoeff, Boston.

Lachrymal Gland Tumors. L. D. Brose, Evansville, Ind.

SECTION ON LARYNGOLOGY AND OTOTOLOGY

CHAIRMAN, W. SOHIER BRYANT, NEW YORK; SECRETARY, GEORGE E. SHAMBAUGH, CHICAGO.

President's Address. W. Sohier Bryant, New York.

Treatment of Palatopharyngeal Adhesions, New Operation for Their Successful Relief. J. C. Roe, Rochester, N. Y.

A New and Satisfactory Apparatus for Etherization in Operations About the Face and Upper Air Passages. A. H. Miller, Providence.

Benign Tumors of the Turbinate Bodies Clinically and Pathologically Considered. Richard H. Johnston, Baltimore.

Anatomic and Physiologic Considerations Relating to the Faucial Tonsils. C. M. Robertson, Chicago.

Conditions in the Faucial Tonsils Which Call for Operative Interference. Emil Mayer, New York.

A Discussion of the Methods of Operating on the Faucial Tonsils. Norval H. Pierce, Chicago.

General Anesthesia for Tonsil and Adenoid Operations. Francis R. Packard, Philadelphia.

Postoperative Tonsillar Bleeding. Its Surgical Control, with Mention of Cases. Lee Cohen, Baltimore.

Fracture of the Base of the Skull. Charles R. C. Borden, Boston.

Presence of Vincent's Spirilla and Bacilli Fusiformis in Pseudomembranous Anginas. Wm. R. Murray, Minneapolis.

Occurrence of Acute Inflammation of the Nasal Accessory Sinuses, Symptoms and Treatment. David B. Kyle, Philadelphia.

Suppurative Accessory Sinus Diseases in Which an Intranasal Operation Is Indicated. H. W. Loeb, St. Louis.

Diseased Conditions Involving the Nasal Accessory Sinuses in Which an External Operation Is Indicated. C. G. Coakley, New York.

Two Cases of Infectious Labyrinthitis. George F. Cott, Buffalo.

Symptoms of the Intracranial Complications Occurring in Chronic Suppurative Otitis Media. A. B. Ducl, New York.

Indications for Tympanomastoid Exenteration in Cases of Chronic Suppurative Otitis Media Where There Is An Absence of Evidence of an Intracranial Complication. B. A. Randall, Philadelphia.

Conditions Which Constitute Contraindications to the Tympanomastoid Exenteration in Cases of Chronic Suppurative Otitis Media. Eugene A. Crockett, Boston.

Exhibition of Preparations, Instruments, etc.

X-Ray Examination of the Mastoid. Samuel Iglauer, Cincinnati.

The Physiology of the Eustachian Tube. E. P. Fowler, New York.

The Deaf Child and the Physician. John D. Wright, New York.

Correction of Nasal Deformities. Wm. W. Carter, New York.

SECTION ON NERVOUS AND MENTAL DISEASES

CHAIRMAN, M. ALLEN STARR, NEW YORK; SECRETARY, WM. ALEXANDER JONES, MINNEAPOLIS.

President's Address. M. Allen Starr, New York.

Tumors of the Hypophysis. D'Orsay Hecht, Chicago.

Successful Removal of a Cerebellar Tumor. T. Diller and O. C. Gaub, Pittsburg.

Observations on Brain Tumors. Wm. G. Spiller, Philadelphia.

Tumors of the Pons: Four Cases with Necropsy. T. H. Weisenburg, Philadelphia.

Diagnosis of Spinal Cord Tumors, with Report of a Case Operated. J. Grinker, Chicago.

Symposium: The Serum Diagnosis of Syphilis and Its Relation to Diseases of the Nervous System.

(a) On the Value of Serodiagnostic Methods in the Diagnosis of Diseases of the Central Nervous System. B. Sachs, New York.

(b) On the Practical Value of Lymphocytosis and the Globulin Reaction and the Complement-Binding Reaction for Neurology. Max Nonne, Hamburg, Germany.

- (c) Serodiagnosis of Syphilis. Hideyo Noguchi, New York.
- (d) The Wassermann Reaction. E. Castelli, New York.
- (e) A Side Light on the Syphilitic Etiology of Tabes. James J. Putnam, Boston.
- Report of Two Cases of Probable Spinal Cord Lesion Following Pasteur Treatment. Wm. A. Jones, Minneapolis.
- Facial Neuralgia Treated by Deep Injections of Alcohol; 75 Cases Reported. Hugh T. Patrick, Chicago.
- Visual Disturbances in Multiple Sclerosis. Theo. Klingman, Ann Arbor, Mich.
- Optic Atrophy in Tabes. A Diagnostic Symptom in the Differential Diagnosis from General Paresis. E. D. Fisher, New York.
- Muscular Effort in the Non-paralyzed Extremity on Attempting to Move the Paralyzed Extremity in Hemiplegia. Charles W. Burr, Philadelphia.
- The Paralytic Complications of Herpes Zoster. J. Ramsay Hunt, New York.
- Treatment of Occupation Neurosis and Neuritis in the Arms. J. Madison Taylor, Philadelphia.
- The Effect of Intercurrent Disorders on Pre-existing Epilepsy. A. S. Hamilton, Minneapolis.
- Hydrotherapy in the Treatment of Nervous and Mental Diseases. W. B. Spratling, Baltimore.
- The Simulation of Insanity. Charles K. Mills, Philadelphia.
- The Practical Value of the Association Experiment. Pearce Bailey, New York.
- Some Modern Problems in the Care and Treatment of Mental Defectives. L. Pierce Clark, New York.
- A Clinical Study of a Series of Cases of Insanity. H. A. Tomlinson, St. Peter.
- A Study of the Traumatic Insanities. A. C. Brush, Brooklyn.
- Traumatic Neuroses, with a Report of Cases. E. E. Gaver, Columbus.
- Medical vs. Legal Responsibility. Alfred Gordon, Philadelphia.
- The Responsibility of Physicians in Cases which Menace Public Safety. W. R. Dunton, Towson.
- Some Points of Contact Between Neurology and Orthopedic Surgery. J. E. Goldthwaite, Boston.
- Meningitis and Lesions of the Radicular Nerves in Tabes Dorsalis. John H. W. Rhein, Philadelphia.
- Nervous Symptoms of Pellagra. E. D. Bondurant, Mobile.
- Allochiria. Carl D. Camp, Ann Arbor.
- The Syndrome of Thalamus Hemorrhage. Charles L. Dana, New York.

SECTION ON HYGIENE AND SANITARY SCIENCE

- CHAIRMAN, J. H. WHITE, NEW ORLEANS, LA.; SECRETARY, S. T. ARMSTRONG, NEW YORK.
- Chairman's Address: J. H. White, New Orleans.
- The Importance of Consolidation of All the National Health Associations into the Section on Hygiene and Sanitary Science with the Purpose of Making It What It Should Be. J. N. McCormack, Bowling Green, Ky.
- The Relation of the Medical Profession to Preventive Medicine. H. M. Bracken, St. Paul, Minn.
- Popular Education as a Stimulus in Public Health Work. W. M. Brumby, Austin, Texas.
- Preservatives in Food Materials: Their Detection and Effects. D. H. Bergey, Philadelphia.
- The Limitations in Public Health Administration. Henry B. Hemenway, Evanston.
- Vasectomy as the Means of Preventive Procreation in the Defectives. Harry C. Sharp, Indianapolis.
- Public Health Problems. George A. Soper, New York.
- Lake Michigan Water for Drinking Purposes. W. A. Evans, Chicago.
- The French Tobacco Factory at Issy, near Paris: Hygienic Notes. Oscar Dowling, Cincinnati.
- The Sanitary Regeneration of San Francisco. N. K. Foster, Sacramento, Cal.
- Insect Carriers of Typhoid Fever. W. Forrest Dutton, Walker's Mills, Pa.
- Typhoid Immunity and Antityphoid Inoculations. Willard J. Stone, Toledo, Ohio.
- The Prevention of Malaria. Seale Harris, Mobile, Ala.
- The Notification to the Local Health Authorities of Cases of Abortion and Miscarriage. Myer Solis Cohen, Philadelphia.
- Necessity of More Extended Cooperation at Ports of Departure in Preventing or Diminishing the Transmission of Infectious Diseases from One Country to Another. A. H. Doty, Quarantine, L. I.
- Reduction of Quarantine Restrictions to a Safe Minimum. J. Y. Porter, Key West, Fla.

SECTION ON STOMATOLOGY

- CHAIRMAN, EDWARD C. BRIGGS, BOSTON; SECRETARY, EUGENE S. TALBOT, CHICAGO.
- Chairman's Address. Edward C. Briggs, Boston.
- Enamel and Its Vitality. R. R. Andrews, Cambridge, Mass.
- A Study of Malnutrition in the School Child. E. Mather Sill, New York City.
- Suppression of the People's Disease. S. B. Luckie, Chester, Pa.
- The Role of the Teeth in Respiration. F. L. Stanton, New York City.
- Oral Prophylaxis. Alphonse Irwin, Camden, N. J.
- The Tonsils and the Teeth. G. Hudson-Makuen, Philadelphia.
- Mouth Conditions in Their Relation to Systemic Infection. Frederick B. Moorehead, Chicago.
- The Surgery of Cleft Palate. George V. I. Brown, Milwaukee, Wis.
- General Therapeutics and Surgery in Dentistry. Arthur R. Dray, Philadelphia.
- Conservative Surgery for Treatment of Tumors of the Mandible. Thomas L. Gilmer, Chicago.
- A Method of Treating Mandibular Fractures. Robert T. Oliver, West Point, N. Y.
- The Treatment of Extreme Degrees of Malocclusion of the Teeth by Operations on the Ramus of the Inferior Maxillary Bone. W. Wayne Babcock, Philadelphia.
- Osteomyelitis of the Jaw. H. H. Germain, Boston.
- Report of Two Record Tertiary Cases. G. Lennox Curtis, New York City.
- Trifacial Neuralgia. Fred Hussey, Providence, R. I.
- Anesthesia. L. G. Noel, Nashville, Tenn.
- A Summary of Thirteen Thousand Nitrous Oxid and Oxygen Anesthesias. Charles K. Teter, Cleveland, Ohio.
- Pseudopulpitis and Periostitis Due to Rheumatoid Arthritis. William Mills, Baltimore.
- Dental Roentgenology. G. E. Pfahler, Philadelphia.
- A Number of Cases in which the Nasal Sinuses Have Been Enlarged by Orthodontia. E. A. Bogue, New York.
- Report of the Committee on Revision of Pharmacopeia. Hermann Prinz, Chairman, St. Louis; G. B. Squires, Somerville, Mass.
- Report of the Committee on Vital Statistics. George V. I. Brown, Chairman, Milwaukee; Vida A. Latham, Chicago; Frederick B. Moorehead, Chicago.

SECTION ON DISEASES OF CHILDREN

- CHAIRMAN, THOMAS S. SOUTHWORTH, NEW YORK; SECRETARY, W. W. BUTTERWORTH, NEW ORLEANS.
- Chairman's Address: The Field for Prophylaxis Among Children. Thomas S. Southworth, New York.
- Transitory Urinary Findings, Associated with Some Diseases of Childhood. Walter Lester Carr, New York.
- Food Intoxications in Childhood. John Rührh, Baltimore.
- Infantile Eczema; Some Recent Views Concerning Its Pathology and Etiology. Isaac A. Abt, Chicago.
- Cardiovascular Disease in Children with Presentation of a Sphygmoscope, Designed for Children. R. G. Freeman, New York.
- Hair Ball or Hair Cast of the Stomach, and Its Occurrence in Children. W. W. Butterworth, New Orleans.
- The Treatment of Summer Diarrhea, Due to Intestinal Fermentation, with Living Lactic Acid Bacilli. Charles Hunter Dunn, Boston.
- Vaccine and Serum Therapy in Diseases of Children. Charles Gilmore Kerley, New York.
- The Treatment of Epidemic Meningitis with the Flexner Serum. Frank Spooner Churchill, Chicago.
- The Treatment of Anemia in Infancy with Citrate of Iron Subcutaneously. John Lovett Morse, Boston.
- Sea-Water Treatment; Given by Subcutaneous Injection, with the Results Obtained in Children. Theodore Le Boutillier, Philadelphia.
- Middle-Milk Mixtures. Alfred F. Hess, New York.
- The Relation Between the Science and Art of Infant Feeding. Henry Dwight Chapin, New York.
- Infant Mortality: The Factors which Compose It, and How These May Be Influenced. L. Emmett Holt, New York.
- Heubner's System of Infant Feeding, Based on Calories and Low Fat. E. Lackner, Chicago.
- A Convenient Method for Determining Caloric Values of Formulas Based on Percentage Feeding of Infants. Henry I. Bowditch, Boston.

- The Transmission of Bovine Tuberculosis to Children. Henry L. K. Shaw, Albany.
- The Antibodies in Tuberculosis. Their Relation to Tuberculin Inoculation and Vaccination. William J. Butler, Chicago.
- The Child's Breakfast. W. C. Hollopeter, Philadelphia.
- Conditions of the Public School Child. J. W. Van Derslice, Chicago.
- The Hygiene of Lactation. J. Ross Snyder, Birmingham.
- Help the Mother Nurse Her Child. Maurice Ostheimer, Philadelphia.
- Opacities of the Cornea: Their Frequency in Children from Preventable Causes, and Their Effect on Vision. Colman W. Cutler, New York.
- Exhibition of a Patient with Achondroplasia, with Notes on the Disease. M. H. Fussell, R. S. McCombs, G. L. de Schweinitz, Philadelphia.
- Suppurative Conditions in Joint Regions in Infants. Linnaeus E. La F  tra, New York.
- "*Post Hoc Ergo Propter Hoc*," Cases in Children Illustrating Conditions Mistakenly Attributed to Injuries. J. P. Crozer Griffith, Philadelphia.
- Persistent Thoracic Sinus Following Empyema. Charles N. Dowd, New York.
- History of Two Cases of Congenital Pyloric Spasm, with Remarks on the Treatment and Etiology of the Condition. D. J. M. Miller, Atlantic City.
- Syphilitic Pseudoparalysis. L. T. Royster, Norfolk, Va.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

CHAIRMAN, REID HUNT, WASHINGTON, D. C.; SECRETARY, C. S. N. HALLBERG, CHICAGO.

Chairman's Address: The Advancement of Pharmacology and Therapeutics by Experiments on Animals. Reid Hunt, Washington, D. C.

Addresses of Delegates of the American Pharmaceutical Association. Geo. M. Beringer, Ph.M., Camden, N. J.

The Mercurial Salts in the Treatment of Syphilis. Lewis W. Bremerman, Chicago.

The Therapeutic Management of Arteriosclerosis Based on the Present View of its Pathology. Alexander G. Brown, Jr., Richmond, Va.

The Analgesic Effect of Local Applications of Solutions of Magnesium Sulphate and of Other Salts. Solomon Solis-Cohen, Philadelphia.

The Determination of the Quality of Ergot. Horatio C. Wood, Jr., Philadelphia.

Some Observations on the Pharmacologic Action of Ergot. E. M. Houghton and H. S. Yntema, Detroit.

Clinical Results with *Craetagus oxyacanthus*, T. F. Reilly, New York City.

The Use of Ferments in Medicine. Charles G. Stockton, Buffalo.

General Principles of Dietetics with Special Reference to the Use of Proprietary Foods. David Edsall, Philadelphia.

Proprietary and Predigested Foods from the Standpoint of the Pediatricist. John Howland, New York City.

The Advantages of Adhering to the Use of Potassium Iodid. George Dock, New Orleans.

Clinical Use of Phenolphthalein. John J. Gilbride, Philadelphia.

Pharmacologic and Clinical Study of Some Phthaleins. M. G. Rowntree, Baltimore.

The Lowering of Blood Pressure by Nitrites. George B. Wallace and A. I. Ringer, New York City.

SYMPOSIUM ON THE PRESENT STATUS OF SERUM AND VACCINE THERAPY WITH SPECIAL REFERENCE TO THE PRODUCTS ON THE AMERICAN MARKET.

(a) The Federal Control of Sera, Vaccines, etc. (b) Vaccine Virus. M. J. Rosenau, Washington, D. C.

Diphtheria Antitoxin. W. H. Park, New York City.

Tetanus Antitoxin. J. F. Anderson, Washington, D. C.

(a) General Principles of Bacterial Vaccine Therapy. (b) Specific Therapy with Infections with the Colon Bacillus—Vaccines and Sera. (c) Vaccine Therapy of Neoformans Infections. (d) Principles of Specific Therapy in Typhoid Fever. Mark W. Richardson, Boston.

Investigations of Sera and Vaccines for Streptococcus, Straphylococcus, and Pneumococcus Infections. L. Hektoen, G. H. Weaver and R. Tummieliff, Chicago.

(a) Antigonococcus Serum and Gonococcus Vaccine (Bacterin). (b) Uselessness of Therapy by Pyocyaneus Vaccine. B. A. Thomas, Philadelphia.

General Principles of Tuberculin Diagnosis and Treatment. E. R. Baldwin, Saranac Lake, N. Y.

The Treatment of Inoperable Sarcoma by Erysipelas and Prodigious Toxins. Leo Loeb, Philadelphia.

(a) Antidysenteric Serum. (b) Antimeningococcus Serum. Simon Flexner, New York City.

Results of Three Years' Experience in Bacterial Immunization. B. A. Thomas, Philadelphia.

On Antivenins. H. Noguchi, New York City.

Report of Committee on the United States Pharmacopeia.

Additions and Eliminations from the United States Pharmacopeia from the Viewpoint of Statistics. C. S. N. Hallberg, Chicago.

Do We Possess in the Drugs and Preparations that are Recognized by the United States Pharmacopeia and the National Formulary a Sufficient Armamentarium for the Medicinal Treatment of Disease? M. Clayton Thrush, Philadelphia.

A Classification of Proprietary Medicines. A. T. McCormack, Bowling Green, Ky.

Nature of Preparations Used in the Treatment of Drug Addictions. L. F. Kebler, Washington, D. C.

What Can Physicians Do to Improve the Pharmacopeia? Henry Leffmann, Philadelphia.

Nomenclature of the United States Pharmacopeia and National Formulary Mixtures. L. F. Kebler, Washington, D. C.

Some of the Preparations of the United States Pharmacopeia from the Practitioner's Standpoint. M. H. Fussell, Philadelphia.

The National Formulary: Its Genesis, Character and Exigent Utility. H. P. Hynson, Baltimore.

SECTION ON PATHOLOGY AND PHYSIOLOGY

CHAIRMAN, M. J. ROSENAU, WASHINGTON; SECRETARY, H. GIDEON WELLS, CHICAGO.

Chairman's Address: The R  le of Animal Experimentation in the Diagnosis of Contagious Diseases. M. J. Rosenau, Washington, D. C.

Further Evidence on the Endemic Occurrence of Cancer in Animals. Harvey R. Gaylord, Buffalo, N. Y.

The Relation Between Anaphylaxis and Immunity. Paul A. Lewis, New York.

The Hemolytic Action of Crotalus Venom on Human Erythrocytes. Joseph McFarland and Paul G. Weston, Philadelphia.

The Relation of Ether to Immunity. Evarts A. Graham, Chicago.

Notes on the Histogenesis of the Thymus Cells, and on the Normal and Pathological Histology of the Thymus. Alwin M. Pappenheimer, New York.

Cardiac Thrombosis: The Clinical and Pathological Findings in Four Cases. Frank Smithies, Ann Arbor, Mich.

Clinical and Experimental Studies in Surgical Anemia and Shock. G. W. Crile, D. H. Dolley and D. A. Prendergast, Cleveland.

The Relation of Venous Pressure to the Efficiency of the Heart. Yandell Henderson, New Haven, Conn.

The Measurement of Human Blood Pressure. Louis Faugeres Bishop, New York.

The Rate of Blood Flow in the Arm. A. W. Hewlett and J. G. van Zwaluwenburg, Ann Arbor, Mich.

Some Relations of Iodin in the Thyroid. S. P. Beebe, New York.

The Metabolic Influence of Copious Water Drinking with Meals. C. C. Fowler and P. B. Hawk, Urbana.

Experimental Analysis of the Altered Function of the Kidney in Diabetes Mellitus. Harlan Shoemaker, Philadelphia.

THE SECTION WILL ATTEND THE SYMPOSIUM OF THE SECTION ON PHARMACOLOGY AND THERAPEUTICS, ON THE PRESENT STATUS OF SERUM AND VACCINE THERAPY WITH SPECIAL REFERENCE TO THE PRODUCTS ON THE AMERICAN MARKET.

The Physiological Utilization of Some Complex Carbohydrates. Lafayette B. Mendel and Mary D. Swartz, New Haven, Conn.

The Experimental Production of Maternal Placenta. Leo Loeb, Philadelphia.

The Relation of Tonus to Peristalsis. W. B. Cannon, Boston, Mass.

Acquired Intestinal Diverticula. Guthrie McConnell, St. Louis.
The Transformation from Tumor into Cystic Tissue in the Central Nervous System. D. J. McCarthy, Philadelphia.
Cysts of the Female Breast, and their Relation to Carcinoma. Joseph C. Bloodgood, Baltimore.
Pathology of Gastric Ulcer. Wm. Carpenter MacCarty, Rochester, Minn.
What a Pathologist Should Know About Obstetrics and Gynecology. Ellice McDonald, New York.
The Inadequacy of the Present Methods Employed in the Bacteriological Study of the Intestinal Tract. Katharine R. Collins, Atlanta, Ga.
The Significance of Ehrlich's Aldehyde Reaction in the Urine. Oscar Berghausen, Cincinnati.
The Diagnostic Value of Hemolysis in Cancer and Tuberculosis. George W. Crile, Cleveland.
Hemolysis in the Diagnosis of Malignant Neoplasms. O. P. Johnstone and C. H. Canning, Pittsburg.
A Rational and Practical Complement Fixation Test and the Butyric Acid Test for Syphilis Diagnosis. Hideyo Noguchi, New York.
Some Studies of the Precipitin Tests for Syphilis. Henry S. Wieder and Edward M. P'Engle, Philadelphia.
Serum Diagnosis of Syphilis. Wm. Litterer, Nashville, Tenn.

SECTION ON CUTANEOUS MEDICINE AND SURGERY

No program for this Section had been received at the time of going to press.

THE COMMERCIAL EXHIBIT

The Exposition of Instruments, Apparatus, Remedial Agents, Literature and Physicians' Supplies at Atlantic City

The Commercial Exhibit will, as usual, be supervised directly by the officers of the American Medical Association, whose aim and desire has been to sacrifice mere size to excellence. The exposition will be held on Young's Pier, in what is known as the Music Hall and Skating Rink. The entrance to the exhibit hall is directly adjacent to the famous Boardwalk. The scientific exhibit, the registration department, the post-office and the information bureau, will all be under the same roof as the commercial exhibit. There is every reason to believe that the display this year will excel in quality and interest that of any previous exposition.

The number of physicians who fail to derive any satisfaction from visiting the commercial exhibits at the meeting of the American Medical Association, is, we venture to say, very small. To the average man there is a great deal of pleasure to be had from looking over the choicest and latest products of the publishers' art; from handling and seeing finely finished surgical instruments; from examining high grade and elegant pharmaceuticals; and from testing the latest thing in automobiles. Such exhibits have a distinct educational value.

All correspondence with reference to reservations should be sent to Mr. Will C. Braum, superintendent of exhibits, 103 Dearborn Avenue, Chicago. Dr. Edward Guion, 1408 Atlantic Avenue, Atlantic City, N. J., will act as local chairman. Most of the firms that will be represented at this exposition are mentioned below.

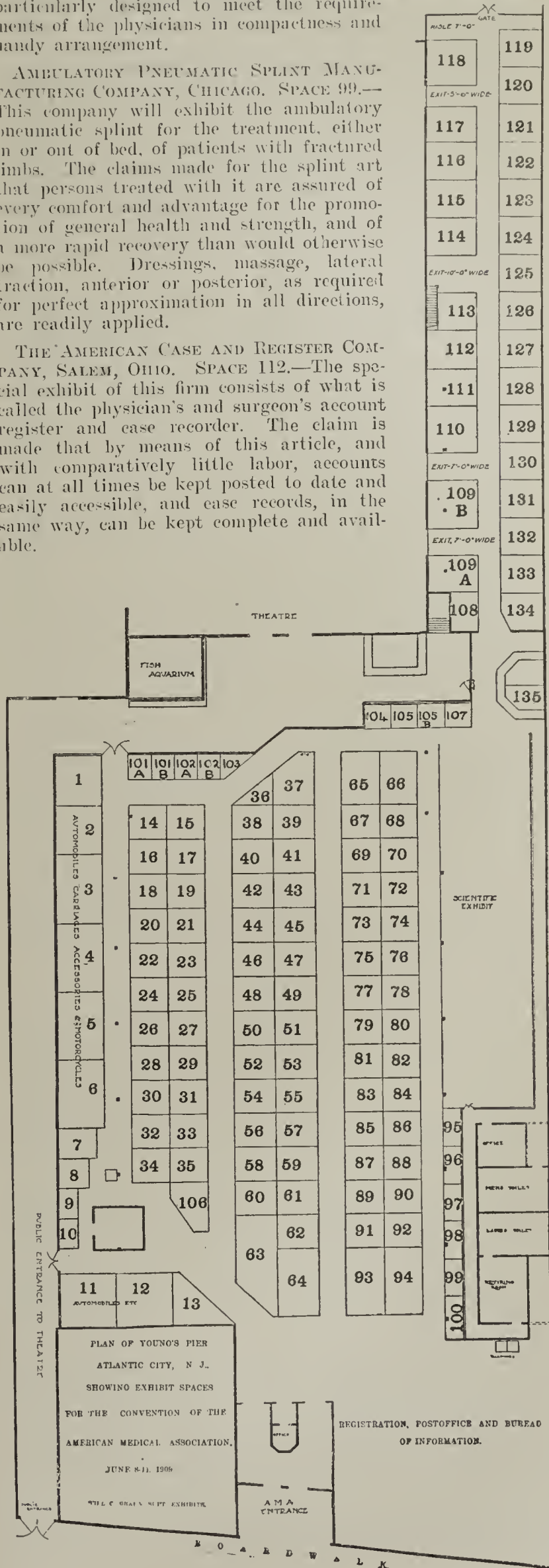
DR. H. M. ALEXANDER & COMPANY, MARIETTA, PA. SPACE 105.—Four of the products prepared at its laboratories will be exhibited by this company. The Pasteur anti-rabic vaccine will be shown in an emulsion preserved in glycerin and in a special container enclosed in a vacuum bottle rendering it possible to transport it through the mails. All of the various forms of tuberculin made from tubercle bacilli of both the bovine and the human types will be shown, as well as small-pox vaccine virus and concentrated and refined diphtheria antitoxin.

W. D. ALLISON COMPANY, INDIANAPOLIS. SPACES 22 AND 23.—Some new features will be displayed by this firm in addition to its well-known practical equipment. These will include a new line of reception room furniture, a chair which is said to combine all the features required by specialists, and can be

converted instantly into an operating table and used as well in general practice, and also a line of sanitary roll-top desks, particularly designed to meet the requirements of the physicians in compactness and handy arrangement.

AMBULATORY PNEUMATIC SPLINT MANUFACTURING COMPANY, CHICAGO. SPACE 99.—This company will exhibit the ambulatory pneumatic splint for the treatment, either in or out of bed, of patients with fractured limbs. The claims made for the splint art that persons treated with it are assured of every comfort and advantage for the promotion of general health and strength, and of a more rapid recovery than would otherwise be possible. Dressings, massage, lateral traction, anterior or posterior, as required for perfect approximation in all directions, are readily applied.

THE AMERICAN CASE AND REGISTER COMPANY, SALEM, OHIO. SPACE 112.—The special exhibit of this firm consists of what is called the physician's and surgeon's account register and case recorder. The claim is made that by means of this article, and with comparatively little labor, accounts can at all times be kept posted to date and easily accessible, and case records, in the same way, can be kept complete and available.



D. APPLETON & COMPANY, NEW YORK CITY. SPACE 33.—This long-established house will exhibit many new works, among which will be Dr. Henry Ling Taylor's "Orthopedic Surgery" (preventative orthopedics). Dr. George W. Crile's original work on "Hemorrhage and Transfusion," Dr. Alexander Bryan Johnson's "Surgical Diagnosis," "The American Treatise on Tuberculosis," edited by Dr. Arnold C. Klebs, and many others. The firm will also have a full line of its standard and forthcoming works on exhibit.

ARLINGTON CHEMICAL COMPANY, YONKERS, N. Y. SPACES 30 AND 32.—This firm will exhibit the preparations, liquid peptonoids and dry peptonoids soluble and hemaboloids, together with some interesting scientific data regarding food values and the methods of preparation of these goods. An attractive and artistic souvenir will be presented to all physicians who visit the exhibit.

ARMOUR & COMPANY, CHICAGO. SPACES 67 AND 68.—The work now being carried on by physiologists, biochemists and pharmacologists shows the importance of the hormones in the animal organism, their relations and their functions. Recent discoveries indicate that probably the many leucithins and organ lipoids play some rôle in the immunizing processes, that the thyroid, suprarenal and pancreas hormones are interdependent and possibly control the fat, sugar and protein metabolism. Physicians doubtless will find the exhibit of this firm's organotherapeutic agents particularly interesting.

ATLAS MOTOR CAR COMPANY, SPRINGFIELD, MASS. SPACE 6.—This firm will exhibit a three-cylinder, five-passenger touring car and its physicians' special runabout. These cars are equipped with the Atlas two-cycle engine which it is claimed should appeal particularly to physicians who run their own cars, as the construction and operation of the engines is such as not to require an expert to operate and care for them. The physicians' runabout is said to combine with the advantages of the engine, extreme ease of riding, graceful lines and proportions and high grade construction.

BAKER ELECTRIC COMPANY, HARTFORD, CONN. SPACE 25.—The Baker static machine will be shown by this company, together with instruments for measuring amperage and voltage, also amperage of high-frequency and auto-condensation currents. The apparatus is constructed with a special view of standardizing electrotherapeutic measurements. There will also be shown the latest developments in apparatus for successful radiographic work.

BATTLE CREEK SANITARIUM, BATTLE CREEK, MICH. SPACES 89, 90, 91 AND 92.—This exhibit will consist of large photographs and other illustrative material showing the methods and appliances which constitute the Battle Creek Sanitarium system. The exhibit will be in charge of trained nurses from the institution, graduates of the Battle Creek Sanitarium and Hospital Training School for Nurses.

BAUSCH & LOMB OPTICAL COMPANY, ROCHESTER, N. Y. SPACE 80.—The instruments making up this firm's exhibit will, it is claimed, represent the most advanced steps in microscope and microtome construction. The new series of achromatic objectives and research microscopes with large stages, handle arms, and sensitive, durable lever fine adjustments will be of particular interest. The new simplified Minot rotary microtome will be shown as will also recently improved centrifuges of various designs.

BERNSTEIN MANUFACTURING COMPANY, PHILADELPHIA. SPACE 55.—Aseptic hospital furniture and physicians' office specialties will be exhibited by this firm. One piece of apparatus to which the manufacturers will direct special attention is an improved type of dressing sterilizer, which will doubtless prove of interest to those in charge of hospitals. Many other items of a similar character will help fill out the display.

FRANK S. BETZ COMPANY, HAMMOND, IND. SPACES 40, 41, 42 AND 43.—This firm expects to have a man making operating knives at its exhibit—a novelty that will doubtless prove an attraction. A display of knives that range in size from two inches to two feet in length, will also be a feature. There will, in addition, be a general exhibit of batteries, x-ray coils, high-frequency and ozone outfits, nebulizers, dry hot air apparatus, operating tables, instrument cabinets and chairs.

BLACK MANUFACTURING COMPANY, CHICAGO. SPACE 3.—Cars of the high wheel type, especially adapted for use by physicians, will be shown here. The exhibit will be in charge of the company's New York manager, and demonstration cars will be

on hand to prove the claims made for the company's product. The firm's president and sales manager expect to be in attendance at the exhibit at least one day, for the purpose of showing their appreciation of the large volume of trade that is coming to them from the members of the medical profession.

P. BLAKISTON'S SON & COMPANY, PHILADELPHIA. SPACE 39.—At this exhibit sheets will be shown of a new work, "Diagnostic Methods," by Ralph W. Webster; also Knight and Bryant's "Ear, Nose and Throat." Attention will also be called to Binnie's "Operative Surgery" and Douglas' "Surgical Diseases of the Abdomen," Deaver's "Surgery of the Upper Abdomen," Gordon's "Nervous Diseases," Sluss' "Emergency Surgery," Casper's "Genitourinary Diseases," Rodman's "Diseases of the Breast," Wilcox's "Treatment," Gould's Dictionaries, and other standard books.

BORDEN'S CONDENSED MILK COMPANY, NEW YORK CITY. SPACE 44.—The food product which this firm will exhibit—malted milk—is claimed to be free from starch and cane sugar and to have had the casein converted into albumose. The manufacturers call particular attention to its keeping properties and to the fact that it is made under the best hygienic conditions.

BURROUGHS WELLCOME & COMPANY, NEW YORK CITY.—A selection of "tabloid," "soloid," "enule" and "vaporole" brand products will be shown by this firm as representing some of the latest achievements in scientific pharmacy and research work. Notable among these are "soloid" microscopic stains for the immediate production of fresh staining solutions and "soloid" brand products for the preparation of test solutions used in water, sewage and urine analysis. Other features of this exhibit will be an assortment of compact and complete medical equipments and first-aid cases for pocket, automobile, buggy or saddle.

CAMPBELL ELECTRIC COMPANY, LYNN, MASS.—The leading features claimed for the Campbell coil are simplicity of handling, durability of construction and compactness. The latest model gives the operator the use of eight currents, including a powerful x-ray current. Some of the expedients adopted for the protection both of operator and coil are the pilot light, which indicates any passage of current into coil, and the protected spark-gap.

G. W. CARRICK COMPANY, NEW YORK CITY. SPACE 82.—The products of this company, antithermoline and trypsogen will be exhibited, and descriptive reading matter distributed to physicians. Drawings from microscopic sections of the human pancreas will be exhibited, showing the degenerative changes in the islands of Langerhans, as a result of diabetes.

CLARK & ROBERTS COMPANY, INDIANAPOLIS. SPACE 46.—This firm makes a specialty of high grade surgical furniture, and intends giving an interesting exhibit in this line. These goods are designed to represent the highest type of aseptic furnishings and they are said to be used not only by physicians, but by dentists, in public institutions and even in private houses. The exhibit should prove interesting both from an educational and scientific standpoint.

CLINICAL-ACCOUNT SYSTEM COMPANY, NEW YORK CITY.—This firm's specialty is a simple and compact method of keeping complete records of all details of practice. It is said to have withstood every legal, medical and economic test. The claim is made that by this method and without the use of books, the physician has before him in readily accessible form, full case-histories and a complete system of accounting.

COLUMBUS BUGGY COMPANY, COLUMBUS, OHIO. SPACE 4.—This company will have an exhibit of automobiles, and an electric coupé for use in cities will be given some prominence. For use in the smaller towns and country districts they will show a motor Stanhope which it is claimed can be used 365 days in the year over all kinds of roads and in all kinds of weather.

F. A. DAVIS COMPANY, PHILADELPHIA. SPACE 75.—At this exhibit attention will be directed to "Sajous' Cyclopedia of Practical Medicine." As an outgrowth and natural development of the newer lines of thought, Dr. Sajous' work on "The Internal Secretions" will also come in for a good share of attention. The company will also display other important new books of interest and value.

DEIMEL LINEN MESH SYSTEM COMPANY, NEW YORK CITY. SPACE 48.—This company has, by a special process of manu-

facture, evolved a soft, pliable and porous fabric which it calls "linen-mesh." It is claimed that since its introduction fifteen years ago, the Deimel underwear has received the most friendly and grateful appreciation throughout the world. The exhibit will consist of garments in all styles and weights for men, women and children.

DE VILBISS MANUFACTURING COMPANY, TOLEDO, OHIO. SPACE 88.—This company has for twenty years given special attention to the manufacture of atomizers, nebulizers and kindred appliances. At its exhibit the following subjects will be illustrated: How to apply medicines to surfaces difficult of access; low pressure atomization; the care of instruments and the disposition of instruments when not in use.

DE ZENG-STANDARD COMPANY, PHILADELPHIA. SPACE 97.—This company will exhibit its eye-examining and eye-measuring instruments for use by the general profession, the De Zeng electric ophthalmoscope being among them. A special feature will be made of practical demonstrations on living eyes, and the diagnostic possibilities in constitutional disease through the eye, may be witnessed by all who are interested. This exhibit promises to be both interesting and instructive.

ELECTRO-SURGICAL INSTRUMENT COMPANY, ROCHESTER, N. Y. SPACE 84.—As an example of modern instrumental methods of diagnosis and treatment, the exhibit of this firm will be of interest. There will be displayed all the latest devices for the direct, visual examination of the bronchi, stomach, bladder, etc. This company has originated many kinds of electrically lighted instruments and current controllers for both canterly and light.

FAIRCHILD BROTHERS & FOSTER, NEW YORK CITY. SPACE 63.—This exhibit will appeal to physicians who are interested in the applied chemistry of the digestive ferments. It includes preparations for every purpose in therapeutics for which the pancreas and stomach gland extracts, and enzymes thereof, are at present utilized. An extract of the pancreas combined with the sodium salts of the conjugated cholic acids is among the latest "Fairchild" products.

JOSEPH C. FERGUSON, JR., PHILADELPHIA. SPACES 60 AND 61.—An interesting and up-to-date exhibit is promised by this firm, of instruments and supplies used in the treatment of affections of the eye, ear, nose and throat. As the work of this company is devoted exclusively to the manufacture of apparatus and instruments used in these special branches, it is intended to make the display both comprehensive and complete.

FOUTS & HUNTER CARRIAGE MANUFACTURING COMPANY, TERRE HAUTE, IND. SPACE 12.—The "cozy cab" which this firm will exhibit might be termed a composite product—many of the special features which it possesses having been suggested by physicians from widely separated points. The makers claim that the "cozy cab" represents the highest point yet attained in producing a light vehicle which will combine comfort and protection from weather conditions. The principles underlying the construction of the "cozy cab" top have been applied also to automobiles, so that the exhibit should interest every physician.

GLOBE MANUFACTURING COMPANY, BATTLE CREEK, MICH. SPACE 83.—The use of vapor massage, vapor vibration and mechanical vibration in diseases of the ear, nose, throat and lungs will be demonstrated at this exhibit. In addition to its line of nebulizers and air compressors the firm will show something new in the way of vibrators and electric air pumps. The new Byington anesthesia apparatus for administration of warm ether, vapor and air, or gas and oxygen will be a feature.

SAM J. GORMAN COMPANY, CHICAGO. SPACE 18.—A new principle is said to be utilized in the construction of this firm's instrument, the physician's vibragent, which is claimed to give an exceedingly high speed and true vibratory stroke. It is a carefully planned and well made instrument, and is guaranteed for five years.

F. A. HARDY & COMPANY, CHICAGO. SPACES 56, 58 AND 59.—An exhibit of ophthalmologic specialties will be made by this company, including the ophthalmometer and special prismatic apparatus. The new Hardy-Van Slyke dynamometer will be given prominence. In surgical instruments the firm will have on exhibition all of the latest eye, ear, nose and throat instruments, particularly those used in the Freer and Ballenger

operations. Many other things of scientific and educative interest will form part of the display.

HOLSMAN AUTOMOBILE COMPANY, CHICAGO. SPACE 5.—This firm will exhibit its new friction chain drive machines. It is claimed for these cars that they have the only absolutely direct drive in use on automobiles and in this particular, one of the dreams of automobile engineers has been realized. This company will also exhibit a four-cylinder all-ball-and-roller-bearing motor, which is said to be the only motor of this kind made. The peculiarity of this engine is the entire elimination of connecting-rods and connecting-rod bearings, the pistons being rigidly joined together by a web.

HORLICK'S MALTED MILK COMPANY, RACINE, WIS. SPACES 34, 35 AND 106.—The great care taken by this firm to obtain milk in its original purity, from healthy cows, with proper sanitary environment, and under hygienic conditions, will be emphasized at this exhibit. So also, the fact that the company possesses its own natural spring, the water from which it uses in mashing the grain and growing the barley malt, will be made a matter of attention.

JEWEL CARRIAGE COMPANY, CINCINNATI, OHIO.—"The Breeze" physicians' stanhope motor vehicle which will be exhibited by this firm is an automobile of the high-wheeled type, with physicians' top, and roll-up storm front. It is air-cooled and the company guarantees that it will travel any road that can be gotten over by a horse-drawn vehicle. The tires are solid and the carriage has ample space for instruments or other baggage.

KELLEY-KOETT MANUFACTURING COMPANY, COVINGTON, KY. SPACES 19 AND 21.—The principal attraction of this exhibit will be the Grosse Flamme coil equipment which will be demonstrated from both the alternating and the direct current. The firm will also feature its new mechanical interrupter. The instrument is claimed to be self-cleaning, practically noiseless in operation, and will operate from any good induction coil. There will also be shown a diagraphoscope especially adapted for making screen examinations, and skiagrams of the chest and stomach.

KEYSTONE ELECTRIC COMPANY, PHILADELPHIA.—This firm will exhibit and demonstrate a full line of electrotherapeutic apparatus and will call special attention to its new high-frequency apparatus. If space will permit, dissected and sectional models of its various instruments will be on exhibition, showing the scientific principles on which they are constructed. A competent electrical engineer will be in charge, who will gladly furnish any information desired.

KNY-SCHIEERER COMPANY, NEW YORK CITY. SPACES 24, 26, 27 AND 28.—This firm will display the products of its manufacturing plants, located in the United States and in Europe. The scope which this company covers is rather extensive; it comprises (1) high grade surgical instruments; (2) aseptic hospital furniture and sterilizers; (3) electromedical apparatus including a new type of x-ray apparatus, and (4) scientific apparatus for laboratory work. Among these will be many new articles which no doubt will be of unusual interest to the surgeon and diagnostician.

LACTOMODE COMPANY, WHEELING, W. VA.—The pasteurizer put out by this company is a compact household outfit consisting of two parts; (1) the lactomode, a glass bottle fitted with a rubber bulb pump for drawing out the lower milk and leaving the "top milk," and (2) the sterilizer composed of two metal vessels, one fitting within the other. The lactomode is placed inside the inner vessel and surrounded with cold water and the larger vessel is then filled with boiling water.

LEA & FEBIGER, NEW YORK CITY. SPACE 65.—There are certain publishers whose names on the title pages of books means that such works are of great value to a considerable section of the profession: for over a century the house of Lea has claimed this distinction. Recent publications of this firm include Dr. J. George Adami's "General Pathology;" Watson & Cunningham's illustrated and practical work on "Genitourinary Diseases" (2 vols.); Ballenger on the "Nose, Throat and Ear;" Dudley's "Gynecology;" Hare's "Practice;" Hare's "Diagnosis" and Hare's "Therapeutics;" the new edition of the "National Standard Dispensatory;" Park's "Pathogenic Micro-organisms," and Woolsey's "Surgical Anatomy." "Gray's Anatomy" and a number of the leading text-books emanate from this company's press, but the most important enterprise in which it is at present engaged is the publication of Osler's "Modern Medicine."

ERNST LEITZ, NEW YORK CITY.—This firm will demonstrate its latest method of illustrating scientific lectures with the Leitz universal projection apparatus (reflectoscope), employing microscopic slides, *x*-ray plates, mounted and unmounted anatomic specimens, and even parts of the human body. It will also illustrate a method of teaching microscopy with the drawing and projection apparatus after Professor Edinger. Unstained micro-organisms will be shown with high power microscopes equipped with the reflecting condenser for observing under dark ground illumination.

CHARLES LENTZ & SONS, PHILADELPHIA.—This firm will show a number of new instruments of special interest to the practitioner. Among these will be Dr. Saxon's apparatus for the application of the Murphy treatment; Dr. Faught's sphygmomanometer, said to be the simplest and most efficient of its kind, and also Dr. Rupert's ether vapor inhaler, for the administration of ether in operations about the mouth and face. Examining and catheterizing electric cystoscopes will also be displayed and a phantom bladder will be used for practical demonstration.

J. B. LIPPINCOTT COMPANY, PHILADELPHIA. SPACES 79 AND 81.—Modern publishing houses spend enormous sums of money in securing the artists to draw the pictures for their new medical books and in obtaining the finest reproductions of these drawings. "Piersol's Human Anatomy" is a profusely illustrated medical book of recent issue, and this firm has decided to exhibit a selection of the most important original water-color drawings for this anatomy at the coming meeting. Special attention also will be called to Dr. James C. Wilson's "Medical Diagnosis;" Dr. Thomas M. Rotch's "The Roentgen Ray in Pediatrics;" Dr. G. G. Davis' "Applied Anatomy," and new medical dictionary, which has been compiled under the editorship of Dr. Henry W. Cattell.

MACALASTER, WIGGIN COMPANY, BOSTON.—This company will exhibit a complete line of *x*-ray tubes, as it is making a specialty of tubes for the heaviest kind of apparatus. These tubes, it is claimed, are giving satisfaction to the most discriminating users; they stand up well and make good pictures. There will also be displayed a full line of goods for *x*-ray protection, including tube shields, gloves and aprons.

MALT-DIASTASE COMPANY, NEW YORK CITY.—This company will exhibit maltzyme both in its natural state and separated into its constituent parts. It will also demonstrate the action of the preparation on starches and explain the various methods used in determining the hydrolytic power of diastasic products. The firm will also have on exhibit samples of U. S. P. extracts and various other products with the idea of illustrating the numerous variations in character of products that can be obtained from malt by different methods of manipulation.

MCINTIRE, MAGEE & BROWN COMPANY, PHILADELPHIA. SPACE 62.—It is said that every operator who has tried to hold the ordinary condensing lens between the fingers of the left hand, and at the same time, hold the patient's eyelid open when removing foreign bodies, will be impressed with the usefulness and adaptability of the Dr. Powell's adjustable condensing lens put out by this firm. This instrument, made with adjustable arm to fit over the third finger of the hand, is one of the many interesting things that will be shown in this exhibit.

W. H. MCINTYRE COMPANY, AUBURN, IND. SPACE 11.—This firm's specialty is motor vehicles particularly adapted to the physician in small towns and in rural districts. Its two-cylinder, 14 horse-power, high wheel, solid rubber tire motor buggy offers the country practitioner a vehicle that, it is claimed, will save more than one-half of his "driving" time; will turn the monotony of the daily drive into a genuine pleasure and will enable him to have reading time as well as office hours, thus building up his practice, and with all, have time for social and home pleasures.

MELLIN'S FOOD COMPANY, BOSTON. SPACE 38.—Every practitioner to whom the dietetic problems of infancy are ever arising, will be interested in this exhibit. The company claims that there have been some valuable additions made to its recent publication, the "Mellin's Food Method of Percentage Feeding." The modification of cow's milk to meet the varying requirements of the digestive capabilities of infants is a subject that is claiming the best thought of investigators, and this book is said to afford much valuable information.

WILLIAM MEYER COMPANY, CHICAGO. SPACE 66.—This exhibit will contain among other interesting features a new type of *x*-ray apparatus, capable of rapid radiographic work, the inverse discharge having been eliminated by compound selective windings. This is said to be especially valuable where the alternating current is used because all current can be used from a two or three phase system. Physicians who desire a resonator which can be used directly from the street current service without an induction coil, will have a chance to test its efficiency. A five cell chemical rectifier, converting alternating into direct current for operating a galvanic wall plate will be shown in operation.

E. B. MEYROWITZ, NEW YORK CITY. SPACES 50, 52 AND 54.—*X*-ray coil apparatus with high-frequency attachment will form part of this firm's exhibit, and there will be shown a special instrument for standardizing the different types of high-frequency currents which are delivered to a patient. The claim is made that with this instrument it is possible for a physician to obtain the same dosage from any type of apparatus, providing the apparatus has a sufficient range. A new interrupting device which is said to be capable of producing extra fine detail in skiagraphic work will also be displayed.

C. V. MOSBY MEDICAL BOOK AND PUBLISHING COMPANY, ST. LOUIS. SPACES 71 AND 72.—A complete line of English, French and German medical publications will be shown by this firm. Of its own line there will be Crossen's "Gynecology," Munro's "Suggestive Therapeutics," Lockard's "Tuberculosis of the Nose and Throat," Hirschman's "Handbook of Rectal Diseases," and Schorer's "Vaccine and Serum Diagnosis." The company will also be the special agents for Burghard's "Operative Surgery" and "A System of Syphilis" by Power and Murphy.

V. MUELLER & COMPANY, CHICAGO. SPACES 85 AND 87.—These manufacturers of surgical instruments will have an exhibit of interest to specialists in every branch of surgery. They will demonstrate to the profession their latest instruments and apparatus for use in surgery of the larynx, esophagus and stomach. Examining and operating instruments for genitourinary work, as well as new instruments for blood examination, etc., should make a visit to this exhibit time well spent.

H. K. MULFORD COMPANY, PHILADELPHIA. SPACES 29 AND 31.—Here will be displayed tuberculins, bacterial vaccines, diphtheria antitoxin, serums, cultures of bacteria, wax models of diphtheritic infections from postmortem cases, models of smallpox and of skin diseases with which the smallpox eruption is liable to be confused and serums in scales for internal use. The firm's working bulletins on tuberculins and bacterial vaccines, educational charts, pictures, etc., will be shown; also an illustration of practical and impractical "concentration" of antitoxin.

PHILADELPHIA SURGICAL SPECIALTY COMPANY, PHILADELPHIA. SPACE 103.—The "multum in parvo" surgical case manufactured by this firm will be made a special feature of its exhibit. This "simplex surgeon," as it is called by its makers, is an easily sterilizable metal tube containing a straight bistoury, curved bistoury, eye-spud, eurette, probe and combination forceps and hemostat. The complete outfit can be carried in the vest pocket.

POMEROY COMPANY, NEW YORK CITY. SPACES 101A AND 101B.—The two features of this exhibit will be: (1) The Pomeroy frame truss and a demonstration of the frame method of truss fitting, which consists in controlling the hernia without any spring pressure; (2) the Pomeroy corset which has been specially designed for the retention of movable kidney and other displacements. It is claimed that in this corset the theoretical requirements of physicians for such an article have been made practical.

PROMETHEUS ELECTRIC COMPANY, NEW YORK CITY. SPACE 102A.—Electric sterilizers are extensively used in office and hospital practice for the sterilizing of surgical instruments. The electric sterilizer made by this firm will, it is claimed, boil water in less time than it takes over gas or alcohol, and with ordinary care will give good service for many years. They are the result of years of experience in the construction and equipment of electric sterilizers and are said to have proven very satisfactory wherever used.

RANDALL-FAICHNEY COMPANY, BOSTON. SPACES 13 AND 20. In its exhibit, this firm is planning to present an old subject in a somewhat new light. Basing the plans on the claim that,

for years, this company has maintained a higher standard of testing and grading clinical thermometers than was commercially required, and that this action lacks full appreciation only because of too limited knowledge on the subject, it intends to demonstrate the careful methods pursued. A line of oil grease guns for automobiles will also be exhibited.

REBMAN COMPANY, NEW YORK CITY. SPACE 98.—The special attraction at this stand will be pictures and illustrations of skin lesions reproduced in the natural colors. For the purpose of illustrating lectures on diseases, they are said to be unexcelled. The collection contained in the various publications in which they appear, is bound to prove of value to the general practitioner who has no opportunity of visiting the various institutes in Europe where the originals of these illustrations are to be found.

REINSCHILD CHEMICAL COMPANY, NEW YORK CITY. SPACE 69.—This firm will have on exhibition its new organic iron and manganese salts. These, it is claimed, can readily be dissolved in cold water, furnishing neutral, clear inodorous liquors; this enables physicians to have their liquors made when wanted, in any quantity, and always fresh. Professor Schmidt's regulin for chronic constipation will also be shown and sampled, as well as other specialties.

ROBERTSON MANUFACTURING COMPANY, CINCINNATI. SPACE 102B.—A new line of compressed air apparatus, single and multiple, nebulizers, atomizers, powder blowers, vacuum pumps, etc., will form part of this firm's exhibit; also a new sanitary hydro-vacuum floor cleaner adapted for use in sick rooms, hospitals, sanitariums, and physicians' offices. The cost of these various appliances has, it is claimed, been greatly reduced, while the efficiency has been fully maintained.

ROESSLER & HASSLACHER CHEMICAL COMPANY, NEW YORK CITY.—The articles this firm intends exhibiting are its special oxygen generator, the peroxides of magnesium and zinc, and the perborates of sodium. The chief claims made for its generator of oxygen are that the gas formed is absolutely pure, the outfit is small and simple, and the ease with which the gas can be made should extend the use of oxygen as a therapeutic agent.

ROSE MANUFACTURING COMPANY, PHILADELPHIA. SPACE 7.—The albosol diagnostic light will be conspicuously exhibited in the automobile section by this firm. The manufacturers of the Albosol light are also large manufacturers of automobile searchlights and acetylene gas generators, designated by the trade-mark "Neverout." A number of unique models will be shown, suitable for physicians' automobiles and carriages, such as small searchlights mounted on movable fixtures, enabling the doctor to read house numbers when making night calls.

W. B. SAUNDERS COMPANY, PHILADELPHIA. SPACES 93 AND 94.—This firm's exhibit will occupy a very prominent position just opposite the bureau of registration and information and the postoffice. Of the new books to be shown, the following are of particular interest: Keen's "Surgery," Kelly and Noble's "Gynecology and Abdominal Surgery," Gant's "Constipation and Intestinal Obstruction," Bonney's "Pulmonary Tuberculosis," DaCosta's "Physical Diagnosis," Jordon's "General Bacteriology," Bier's "Hyperemic Treatment" by Meyer and Schmieder, Schamberg's "Skin Diseases and Eruptive Fevers," and Bondless' "Medical Gynecology." There will also be shown advance sheets and illustrations of Kelly and Cullen's "Myomata of the Uterus," Volume V of Keen's "Surgery," Army's "Pharmacy," McKenzie's "Exercises" and many others.

SCANLAN-MORRIS COMPANY, MADISON, WIS. SPACES 47 AND 49.—This firm will exhibit a line of porcelain enameled steel furniture and sterilizing apparatus for hospitals and physicians' offices. Its porcelain enameled furniture, introduced some eight years ago, is said to be rapidly taking the place of glass, owing to its cleanliness and durability. In high-pressure sterilizing apparatus, it will show a new construction, which is claimed to conform to the specifications authorized in advanced engineering practice, embodying the latest improvements in apparatus of this type.

SCHIEDEL-WESTERN X-RAY COIL COMPANY, CHICAGO. SPACES 77 AND 78.—This firm will make a special feature of its system of induction coils and compression apparatus for the making of detailed skiagraphs by the process of elimination. This method requires two induction coils arranged for exciting two x-ray tubes at once, the tubes being set at right angles to each other. The new apparatus will be demonstrated in full.

SCHIEFFELIN & COMPANY, NEW YORK CITY. SPACES 95 AND 96.—At this exhibit the products of the Lederle Antitoxin Laboratories are to be displayed, including diphtheria antitoxin, tetanus antitoxin, antistreptococcic serum and vaccine virus. The results of further improvements in the method for refining antitoxic sera will be demonstrated. There is also to be shown the body cavity disinfectant prepared in the Lederle Antitoxin Laboratories, in the form of a pure culture of the *Bacillus Bulgaricus* grown on media suitable for injection into these cavities.

SMITH, KLINE & FRENCH COMPANY, PHILADELPHIA. SPACE 86.—This exhibit will be entirely in the interest of Eskay's Food. Stock packages will be shown by the firm and in addition a practical demonstration will be given in the way of display jars, showing the composition of the food. One jar will contain the cereals, one jar the sugar of milk and eggs, while another jar will show the finished product. It will also demonstrate how the curd of cow's milk is formed in the human stomach when it meets the gastric juice.

SPEAR-MARSHALL COMPANY, CHICAGO. SPACE 70.—This firm will exhibit its leucodescent therapeutic lamp, for which a wide field of indication is claimed. The present apparatus is said to be the result of years of clinical and laboratory research. Within the past year it has been greatly improved, and its manufacturers now claim that it is the embodiment of progress in the use of radiant light in therapeutics.

E. R. SQUIBB & SONS, NEW YORK CITY. SPACES 36 AND 37.—Products representing its entire line—chemicals, pharmaceuticals, N. F. preparations, and tablets will be shown by this firm. The exhibit will be in charge of a competent corps of professional men, and, among other things, demonstrations will be given showing the rapid and complete disintegration of the Squibb tablets. Specimens of important National Formulary preparations will be another prominent feature.

DR. KATHERINE L. STORM, PHILADELPHIA. SPACE 104.—The exhibit of the "Storm" abdominal supporter will be in charge of some of the agents of the Storm Supporter Company. The inventor of this supporter reports that she has had more than seventeen hundred mail requests for information concerning this belt since she began advertising in medical journals. This would seem to indicate that the medical profession is interested in scientific mechanical support.

SURGICAL SUPPLY IMPORTING COMPANY, NEW YORK CITY. SPACE 45.—While this firm does not sell to physicians direct, it will have on exhibition a number of articles for which they are agents. Among these will be Bender's "Ideal Bandages," the seamless elastic hosiery of Rompler's, Delamotte's bougies and catheters and the high-grade surgical instruments manufactured by Alb. Stille of Stockholm.

TRUAX, GREENE & COMPANY, CHICAGO. SPACES 51 AND 53.—One of the features of this exhibit will be an automatic electric incubator in which both temperature and moisture are automatically controlled by electricity. It is said to be built on an entirely new principle, which can be applied to either infant incubators or to those used for bacteriologic purposes. Surgical instruments and physicians' specialties of standard patterns and many later models will be shown by this firm.

VAN ORDEN CORSET COMPANY, NEW YORK CITY.—This firm will demonstrate their surgical belt corset, which is said to differ from the ordinary abdominal belt with corset worn over it (as the average woman now wears it) by eliminating two opposing pressures—upward from the belt, downward from the corset. It is said to give definite support from the spine just where the physician prescribes it, and a firm comfortable circular belt covers the entire curve of abdomen and hips.

VICTOR ELECTRIC COMPANY, CHICAGO. SPACES 73 AND 74.—This company will call special attention to its improved form of portable x-ray and high-frequency apparatus. It is claimed that this outfit, which is in part designed on the Tesla principle, makes it possible to take radiographs which heretofore have required the use of much larger and expensive coils. The company will show a therapeutic lamp of new and original design, and will also demonstrate an improved form of apparatus for producing and controlling the sinusoidal currents.

WALSH WINDOW TENT COMPANY, MORRIS, ILL. SPACE 76.—This firm's new inside tent, which it claims is the last word

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SALVAGE IN LIFE-INSURANCE

An interesting suggestion was brought before a recent meeting of the Association of Life-Insurance Presidents by Dr. Burnside Foster, editor of the *St. Paul Medical Journal*. It was in line with that of Prof. Irving Fisher, to which we referred.¹ The latter suggested that there were good financial, as well as philanthropic, reasons why the insurance companies should interest themselves in the extension of human life now made possible by the progress of sanitary science. He proposed the assignment of a sum of \$200,000 a year by the companies to attain this end, by "the sanitary education of the public" and by "stimulating municipalities, states and the federal government to greater efforts for the preservation of health."

The suggestion Dr. Foster makes is that life-insurance companies should keep themselves informed as to the physical condition of their policy-holders by offering to give them free medical re-examination at five-yearly or even shorter intervals. The advantage expected to accrue to the companies consists in the saving consequent on the extension of the average life of the policy-holders.

Many objections were raised to this suggestion. Most life-insurance officials were convinced that the mere proposal of such an examination would "sear policy-holders almost to death." The attendant expense, too, seemed to many of those present to put it out of the question. Some even declared that if, after such re-examination, a policy-holder was declared to be in good health, he would be much more inclined to let his policy lapse if it were difficult to keep up.

Many of these objections hold just as strongly against the preliminary examination for life-insurance. Indeed, half a century ago they were urged so strenuously that it took some time to induce the companies to adopt the principle of requiring a preliminary medical examination of all applicants. No doubt, to some timorous people this medical examination is a trying ordeal; it causes some to hesitate and restrains others from taking out insurance at all. But custom has largely broken down this dread; most persons now regard the medical examination as a matter of course, and some welcome it.

The expense of this examination and the fear that it would deter applicants meant so much to life-insurance

companies that they hesitated long before adopting preliminary examinations; then the smaller companies took it up half-heartedly. It was soon demonstrated, however, that the medical examinations of a single year saved the company enough money to run the medical department for many years.

None of the objections against Dr. Foster's suggestion will have weight for those who know the story of life-insurance in its relation to medical examination. There seems no doubt that such periodical examinations might be of great service in prolonging life. Diseases like tuberculosis, diabetes, and even nephritis, may run so insidious a course as not to be suspected at all by the patient, while a physician may readily discover the early symptoms and by proper directions enable the patient to avoid the more serious manifestations for years—perhaps for a normal term of life.

Provision against loss, though new in life-insurance, is not a new idea in other branches of insurance. The fire-insurance companies now maintain salvage corps whose duty it is, in case of fire, to go into insured buildings and protect valuable property from damage by fire or water, thus saving many things which would otherwise be a total loss to the company. When the idea was first broached, it was objected that such a salvage corps would be expensive; that its presence in houses would be resented by owners; and that insurers would be afraid of having damaged goods imposed on them by the insurance company. Experience, however, has proved the value of the salvage corps, and now there is no institution more firmly rooted in fire-insurance.

It has often been suggested that a medicobiologic examination at regular intervals—a measure foreshadowed by this suggestion for life-insurance companies—would lengthen life and save much suffering. If death were not inevitable and suffering not preventable, then men might be justified in refusing to provide for the one and to guard against the other; but "life is a dangerous thing at best, and very few of us get out of it alive." Death can not be postponed by a childish refusal to look certainty in the face. Sometimes, however, it can be deferred—often the worst trials attendant on it can be mitigated—by a seasonable and resolute determination to know the truth; and a realization of these facts is constantly growing among intelligent people.

It seems clear that the suggestion as to re-examination of policy-holders must bear fruit, if not now, then at some time when insurance officials shall be large-minded and progressive enough to appreciate its value.

THE MANNER OF EXTENSION OF CANCER

If we stop to consider the actual rate at which lymph must travel in the finer lymphatics, it becomes at once evident that the velocity must be far too low to permit it to have much effect in washing cancer cells or similar objects from one place to another. Furthermore, the

1. THE JOURNAL A. M. A., April 17, 1909, p. 1262.

very fact that in cancer the lymphatics are extensively blocked by cancer growth must make the rate of lymph flow rather less than normal. Nevertheless the assumption and the teaching until quite recently have been almost universal that cancer cells were washed from the primary growth to the regional glands by the lymph stream. By his demonstrations of the continuity of cancer growth from the primary tumor into the regional lymphatic channels, spreading centrifugally by direct extension and largely independently of any washing away of cells, Handley did a great service to surgical pathology and surgical practice, for he demonstrated once and for all the necessity of removing as much as possible of the tissue intervening between the primary tumor and its lymphatic metastases. This "permeation theory" of cancer growth has, as Handley himself says, been accepted and applied with especial readiness by American surgeons, while Continental surgeons have been slow to appreciate its significance. In a recent address¹ he discusses the reparative and healing processes that take place in growing cancers, and their bearing on the extension of malignant growths by permeation.

The life cycle of a typical carcinoma he considers to be somewhat as follows: At first the growth extends on all sides in a centrifugal manner into the tissue interspaces, and thence into the lymphatic vessels; at this time cancer cells may be swept away from their attachments and into the regional glands, but this is a minor and subsidiary process. As the permeating growth spreads, the growing edge becomes cut off from the primary center by fibrosis, and as the edge continues to spread invisibly, small macroscopic tumor nodules manifest themselves in the area of fibrosis at points where the cancer cells have not been entirely destroyed by the fibrosis. Soon the central part of the primary growth also begins to become fibrotic, degenerates, and forms an ulcer spreading centrifugally likewise. If the patient lives long enough the proliferative energy of the primary and nearest secondary growths may become exhausted, so that the ulcer heals and the satellite nodules vanish, while the permeative growing edge usually continues its spread, leaving in its track fresh secondary nodules. In other words, every aggregation of cancer cells has a definite life cycle, tending to grow for a time and then to degenerate spontaneously and undergo fibrosis, these changes progressing from the center step by step toward the periphery. Ordinarily, this life cycle is interrupted by the death of the host of the cancer, but in the more slowly growing cancers there is often time for the healing processes to become very evident in the centers of both primary and secondary tumors. As Handley has demonstrated, if the spread of subcutaneous cancer nodules is watched carefully it will be found that the appearance of new nodules farther from the center is accompanied by disappearance of the

older, more centrally located secondaries, and microscopic studies may prove that the cancer cells have entirely vanished from these regions.

As a matter of fact, the symptoms of cancer are largely caused by the defensive fibrotic processes rather than by the growth of the tumor cells. The typical features of mammary cancer, such as retraction of the nipple, flattening of the breast, and fixation of the skin, are all produced by the defensive fibrosis rather than by the destructive infiltration and growth processes. The dense thickening of the skin in cancer *en cuirasse* may be due solely to fibrosis without any existing invasion by cancer cells being demonstrable, and the edema of the arm is probably caused by lymphatic fibrosis resulting from the natural curative processes which accompany the growing cancer.

Handley's conception of the mechanism of extension and metastasis of cancer, based on careful clinical and laboratory studies, seems to be pathologically sound and practically important, and in any case it carries with it a logical picture of the events that are taking place in growing cancers which can not fail to be of help to the surgeon who has to remove and treat such conditions.

ABSOLUTE VALUES IN PERCUSSION

The statement is frequently heard in connection with the physical signs of early pulmonary tuberculosis that any demonstrable change in the percussion note over the lungs indicates a process which can no longer be designated as incipient. The impression is almost universal that abnormalities in the auscultatory phenomena precede by a considerable period of time any reliable signs that may be elicited by percussion. This conception has been challenged by C. E. Waller,¹ of Hålahult, Sweden, who urges that more attention be paid to absolute findings in the percussion of any given area. He thinks that the disrepute into which percussion has fallen is due in a large measure to the habit of employing only the comparative method, in which the percussion note over analogous areas on the two sides of the chest are contrasted. The opportunity for errors of interpretation in the use of this method is obvious, yet it is true that it is largely employed to the exclusion of such careful consideration of the percussion note in itself as is given to the quality of the breath sounds or of the voice transmission.

Waller describes various degrees of impaired resonance which, he asserts, may be absolutely identified and which succeed each other from the earliest stage of tuberculous infiltration to the stage of absolute solidification. The earliest change noted is a shortening of the typical non-tympanitic pulmonary note brought out at the end of quiet expiration or the beginning of inspiration by very light percussion. At this time,

1. Brit. Med. Jour., March 6, 1909; abstracted in THE JOURNAL, April 2, 1909, p. 1146.

1. Am. Jour. Med. Sci., April, 1909.

there is also added a slight tympanitic element due to the relaxation of the congested lung. The stage beyond this lacks the non-tympanitic sound during the whole respiratory phase with light percussion unless the depth of respiration is increased, when it appears when the lungs are full. With more intense infiltration the normal pulmonary note may be brought with slight increase in the force of percussion, though this increase will not suffice for the next stage of consolidation. The most forceful percussion stroke used—and this is only relatively strong—distinguishes a fourth and fifth degree of dulness in one of which the pulmonary note may still be recognized and in the other not.

No description of percussion technic or of the sounds produced will convey to every reader the same impression and so no scale of dulness such as that described can ever be of very much value as a general standard, but for the use of any one observer such a scale would prove of great value in recording changes in a given chest or as a standard of comparison. In these days when so many tempting short cuts to diagnosis are being offered the practitioner it is gratifying to record an effort toward refinement in physical diagnosis on which, after all, must rest the final judgment as to the condition of the patient. Percussion is an aid which deserves more attention than has been accorded it of late.

THE ATLANTIC CITY SESSION

We publish this week considerable matter relative to the coming session of the American Medical Association. While the local profession and the citizens of Atlantic City are making special efforts to assure a most enjoyable time for those who attend, and while the location and its environs are admirably adapted for rest and recuperation, still after all, the scientific part is the most important. A casual glance over the Section programs, which appear in this issue, will show that the scientific work will be fully up to the high standard of recent years. All of the programs are excellent, some exceptionally so.

Attention should be called to a symposium in the Section on Pharmacology and Therapeutics. This takes up, from every viewpoint, one of the most practical and live questions of the day, "The Present Status of Serum and Vaccine Therapy with Special Reference to the Products on the American Market." As will be noticed, the subject is to be handled in all its phases by authorities, and the result of such a discussion must throw light on many obscure points.

Another important symposium is that in the Section on Practice of Medicine on "Physical Therapeutics"—certainly a topic to attract interest and discussion. Another practical question will be treated in a symposium in the Section on Nervous and Mental Diseases, "The Sero-Diagnosis of Syphilis and Its Relation to Diseases of the Nervous System." The Section on

Pathology and Physiology is especially to be congratulated on the splendid manner in which many of the live questions of the day in physiology and pathology will be treated by well-known men, including some outside of the profession who are eminent in these departments.

Taking it all in all, we believe we are justified in saying that the outlook for splendid scientific work at the coming Atlantic City session is more promising than at any former meeting.

A PRACTICAL METHOD OF REVISING THE PHARMACOPEIA

A practical measure, looking toward the inclusion in the Pharmacopeia of unofficial remedies that stand the test of clinical experience, has been initiated by the Section on Ophthalmology of the American Medical Association. From fifty of the best-known drugs selected from "New and Nonofficial Remedies," fourteen were culled by the committee of the section as having a sufficiently wide employment by ophthalmic surgeons to justify their general recognition. A list of these fourteen drugs was sent on a return postal card to each of the 935 members of the section, with instructions to mark the six drugs which seemed most useful. The replies will be tabulated, and those remedies that have received the largest number of votes will be officially recommended by the section for inclusion in the next revision of the Pharmacopeia. The fourteen remedies named are: adrenalin, alypin, argyrol, beta-eucain hydrochlorid, chloretone, collargol, dionin, eupthalmin, fibrolysin, fluorescein, holocain hydrochlorid, novocain, protargol and stovain. The idea seems eminently practical and its adoption by the other sections would furnish a mass of cumulative evidence in regard to many unofficial preparations that will be of great value from a clinical viewpoint. Moreover, it would cover so broad an area of investigation as to place the results beyond the possibility of any charge of partiality.

THE INSANE AND JURIES

The tendency of juries (often manifested also by judges in habeas corpus proceedings) to give the benefit of the doubt to those wishing to escape from confinement as lunatics is well known. In his latest report Dr. Robert B. Lamb, superintendent of the State Hospital for the Criminal Insane at Matteawan, New York, has followed up the record of the thirty-four inmates who have been discharged by juries from that hospital as sound in mind. According to his report, fourteen of these returned eventually, either to prison or to the asylum, eight became troublesome to their families, three were unable to earn a livelihood, six disappeared, two committed suicide, and only a single one of the thirty-four was able to support himself partially after his discharge. This is a good commentary on the practice of freeing lunatics by the courts; and it will be fortunate if sooner or later there is not some fatal result from the

release of these patients, twelve of whom were charged with murder in the first degree. It may be said that Matteawan is an asylum for criminals which therefore may not fairly be compared with institutions for the non-criminal insane. There is, however, some reason to be given for the detention of each insane person confined in an institution; for, with the increase of insanity at the present time in most of our communities and the consequent crowded conditions of the asylums, the officials are not excessively anxious to retain any patients that can safely be discharged. Yet Dr. Lamb's report avers that "in all cases referred to which have been submitted to juries for verdict, the finding has been uniformly in favor of the lunatic." Dr. Lamb suggests that the methods required for the confinement of the criminal lunatic should be demanded for his release—the certificate of two competent medical examiners and the approval of the judge of a court of record. This rule could be applied as well to inmates of non-criminal asylums. It is mistaken kindness to the individual, as well as a grave injustice to society, to turn adrift an irresponsible derelict, incapable of pursuing a true course and threatening woe to others.

Medical News

ALABAMA

Graduation Made a Requirement.—It is announced that on and after July all applicants for license to practice medicine in the state must be graduates of reputable medical colleges. This leaves only four states, Arkansas, Massachusetts, Mississippi and Tennessee, which continue to examine non-graduates in medicine for license to practice.

Hospital Staff Appointed.—The following medical and surgical staff has been appointed for the Mobile City Hospital for the six months beginning April 1: Surgery—Drs. William McD. Mastin, Douglas G. Campbell, Harry T. Ingè, James J. Peterson, and Joseph Schwartz; medicine—Drs. Ernest S. Feagin, Neal E. Sellers, Nicholas A. Madler, and Lee W. Roe; dermatology—Dr. M. Toulmin Gaines; obstetrics—Dr. R. Clarence Jones; pathology—Dr. C. Winthrop; eye, ear, nose and throat—Dr. Alfred E. Maumenec; and county physician—Dr. William G. Ward.

Society Meetings.—At the annual meeting of the Autauga County Medical Society, held in Prattville, March 11, the following officers were elected: Dr. Harry E. Downs, Billingsley, president; Dr. Clarence C. Rice, Prattville, vice-president; Dr. John E. Wilkinson, Prattville, secretary-treasurer; Dr. Robert M. Davis, Prattville, health officer; Drs. Malcolm D. Smith, John W. Hagler, Clarence C. Rice, Robert M. Golson, and Robert M. Davis, all of Prattville, county board of health; Drs. Harry E. Downs, Billingsley, and A. James Tankersley, Autaugaville, delegates to the state association, and Dr. Clarence C. Rice and John E. Wilkinson, Jr., Prattville, alternates.—At the annual meeting of Blount County Medical Society, held in Oneonta, April 6, the following officers were elected: Dr. Samuel T. Shepherd, Lehigh, president; Dr. David S. Moore, Clarence, vice-president and delegate to the state medical society; Dr. Marvin Denton, Cleveland, secretary-treasurer; Dr. William C. Miles, Village Springs, delegate to the state medical society, and Floyd G. Donehoo, Oneonta, city and county physician.

CONNECTICUT

February Deaths.—There were 1,306 deaths reported to the State Board of Health during February, 58 less than for January, 209 less than for February, 1908, and 99 less than the average February deaths for the five years preceding. The death rate was equivalent to 15.1 per 1,000 per annum. The deaths from infectious diseases were 191, or 14.6 per cent. of the total mortality.

Infectious Diseases.—During February, there were reported to the state board of health more than 783 cases of measles in 39 towns, 129 cases of scarlet fever in 32 towns, 2 cases of cerebrospinal meningitis in 2 towns, 152 cases of diphtheria in 35 towns, more than 91 cases of whooping cough in 15 towns, 23 cases of typhoid fever in 13 towns, and 105 cases of consumption in 29 towns.

Society Meetings.—At the one hundred and seventeenth annual meeting of Fairfield County Medical Society, held in Bridgeport, April 13, the following officers were elected: Dr. Samuel Pierson, Stamford, president; Dr. Herbert E. Smyth, Bridgeport, vice-president; Dr. Frank W. Stevens, Bridgeport, secretary; Dr. James D. Gold, Bridgeport, treasurer; Dr. Samuel M. Garlick, Bridgeport, counselor; Drs. William S. Randall, Shelton, Edward S. M. Smith, Bridgeport, and David C. Brown, Danbury, censors; and Drs. James D. Gold, Bridgeport, William J. Tracey, Norwalk, George H. Noxon, Darien, John W. Wright, Bridgeport, and Frank W. Stevens, Bridgeport, delegates to the state society.—The one hundred and seventeenth annual meeting of the Middlesex County Medical Society was held in Middletown, April 8, when the following officers were elected: President, Dr. Michael D. Murphy, Middletown; vice-president, Dr. Mathew W. Plumstead, East Haddam; censor, Dr. James M. Keniston and James H. Kingman, Middletown; county reporter, Dr. James Murphy, Middletown; state counselor, Dr. James H. Kingman, Middletown, and delegates to the state society, Drs. Charles E. Stanley and Charles B. Young, Middletown.—Hartford County Medical Society, at its one hundred and seventeenth annual meeting, held in Hartford, April 6, elected the following officers: President, Dr. Charles D. Alton, Hartford; vice-president, Dr. Herman Strosser, New Britain; secretary-treasurer, Dr. Frederick B. Willard, Hartford; counselor, Dr. Oliver C. Smith, Hartford; censor, Dr. Edward R. Lampson, Jr., Hartford, and delegates to the state society, Drs. Frederick B. Willard, Phineas H. Ingalls, Michael H. Gill and John H. Rose, Hartford, Harry B. Rising, Glastonbury, William R. Tinker, South Manchester, and Erastus P. Swasey, New Britain.—At the one hundred and eighteenth annual meeting of the New London County Medical Society, held in Norwich, April 1, the following officers were elected: President, Dr. George H. Jennings, Jewett City; vice-president, Dr. Patrick J. Cassidy, Norwich; clerk, Dr. Edwin C. Chipman, New London; counselor, Dr. Edward P. Brewer, Norwich; censor, Dr. Charles E. Brayton, Stonington (re-elected), and delegates to the state society, Drs. Dennis J. Shahan, Norwich, and George N. Miner, Waterford.

COLORADO

Appropriation for Feeble-Minded.—The legislature has made an appropriation for the establishment of a State Home for Feeble-Minded on farm lands near Denver.

Additions to Hospitals.—The Steele Memorial Hospital, the municipal hospital of Denver for contagious diseases, is about to build an addition costing \$20,000.—St. Joseph's Hospital, Denver, will build an addition to be used as a home for nurses.

Entitled to Salary as Trustee.—The assistant attorney-general has decided that Dr. William W. Grant, Denver, is entitled to salary during his term of office as trustee of the State Hospital for the Insane, in spite of the fact that the legislature two years ago abolished salaried boards.

Variations in Deaths.—The ninth biennial report of the State Board of Health shows a substantial decrease in deaths from typhoid fever and scarlet fever, but an increase of nearly 100 per cent. in deaths from diphtheria. An effort will be made to introduce the free distribution of antitoxin throughout the state.

The People Must Now Decide.—Governor Shafroth on March 23 signed House bill No. 50, which provides for the submission to the people of a constitutional amendment permitting the establishment of a medical department of the State University in Denver, in which students may take the last two years of their medical course.

Personal.—Dr. Abraham L. Fugard has been elected mayor of Pueblo.—Dr. Ralph E. Morris, Cripple Creek, has been appointed registrar of Teller county.—Dr. Richard W. Corwin, Pueblo, has been appointed a member of the board of regents of the American School of Archeology, Santa Fe, N. M.—Dr. Clara M. Moore, Denver, has been appointed physician in charge of the woman's department of the State Hospital for the Insane, Pueblo.

Asks Medical Society to Name Candidate for City Physician.—At a special meeting of the Larimer County Medical Society, April 21, a communication was read from the mayor of Fort Collins, Colo., stating that it was the wish of the majority of the aldermen that the society name a candidate for the position of city physician, to be acted on at a special meeting of the council. The invitation of the mayor was accepted, the society balloted for a nominee for the position, and Dr. Albert W. Rew was declared the unanimous choice of the society.

DELAWARE

Antituberculosis Meeting.—The Delaware Antituberculosis Society, at its annual meeting, held in Wilmington April 13, elected the following physicians, members of its board of directors: Dr. John J. Black, Newcastle, and Drs. Harold L. Springer, Albert Robin, John P. Wales, Peter W. Tomlinson and Abram E. Frantz, of Wilmington.

State Board of Health Changes.—The personnel of the State Board of Health has been changed by the declination of the president, Dr. Ezekiel W. Cooper, Camden, to accept reappointment. Dr. John W. DeWitt, St. Georges, has been elected president; Dr. Abram E. Frantz, Wilmington, has been re-elected secretary-treasurer, and Drs. William F. Davis, Dover, and William F. Haines, Seaford, have been elected members of the board.

Work Against Tuberculosis.—Dr. Albert Robin, Wilmington, in charge of the Wilmington Dispensary for Tuberculosis, in his annual report, states that 114 new patients were seen during the year; 349 visits were made to the dispensary by these patients, and that visiting nurses made 1,679 visits to the homes of patients. He recommends that the dispensary be located in a more central part of the city and in a building by itself; that additional nurses be provided as soon as the work demands it, and that more physicians be invited to work in the dispensary as well as in the homes of patients.

INDIANA

Protest Against Use of Names.—The Wayne County Medical Association has issued a second protest against the use of names of its members in lay journals in connection with medical and surgical cases.

Indiana University Adopts Higher Requirements.—At a recent meeting the faculty of Indiana University School of Medicine voted unanimously to require for entrance in addition to a four-year high school course, one year of collegiate work beginning this fall and two years of collegiate work beginning in the fall of 1910.

Appeal Regarding Meningitis.—Dr. John H. N. Hurty, Indianapolis, secretary of the State Board of Health, has issued an appeal entitled "Let Us Save 200 Lives This Year from Meningitis," in which he urges the use of the Flexner antimenigitis serum which can be obtained without expense by any practitioner of the state from Dr. Walter D. Hoskins, Indianapolis, or Dr. Homer Wooley, Bloomington, both of whom are professors in the medical department of the Indiana Medical University. It is to be hoped, says Dr. Hurty, that the use of the anti-meningitic serum will not be delayed, as was the case with the diphtheria antitoxin.

ILLINOIS

Personal.—Dr. William B. Peck, Freeport, has returned from Europe.—Dr. Louisa L. Munch, Joliet, was operated on for appendicitis in Mary Thompson Hospital, Chicago, April 14.—Dr. Orville B. Blackman, Dixon, was seized with a cerebral hemorrhage, April 20, but is reported to be improving.

Conference on Public Health.—A public health conference was held at the University of Illinois, Urbana, April 23. In the absence of the president, Edmund A. James, the vice-president, Prof. Thomas J. Burrill, delivered the address of welcome. Dr. George W. Webster, Chicago, president of the State Board of Health, spoke on the work of the board and pointed out the deficiencies of our state health organization. He suggested that the Governor should appoint a commission to study the health laws and organizations of other states and recommended the needed improvements in this state. More comprehensive instruction in public health and closer cooperation between the university and the various state boards which are now concerned with the public health are necessary. Dr. James A. Egan reviewed the existing cooperation between the university and the State Board of Health and considered the proposed water survey legislation in some detail. He

favoured retaining the laboratory of the board at Springfield. Vice-President Burrill discussed the proposed course in sanitary science at Cornell University and the advisability of undertaking similar work here, indicating the scope of the proposed organization. Dr. William A. Evans, commissioner of health of Chicago, gave a thorough discussion of the management of the Chicago milk problem. The magnitude of this part of the work may be imagined from the fact that milk is received from 12,000 farms, situated in four states. Every farm is inspected and record maps of the farm, indicating its equipment, its sanitary condition and its surroundings, are made by the inspectors and preserved. The sampling and testing of the milk is a large undertaking. Over 30,000 eight-gallon cans of milk are received daily. The enforcement of the new ordinances requiring satisfactory tuberculin test of the cows or pasteurization of the milk is proving very satisfactory, and the educational effect upon the milk producers is exceedingly valuable. Prof. W. T. Sedgwick, Boston, spoke on the profession of health officer as offering a career for trained young men, and mentioned several of the smaller towns in the East where such men devoted their full time to local sanitary matters, to the great benefit of the community. He pointed out the pernicious influence of politics upon public health work. Prof. A. N. Talbot considered the work of the municipal engineer and some of the larger sanitary engineering problems of the state. Dr. John Marten, health officer of Tolono, spoke of the work of the local health officer, pointing out the very serious attitude of the Illinois public in expecting its health officers to do efficient work, without paying them anything for their services or even defraying the necessary expenses of the work. The greatest resource of the local health officer is the aid of the State Board of Health and the university, when he calls on them for advice. These resolutions were adopted:

Resolved, That an annual conference of health officers should be held in the state of Illinois, to provide for the instruction of health officers in recent advances of science and of practical experience related to the public health, for the free discussion of public health problems in the state, and for the expression of opinion by the assembled health officers on methods of promoting the public health, and related subjects.

Resolved, That the state university be asked to provide opportunity for more systematic investigation and more comprehensive instruction in hygiene, sanitary science and the sciences related thereto.

Resolved, That a committee of three be appointed by the chair to present to the university and to the State Board of Health a plan for carrying out the suggestions made in the above resolutions and to render assistance in securing the necessary legislation.

Resolved, That it is the sense of this meeting that a commission should be appointed by the governor, in accordance with the suggestion embodied in Dr. Webster's paper, to study the health departments of other states and of our own and to report on the possibility of improvement in the organization of the Illinois department of health.

It is to be regretted that, despite the wide advertisement of this conference, to which invitations were sent by the state university and the State Board of Health, only five of the 5,400 city, village and county health officers of the state were present, and of these three were from Champaign county and one from Chicago.

Chicago

Bequest for Hospital.—The Francis E. Willard Temperance Hospital is one of the two principal legatees of the estate of the late Dr. Thomas D. Fisher, Leroy, which is valued at \$75,000.

Compulsory Vaccination.—At the meeting of the council of the Chicago Medical Society April 13, resolutions, introduced by Dr. William L. Baum in support of a bill making vaccination compulsory, were adopted.

Health Institute Proprietor Fined.—M. Janik, proprietor of the Krakow Institute on Milwaukee avenue, charged on complaint of the State Board of Health with practicing medicine without a license, is said to have been found guilty by a jury in the municipal court, April 22, and fined \$100.

Personal.—Dr. Jacob Frank has been appointed attending surgeon of the Columbus Hospital.—Dr. William A. MacFarlane has been ill seven weeks with pleuropneumonia.—Dr. Frank L. Rose, who is about to remove to Lusk, Wyo., was given a farewell dinner April 22, by the Englewood Branch of the Chicago Medical Society.—Mr. Harlow N. Higinbotham has been elected president and Dr. William A. Evans, secretary of the board of directors of the new Chicago Municipal Sanatorium.

New Dispensary.—An addition to the dispensaries of Chicago is the Calumet Avenue Branch of the South Side Dispensary, erected adjacent to Mercy Hospital by the Northwestern University Medical School at a cost of \$30,000. A large faculty room, two recitation rooms, thirteen small ex-

aminig rooms, drug rooms, a photographic room, an x-ray room are on the first floor; a laboratory occupies the entire rear of the floor; on the second floor there is an assembly hall for clinical demonstrations, with a seating capacity of 300.

IOWA

Wills Library to Medical School.—By the will of the late Philo J. Farnsworth, Clinton, his extensive library of medical and scientific works is bequeathed to the Medical Department of the Iowa State University, Iowa City.

Unlicensed Practitioners Found Guilty.—James E. Myers, Lansing, indicted on the charge of practicing medicine without a certificate from the State Board of Health, on complaint of the Allamakee County Medical Society, is said to have been found guilty.—"Dr." Adkins, a graduate of a school of "vital science," charged with practicing medicine without a license, is said to have been found guilty at Montezuma, April 8, and fined \$300.

Appropriations for the Tuberculosis Conflict.—At the session of the state legislature, just closed, there was appropriated for new buildings at the State Sanatorium for the Treatment of Tuberculosis, Oakdale, \$55,000; there is available for maintenance for the next two years \$96,000, and \$10,000 was appropriated for lectures on tuberculosis and the education of the public. The new buildings will enlarge the sanatorium to a capacity of 120. Its present limit of 77 has been taxed since October last.

Personal.—Dr. Thomas U. McManus, Waterloo, has been appointed a member of the State Board of Health, vice Dr. Joseph H. Sams, Clarion, term expired.—Dr. Charles M. Harrington, Knoxville, is reported to be critically ill with appendicitis.—Dr. Aaron A. Noyes, Mason City, a member of the first class that graduated from an Iowa medical college, was the guest of honor at a banquet given by the faculty to the students and alumni of Drake University Medical School, Des Moines, April 5.

MARYLAND

Convicted for Violation of the Cocain Ordinance.—Dr. Ralph J. Schirman, Baltimore, is said to have been convicted, April 22, of violating the cocain ordinance by prescribing the drug for habitual users. Sentence was suspended under a motion in arrest of judgment.

Personal.—Dr. William Osler arrived in the United States from England, April 21.—Dr. Charles H. Medders, Baltimore, who sued the Western Maryland Railroad for \$5,000 for services rendered in a collision four years ago, is said to have been given a verdict for \$150.

Alumni Banquet.—The annual banquet of the General Alumni Association of the University of Maryland was held April 22. Among the medical speakers were Dr. Joshua W. Hering, Westminster, comptroller of the state, and Dr. John C. Hemmeter, Baltimore, of the faculty of physics.

Society Meeting.—Montgomery County Medical Society held its annual meeting in Rockville, April 20, and elected the following officers: President, Dr. Otis M. Linthicum, Rockville; vice-president, Dr. William L. Lewis, Kensington; secretary-treasurer, Dr. John L. Lewis, Bethesda, and censor, Dr. William T. Pratt, Potomac.

Increase in State Appropriations Asked.—The following applications from Baltimore institutions for increased state appropriations have been made to the Board of State Aid and Charities: Hebrew Hospital, from \$7,000 to \$12,000; St. Joseph German Hospital, from \$7,500 to \$15,000; Hospital of the Good Samaritan, from \$1,200 to \$5,000; and South Baltimore Eye, Ear and Throat Hospital, from \$2,000 to \$6,000.

MISSISSIPPI

Personal.—Dr. Harry H. Harrison, Jackson, was seriously injured in a runaway accident April 7.—Dr. Fred. L. Meyer, state lecturer for the State Board of Health on Hygiene and Sanitation, delivered a popular lecture in Meridian, April 22, on "Mosquitoes and Flies."

College to Open.—The chancellor of the University of Mississippi announces that the University Medical College will open at the Charity Hospital, Vicksburg, September 23. The contract for the construction of the building in which the medical department is to be located has been awarded, and it is expected it will cost between \$9,000 and \$12,000.

State Society Meeting.—At the annual meeting of the Mississippi State Medical Association, held in Jackson April 12 to 14, under the presidency of Dr. James W. Gray, Clarksdale,

the following officers were elected: President, Dr. Dudley W. Jones, Fernwood; vice-presidents, Drs. Joseph C. Armstrong, Water Valley, and Thomas Purser, McComb; treasurer, Dr. Hugh L. Sutherland, Rosedale (re-elected); councilors, First District, Dr. Thomas M. Dye, Longwood, and Second District, Dr. James B. Bullitt, University; delegate to the American Medical Association, Dr. James W. Gray, Clarksdale, and alternate, Dr. H. A. Minor, Macon. Before its adjournment, the association renewed its recommendation for the establishment of a state charity hospital in Jackson, and a memorial on this subject will be presented before the next legislature. It was decided to meet in Oxford in 1910.

MISSOURI

Appeal Dismissed.—The appeal of Dr. Erasmus A. Duncan, Salem, from the decision of the State Board of Health, which revoked his license to practice medicine on account of alleged issuance of prescriptions for whisky in violation of the law, is said to have been dismissed in the Circuit Court April 3.

Personal.—Dr. W. Francis Mitchell, Lancaster, has been an invalid for eight months with a serious disease of the neck.—Dr. George Williams, Odessa, has been appointed superintendent of the State Hospital for the Insane No. 4, Fulton, vice Dr. Porter E. Williams, term expired.

City Hospital for Sedalia.—A committee from the Pettis County Medical Society has asked Dr. Wood, the owner of Maywood Hospital, Sedalia, whether he would be willing to sell the institution, that it might be converted into a city hospital. He put a price of \$40,000 on the building and equipment, and the question is to be voted on by the society at its next meeting.

Bill to Reduce Dissecting Material.—House Bill 456, to eliminate hospitals and poorhouses as sources of supply for anatomic material, thereby reducing the latter four-fifths, has passed the Senate and is in the hands of the house committee on public health and legislation. Dr. Robert J. Terry, St. Louis, has introduced a resolution setting forth that this bill in effect defeats the purpose of the present law which authorizes the use of the bodies of unclaimed dead for the pursuit of medical studies, and that the passage of the bill would result in retrogression from the attitude maintained by other civilized states toward medical science, and urging every intelligent legislator to oppose so reactionary a measure.

NEW HAMPSHIRE

Personal.—Dr. Mary Dennon, Manchester, has been appointed assistant physician at the Norristown (Pa.) State Hospital for the Insane.—Dr. John H. Bates, East Rochester, has been appointed county physician for Rochester, Strafford and Barrington.

State Medical Society Meeting.—The one hundred and eighteenth annual meeting of the New Hampshire State Medical Society will be held in Concord May 13 and 14, under the presidency of Dr. John M. Gile, Hanover. The house of delegates will meet May 12 at 8:30 p. m. Among the principal papers at this meeting are those on "Surgery of the Stomach," by Dr. John B. Deaver, Philadelphia; "The Legal Liability of Physicians to Patients," by M. D. Cobleigh, Esq.; "The Development of Milk Laboratories in Regard to What Food Stuff They Can Provide, and Their Relations to the Principles of Infant Feeding," by Dr. Thomas M. Rotch, Boston; "The Fashionable Shoe as Worn on the Human Foot as Seen Through an X-Ray," by Dr. Arthur F. Wheat, Manchester, and "Responsibility of the General Practitioner and the Specialist in the Prevention of Deafness," by Dr. Francis P. Emerson, Boston. The anniversary banquet will be held at the Eagle Hotel in the evening of May 14, presided over by Dr. Howard N. Kingsford, Hanover.—In connection with this meeting the annual meeting of the New Hampshire Society of Military Surgeons will be held.

NEW JERSEY

Pay Physicians for Reporting Communicable Diseases.—The board of health of East Orange, on April 15, made appropriation to cover the payment of ten cents to physicians for each case of contagious disease reported in the city, the order to be retroactive for as far as January 1.

Personal.—Dr. S. Leslie West, formerly of Philadelphia, has gone to Atlantic City to manage the Westmont Sanitarium, formerly the Hotel Senate, which has been especially equipped for hydrotherapy and electrotherapeutics.—Dr. Edward

Guion has been elected health officer of Atlantic City, vice Dr. Milton L. Somers, deceased.—Dr. Charles J. Larkey has been appointed deputy health officer of Bayonne.

Society Meetings.—At the annual meeting of Union County Medical Society, held in Elizabeth April 14, the following officers were elected: President, Dr. Stephen T. Quinn; vice-president, Dr. P. DuBois Bunting; secretary, Dr. John H. P. Conover; treasurer, Dr. Alvin R. Eaton, Jr., all of Elizabeth; reporter, Dr. Morton H. Pierson, Roselle, and delegate to the state society, Dr. Ellis W. Hedges, Plainfield.—Bergen County Medical Society, at its annual meeting April 13, elected Dr. Philip E. Brundage, Grantwood, president; Dr. James W. Proctor, Englewood, vice-president; Dr. Frederick S. Hallett, Hackensack, secretary, and Dr. Frank Freeland, Maywood, treasurer.—At the annual meeting of Cumberland County Medical Society, held in Bridgeton April 13, Dr. Charles W. Wilson, Vineland, was elected president; Dr. Alfred Cornwell, Bridgeton, vice-president; Dr. Amos J. Mander, Millville, secretary, and Dr. Joseph Tomlinson, Bridgeton, treasurer.—Somerset County Medical Society held its annual session in Somerville April 8, and elected Dr. Peter J. Zeglio, North Plainfield, president; Dr. Claudius R. P. Fisher, Bound Brook, vice-president; Dr. Francis E. DuBois, Plainfield, secretary; Dr. Thomas H. Flynn, Somerville, treasurer; Dr. John P. Hecht, Somerville, reporter; Dr. Henry V. Davis, North Branch, censor, and Dr. Elsie R. Graff, Somerville, delegate to the state society.

NEW YORK

Fire at Sanatorium.—Dr. W. Hays Mitchell, superintendent of the Sheldrake Springs, writes that on April 20, the power plant of the institution was destroyed by fire with a loss of \$10,000. No damage was done to the main building, nor did the fire cause serious delay in caring for patients.

Gold Medal Awarded.—A special award of a gold medal and certificate in recognition of effective work done in organization of the state campaign against tuberculosis has been awarded to the State Charities Aid Association by the committee which had in charge the granting of awards by the International Congress on Tuberculosis.

Bill to Abolish Quarantine Commissioners.—This bill provides for the abolishment of the quarantine commission and the turning over of the work to Dr. Alvah H. Doty, the health officer of the Port of New York. All of the quarantine commissioners except one are out of office, either through death or otherwise. The governor has recommended this step for the past two years.

Ambulance Board Bill Held Up.—The Hoey bill, which proposes to place the ambulance service of New York under the control of a board consisting of the police and charities commissioners and the head of Bellevue and the Allied Hospitals, which was passed by the assembly and handed down to the senate, has been held up by the senate committee. The bill will be amended so that instead of the head of Bellevue and the Allied Hospitals, two private citizens shall be appointed by the mayor. The private hospitals contended that it was not just to have only one hospital represented in the membership of the board.

Resolutions Regarding Ophthalmia of the New Born.—At a meeting of the Medical Society of the County of New York, March 22, a preamble and resolutions were unanimously adopted, setting forth that ophthalmia neonatorum is the cause of blindness in 33 per cent. of the cases in all institutions; that the disease is in great part, if not entirely, preventable; that the control of preventable diseases must originate within the profession of medicine; and can succeed only by the concerted action of the entire profession and the arousing of public sentiment, endorsing and commending to the favorable consideration of the President of the United States the calling of an International Congress for the Study of Ways and Means for the Prevention of Ophthalmia Neonatorum and Blindness, and requesting that he extend an invitation to the medical profession and those interested in public health to participate in a world's congress, to be held in Washington in 1910.

Bills Passed.—The State Department of Health Sewage Disposal Bill was passed on April 20. This bill gives to the State Commissioner of Health the power of determining on investigation, whether the sewage from any city, village, town, building, steamboat or other vessel or property, which is being discharged into the waters of the state, is polluting such waters in a manner injurious to health or comfort, and, if so, to issue an

order to discontinue the discharge of such sewage and adopt a method which will avoid further pollution.—The senate passed the bill making an appropriation for the purchase of the Greenvale site for the new State Hospital for the Insane.—Assemblyman Voss' bill was also passed, which prohibits the employment of any child under the age of 16 in factories where circular, band saws, wood-shapers, wood joiners or other appliances dangerous to life or limb, like saws, belts or wheels, or poisonous acids are used; where alcoholic liquors are manufactured, bottled or packed, or where the employment of such necessitates the persons standing during his or her work. No person under the age of 16 shall be permitted to run an elevator and no male person under the age of 18 or female under 21 shall be permitted to clean or to have the supervision of machinery.

New York City

Fifty Dollars for the First Baby.—The first child born in the Jewish Maternity Hospital, East Brooklyn, was given \$50 by the hospital authorities. The birth occurred April 11.

For Selling Cocain.—A Grand street druggist has been convicted of selling cocain and sentenced to imprisonment for 11 months and 29 days in the penitentiary, and to pay a fine of \$500.

Personal.—Dr. Samuel W. Hamilton, of the Manhattan State Hospital, has been appointed assistant physician at the Utica State Hospital.—Dr. Max J. Russianoff, Brooklyn, has been appointed assistant physician at the Rome State Custodial Asylum.

New Home for the Blind.—The New York Institution for the Blind has purchased a site of about 51 acres for its new home in Bronxville village. It will be two years before the institution will leave its home at Ninth avenue and Thirty-fourth street to occupy the new building.

Fresh Air Excursions.—The Fresh Air Excursions to Sea Breeze Hospital will begin May 19. Dr. Edward O. Park of the New York Foundling Hospital has been appointed attending physician to the Fresh Air Department of the New York Association for Improving the Condition of the Poor, and will examine all children who take the trips.

Aid for Sea View Hospital.—The Board of Estimate and Apportionment has authorized the issue of \$1,350,000 incorporate stock to provide for the erection and completion of the Sea View Hospital on Staten Island. It is stated that with this amount 1,000 beds could be provided for patients whom it is purposed to care for on Staten Island.

Neurologic Institute Planned.—The Neurological Institute of New York, backed by well-known professional men, has been incorporated, and plans are being made to alter two dwelling houses for headquarters. Dr. Joseph Collins and Dr. Joseph Fraenkel are the originators of the plan in this country. About \$100,000 has been promised for the purchase of a site for this hospital and clinic, which will be the first of its kind in America.

Communicable Diseases on Steamers.—The Hamburg-American steamer, *Cleveland*, which arrived April 7, was detained in quarantine on account of a case of smallpox in the steerage.—The Russian steamer, *Russia*, which arrived April 9, from Libau, was detained in quarantine on account of a case of smallpox.—Information was received at the Naval Hospital, Brooklyn, April 8, that scarlet fever had broken out on board the U. S. battleship *Missouri*.

To Save the Babies.—The Bureau of Child Hygiene of the Department of Health, started its annual life-saving campaign April 15, when 141 nurses and 150 physicians began their visits and instructions to mothers. Dr. S. Josephine Baker is head of the bureau, and Dr. Walter Bense, executive head of the system. Cards giving a few simple principles in regard to the care of infants are being distributed, and these urge that in case the baby is ill a physician be called, or the Department of Health be notified at once.

NORTH CAROLINA

Decision in Liquor Cases.—In the Federal Court of Greensboro, United States District Judge Boyd has ruled that a witness who testified that he had purchased spirituous liquors from the defendant was indictable as an aider and abettor in the violation of the law; that the violation of the law against retailing without license was a misdemeanor, and, since aiders and abettors were guilty as principals, that purchasers of liquors were equally guilty with the seller. This decision has been noted with much interest by physicians of the state, as

the stringent prohibition law which took effect last January has naturally stopped the legal sales of liquors in the state excepting for medical purposes on prescriptions, and as, in a great majority of the counties, public sentiment has prevented druggists from taking out licenses to handle liquors even for medicinal purposes.

OHIO

Medical Society Organized.—Physicians of Morrow county met in Mount Gilead and organized a medical society, and elected Dr. Walter C. Bennett, president, and Dr. Roy L. Pierce, secretary, both of Mount Gilead.

Alumni Associations Merge.—The Alumni Association of the Medical College of Ohio and Miami Medical College, Cincinnati, were merged April 1. Dr. William H. Campbell, Cincinnati, was elected president, and Dr. Sidney O. Lange, Avondale, secretary.

Agree Not to Write Prescriptions for Liquor.—At a meeting of Union County Medical Society, April 13, a resolution was unanimously adopted agreeing not to write prescriptions for whisky except at the bedside of patients, and then only when absolutely indicated.

Personal.—Dr. George W. Crile, Cleveland, read a paper on "Surgical Anemia and Resuscitation" before the Detroit Academy of Medicine, April 13.—Dr. T. Addison McCann, Dayton, has been appointed a member of the State Board of Medical Examination and Registration.—Dr. Simon P. Wise, Millersburg, has been appointed a member of the board of trustees of the Ohio Tuberculosis Sanatorium, Mount Vernon.

For Tuberculosis Sufferers.—Butler county is to have a hospital for the treatment of tuberculosis. The old stone building on the grounds of the county infirmary has been selected for this purpose.—The Dayton Tuberculosis Society is making strenuous effort to raise funds by subscription to meet the expenses of the new Brookside Sanatorium for a year. The institution opened for the reception of patients April 25, and formal dedication was to be May 1.—The Antituberculosis League of Cincinnati has been incorporated by Drs. Samuel E. Allen and John M. Withrow and Messrs. C. M. Hubbard, Louis L. Levi and E. L. Hitchins.

PENNSYLVANIA

Leg Not Refractured.—Dr. John J. Bilheimer, Priceburg, writes that the report in THE JOURNAL, April 17, regarding his condition, was incorrect. Dr. Bilheimer reports that his leg is in good condition, strong and straight, and of equal length with its fellow.

Aid for Hospitals.—Mrs. J. C. Blair has given \$50,000 for the erection and partial equipment of the J. C. Blair Memorial Hospital in Huntingdon, and an additional \$50,000 for its partial endowment.—The will of the late Dr. Martin H. Boye bequeaths \$12,000 each to the Allentown Hospital and St. Luke's Hospital, South Bethlehem.—The will of the late William P. Henszey, Philadelphia, bequeaths \$10,000 each to the Hospital of the Good Shepard; Episcopal Hospital; Orthopedic Hospital; Presbyterian Hospital; Woman's Hospital; Medico-Chirurgical Hospital; Cathcart Home for Incurables; Wills Eye Hospital and White Haven Sanitarium.—The will of the late Emilia A. Krause bequeaths the residual of an estate valued at almost \$40,000, to Christ Church Hospital, Philadelphia.

Philadelphia

Hospital Dedicated.—The Frederick Douglass Hospital and Training School for Nurses, an institution founded by the colored physicians of this city and erected at a cost of \$100,000, was dedicated with appropriate ceremonies, April 22. The institution was organized by Dr. Nathan F. Mossell, who has been elected its medical director.

Memorial Tablet Erected.—A memorial tablet has been placed in the main hallway of the German Hospital, Philadelphia, to commemorate the bestowment of an endowment fund of \$5,000 by the parents of the late Dr. Sorden McClure, first lieutenant and assistant surgeon N. G. Pa., assigned to duty with the First Infantry, to furnish a free bed in the hospital for the benefit of soldiers of his regiment.

Personal.—Drs. F. Hurst Maier and P. Brooks Bland have been elected gynecologists to St. Joseph's Hospital.—Dr. J. Morton Boice has been elected gynecologist to the out-patient department of St. Joseph's Hospital.—Dr. J. Norman Henry sailed for Europe April 23.—Dr. Samuel G. Dixon has been elected vice-president of the Pennsylvania Society for the

Prevention of Tuberculosis.—Dr. William W. Keen has been elected president of the Contemporary Club.

Testimonial Dinner to Henry Phipps.—With the unanimous approval of many of the city's most prominent citizens, and with Mayor Reyburn representing the public at large, it was decided, on April 22, to give a testimonial dinner on May 12 in this city, to Mr. Henry Phipps, the founder of the Phipps Institute for the Study and Treatment of Tuberculosis. The dinner will also be made the occasion for presentation to Mr. Phipps of the Althoff Gold Medal, which he was awarded by the International Congress on Tuberculosis. The following committee is in charge of the arrangements: Drs. Lawrence F. Flick, Joseph F. Walsh, Joseph S. Neff, Charles J. Hatfield, Martin G. Brumbaugh and Mr. E. T. Stotsberry.

TENNESSEE

Personal.—Dr. Thomas J. Happel, Trenton, who has been seriously ill for many weeks, is reported as slightly improving.—Dr. Charles A. Abernethy, Pulaski, has been chosen by the State Board of Medical Examiners to fill the vacancy in the secretaryship caused by the illness of Dr. Happel.

Commencements.—The annual commencement exercises of the Chattanooga Medical College were held April 26, when a class of 24 was graduated. Hon. George W. Ochs, Philadelphia, delivered the principal address.—The commencement exercises of Meharry Medical College, the Medical Department of Walden University, Nashville, were held April 8, when a class of 41 was graduated. The salutatory address was given by Dr. J. G. Shaw, Mississippi; the medical valedictory by Dr. T. S. Powell of Tennessee; the doctorate address was delivered by Booker T. Washington, and the charge to the graduating class by Dr. J. W. E. Bowen, Atlanta, Ga., on the "Sacredness of the Profession."

VIRGINIA

Smallpox Warning.—A special bulletin on smallpox has been issued by the State Board of Health, which gives the history of the disease in the state and urges general vaccination in the effort to expel the disease from Virginia.

Personal.—Major James W. Henson, Richmond, surgeon Virginia Volunteer Militia, has resigned.—Dr. Samuel A. Hinton, Petersburg, has been re-elected councilor from the Fourth District to the Medical Society of Virginia.—Dr. May T. Jones, West Point, has been appointed assistant physician at the Eastern State Hospital, Williamsburg.—Dr. Sylvester D. Craig, Alexandria, has succeeded Dr. Fadely, resigned, as assistant surgeon in the National Soldiers' Home Hospital, Newport.

Preventive Medicine.—The University of Virginia has announced a summer course for the training of those interested in subjects connected with the preservation and improvement of public health, to begin June 14 and continue until July 24, especially for health officers, medical inspectors and similar public officers. It will also inaugurate in September a four years' course for the training of sanitary engineers. A course of lectures will also be given on selected topics of public health, some of which are intended especially for public health students, while others are open to all students in the university. The six weeks' course includes chemistry, bacteriology, medicine, hygiene and epidemiology.

GENERAL NEWS AND COMMENT

Esperanto Authorized for International Medical Congress.—The last Pan-American Scientific Congress approved Esperanto as a neutral international language and recommended it for an important place in the programs of congresses among the various American governments.—Esperanto has been officially accepted by the forthcoming International Medical Congress at Budapest, as a language in which communications may be made and discussed.

Promotions and Appointments.—At the annual meeting of Directors of the Rockefeller Institute for Medical Research, New York City, April 10, the following promotions and appointments were made: Associate members—Drs. John Auer, physiology; Hideyo Noguchi, pathology; Alexis Carrel, surgery; associate, George W. Heimrod, chemistry. Assistants—Martha Wolstein and Richard V. Lamar, pathology; A. O. Shaklee, physiology, and Gustave M. Meyer, chemistry. Fellows—M. T. Burrows, pathology, and Paul F. Clark, bacteriology.

Railway Surgeons Meet.—At the fourteenth annual meeting of the Association of Surgeons of the Southern Railway, held in Jacksonville, Fla., April 6 and 7, the following officers

were elected: President, Dr. Charles H. Starkel, Belleville, Ill.; vice-presidents, Drs. Jay H. Durkee, Jacksonville, Fla., and Hugh W. Blair, Sheffield, Ala.; secretary-treasurer, Dr. Jacob U. Ray, Woodstock, Ala., and member of the executive committee, Dr. George H. Stubbs, Birmingham, Ala. Dr. William A. Applegate, chief surgeon of the railway, Washington, D. C., was presented with a watch by the association.

Civil Service Examination.—The United States Civil Service Commission announces an examination, June 16, at a number of cities throughout the United States, to secure male medical internes in the Government Hospital for the Insane, Washington, D. C., at \$600 per annum, each with maintenance, and for similar vacancies as they may occur. Applicants must be graduates of reputable medical colleges not more than two years prior to the examination, and application should be made either to the United States Civil Service Commission, Washington, D. C., or to the secretary of the local board of examiners at any place at which the examination is to be held.

Philadelphia Physicians' Business Journal.—This is a new periodical, of which the first issue has come to hand. It aims to care for the economic interests of the physician, individually and collectively. The importance of the organization of business bureaus is insisted on in order that physicians may obtain by solidarity that consideration for their rights which the individualism of the past has lost to them. The journal, which is under the editorship of Dr. P. B. Thatcher, with Drs. A. M. Eaton, A. B. Hirsh, J. A. Broadfield, H. B. Ingle and N. M. Brinkerhoff as associate editors, consists at present of eight pages, but will be gradually increased. This first issue contains an Appeal for the Formation of Additional Physicians' Business Associations by Dr. A. M. Eaton, and articles on "The Present Status of the Profession," by Dr. P. B. Thatcher, and "Improvement in Professional Troubles," by Dr. A. B. Hirsh, besides notes on organization matters.

The Carroll Fund.—The following subscriptions have been received since the last report:

Previously reported	3,073.95
Adams County Medical Society, Quincy, Ill.	\$ 15.35
Dr. C. Lincoln Furbush, Philadelphia.	5.00
Mississippi State Medical Society, Vicksburg.	150.00
Members of Mississippi State Medical Society.	135.00
Dr. H. V. Ogden, Milwaukee, Wis.	5.00
Dr. C. L. Hagen Burger, Boston.	3.00
A physician of La Aurora, Puebla, Mexico.	1.00
The Rapides Parish Med. Society, Alexandria, La.	10.00
Dr. J. T. Joseph Bird, New York City.	1.00
Dr. G. Victor Janvier, Royersford, Pa.	1.00
Dr. O. C. Strickler, New Ulm, Minn.	5.00
Dr. Frank S. Mathews, New York City.	5.00
Mr. T. G. Dabney, chief engineer Yazoo-Miss. Delta Levee District, Clarksdale, Miss.	5.00
Dr. J. M. Anders, Philadelphia.	5.00
Dr. Joseph M. Croman, Mt. Clemens, Mich.	5.00
Dr. E. B. Quillen, Wilmington, N. C.	1.00
Dr. Albert Volkenberg, New York City.	5.00
Dr. P. J. H. Farrell, Chicago.	10.00
Dr. E. C. Ellett, Memphis, Tenn.	5.00
	<hr/>
	\$ 372.35
Total amount subscribed.	\$3,446.30

FOREIGN

Medical Members of the New Italian Parliament.—Twenty-five of the former medical members were re-elected and nine new physicians were elected, but ten others failed of re-election, and ten other physicians who were candidates for legislative positions were beaten at the polls. The latter list includes Bossi of dilator fame.

Prize for Work on Dementia Præcox.—The Royal Academy of Medicine of Turin offers a prize of \$120 (600 lire) for the best work on dementia præcox, written in French, Italian or Latin, Ms. or published since 1905, and entered in competition for the Bonacossa prize before Dec. 31, 1909. Address the secretary, F. Abba, via Po, 18, Turin, Italy.

International Cancer Research Conference.—During the German Surgical Congress at Berlin last week, the council of the International Cancer Research Association held a meeting. The main subjects discussed were the best means for compiling international cancer and operative statistics on a uniform basis, the organization of the next international anticancer conference and allied questions.

More Medical Victims of Exanthematous Typhus.—The last foreign mail brings word of the death from epidemic typhus of an interne at Madrid, the fourth victim among the hospital internes during the present epidemic. The two last issues of the *St. Petersburg. med. Wochenschrift* also give obituary notices

of five Russian physicians who succumbed during the two weeks to typhus professionally acquired, all residing in different provinces.

Northland Congress for Internal Medicine.—The sixth *Nordiska Kongressen för invärtes Medicin* is to meet this year at Skagen in Denmark in the last half of June, with K. Hausen of Bergen in the chair. The diagnosis of incipient pulmonary tuberculosis and functional tests of various organs are to be the main subjects discussed. The first is to be introduced by Tillman and Saugman, the second by Schaumann of Helsingfors, O. Scheel of Christiania, Madsen of Bergen, and V. Scheel of Copenhagen. The address of the secretary of the congress is Prosektor Scheel, Kommunehospitalet, Copenhagen, Denmark.

Northland Surgical Congress.—The eighth congress of the *Nordisk kirurgisk Förening* is to be held this year at Helsingfors, August 19 to 21. J. Berg and G. Forssell deliver the addresses on the first topic, "Modern Methods of Treating Cancer." E. Rode and V. Albeck speak on the second topic, "Indications for Interruption of Pregnancy in Serious Morbid Conditions, Especially in Tuberculosis." The third subject announced for discussion, "Treatment of Coxitis," will be introduced by Sinding-Larsen and H. von Bonsdorff. Prof. A. Krogius of Helsingfors is to preside at the congress and J. Borelius of Lund is the general secretary.

Semicentennial of St. Petersburg Medical Society and Russian Medical Literature.—The *Verein St. Petersburger Aerzte* celebrated March 31 the fiftieth anniversary of its foundation. The *St. Petersburg. med. Wochenschrift* has been its official organ for many years, as also of all other German-speaking medical associations in Russia. This journal is always published in German, and a very valuable feature is a monthly supplement devoted to current Russian medical literature. It lists in the course of the year the contents of twenty-two of the leading Russian medical journals, with brief summaries of the important articles, all in German. The more important articles in the Russian medical journals are almost invariably published simultaneously also in some German or French journal.

German Society for Repression of Venereal Diseases.—The annual meeting of this society was held at Berlin in February, and the secretary stated in his report that the warning circular for girls and women and others for parents and for men had been recently rewritten, and that arrangements had been made to have prophylactic lectures delivered this year in the universities and postgraduate schools. Graser of the German Marine Hospital at Naples obtained the prize offered for the best prophylactic pamphlet for distribution among soldiers and sailors. It is for sale at bookstores for 5 cents. It was announced with approving comment that the Bavarian government has forbidden the holding of lectures on sexual enlightenment by medical men or anyone unless endorsed by some medical or hygienic association. The meeting was mainly devoted to discussion of the sanitary control of prostitutes.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 16, 1909.

Dentists Object to be Prohibited from Administering Anesthetics

As stated in previous letters, attention has been directed to the number of deaths which occur under anesthetics, and further legislation for the protection of the public is demanded. A bill has been introduced in the House of Commons prohibiting the administration of any general anesthetic by other than a legally qualified medical practitioner and also rendering theoretical and practical instruction in administration necessary for qualification. The executive of the British Dental Association has protested against dentists being deprived of the right to administer anesthetics.

Sleeping Sickness; Recent Discoveries

Important discoveries with regard to sleeping sickness have been made by Dr. Kinghorn and Mr. Montgomery in Rhodesia and Nyassaland of the expedition of the Liverpool School of Tropical Medicine. They have shown that the disease may be due to any one of a large number of trypanosomes and that these may be carried by flies other than tsetse. In northern Rhodesia preventive measures have been successful. The country has been divided into zones and all the known cases segregated. The disease has in consequence considerably diminished.

Lectures on Medical Ethics

A general practitioner has made a novel suggestion in *St. Bartholomew's Hospital Journal* that one or two lectures should be given in the medical school at the end of each session on medical ethics and etiquette to those students who have finished their course and are about to qualify. He proposes that these lectures should be given by some well-known general practitioner of high standing and long experience and not by a consultant on the hospital staff whose career has not enabled him to gain experience of the petty annoyances and of the temptations to diverge from the straight path, which are so often cropping up in the life of the general practitioner. A recommendation has been sent up from the council of the student's union of the hospital asking the medical school committee to arrange for such lectures.

The Royal College of Surgeons

The Jacksonian prize has been awarded to Mr. J. P. Lockhart Mummery, F.R.C.S., for his essay on "The Pathology and Treatment of Those Conditions and Diseases of the Colon Which Are Relievable by Operative Measures." The prize subject for the year 1910 will be "Tuberculous Disease of the Urinary Bladder and Male Genital Organs." Sir Jonathan Hutchinson has been appointed the delegate of the college to the University of Geneva on the occasion of the three hundred and fiftieth anniversary of its foundation in July next. Dr. R. T. Leiper of the London School of Tropical Medicine, has been asked to undertake the revision and renovation of the collection of entozoa in the college museum.

The Children's Act

The present government is distinguished above all previous ones by its solicitude for children, the outcome of the humanitarian movement of the times. The Children's Act which has just come into force, and has aptly been called the "Children's Charter," is probably the most complete measure for the protection of infant and child life which has ever been devised. Every provision possible seems to have been included. A great advance has been made on the Infant Life Protection Act of 1897, which rendered foster parents who received more than one infant under the age of 5 years subject to inspection. The present act renders subject to inspection every infant who is placed out to nurse for more than 48 hours for fee or reward. Notification of the fact must be made to the local health authorities, and in case of change of residence, removal or death of the infant this must also be reported within 48 hours. The coroner must be informed within 24 hours of the death of an infant under such circumstances. It is common practice of the poor to insure the lives of their children for small sums, in order to defray the expenses in case of death. In connection with this practice, some scandals have arisen from time to time. When a child died under circumstances of poverty and neglect, it has often been alleged that the prospect of being paid the insurance money prevented it from receiving due care. The present act forbids the insurance of all such children in charge of foster parents. The second part of the act deals with the prevention of cruelty to children and young persons. Failure to provide adequate food, clothing, medical aid or lodging is to be deemed neglect. Provisions are made to prevent the frequent tragedies of overlying, burning and scalding of children. It is also an offense to give a child under the age of 5 years any intoxicating liquors, except on the order of a physician, or in case of sickness or apprehended sickness or other urgent cause.

Death of Another Investigator of Sleeping Sickness

Capt. F. H. Hardy, of the Army Medical Corps, a former student of Guy's Hospital, has contracted a fatal attack of sleeping sickness while investigating the disease and endeavoring to stop its spread among the natives of Nyassaland. When he was found to be infected it was decided that he should come home for treatment, but he died on the way, at Aden. His fate recalls that of Lieut. F. Tulloch, another officer of the Army Medical Corps, who contracted the disease a few years ago in central Africa and came home to die.

A Physician Who Risked His Life for a Patient

The heroic act of sucking a tracheotomy tube has once again been performed. A boy was brought to the East Ham Hospital almost asphyxiated by laryngeal obstruction from diphtheria. Dr. Sowden, health officer of the district, at once performed tracheotomy and as the breathing was not relieved he sucked the membrane out of the tube and saved the patient's

life. A week has now passed and the physician has shown no sign of the disease.

The Editorship of The Lancet

Dr. Squire Sprigge, who has been chief of the editorial staff of the *Lancet* for fifteen years, has received the well-merited promotion to the post of editor. He is the author of the "Life and Times of Thomas Wakley," an interesting and ably written biography of the founder of the *Lancet*, and a valuable contribution to the history of the early part of the nineteenth century, for the first Wakley was a public man, a member of Parliament, a reformer and a stout political fighter. The long connection of the Wakley family with the editorship of the journal is severed, but it is in the best and most appropriate hands and its position and traditions are certain to be maintained unimpaired.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 15, 1909.

The Abuse of Free Hospital Attendance

The decree concerning the organization of the Public Assistance in Paris formally recognizes the principle that the hospital must be reserved for the poor: "The sick entered in the list of indigents or recognized as being necessitous alone have a right to gratuitous medical aid, save in cases of emergency." This principle, however, is violated every day. If one examines the statistics of mortality for Paris and in the Department of the Seine, one sees that in 1905, out of 53,220 deaths, 25,221 persons died in the hospitals, and, consequently had been cared for at the public expense. This death list represented, then, in 1905, 48 per cent. of the general mortality, while in 1880 it did not exceed 29 per cent. This increase in hospital attendance is due, not to an increase in pauperism, but to the fact that the betterment of the hospitals has had the effect of dissipating the repugnance formerly felt for the hospital by people in easy circumstances.

The medical profession complains with reason of the scandalous abuse committed daily by people of means taking the place of the poor. Dr. Lermoyez, mentioned recently as coming to his hospital clinic, the proprietors of a large hotel and a hairdressing establishment, a provincial lawyer, a manufacturer disguised as a workman, a dealer in art bronzes disguised as a delivery man, a provincial lady of independent means who had borrowed the dress of a maid, etc. Dr. Thierry has seen in his hospital service a merchant who brought his daughter daily in his carriage, a jockey who earned, according to his own statement, 25,000 francs a year, and a cashier of a large commercial house, earning 20,000 francs a year. For some time since attention has been more and more directed to this state of affairs, prejudicial alike to the interests of the real poor and to those of the physician, who thus sees diminishing his paying *clientèle*. With a view to remedying it, M. Mesureur, director of the Public Assistance, has decided to impose a fee of 75 centimes for each attendance, a measure unfavorably regarded by the medical body from every point of view; for if such attendance is rendered to the indigent, it ought to be entirely gratuitous; but if to one whose circumstances permit him to pay therefor, then a fee of 75 centimes is ridiculous. M. Mesureur has, moreover, had posted in the hospitals a notice pointing out that medical attention is exclusively reserved for indigent or necessitous persons domiciled in Paris or in the Department of the Seine. The administration of Public Assistance reserves the right of investigating the subject of domicile, to verify the truth of the statements made and, if necessary, to recover fees for consultation from every person whose condition is neither indigent nor necessitous. Finally, in consequence of the steps taken by the president of the general council of medical societies of the *arrondissement*, and by the general secretary of the medical syndicate of Paris, Mr. Mesureur has decided to establish a commission to investigate the means of preventing admission to the free hospitals of the *Assistance Publique* of patients sufficiently well off to pay their own medical fees. This commission will consist, not only of members of the administration of Public Assistance, but also of representatives of the different professional bodies, such as the Syndicate of Physicians of the Department of the Seine, the Medical Syndicate of Paris, etc.

The Antitobacco Society

The subject set by the Society Against the Abuse of Tobacco this year for competition is as follows: "Report of Observations Showing That Smokers Are More Subject Than

Others to Cancer." There will also be made a large number of awards to physicians for works not directly answering the question, but dealing with the evil consequences of the abuse of tobacco. Essays should be addressed to Dr. Georges Petit, 12 Rue Jacob, Paris.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, April 15, 1909.

The Summer Term at the University of Vienna

The summer term has just begun at the University of Vienna. The official catalogue enumerates no less than 406 different classes, courses and lectures (under 35 ordinary, 65 extraordinary professors and 167 privat-docents and assistants) for the summer semester, which lasts from the middle of April to the middle of July. The number of lectures has decreased a little in comparison with the summer term of 1908, but the number of classes is larger (406 against 380). They will include not only all the regular lectures on the cardinal branches (surgery, medicine, ophthalmology, pediatrics, gynecology, dermatology, morbid anatomy) by the ordinary professors, but also a vast number of special lectures and courses, many of which (especially postgraduate classes, or classes in English, French or Russian) are to be adapted to the needs of students applying to the lecturer. Vienna, it must be remembered, is one of the centers of European medical study. No less than 385 foreign graduates matriculated at the university during the last winter term, about 60 per cent. of them being English and American physicians. There are classes in English on special subjects (otology, rhino-laryngology, ophthalmology, morbid anatomy, bacteriology, atypical surgery). The influential Anglo-American Medical Association of Vienna has taken the matter in hand and oversees the classes with the best possible results to both students and lecturers.

An important point is that anyone wishing to get as much as possible out of his stay in this city should come in the summer. Many professors are out of town in July and August, and the enormous material in the hospitals may be used much better by the man who wishes to do it than if the professor were obliged to deliver his daily lecture. In fact, during the summer vacations much independent work may be done by those competent to do it. Those who have not a great deal of knowledge or experience will do well to come here early in winter; having attained enough proficiency, they will readily be allowed in the clinics to work as much as they like during the summer.

The average fee for the classes, roughly speaking, comes to about \$10 for four weeks; some cost less, some a trifle more. Generally the number of students is limited to ten or fifteen, so that each may obtain the best results.

Protection of Infants in Vienna

The idea of combating the appalling mortality among infants by protecting them from bad food and ignorance has at last gained a firm hold in this city, thanks to the intrepid perseverance of a few men with open minds and pockets. The report of the *Säuglingsschutz* (Society for the Protection of Infants) shows success, and proves that the method adopted is a correct one; namely, encouragement of natural feeding with the mother's milk, instruction of the mother in regard to the nature and duration of wet-nursing, and regular inspection and control of the children. It has been possible to bring down the mortality among the controlled infants to 100 per thousand, against 190 per thousand in Vienna generally, and at least 210 per thousand among the inhabitants of the poor districts, whence the controlled children are brought to the society.

On the other hand, the absolute figures of the good work accomplished are insignificant in comparison with the achievements abroad. First, large funds are required; next, strict instruction of the coming generation of physicians in regard to the cardinal principles of the care of infants is necessary. Then, too, the midwives, many of whom do not favor breast-feeding, need enlightenment.

A very useful step in this direction would be the institution of mothers' schools, for girls and mothers. Such a school has been founded in Vienna with the assiduous aid of Prof. von Escherich; and it will no doubt help to re-educate the female population in its maternal duties. Such schools are also planned in connection with factories and workshops.

Another important movement is also under way in medical circles. The emperor's jubilee in 1908 has caused large sums

to be devoted, according to the old emperor's wish, to the welfare of the child. There is a movement to use these large funds for hospitals and orphans' institutes. Von Escherich and many other prominent physicians, however, recommend the employment of these sums for the *Säuglingsschutz* for the prevention of mortality among infants and for the support of poor mothers after childbirth, provided they feed their babies at the breast. As the fund amounts to several hundreds of thousands, much could be done with it in this direction, and there is every reason for hope that this end will be attained.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 7, 1909.

Tippling by Specialists

In consequence of the accusations made in the medical tip affair, Professor Posner offered his resignation from the editorial staff of the *Berliner klinische Wochenschrift*, but the management refused to accept it, and this refusal was sanctioned by the representatives of the medical press association. It seems that while the representatives of the association did not intend their action as a complete vindication of Professor Posner, they thought the matter was not sufficiently clear to make his resignation necessary. Professor Posner has already resigned the presidency of the Deutsche Gesellschaft für Urologie.

Union of Otology and Laryngology

It is proposed to unite these two specialties, but many of the specialists object. To the outsider it seems a small matter. For while it is to the interest of the student that these subjects be well taught, it can make little difference whether they are taught by one man or two. In large cities where specialists are overworked, independence will naturally be favored, but in the smaller universities union will be more convenient.

New Imperial Insurance Law

A new bill for the codification of the insurance legislation has just been printed. Insurance for sickness is extended to agricultural and forestry laborers, messengers and domestic employes. The right of free choice of physician has not been confirmed by law, as was hoped by many physicians. A more detailed consideration of this legislation will be given in a later number.

Work of the School Physicians

During 1907-08, 39,666 pupils in the Berlin public schools (about 17.5 per cent.) were under medical supervision; 6,054 received supervision because of insufficient vitality, 7,334 on account of diseases of the eye, 3,453 on account of affections of the ear, 2,801 on account of curvature of the spine, 2,990 on account of diseases of the nose and throat, 2,775 on account of diseases of the heart, 2,062 on account of hernia, 1,818 on account of scrofula, 1,740 on account of tuberculosis of the lungs, 1,658 for nervous diseases, 1,450 on account of disorders of speech, 1,221 for rickets, 746 for imperfect mental development, 391 for epilepsy, 691 for diseases of the skin, 841 for diseases of the lungs, 381 for tuberculosis of the bones, 411 for lack of education, 177 for diseases of the kidneys and 797 for other diseases.

Operation Punishable as a Bodily Injury

In 1894 the Imperial Court, the highest court in Germany, decided that it constituted an illegal and criminal bodily injury if a physician performed an operation without the consent of the patient or his legal representative, and in such cases it was immaterial whether the purpose or even the results of this bodily injury were shown to be rational and beneficial to the injured person. A short time ago the court in a similar case confirmed the former decision in spite of the fact that meanwhile serious objections had been raised against this opinion both by jurists and physicians. According to this, surgeons must be very careful in their procedure, if they do not wish to come in conflict with the courts and to pay for their good intentions and the success of their art by fines. They can feel absolved from the duty of asking the consent of patients or their relatives before undertaking an operation, only in cases of unconsciousness or insanity or when there is danger in delay; moreover, there is the danger that many patients will suffer injury on account of this judicial opinion because an operation will not be undertaken at the right time in consequence of lack of consent or will be entirely omitted.

Association News

THE COMMERCIAL EXHIBIT

(Concluded from page 1427)

in window-tent construction, will be on exhibition. The standard tent put out by the company has the endorsement of the National Association for the Prevention of Tuberculosis, and has been very generally adopted by the medical profession. Visitors will no doubt be attracted by the complete line of tent ventilators, paper blankets and "everything for fresh air with comfort," which will be shown.

HENRY K. WAMPOLE & COMPANY, PHILADELPHIA. SPACES 16 AND 17.—This company intends to display to physicians the ability of a manufacturing concern to produce on a large scale products that combine therapeutic efficiency with pharmaceutical elegance. It will comprise pulverous pills, compressed tablets, fluidextracts, elixirs, effervescent salts, capsules, etc. Special attention will be directed to bismuth hydrate compound and glycerodine, as preparations illustrating the firm's ability to produce elegant and at the same time efficient products for the physician.

WILMOT CASTLE COMPANY, ROCHESTER, N. Y. SPACE 57.—Its latest designs in sterilizers and sterilizing outfits will be exhibited by this firm, including pressure and non-pressure sterilizers; the efficiency of both processes will be demonstrated. Physicians will thus be able to determine both what kind of sterilizers are best adapted for their uses and also the various methods of heating same. In this connection special attention will be given to electric heating.

WILLIAM WOOD & COMPANY, NEW YORK CITY. SPACE 64.—This firm will present an exhibit arranged on the same general lines as last year. Advance proofs of many of the new illustrations for the forthcoming edition of Cunningham's "Anatomy" will interest students and teachers. New editions of such standard works as Dana's "Nervous Diseases," Ziegler's "Pathology," Baruch's "Hydrotherapy," Cabot's "Physical Diagnosis," and Chapin's "Infant Feeding" will be shown; together with the new "Embryology" by Bailey and Miller, McKay's new "Operations on the Uterus, Perineum and Round Ligaments," Norman Kerr's "Operative Midwifery," Calmette's "Venom's," etc., and many others.

Hotel Headquarters

The following list of hotel headquarters is repeated from the issue of April 3, in which it first appeared:

GENERAL HEADQUARTERS	Marlborough-Blenheim
PRACTICE OF MEDICINE	Hotel Dennis
SURGERY AND ANATOMY	Hotel Chalfonte
OBSTETRICS AND DISEASES OF WOMEN	Haddon Hall
DISEASES OF CHILDREN	Hotel Traymore
NERVOUS AND MENTAL DISEASES	Hotel Brighton
HYGIENE AND SANITARY SCIENCE	Hotel Seaside
PHARMACOLOGY AND THERAPEUTICS	Hotel Chelsea
OPHTHALMOLOGY	Hotel Rudolf
LARYNGOLOGY AND OTOTOLOGY	Hotel St. Charles
CUTANEOUS MEDICINE AND SURGERY	Hotel Shelburne
PATHOLOGY AND PHYSIOLOGY	Hotel Windsor
STOMATOLOGY	Hotel Royal Palace

Correspondence

Vaccine Therapy of Colds

To the Editor:—In the newspapers recently, there have been several more or less sensational articles in regard to my alleged discovery of the germ of cold, or a new serum or antitoxin for colds.

The facts are as follows: I have not discovered any new germ of colds, or any antitoxin, or antiserum, nor have I made any attempt to do so. I have made some experiments on vaccination for acute coryza, following out in a measure recommendations made by Dr. R. W. Allen in an article which appeared in the *Medical Record*, Dec. 19, 1903. Dr. Allen mentions four organisms and gives the dosage used for cure as well as for immunization. He also says that when there is

doubt as to the organism, he uses a vaccine containing several of the organisms mentioned.

My method is to use an antigenic vaccine prepared as follows: "Blow" the nose thoroughly to clean out contaminating organisms. Swab out each nostril with a diphtheria swab and inoculate two (to guard against possible loss) agar slant tubes. Incubate twenty-four hours. Prepare a vaccine in the usual way from the growth and inject one cubic centimeter (less for children) hypodermatically. The results in the few cases treated by me are most surprising, the colds in each instance disappearing in twenty-four hours. In one experiment, the immunity has apparently lasted nearly two months. One patient is not "subject to colds," but the others are, almost continually during the winter, and I have never seen anything act so satisfactorily as this method. I intend to use it whenever opportunity offers.

These three experiments prove nothing, but they demonstrate the advisability of continuing the method. Should further experiment confirm its value, there is no reason why the physician without laboratory facilities should not use his diphtheria swabs and send them to a laboratory where the vaccine could be prepared and sent to him for injection, and thus, as one of my medical friends said, "restore the treatment of colds from the drugstore to the physician, where it belongs." Or the practitioner could use the old method and incubate his cultures in a "pocket in his undershirt," or "held with adhesive strips in the axilla."

Dr. Allen advises using his vaccine "at the onset of the attack, or not until the third day, as considerable constitutional disturbance may result if used in the interval." In one of my cases decided constitutional disturbance resulted. Twenty-four hours after "catching cold" the vaccine was ready and injected. About five hours later there was a chill followed by fever, dryness of skin and throat, headache, pains in the joints and general malaise. These symptoms were rather severe for three hours, then after a short nap of about half an hour, largely disappeared, though the headache persisted slightly until next morning. The point of inoculation was decidedly tender the first day and somewhat so the second. The cold was gone in less than a day following inoculation.

The number of bacteria injected has not been estimated, nor has the opsonic index been determined. One injection has been sufficient in each of the three experiments.

I should consider it a favor if anyone who tries this method would communicate his results to me.

CHARLES B. MORREY, Columbus, Ohio.

Professor of Bacteriology, Ohio State University.

An Appeal for Information on Alcohol in Beverages and in Medicines

To the Editor:—As superintendent of the Department of Medical Temperance of the National Woman's Christian Temperance Union, I have been chosen as one of the representatives of the United States Government to the International Congress on Alcoholism to be held in London in July. It has also been arranged that I shall read a paper in the scientific section. All I expect to do with such a paper is to tell what is being done among American medical men in regard to investigations of alcohol, and something of the present trend in the medical use of alcoholic liquors. As I wish to present a fair and truthful picture of the present attitude of American physicians to the alcohol question, I ask that physicians reading this will kindly send me a brief statement of their personal opinion of the use of alcoholic liquors, both as beverages and in the treatment of disease. Professors in medical schools, or health officers, or physicians practicing in connection with large hospitals please state that they are such.

As some who read this may not know what the work of the medical temperance department of the W. C. T. U. is, I may say that this department teaches women to avoid self-drugging, and shows the dangers of resorting to alcoholic liquors for family ills. The work is based entirely on the teachings of eminent physicians. The department began the public agitation against fraudulent "patent medicines," and is keeping

it up, for during the past year I have personally sent out over 20,000 copies of the "Great American Fraud," besides tens of thousands of my own leaflets on that subject. Physicians who understand my work are much interested in it, and many have helped me. May I not hope that a great avalanche of postal cards or letters will reach me in response to this appeal? Will it be fair for me to assume that, if only a few answer, only a few are interested in the questions to be discussed at the Congress on Alcoholism?

(MRS.) MARTHA M. ALLEN, Mareellus, N. Y.

Eye Bandage and Priority of Description

To the Editor:—In reply to Dr. Friedenwald's letter in THE JOURNAL, April 10, page 1196, I wish to state that I have used the eye bandage for ten years, and have failed to find it described or illustrated in the text-books or journals at my disposal. For that reason I published the article. I would not knowingly claim anything belonging to another.

G. A. MORLEY, Crookston, Minn.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

WORMS IN EGGS

To the Editor:—Some time ago one of my patients opened a hen's egg, in the white of which was a small worm about one-twelfth of an inch thick and one and one-half inches long. The egg and the worm were given to me, but were accidentally destroyed. In the *Medical World*, February, 1909, page 62, I find recorded a similar observation. Can you give me any further information on this subject?

WESLEY C. STICK, Hanover, Pa.

ANSWER.—It occasionally happens that intestinal parasites wander from the intestines into the female genital ducts. This is a particularly easy matter in the case of birds, where the intestine and oviduct discharge into a common genitointestinal cloaca. From the brief description of the parasite it is probable that it was a nematode, possibly the *Heterakis perspicillum* (Rudolphi, 1803). This worm lives in the small intestine of fowls, and on wandering into the oviduct may become surrounded by albumin during the formation of the egg, but before the formation of the eggshell. It has been observed in the egg on a number of occasions. The worm has never been reported as a parasite of man and its size would, generally, lead to its discovery before being swallowed. It has, therefore, no practical medical importance.

Occasionally a rather closely allied parasite of man, the common pin worm (*Oxyuris vermicularis*) wanders from the rectum through the anus, and after entering the vagina, makes its way further up the genital tract. Occasionally, too, certain trematodes belonging to the genus *Prosthogonimus* (as *P. oratus*) are found in the hen's egg. Such cases have been reported by Diesing in 1850, Landois in 1882, Linton in 1887, Spencer in 1889 and Ralliet in 1893. These parasites inhabit the bursa fabricii whence they enter the oviduct and are easily included in the albumin before the eggshell is formed.

THE BLACK MOTOR CAR IN THE AUTOMOBILE NUMBER

THE JOURNAL has issued three Automobile Numbers, in 1906, 1908 and 1909. The contributions from physicians published therein have been accepted from the authors as fair and unprejudiced testimonies and very little complaint of any unfairness has come to THE JOURNAL. In the third number, however, March 6, 1909, there was only one contribution referring to the cars made by the Black Manufacturing Company, of 124 E. Ohio St., Chicago. The author of that letter had had unfortunate experience with his car, and his letter was a most unfavorable criticism. The publication of this letter caused a great many protests to be sent to THE JOURNAL from satisfied owners of Black automobiles. Instead of selecting any one of these letters for publication, we will merely say that they are from physicians in various parts of the country who have tested the Black automobile in country practice, over all kinds of roads, including sand and mud. These writers speak as favorably of their cars as do those who use other medium-priced cars. It seems evident, therefore, that it is unfair to judge the products of this company by the testimony of one man whose experience had been unsatisfactory.

MOLDS, CASTS AND MODELS

To the Editor:—THE JOURNAL has made me disgruntled by allowing contributors to speak of all kinds of splints, molds and molded splints indiscriminately as "casts." The iron-worker knows the difference between a mold and a cast, and the artist distinguishes between his models, molds and casts. It is rather irritating, therefore, to find our medical brothers less particular. A recent article reached the point of absurdity. Five times the word "cast" was used when molds or molded splints were meant; and a cast, *i. e.*, a plaster-of-Paris reproduction, of a leg was called, not a "cast," but a "model." A model it certainly was not, for it was not intended for reproduction; instead, an appliance was to be fitted on it. In this case the human leg was the "model" and the cast reproduced it. The cast was not to be used as a model for anything. The editors of THE JOURNAL have taken many liberties with my articles. They have changed anything that seemed good to them, even to the title, and the articles have always gained in clearness thereby. And I can not believe that THE JOURNAL's contributors would feel hurt if the editors were to rescue them from a misuse of ordinary English words.

F. S. M.

ANSWER.—Our correspondent is undoubtedly right in the distinction which he draws between a mold—a form or matrix for shaping something in a fluid or plastic condition—and a cast—a reverse copy, in some plastic material, of a mold. We fail to find, however, that he is fully justified in his contention in regard to the word "model." According to the Standard Dictionary, a model is "an object, usually in miniature, representing accurately something to be made or already existing . . . A model may be either the thing to be copied or the copy that has been made from it." Thus, a miniature reproduction of a ship is called a "model," though not intended to serve as a pattern in making future ships.

TO DISGUISE THE ODOR OF ETHER

To the Editor:—What will effectively disguise the pungent odor of ether? I do not want an oil, but would like some alcoholic or ethereal extract like cologne, etc., that would accomplish the purpose.

D. KRAMER, New York.

ANSWER.—Compound esters like ethyl acetate (acetic ether) or amyl acetate, or valerianate might be tried, but some of the essential oils such as oil of wintergreen, sassafras, etc., would be more efficient.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers for the week ended April 24, 1909:

Hartnett, E. H., major, ordered to duty at Fort Du Pont, Del., on the expiration of his present leave of absence.

Murray, A., capt., ordered to Fort Du Pont, Del., instead of the Philippines division.

Tefft, W. H., capt., Fort Baker, Cal., ordered to duty with troops at Sequoia National Park, Cal.

Cox, W., capt., honorably discharged from the service of the United States, with one year's pay.

Richards, R. L., capt., relieved from duty at Fort Wayne, Mich., and ordered to Washington, D. C., for a special course of instruction at the Army Medical School.

Yost, J. D., capt., granted leave of absence for one month.

Coffin, J. M., capt., relieved from duty at the Army and Navy General Hospital, Hot Springs, Ark.; will sail July 5, 1909, for Philippine service.

Snyder, H. D., Smith, A. M., Wilson, J. S., Fuller, L. A., Skinner, G. A., Edger, B. J. Jr., Robbins, C. P., majors, relieved from duty in the Philippines division in time to sail July 15 for San Francisco.

Reynolds, C. R., capt., relieved from duty with Company C, Hospital Corps, and ordered to duty at the Walter Reed Army General Hospital, Washington, D. C.

Woodruff, C. E., major, Kirkpatrick, T. J., major, relieved from duty at Fort Wadsworth, N. Y., and Fort Moultrie, S. C., respectively, in time to proceed to San Francisco and sail July 5, 1909, for Philippine service.

Hess, L. T., major, granted an extension of one month to his leave of absence.

Perley, H. O., colonel, ordered at the expiration of his present leave of absence to Denver, for duty as chief surgeon, Department of the Colorado, and attending surgeon in Denver.

La Garde, L. A., lieutenant-col., when relieved from duty at Denver, ordered to San Francisco for duty as chief surgeon, Department of California.

Kean, J. R., lieutenant-col., ordered to New York City, to represent the medical department of the army at the meeting of the Medical Society of the County of New York, April 26, 1909.

Graves, L. K., M. R. C., honorably discharged from the service of the United States May 8, 1909, his services being no longer required; granted leave of absence to include May 8.

Kierulff, H. N., M. R. C., granted leave of absence for 23 days.

Johnson, T. H., M. R. C., ordered to active duty and assigned to duty at Fort Du Pont, Del.

Foster, G. B., M. R. C., ordered to active duty, and assigned to duty at Fort Totten, N. Y.

Haley, J. C., M. R. C., ordered to active duty, and assigned to duty at Fort Porter, N. Y.

Fox, J. S., M. R. C., ordered to active duty, and assigned to duty at Fort Sam Houston, Texas.

Demmer, C. C., M. R. C., ordered to active duty, and assigned to duty at Fort Ontario, N. Y.
Fisk, O. C., M. R. C., ordered to active duty, and assigned to duty at Fort Leavenworth, Kan.
King, C. T., M. R. C., ordered to active duty, and assigned to duty at the Presidio of Monterey, Cal.
Napier, Edw. L., M. R. C., ordered to active duty and assigned to duty at Fort McPherson, Ga.
Bowman, M. H., M. R. C., ordered from Depot of Recruits and Casuals, Angel Island, Cal., to Fort Baker, Cal., for temporary duty.
Burket, J. A., M. R. C., ordered to active duty, and assigned to Fort Snelling, Minn., for duty.
Chase, A. M., M. R. C., relieved from duty at Fort Sam Houston, Texas, and ordered to Fort St. Philip, La., for duty.
Brown, P. D., M. R. C., relieved from duty at Fort St. Philip, La., and ordered to Fort Sam Houston, Texas, for duty.
Trotter-Tyler, G., M. R. C., ordered to Washington Barracks, D. C., for temporary duty, and then to return to Fort Adams, R. I.
Stallman, G. E., D. S., arrived at Fort Bliss, Texas, for duty.
Hammond, W. G., D. S., left Fort Wingate, N. M., and arrived at Fort Logan, Colo., for duty.
Whinnery, J. C., D. S., ordered from Vancouver Barracks, Wash., to a tour of Alaskan posts—Fort Liscum, Fort William H. Seward, Fort Egbert, Fort Gibbon, Fort St. Michael and Fort Davis.
Lauderdale, C. E., D. S., ordered to Fort Logan, Colo., for duty, at the expiration of his present leave of absence.
Hammond, W. G., D. S., relieved from duty at Fort Logan, Colo., in time to proceed to San Francisco and sail June 5 for Philippine service.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended April 24, 1909:

Fiske, C. N., P. A. surgeon, detached from the Bureau of Medicine and Surgery, Navy Department, and ordered to temporary duty at the Navy Yard, Washington, D. C.
de Figanerie, P. A., and McMurdo, H. B., acting asst.-surgeons, detached from duty at the Naval Medical School, Washington, D. C., and resignations accepted to take effect April 21, 1909.
Bogert, E. S., Jr., surgeon, detached from the Marine Recruiting Station, New York, and ordered to the Naval Academy.
Kennedy, J. T., surgeon, detached from the *Independence* and ordered to the *Colorado*.
DeValin, C. M., surgeon, orders of March 22 modified; Detached from the *Washington* and ordered to the Navy Yard, Washington, D. C.
Leach, P., surgeon, detached from the *Hancock* and ordered to the Marine Recruiting Station, New York.
Dunn, H. A., P. A. surgeon, detached from the *Colorado* and ordered to the *Independence*.
Turner, H. W. B., asst.-surgeon, ordered to the *Hancock*.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended April 21, 1909:

Geddings, H. D., asst. surgeon-general, relieved from duty in Bureau as assistant surgeon-general, to take effect April 20, 1909.
Geddings, H. D., asst. surgeon-general, directed to proceed to certain points in Europe upon special temporary duty as inspector of vaccine and antitoxin establishments.
McIntosh, W. P., surgeon, granted 7 days' leave of absence from April 24, 1909.
Wertebaker, C. P., surgeon, directed to report at bureau upon special temporary duty.
Cofer, L. E., P. A. surgeon, detailed to represent the service at the annual meeting of the South Carolina State Medical Association at Summerville, S. C., April 20, 1909.
Robinson, D. E., P. A. surgeon, granted 5 days' leave of absence from March 28, 1909, on account of sickness.
Long, J. D., P. A. surgeon, granted 1 month's leave of absence from May 1, 1909.
Stimson, A. M., P. A. surgeon, relieved from special temporary duty at Los Angeles, Cal., and directed to rejoin station, Washington, D. C.
Hurley, J. R., asst.-surgeon, relieved from temporary duty at San Francisco quarantine and directed to proceed to Manila, P. I., and report to the chief quarantine officer for duty.
Blanchard, J. F., acting asst.-surgeon, granted 1 day's extension of leave of absence, April 16, 1909.
Delgado, J. M., acting asst.-surgeon, granted 2 days' extension of annual leave from April 6, 1909, on account of sickness.
McLarty, A. A., acting asst.-surgeon, granted 3 days' leave of absence from April 6, 1909, under paragraph 210, Service Regulations.

BOARD CONVENED

Board of medical officers convened to meet at the Marine Hospital, San Francisco, Cal., May 3, 1909, for the examination of candidates for admission to the service as asst.-surgeon: Detail for the board: Surgeon H. W. Austin, chairman; P. A. Surgeon Rupert Blue; P. A. Surgeon F. E. Trotter, recorder. April 15, 1909.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended April 23, 1909:

SMALLPOX—UNITED STATES

Alabama: Birmingham, March 1-31, 10 cases.
California: Los Angeles, March 27-April 3, 1 death.
Georgia: Macon, April 4-11, 6 cases.
Illinois: Alton, March 1-31, 1 case; Galesburg, April 3-10, 2 cases.
Indiana: Indianapolis, April 4-11, 1 case; LaFayette, April 5-12, 1 case.
Iowa: Council Bluffs, April 5-12, 1 case; New Hampton, Feb. 26-April 15, 8 cases.

Kansas: Kansas City, April 3-10, 2 cases; Topeka, March 6-April 3, 12 cases.
Kentucky: Covington, April 3-10, 2 cases; Lexington, 1 case; Paducah, March 26-April 3, 1 case.
Michigan: Saginaw, March 26-April 3, 2 cases.
Minnesota: Duluth, April 1-8, 6 cases.
Montana: Butte, March 30-April 6, 2 cases.
Nebraska: South Omaha, April 3-10, 2 cases.
New Jersey: Camden, April 3-10, 1 case; Lodi, March 12, 1 case.
North Dakota: Sherwood and vicinity, Jan. 12-April 5, 73 cases.
Ohio: Cincinnati, April 1-7, 7 cases.
Texas: San Antonio, April 3-10, 1 case.
Virginia: Richmond, April 3-10, 1 case.
West Virginia: St. Albans, Feb. 16-April 12, 19 cases.
Wisconsin: LaCrosse, April 3-10, 2 cases; Milwaukee, March 13-April 3, 23 cases; Racine, April 3-10, 1 case.

SMALLPOX—FOREIGN

Algeria: Bona, Jan. 1-31, 16 cases, 7 deaths; Feb. 1-28, 25 cases, 13 deaths.
Brazil: Para, March 20-27, 1 case, 1 death; Pernambuco, Feb. 15-28, 5 deaths; Rio de Janeiro, Feb. 27-March 7, 25 cases, 14 deaths.
Canada: Halifax, March 27-April 3, 2 cases.
Ceylon: Colombo, Jan. 23-Feb. 13, 31 cases, 9 deaths.
China: Tientsin, Feb. 20-27, 1 case.
France: Paris, March 20-27, 3 cases.
Great Britain: Bristol, March 20-27, 1 death.
India: Bombay, March 9-16, 18 deaths; Calcutta, Feb. 27-March 6, 315 deaths; Madras, March 6-13, 1 death; Rangoon, Feb. 27-March 6, 8 deaths.
Indo-China: Saigon, Feb. 20-27, 7 cases, 5 deaths.
Italy: General, March 21-28, 2 cases; Catania, March 20-27, 2 cases; Naples, March 21-28, 16 cases.
Java: Batavia, Feb. 20-March 6, 9 cases, 1 death.
Mexico: Guadalajara, March 25-April 1, 2 deaths; Monterey, March 29-April 4, 3 deaths.
Newfoundland: St. Johns, March 22-April 3, 2 cases.
Peru: Lima, March 25, 1 case, in lazaretto.
Portugal: Lisbon, March 20-April 3, 11 cases.
Russia: Moscow, March 13-20, 19 cases, 11 deaths; Odessa, March 13-April 2, 1 case; Riga, March 29-April 5, 1 case; Warsaw, Jan. 16-30, 6 cases.
South Africa: Cape Town, March 6-13, 1 case.
Spain: Barcelona, March 22-29, 2 deaths; Valencia, March 19-26, 5 cases, 3 deaths; Vigo, March 20-27, 1 case.
Straits Settlements: Penang, Feb. 27-March 6, 1 case, imported.
Tripoli: Tripoli, March 20-27, 2 deaths.
Turkey: Constantinople, March 20-28, 1 death; Smyrna, Feb. 26-March 4, 2 deaths; March 18-25, 3 deaths.

YELLOW FEVER

Barbados: March 27-April —, 3 cases, 2 deaths.
Ecuador: Guayaquil, March 13-20, 26 cases, 10 deaths.

CHOLERA

India: Bombay, March 9-16, 1 death; Calcutta, Feb. 27-March 6, 67 deaths; Rangoon, 3 deaths.
Russia: St. Petersburg, March 27-31, 13 cases, 3 deaths.

PLAGUE

Brazil: Rio de Janeiro, Feb. 28-March 7, 5 cases, 1 death.
Chile: Antofagasta, March 1-20, 24 cases; Iquique, March 21, 26 cases, in lazaretto.
Ecuador: Guayaquil, March 13-20, 5 cases, 3 deaths.
India: General, March 30-April 6, 5,033 cases, 4,109 deaths; Bombay, March 9-16, 286 deaths; Calcutta, Feb. 29-March 6, 71 deaths; Rangoon, 9 deaths.
Peru: General, March 13-27, 54 cases, 25 deaths; Callao, March 14-27, 4 cases.

Marriages

E. R. SAUSSER, M.D., to Miss Eleanor Moore, both of Philadelphia, April 14.

JAMES JOSEPH ROACH, M.D., to Miss Edna Nacey, both of Chicago, April 20.

FRED A. METTS, M.D., Ossian, Ind., to Miss Mabel Sanders of Sarnia, Ont., April 14.

JOHN NORMAN HENRY, M.D., to Miss Mary K. Gibson, both of Philadelphia, April 13.

ROBERT HURTIN HALSEY, M.D., to Miss Edith Bates, both of New York City, April 14.

ARNOLD KNAPP, M.D., New York City, to Miss Julia James Long, at Camden, S. C., April 14.

EUGENE A. HILDRETH, M.D., to Miss Mary Elizabeth Hazlett, both of Wheeling, W. Va., April 15.

EUGENE F. RAPHEL, M.D., Wheeling, W. Va., to Miss Julia Cairns Cherbonnier, at Baltimore, April 12.

ROBERT T. MILLER, JR., M.D., Baltimore, Md., to Miss Mary Edes Hooper, at Bridgewater, Mass., April 15.

EDWARD CUSSLER, M.D., New York City, to Miss Mary Lansing Catlin of Washington, D. C., April 22.

WILLIAM B. WARTHEN, M.D., Bartow, Ga., to Mrs. Sallie Bell Newsom of Davisboro, Ga., at Macon, Ga., April 15.

LAUNCELOT LONGSTREET MINOR, M.D., Hollywood, Miss., to Miss Louise Bragg of Arlington, Tenn., at Memphis, April 13.

Deaths

Joseph H. Chittenden, M.D. Bellevue Hospital Medical College, New York City, 1864; a member of the Medical Society of the State of New York; from 1869 to 1870 president and from 1879 to 1884 secretary of the Broome County Medical Society; a member of the Binghamton Academy of Medicine; consulting physician to the Binghamton Hospital; physician to the Susquehanna Valley Orphans' Home; contract surgeon in the Army during the Civil War; jail physician of Binghamton for several years; a member and in 1881 and 1884 president of the school board; died suddenly at his home in Binghamton, April 14, from heart disease, aged 69.

Edgar Thrush Duke, M.D. University of Maryland, Baltimore, 1891; a member of the Medical and Chirurgical Faculty of Maryland; formerly president and for several years secretary of the Allegany County Medical Society; one of the organizers of the Western Maryland Training School for Nurses; died at his home in Cumberland, April 13, from pneumonia, aged 43. At a called meeting of the Cumberland Academy of Medicine, resolutions were unanimously adopted regarding the death of Dr. Duke, and the medical profession of the city in a body attended his funeral.

Samuel Marshall Orr, M.D. Jefferson Medical College, Philadelphia, 1879; of Anderson, S. C.; a member of the first State Board of Medical Examiners; a member of the South Carolina Medical Association, and once president of the Anderson County Medical Association; local surgeon for the Charleston and Western Carolina and Blue Ridge Railways; president and trustee of the Anderson Water, Light and Power Company, and president and treasurer of the Orr Cotton Mills; died at Johns Hopkins Hospital, Baltimore, April 14, after a surgical operation, aged 53.

Albert H. Simonton, M.D. Cincinnati College of Medicine and Surgery, 1893; from 1898 to 1902 contract surgeon in the United States Army; and afterward chief surgeon of the Arkansas Southwestern Railroad at Fordyce; died at his home in Chicago, April 19, from the effects of morphin, believed to have been self-administered with suicidal intent, while dependent, aged 63.

Frank Winthrop Draper, M.D. Harvard Medical School, Boston, 1869; for thirty-five years professor of legal medicine in his alma mater; a member of the Massachusetts Medical Society and an authority on medicolegal topics; a veteran of the Civil War; from 1877 to 1905 medical examiner of Suffolk county; died at his home in Brookline, April 19, from pneumonia, aged 66.

William Hungerford Burr, M.D. University of Maryland, Baltimore, 1884; a member of the American Medical Association; for four years surgeon in charge of the Santa Fe System Hospital and surgeon to the Clark Coal Company, Gallup, N. M.; died in the Santa Fe Hospital, Albuquerque, N. M., April 13, from pneumonia, aged 49.

Robert H. Alvis, M.D. University of Nashville (Tenn.), 1874; a member of the Oklahoma State Medical Association and of the Frisco System Medical and Surgical Society; physician of Carter county, Okla., and local surgeon of the Frisco system at Ardmore; died suddenly at his home in that city, April 15, from nephritis, aged 57.

Charles W. Power, M.D. Western Reserve Medical College, Cleveland, Ohio, 1888; of Wooster, Ohio; chief surgeon of the construction work of the Harriman System in Mexico and Arizona; and prior to that a medical missionary in Korea; died in Nogales, Ariz., March 20, six days after an operation for abscess of the liver, aged 49.

Hervey Prentice Hudson (license, Tenn., 1889); of Woodland, Tenn.; a member of the Tennessee State Medical Association; formerly president of the Haywood County Medical Association; county physician and formerly health officer of Hanley, Tenn.; died in Brownsville, April 6, from cerebral hemorrhage, aged 57.

Rosa Freudenthal Monnish, M.D. Georgia College of Eclectic Medicine and Surgery, Atlanta, 1882; who on March 24 is said to have been found guilty of illegal use of the mails; died at her home in Atlanta, April 19, from the effects of hydrocyanic acid, taken, it is believed, with suicidal intent.

William Lee Richardson, M.D. Jefferson Medical College, Philadelphia, 1848; a member of the American Medical Association; and said to be the oldest member of the Medical Society of the State of Pennsylvania; died at his home in Montrose, March 19, from influenza, aged 93.

Benjamin F. Gamber, M.D. Homeopathic Hospital College, Cleveland, Ohio, 1877; formerly professor of anatomy, physiology and hygiene in his alma mater; of Oakland, Cal.; a fellow of the Royal Microscopical Society; died in Lancaster, Pa., April 14, from nephritis, aged 65.

Lucius Maltby Barney, M.D. Denver (Colo.) College of Medicine, 1902; medical director of the Health and Accident Company, Denver; formerly a member of the Colorado State Medical Association; died at Palisades, Colo., from meningitis, April 7, aged 38.

John Milton McCanna, M.D. Jefferson Medical College, Philadelphia, 1905; of Mount Joy; a member of the Medical Society of the State of Pennsylvania; died in the Lancaster General Hospital, April 16, from tuberculosis of the liver, aged 34.

Joseph J. Thaxton, M.D. Jefferson Medical College, Philadelphia, 1840; for fifty years a practitioner of Person County, N. C.; and since 1890 a resident of Durham; died at the home of his daughter in that city, April 12, from senile debility, aged 91.

Pierce Elliott Dean, M.D. University of Alabama, Mobile, 1892; a member of the Medical Association of the State of Alabama; died at his home in Wedowee, Ala., Aug. 29, 1908, from paralysis of the pneumogastric nerve, aged 59.

James Wilson Bryant, M.D. Medical College of Virginia, Richmond, 1876; for many years local surgeon of the Norfolk and Western Railroad at Crewe, Va.; and mayor of that city; died at his home April 12, aged 56.

Alonzo Lyons Whitcomb, M.D. Northwestern University Medical School, Chicago, 1874; a member of the Arkansas Medical Society; died suddenly at his home in Rogers, Ark., April 10, from cerebral hemorrhage, aged 60.

Walter Sheridan Owen, M.D. University of Louisville, Ky., 1907; formerly of Muskogee, Okla.; a member of the Oklahoma State Medical Association; died at his home in Rogers, Ark., April 4, from tuberculosis, aged 29.

John P. H. Gray, M.D. Missouri Medical College, St. Louis, 1856; for three terms a member of the Missouri Legislature from Moniteau county; died at his home in California, Mo., February 11, from paralysis, aged 87.

Fletcher C. Lawyer, M.D. Jefferson Medical College, Philadelphia, 1873; of Missoula, Mont.; died February 17, from erysipelas complicating diabetes, in Los Angeles, Cal., where he had gone for his health, aged 55.

Jacob Stevenson Nichols, M.D. Bellevue Hospital Medical College, New York City, 1872; a member of the North Texas Medical Society; died at his home in Handley, Texas, January 25, from pneumonia, aged 64.

Ira Steinberger, M.D. American Medical College, Eclectic, St. Louis, 1880; one of the earliest settlers in Neosho county, Kan.; a practitioner of Erie for nearly forty years; died at his home, April 8.

Juan Louis Zabala, M.D. College of Physicians and Surgeons, New York City, 1897; at one time coroner's physician of San Francisco; died in Salinas, Cal., April 11, from typhoid fever, aged 38.

Andrew McBride, M.D. Medical College of the State of South Carolina, Charleston, 1889; of Holder, Fla.; died in St. Leo's Hospital, Greensboro, N. C., July 26, 1908, from typhoid fever.

George E. Tytler, M.D. New York Homeopathic Medical College, New York City, 1873; died at his home in New York City, April 16, from cerebral hemorrhage, aged 60.

John R. Wampler, M.D. American Eclectic Medical College of Ohio, Cincinnati, 1888; died at his home in Dayton, Ohio, April 13, from dilatation of the heart, aged 59.

Leonidas O. P. Wolfe, M.D. Rush Medical College, Chicago, 1866; of Mauckport, Ind.; died suddenly at the home of his brother in that place, March 30, aged 67.

Joseph Harvey Lovell, M.D. Hygieo-Therapeutic College, New York City, 1873; died at his home in Langhorne, Pa., July 28, 1908, from paralysis, aged 74.

Joseph S. Boone, M.D. Cincinnati College of Medicine and Surgery, 1872; a veteran of the Civil War; died at his home in Powhatan, Ohio, April 2, aged 69.

Garrison Brown, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878; died at his home in Crescent City, Ill., April 13, from pneumonia, aged 62.

Cora Lee Outcalt, M.D. Hahnemann Medical College, Chicago, 1902; formerly of Ottawa, Ill.; died at her home in Chicago, April 20, from carcinoma, aged 47.

R. Frank C. Browne (license, R. I. years of practice, 1895); died in his apartment in Providence, R. I., April 12, from heart disease, aged 53.

Alonzo Bryan, M.D. Medical College of Ohio, Cincinnati, 1875; of Detroit; died in the Red Cross Hospital in that city, April 13, aged 69.

John A. Parke, M.D. Trinity Medical College, Toronto, 1894; of Arcola, Sask.; died at Feversham, Ont., recently, from heart disease.

Thomas P. Blunt (license, Ark., 1903); died at his home in Little Rock, April 7, from cancer of the intestine, aged 52.

Henry James Metcalfe, M.D. McGill University, Montreal, 1873; died at his home in Thurso, Que., April 15, aged 58.

Charles Harris McKenna, M.B. University of Toronto, 1899; died at his home in Dublin, Ont., January 1.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

A Physician's Review Course

Comparatively few physicians feel able to spare the time necessary to take an annual postgraduate course; yet the need of keeping abreast of the progress in medical knowledge is a very real one. The advantage of a brief review course, especially in laboratory work, is evident, a fact which at least one state has recognized.

The board of regents of the University of Nebraska, at the instance of its medical faculty, has authorized the introduction of an annual review course of one week's duration, which is "open to all graduates of reputable medical schools." Stress is laid on the fact that this is not a postgraduate course as such is usually understood. "It is a course in which a practitioner is able to make a more intimate acquaintance with prominent advances in medicine than is possible through the medium of text-books or journals." These courses are exclusively for practitioners, and are given at the state university. They are made even more valuable by being given during the week just preceding the meeting of the state medical society; this year they commenced Monday, April 26 and closed Saturday, May 1, the Nebraska State Medical Association convening May 4. By this arrangement physicians who wish to attend their state meeting can, by leaving a week earlier, take in both the review course and the association meeting.

The general outline of the course is: Clinical work in the mornings, lectures and laboratory work in the afternoons, while formal and technical lectures followed by full discussions are given in the evenings. The subjects dealt with in this year's course included anatomy, bacteriology and pathology, chemistry, clinical diagnosis, histology, medical zoology, orthopedics, pathologic diagnosis, pharmacodynamics, physiology, psychiatry and surgical diagnosis.

A New County Society Bulletin

The Hennepin County (Minnesota) Medical Society has begun to issue a monthly bulletin, a four-page folder, containing the programs of coming meetings, announcements regarding medical society matters, names of physicians proposed for membership, etc. The publication of bulletins, either weekly or monthly, by the larger medical societies affords a regular, cheap and efficient means of communication with members.

Local Secretaries Organize

The secretaries of the branch and affiliated societies of the Chicago Medical Society have organized a Secretaries' Association to cooperate with the officers of the Chicago Medical

Society to increase the efficiency of the work of the organization. Two meetings will be held during the year, one in September and one in January. At the first meeting, held April 1, organization was effected and officers elected, sixteen of the twenty-five societies being represented. This movement is an extension of the plan of county secretaries' meetings, such as have been held in a number of states. The new society will doubtless be of great assistance in facilitating the work of organization in Cook county.

The Optometry Bill and the Practice of Medicine

A bill is before the legislature of the state of Illinois to have a so-called optometry bill enacted to license persons to fit glasses and treat certain diseases of the ocular apparatus.

The medical profession is opposed to the passage of such legislation for the following reasons:

1. The examination of the eye with ophthalmologic instruments for the discovery of visual defects and their cure is the proper function of the educated, trained and experienced physician. As is well known, the determination of the refraction is often the smallest and least important part of the treatment of weakness of sight or defective vision.

2. The work of the skilled optician is that of grinding, mounting and adjusting glasses. The optician who knows nothing whatever about anatomy, physiology or pathology is utterly incompetent to decide what the meaning of a patient's symptoms may be. It sometimes means the need of glasses; quite often it has nothing to do with that need. The determination of this important question can, in the interest of the patient, be only settled by one who has made a study of human anatomy, physiology, pathology, etc.; in other words, by the educated, graduated and trained physician.

3. The functions of the optician and the duly qualified medical man should be kept separate in the same manner and for the same reasons that the druggist's business of filling prescriptions is by law distinctly separated from the physician's business of prescribing. In our opinion, the proper relations of the druggist and the optician are analogous. In the case of the druggist the law wisely forbids the druggist to prescribe medicine or to sell certain drugs and compounds without the authority of the physician's prescription. It is believed by the medical profession that, in the interests of the patients, the optician should be restricted in a similar manner.

Any persons desiring to practice medicine or any of the specialties of the medical profession should qualify themselves for it in the regular way prescribed by law, and not seek to get in by way of a side door, i. e., by getting a diploma from any board of examiners other than the now lawfully constituted boards.

For the reasons stated, the medical profession is opposed to permitting examination of eyes for fitting glasses beyond the ordinary use of test cards, or by the employment of ophthalmologic instruments of any kind in the testing of eyesight, by any persons who are not regular medical practitioners, be they styled opticians, eyesight specialists, optometrists, doctors of optometry or refractionists.

A. H. ANDREWS, Chairman,
WILLIS O. NANCE, Secretary,
THOMAS FAITH,
W. L. NOBLE.

THOMAS A. WOODRUFF,
Committee on Legislation of the
Chicago Ophthalmological Society.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month

General Subject for the Month: Diseases of the Ear

First Weekly Meeting

ANATOMY OF THE EAR

EXTERNAL EAR.—(1) Auricle: Structure, shape, attachments, helix, antihelix, fossæ, tragus, antitragus, lobule. (2)

External Auditory Canal: Structure, diameters, length, direction, portions, ceruminous glands. Relations of each wall. Blood and nerve supply, lymphatics.

MIDDLE EAR.—Membrana tympani: Location, plane, attachments, structure, Shrapnell's membrane, Prussak's space, membrana vibrans, umbo, handle of malleus, blood vessels and nerves. Tympanic cavity: Location, boundaries and relations; contents, ossicles, shape and attachments of each; fenestrum ovale; Eustachian tube, length, boundaries, structure; aditus ad antrum; mastoid process, antrum, cells, situation and size, roof, floor and walls, relations of each suprameatal triangle.

INTERNAL EAR.—Osseous boundaries. Vestibule, cochlea, semicircular canals, endolymph, organ of Corti, otoliths, distribution of auditory nerve.

PHYSIOLOGY OF HEARING

Function of auricle, tympanic membrane; ossicles, connections, modes of action; muscles of middle ear, attachments, function of each; Eustachian tube; cochlea, semicircular canals, utriculus and sacculus. Distribution of auditory nerve. Properties of sounds. Harmony and discord.

Reference books for the tenth month: Politzer: Diseases of the Ear. Barnhill and Wales: Modern Otology. Ballenger: Diseases of Nose, Throat and Ear. Dench: Diseases of the Ear. Bacon: Manual of Otology. Love: Diseases of the Ear. Kyle, J. J.: Manual of Diseases of the Ear, Nose and Throat. Gleason's Manual of Diseases of Ear, Nose and Throat. Whiting: The Modern Mastoid Operation.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

FLORIDA: Tallahassee, May 19-20. Sec., Dr. J. D. Fernandez, Jacksonville.
MASSACHUSETTS: State House, Boston, May 11-13. Sec., Dr. Edwin B. Harvey, Room 159, State House.
MISSISSIPPI: State Capitol, Jackson, May 11-12. Sec., Dr. S. H. McLean.
MISSOURI: Kansas City, May 17-19. Sec., Dr. J. A. B. Adcock, Warrensburg.
MISSOURI: Kansas City, May 17-19. Sec., Dr. J. A. B. Adcock, Warrensburg.
NEBRASKA: State Capitol, Lincoln, May 25-27. Secretary, Dr. E. J. C. Sward, Oakland.
NEW YORK: Albany, May 18-21. Dr. Charles F. Wheelock, Albany.

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

Fifth Annual Conference, held at the Auditorium Hotel, Chicago, April 5, 1909

(Continued from page 1353)

Report of the Secretary

Following the address of the Chairman, the Secretary of the Council, Dr. N. P. Colwell, gave the following report of the work of the past year

Mr. Chairman, Members of the Council and Delegates:

Gentlemen:—For five years the Council on Medical Education has been working for higher and more uniform standards of medical education. In this time so many changes for the better have been brought about that some references to them in the course of this report should be made. Such influence as the Council may have had toward these improvements has been due largely to the following facts:

1. The Council is the permanent committee on education of the medical profession of America, represented by the American Medical Association. As such, its interests are national and its object is the betterment of medical education in all sections of the country.

2. It is a permanent committee, thereby exerting a constant, steady pressure for improvement, not possible through temporary committees, however excellent their work might be.

3. Its permanent headquarters at the home of the medical profession of America and its connection with the *Journal of the American Medical Association*, with its extensive correspondence, made it possible to obtain much information regarding medical education which otherwise could not have been secured.

4. An abundance of information has been collected, tabulated and published regarding medical colleges, standards, students, graduates, facilities and equipment, as well as much information regarding the requirements for license to

practice medicine both in this country and abroad. There has also been collected considerable information regarding elementary, secondary and collegiate education.

5. Indeed, "knowledge is power," and this information, formerly not to be had, has thrown much light on medical education, revealing quite clearly problems which otherwise could not have been seen.

6. As problems have arisen they have been presented at these conferences for discussion and some movements have been started which are rapidly bearing fruit. On the whole, much has been accomplished, which will be briefly outlined in the following report, showing the present status of preliminary and medical education in the United States:

PRELIMINARY EDUCATION.

Investigation reveals much confusion in standards not only among medical schools, but also in high schools, colleges and all other departments of education. No previous time, however, has seen so many forces at work in the effort to standardize the different departments and to develop system and uniformity.

High Schools.—Many of the states are seriously lacking in good high schools, which observation applies as much to a number of states north of the Mason and Dixon line as to those south of it. In fact, there are very few states which have all their high schools well organized, well equipped and supplied with well qualified, college-trained teachers. This department of education is now being systematically taken up by various organizations, including the General Education Board, and throughout the southern states a high-school inspector with the title of a "Professor of Secondary Education" has been placed with each state university. Public sentiment throughout the south is rapidly being awakened and already vast sums have been appropriated by legislatures to develop high schools. Leading educators in the south state that within four to five years that section will be fairly well provided with four-year high schools.

Colleges and Universities.—Several educational organizations, including the Associations of Universities and the Carnegie Foundation for the Advancement of Teaching, are now at work in an effort to standardize colleges and universities, many of which at the present time, from an educational standpoint, have no right to such titles, since they give courses of little more, or even of less value, than those in some of the better high schools.

The Carnegie Foundation for the Advancement of Teaching has also fixed an entrance requirement to universities consisting of 14 units of high school work, a unit being defined as representing 5 weekly recitations of 40 minutes each for a year. The 14 units adopted require four years of high school work superimposed upon eight years in the elementary grades and involve a fair distribution of time among different subjects.

PRELIMINARY REQUIREMENTS OF MEDICAL SCHOOLS

Eleven medical colleges already require two or more years of work in a college of liberal arts for admission. These colleges and the years when such requirement began are as follows:

College.	Began.
Johns Hopkins University Medical Department.....	1893
Harvard Medical School.....	1900
Western Reserve University, Medical Department.....	1901
University of Chicago, Rush Medical College.....	1904
University of California, Medical Department.....	1905
University of Minnesota, Coll. of Med. and Surg.....	1907
University of Minnesota, Homeopathic Department.....	1907
University of North Dakota, College of Medicine.....	1907
University of Wisconsin, College of Medicine.....	1907
Cornell University Medical College.....	1908
Lake Forest College, School of Medicine.....	1908

Eighteen other colleges have definitely announced an increase in their entrance requirements to two or more years in a college of liberal arts. These and the dates when such requirements will become effective are as follows:

College.	Begins
Leland Stanford Junior University, Department of Medicine..	1909
Yale Medical School.....	1909
*Northwestern University Medical School.....	1909
University of Kansas, School of Medicine.....	1909
University of Michigan, College of Medicine.....	1909
*University of Nebraska, College of Medicine.....	1909
University of South Dakota, College of Medicine.....	1909
University of Colorado, School of Medicine.....	1910
†Indiana University School of Medicine.....	1910
†State University of Iowa, College of Medicine.....	1910
Drake University, College of Medicine.....	1910
‡University of Missouri, Department of Medicine.....	1910

John A. Creighton Medical College.....	1910
Dartmouth Medical School.....	1910
Columbia University, College of Physicians and Surgeons....	1910
†Syracuse University, College of Medicine.....	1910
†University of Pennsylvania, Medical Department.....	1910
†University of Utah, Medical Department.....	1910
* One year required for the session of 1908-09.	
† Will require one year for the session of 1909-10.	
‡ One year has been required since 1906.	

The 21 following colleges either already require one year of work in a college of liberal arts in addition to a four-year high school course, or have announced their intention to do so on or before the year given:

College.	In Force.
Fordham University, School of Medicine.....	1908
University of North Carolina, Medical Department.....	1909
Oakland College of Medicine and Surgery.....	1910
Denver and Gross College of Medicine.....	1910
College of Physicians and Surgeons, Chicago.....	1910
Hahnemann Medical College, Chicago.....	1910
Kansas Medical College.....	1910
Tulane University of Louisiana, Medical Department.....	1910
St. Louis University School of Medicine.....	1910
Washington University, Medical Department.....	1910
University of Cincinnati, Medical Department.....	1910
Starling-Ohio Medical College.....	1910
Cleveland College of Physicians and Surgeons.....	1910
University of Oklahoma School of Medicine.....	1910
University of Oregon, Medical Department.....	1910
Vanderbilt University, Medical Department.....	1910
University of Texas, Medical Department.....	1910
*University of Virginia, Department of Medicine.....	1910
West Virginia University, College of Medicine.....	1910
Marquette University Medical Department.....	1910
Wisconsin College of Physicians and Surgeons.....	1910
* Requires a three year high school course plus one year of college work.	

Several other colleges announced to us that higher requirements had been adopted. Two have since rescinded their action, five have merged into other colleges, and others, on inspection, being found unworthy of recognition, were omitted from the lists. The schools above named, however, have made definite statements in their announcements regarding the increase in their entrance requirements and doubtless mean what they say.

In support of these higher standards, the State Examining Boards of six states have established higher requirements of preliminary education. These states and the years when the requirement will become effective are as follows:

State Examining Board of	No. of years Required.	Affects students matriculating	Affects all applicants after
Minnesota	2	1908-09	1912
Connecticut	1	1908-09	1912
North Dakota	2	1907-08	1911
South Dakota	1	1907-08	1911
Colorado	1	1908-09	1912
Kansas	1	1910-11	1914

Several other states are contemplating a similar increase in their requirements of preliminary education. In some of these the increase would doubtless be welcomed, since medical colleges have already adopted the increased requirements.

MEDICAL COLLEGE MERGERS

Since our last conference there have been five important mergers of medical colleges by which nine medical schools are replaced by four stronger ones. These mergers were as follows:

1. At Louisville, Ky., the Louisville and Hospital Medical College, the Kentucky School of Medicine and the University of Louisville Medical Department united, retaining the name of the University of Louisville Medical Department. This leaves but one regular medical college in Louisville, where there were five colleges two years ago. As a direct result of this merger, the school has received \$25,000 from the city of Louisville, and steps have been taken to build a new city hospital, which is to be largely under the control of the medical school.
2. At Cincinnati, the merger between the Medical College of Ohio and the Miami Medical College has been completed, the new school to be the Medical Department of the University of Cincinnati. The building of an enormous new city hospital has already been started near the university campus and a new medical college building will be erected adjoining this hospital. The outlook for this new school is very encouraging.
3. The Keokuk Medical College, College of Physicians and Surgeons, located at Keokuk, Iowa, has turned all its property and good will over to the Drake University, College of Medicine, at Des Moines, Iowa.

4. The University of Southern California, College of Medicine, at Los Angeles, has united with the University of California, whereby it becomes the Los Angeles Medical Department of the state university. The work of the first two years will be at Berkeley, the student being allowed to take his clinical work either at San Francisco or Los Angeles.

5. The Cooper Medical College, beginning this fall, will be the Medical Department of Leland Stanford, Jr., University, located at Palo Alto, Cal. Three years of work in the liberal arts' department will be required for admission. The first three semesters of medical work will be given on the University campus at Palo Alto, the last five at San Francisco.

NIGHT TEACHING ABANDONED

Information has been received that the teaching of medicine to students attending only at night or after 4 o'clock p. m., has been abandoned by George Washington University and by Howard University, both located at Washington, D. C., and by Temple College Medical School at Philadelphia. This still leaves four medical night schools, three of which are at Chicago and one at St. Louis.

GRANTING OF ADVANCED STANDING

It is a rather deplorable practice, even with some of the supposedly better grade medical colleges, to allow advanced standing with little or no restrictions for work done in some of the medical schools known to be of extremely low grade, from night schools and even from schools not generally recognized by law as medical schools. It is quite encouraging, therefore, to note that an increasing number of colleges are limiting such advanced standing to those colleges which are of known merit.

NEEDS AS REVEALED BY THE INVESTIGATION OF MEDICAL COLLEGES

An investigation of medical education in the United States covering a period of five years and which included one or more personal inspections of each individual medical school, has revealed numerous defects in the teaching of medicine, some of which may be briefly stated as follows:

1. There are too many medical colleges in this country. As shown a years ago,¹ the United States has nearly as many colleges as the rest of the civilized world combined. The majority of them depend on the fees of students to pay their running expenses.
2. This has led to an active competition for students to an utter disregard of preliminary requirements, which has not only prevented the medical school from obtaining well-trained students, but has also hindered the development of the high schools, since students were and are still being admitted with only a grammar school education.
3. The medicine of 15 or 20 years ago is still being taught by a number of our colleges. Even that could be better taught if the students taking such work were required to have a preliminary training the equivalent of a four-year high school education.
4. The medicine of to-day, however, really requires of the student a more extensive and thorough preliminary training than is possible in the vast majority of our secondary schools. Experience has shown that this additional preliminary training for medicine should consist of at least one year's work in physics, chemistry and biology, and that a reading knowledge of German and French should also be required.
5. The medicine of to-day demands teachers rather than practitioners. For the fundamental medical sciences there should be not less than five or six instructors who have had special, thorough training in anatomy, histology and embryology, physiology, physiologic chemistry, pharmacology, pathology and bacteriology, and these men should be paid salaries sufficient to permit them to devote their entire time to teaching and research, unhampered by the necessity of keeping up an active practice for a livelihood.
6. In order to properly teach medicine to-day, medical colleges must have hospitals either owned by them or entirely under their control so far as the clinical material is concerned. This is one of the greatest needs of medical teaching to-day. Our medical students must come into closer contact with patients in hospital wards and dispensaries, where they should be given a systematic, careful training in writing histories, as well as in the methods of the clinical laboratory.
7. If the medical college is of high standard, hospital patients would be benefited by the presence of the students. The attending physician is going to be far more careful in his

1. THE JOURNAL A. M. A., May 16, 1908, page 1639.

examinations and treatment if he is being watched by a few keen-witted medical students. Again, even pay patients seldom object to examination by one or two students in the presence of the physician. In fact, in one hospital where free ward patients were regularly placed in charge of senior students under the direction of the attending physician, a number of patients asked to be given similar attention under the impression that their cases were not receiving as thorough investigation as the others, which may have been true.

8. In many instances our medical schools are run as medical "institutions," manned by busy practitioners for whom the college work is an insignificant side-issue, rather than as medical colleges in the hands of teachers, for whom the practice of medicine is no consideration except for those connected with the clinical chairs. Even the occupants of the clinical chairs should be selected for their ability as teachers rather than because of their practice, or because they are on the attending staff of this or that hospital.

9. Another serious need is proper supervision, since a number of medical colleges have an abundance of clinical material, but for want of proper oversight are not taking advantage of it. A smaller amount of material carefully used is sometimes better than a large amount of material without careful supervision, since in the latter case the student is apt to develop superficial habits.

10. This supervision should also extend to keeping the buildings clean. The uncleanness of the buildings and laboratories of some of our medical colleges makes one question the possibility of their teaching asepsis, or even ordinary cleanliness.

11. A number of medical schools have not yet adopted the recent methods of embalming anatomic material by which the work of dissection is much more agreeable. A larger number have not provided frozen cross-sections, prepared anatomic specimens, or other modern adjuncts which are so useful in the teaching of anatomy.

12. Medical education is but one of the departments of our general system of education, and should be brought into harmony with all other departments. The interests of all departments of education are mutual. What helps one should help all. Medical schools must depend on the high schools, colleges and universities to furnish the preliminary training for medical students. The medical school might also obtain many valuable suggestions from the liberal arts' colleges in regard to supervision, standards of equipment and methods of teaching. On the other hand, if the medical college insists on high standards of preliminary education, it will aid and stimulate the work of the secondary school, college and university.

13. As already stated, there is much confusion in the standards of our secondary schools. To place the proper value on preliminary credentials, therefore, and to judge of a student's qualifications, requires expert knowledge which is not at present available for our medical schools. The provision for certificates from county superintendents or high school principals has proved to be very unsatisfactory. A number of eastern colleges and universities have solved the problem by requiring that their examinations be held by the College Entrance Examining Board. It might be possible at least for the eastern medical schools to have the preliminary credentials of their medical students pass through the hands of that board.

14. There are a number of medical schools known as medical departments of universities which in point of fact have only nominal connection with such universities. In a few instances there is no real university of the name given, or else the university is made up of schools of medicine, law, dentistry and pharmacy without a liberal arts' department. The majority of these are really independent medical schools, the university so called having no control over the standards of teaching, nor furnishing any financial assistance to its "medical department."

15. A medical school would be greatly benefited by becoming the organic medical department of a university which has a strong liberal arts' department. By "organic" is meant where the medical school and its finances are controlled by the university trustees and where the educational standards are fixed by the liberal arts' department. By such connections, made within recent years, it has been most interesting to watch the transformation of what might better be termed "medical institutions" into, what are in every sense of the term, "medical colleges."

16. Those medical schools which are honestly striving to teach medicine and which have the right ideals should receive

endowment. It has been clearly demonstrated time and again that no medical school can demand the necessary entrance requirements, provide the expert all-time salaried instructors, install the thoroughly equipped laboratories and properly supervise the dispensary and hospital teaching without private endowment or state aid. Additional figures have been received during the past year showing that the cost of teaching a student in each of the freshman and sophomore years in the 25 or 30 leading medical schools ranges from \$250 to \$700 or more per year, while the tuition received from each student ranges only from \$65 to \$250 per year. To meet the necessary expenses of properly teaching medicine from students' fees is therefore clearly out of the question.

17. After all that has been said in the last four or five years regarding the needs of modern medicine in money, salaried instructors, laboratories and hospitals, there are still a considerable number of colleges which, from students' fees, are able to pay all expenses and still have a snug little sum at the end of the year to "divide up" among the members of the faculty. And strange as it may seem, it is from these very colleges that we oftenest hear the plea for "the poor boy who wants to get an education" as an excuse for low preliminary requirements, and the question as to "who will practice at the country cross-roads and the back-woods districts" if a thorough medical training is insisted on.

18. There are several medical schools so called which are little else than quiz classes and which are run only to prepare their students to pass state license examinations. Inspection shows they seriously lack equipment or make little use of what they have. Statistics show that "graduates" of these schools are able to pass the state license examinations, as they are now generally conducted, when graduates of better equipped colleges fail. This is an argument for the practical state license examination.

STATE LICENSE LEGISLATION AND REQUIREMENTS

Since a year ago several important changes have been made in medical practice acts or in board rulings governing the requirements for license to practice medicine.

1. The Ohio State Board, at its June, 1907, meeting, inaugurated practical examinations. Each applicant was called on by number during the written examination, in the presence of the entire class, to identify pathologic specimens and bacteria and to make a urine analysis. An extension of time equal to that required for the practical test was granted to those who were called from their written work. It required about 50 minutes for each of the 161 applicants to complete the examination, and the results were reported to be highly satisfactory. Massachusetts has added practical examinations.

2. Rhode Island secured an amendment to the medical practice act requiring that each applicant for license must be "a graduate of a reputable medical college." This provides that no more non-graduates can secure license and also gives the board the right to refuse recognition to medical colleges which it considers not reputable. There remain only five states which still allow non-graduates to secure a license other than through reciprocity. These states are as follows:

Alabama	Massachusetts	Tennessee
Arkansas	Mississippi	

3. Indiana has provided for an examination in the fundamental medical branches at the end of the sophomore year, this credit to be acceptable toward the examination for license after the four years in a medical college have been completed and the diploma conferred. This makes six states which at the present time have provided for the license examination in two parts. These states are:

Colorado	Maryland	New York
Indiana	Michigan	Virginia

4. In only one instance during the past four years has a state retrograded in its standards for medical licensure. This occurred during the last year in Oklahoma. A bill for a strong practice act was introduced, but was so sadly riddled by the time it came through the Oklahoma legislature that it provides lower standards than were formerly enforced in the territory of Oklahoma.

5. In four states during the past year recognition was withdrawn from a number of medical colleges. In Indiana from one college which has been closed, in Illinois from five, to all of which recognition has since been restored, in Missouri from two, to one of which recognition has been restored, and in Texas from two, both of which have been closed. In several

other states, while recognition was not withdrawn from colleges, considerable pressure has been exerted by the boards resulting in marked changes for the better.

CHARTERING OF COLLEGES

In only a few states is there any check on the incorporation or chartering of medical schools. In most states any body of men by paying the required fee can incorporate as a college or university, often with authority to grant any degree under the sun, no question being asked as to the ability to furnish education of the standard generally supplied by the better colleges and universities. And seldom is there any means of control over such institutions, even after they are incorporated.

MEDICAL SECTS

No such unchecked educational institutions are allowed to exist, so far as we have been able to learn, in any other country, and in no other country do medical sects abound as in this country. Besides the three or four legally recognized schools of medicine, we now have some 30 or more non-descript fads in a long procession, demanding legal recognition and representation on examining boards.

FENCES WITH HOLES IN THEM

The trouble to-day in our medical practice acts is that our legislatures make the fences high and strong, but then proceed by granting special privileges to this or that sect, to make large holes in these fences, through which many untrained pseudo-doctors are annually admitted to practice on an unknowing and unsuspecting public.

THE LOGICAL REMEDY

The only logical position to take in the matter is, as has been done in a few states, to fix an educational standard by which all who wish to secure the license to practice medicine must comply. This standard should require a fair amount of preliminary education, which should be at least that of a four-year high school course, and a thorough training of at least four years in a medical school, the first two years of which should be devoted largely to laboratory courses in the fundamental medical sciences, anatomy, physiology, pharmacology, pathology and the like, a knowledge of which is absolutely essential to one who is to differentiate between health and disease. The last two years should be largely spent in the hospital and dispensary, in personal contact with the sick and injured, and should include a thorough training in the clinical laboratory. If this standard is complied with, then grant a physician's license and let the holder practice as his educated common sense dictates.

RECIPROCITY

Reciprocity, if wisely administered, is a commendable measure and a matter of justice to the old practitioner, who for good reason may be compelled to move to another state. Misunderstood, however, or poorly administered, it may seriously lower medical standards. It is still quite widely understood, even among state board members, that if one state has reciprocity with another it means that any doctor licensed by the one state must be accepted by the other, no matter how low the applicant's preliminary training was or from what college he may have graduated. Of course, that idea is entirely wrong, since reciprocity provides that the license from another state may be accepted in lieu only of the written examination. In all other respects the applicant should comply with the standard required by the law of the state in which he is trying to secure license, which standards it is the duty of the licensing board to enforce.

As usually provided in the state practice acts, reciprocity is a discretionary measure, licenses under that measure to be granted only when the board is satisfied that the applicant in every way comes up to the standard fixed by the practice act. It sometimes occurs that an applicant who has failed repeatedly before one board goes elsewhere and passes, then reappears to the first board for a license through reciprocity. Several boards under such circumstances have very properly refused to issue licenses, and have demanded that such applicants pass their own examinations. Another board, that of Louisiana, has recently published a list of medical colleges which are considered satisfactory, and has barred graduates of all other schools from registration through reciprocity. Such procedure by the boards makes reciprocity in their hands a powerful influence for higher standards.

ADVANCES OF THE PAST YEAR

From the several advances mentioned, and doubtless others should be included, it will be seen that improvements in medical education in this country are being rapidly brought about. The following sentences will briefly indicate some of the advances made during the past year:

(a) Several state legislatures have made large appropriations for the opening of good high schools, and several organizations are actively working for the standardization of our secondary schools, colleges and universities.

(b) Twenty-nine medical schools by 1910 will be requiring two or more years of liberal arts' college work for admission.

(c) At least 50 medical schools by 1910 will be requiring one or more years of liberal arts' college work for admission.

(d) Practically all of the medical schools referred to expect to require preliminary work in college physics, chemistry and biology, and a reading knowledge of German or French.

(e) Six State Medical Examining Boards have increased their requirements of preliminary education to one or two years of work in a college of liberal arts.

(f) Five important mergers have been completed during the year, replacing nine medical colleges by four stronger ones.

(g) Teaching medicine at night has been abandoned by three medical schools, and only four remain, three of these being at Chicago and one at St. Louis.

(h) Practical examinations in addition to the written have been inaugurated by at least two examining boards: those of Ohio and Massachusetts.

(i) One more state now requires that all applicants be graduates in medicine, leaving only five which license non-graduates.

(j) Six state boards have provided for a two-part examination, whereby applicants may take examinations in some of the subjects at the end of their sophomore year.

LOOKING AHEAD

While much remains to be accomplished, many of the problems are now more clearly defined and rapidly approaching a satisfactory solution. Several strong forces are at work at these problems, including the state examining boards and their confederations, the medical colleges and their associations, the American Academy of Medicine and others. Each organization is doing a work which can not be done by the others. Sometimes the efforts overlap, but should not be allowed to conflict. There is certainly enough work for all, and they are all striving toward the same ideal, namely, the improvement of medical standards in the United States, until they are at least equal to those of our neighbors across the Atlantic.

(To be continued)

Medical Education and Nostrums, Ninth Letter

This is the ninth of a series of letters issued jointly by the Council on Medical Education and the Committee on Medical Teaching of the Council on Pharmacy and Chemistry:

To Medical Teachers.—This letter contains some suggestions for the departments of pathology, bacteriology, state medicine and Medical economics. *Pathology.*—The study of many pathologic conditions demonstrates clearly that these can not be cured directly by any drug, and this is the proper place for emphasizing not only the absurdity but the danger of nostrums for which such cures are claimed. The so-called cancer cures form a most striking object-lesson, of which the rheumatic, gout and Bright's disease cures are but minor variations.

Bacteriology.—The undoubted usefulness of antiseptics has been perverted by manufacturers until it may be questioned whether the proprietary antiseptics are not doing more harm than good. The public, as well as the profession, should be educated to effective protection against bacterial infection. The injudicious advertisement of proprietary antiseptics, however, may easily become harmful by inducing an unjustified sense of security, thus belittling the importance of the natural protective measures, such as cleanliness and isolation (see Phenol Sodique, THE JOURNAL, Nov. 9, 1907, p. 1617). Many are more directly dangerous, in that their poisonous nature is not sufficiently emphasized, or is even specifically denied, by the manufacturer. Others are advertised to accomplish results which are inherently impossible. Deodorants

have been praised as disinfectants. In many cases the cost per unit of efficiency causes an otherwise active antiseptic to be used in quantities so small as to render it useless.

State Medicine.—The profession, when it denounces self-medication, is commonly accused of self-interest. The student should be thoroughly informed of its true motives, and this department may well emphasize the dangers to the public health arising from the prevalent use of the confessed "patent medicines"; the evil effects of the constant suggestion of disease symptoms in the advertising matter; the neglect of curable conditions until they have become incurable; the uncontrolled use of remedies, such as digitalis, mercury, or arsenic, which, in unskilled hands, are more potent for ill than for good; the creation of drug habits; the disguising of the poisonous nature of nostrums tending to serious and even fatal accidents; the "sampling" of active poisons where they may be found by children, etc. This would also be a proper opportunity to emphasize the fact that the use and endorsement of proprietary articles by the profession is the strongest advertisement of these articles to the laity, and that the profession can not expect the laity to take effective measures against these evils until the profession sets a worthy example.

Medical Economics.—This department should expand on the articles on Nostrums (Section 8 of Chapter II) of the Principles of Medical Ethics. The student should be advised that secret remedies have ever been condemned by the best element of our profession, and that their use forfeits the respect of both the profession and the laity. The warning against testimonials should also be emphasized.

Section 8 of Chapter II of the Principles of Medical Ethics reads: "It is equally derogatory to professional character for physicians to hold patents for any surgical instruments or medicines; to accept rebates on prescriptions or surgical appliances; to assist unqualified persons to evade legal restrictions governing the practice of medicine; or to dispense, or promote the use of, secret medicines, for if such nostrums are of real efficacy, any concealment regarding them is inconsistent with beneficence and professional liberality, and if mystery alone gives them public notoriety, such craft implies either disgraceful ignorance or fraudulent avarice. It is highly reprehensible for physicians to give certificates attesting the efficacy of secret medicines, or other substances used therapeutically."

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

American Academy of Medicine, Atlantic City, June 5-7.
Am. Assn. of Genito-Urinary Surgeons, Pocono, Pa., May 31-June 1.
Am. Climatological Association, Fortress Monroe, Va., June 4-5.
American Dermatological Association, Philadelphia, June 3-5.
Am. Gastro-Enterological Association, Atlantic City, June 7-8.
American Gynecological Society, New York, May 27-29.
American Laryngological Association, Boston, May 31-June 2.
American Laryn., Rhin. and Otol. Society, Atlantic City, June 3-5.
American Medico-Psychological Assoc., Atlantic City, June 1-4.
American Neurological Association, New York, May 27-29.
American Orthopedic Association, Hartford, Conn., June 14-16.
American Pediatric Society, Lenox, Mass., May 27-28.
American Proctologic Society, Atlantic City, June 7-8.
American Surgical Association, Philadelphia, June 1-3.
American Therapeutic Society, New Haven, Conn., May 6-8.
American Urological Association, Atlantic City, June 7.
Arizona, Medical Association of, Prescott, May 19-20.
Arkansas, Medical Society of, Pine Bluff, May 18-21.
Association of American Physicians, Washington, D. C., May 11-12.
Conf. of State and Prov. Bds. of No. Am., Washington, June 4-5.
Connecticut State Medical Society, Hartford, May 26-27.
Illinois, State Medical Society, Quincy, May 18-20.
Iowa, State Medical Society, Dubuque, May 19-21.
Kansas State Medical Society, Emporia, May 5-7.
Louisiana State Medical Society, New Orleans May 4-6.
Maine Medical Association, Portland, June 16-17.
Maryland, Med. and Chir. Faculty of, Baltimore, May 13-15.
Massachusetts Medical Society, Boston, June 15-16.
Missouri, State Medical Association, Jefferson City, May 18-20.
Montana State Medical Association, Missoula, May 12-13.
Nat. Assn. for Study and Prevention of Tuberculosis, Washington, D. C., May 13-15.
Natl. Conf. State Med. Ex. and Licensing Bds., Atlantic City, June 7.
Nebraska, State Medical Association, Omaha, May 4-6.
New Hampshire, Medical Society, Concord, May 13-14.
New Jersey Medical Society, Cape May, June 23-25.
North Dakota, State Medical Association, Fargo, May 11-12.
Ohio, State Medical Association, Cincinnati, May 5-7.
Rhode Island Medical Society, Providence, June 4.
Texas State Medical Association, Galveston, May 11-13.
Wisconsin State Medical Society, Madison, June 30-July 2.

THE AMERICAN SOCIETY OF TROPICAL MEDICINE

Sixth Annual Meeting, held at the United States Naval Medical School, at Washington, D. C., April 10, 1909

Election of Officers

The following officers were elected for 1909-1910: President, Dr. William C. Gorgas, Ancon, Canal Zone; vice-presidents, Dr. William S. Thayer, Baltimore, and Dr. Rudolph Matas, New Orleans; treasurer, Dr. Charles Lincoln Furbush, Philadelphia; secretary, Dr. John M. Swan, Philadelphia; assistant secretary, Dr. Edward R. Stitt, Washington; councilors (to serve two years), Dr. Ramon Guiteras, New York, Dr. James Ewing, New York.

Dr. William S. Thayer, Baltimore, and Dr. James M. Anders, Philadelphia, were elected delegates to the International Society of Tropical Medicine.

Malaria, with Especial Reference to What Is Not Malarial Fever

DR. JOHN PELHAM BATES, Nashville, Tenn., presented a clear and exhaustive paper on this subject, and drew the following conclusions: Malaria is an extremely simple disease, unless complications are present. In true malaria (with the patient at perfect rest), quinin will control all symptoms within five days. If not, death will be so prompt that there will be no time to hesitate over the diagnosis. It is important to remember the large number of infections that may be present along with an acute malarial infection. Lack of knowledge of this fact, accounts for the confusion in our ideas with regard to the course of malaria and its non-amenability, in exceptional instances, to treatment. Finding malarial parasites in the blood is not the end, but the beginning of the diagnosis. When quinin fails to have a marked effect on the fever within from forty-eight to sixty hours, although parasites may be present, there is some complication; and when the fever is once reduced by quinin and there is again a rise of fever, the second rise is not due to malarial infection, but to an intercurrent infection manifesting itself late in the attack. In the presence of a marked leucocytosis, the idea of malarial infection should be abandoned, and search should be made for the real cause.

Report of a Case of Quartan and of One of Estivoautumnal Malaria

DR. JOHN M. SWAN, Philadelphia: The case of quartan infection was accidentally discovered in a patient admitted to the hospital for nephritis. The man had recently landed from Jamaica. His blood was studied, and found to contain a single generation of quartan parasites. He had no chill, but his temperature was 99.4 F. at 8 a. m. on October 9. Seventy-two hours later the temperature was 100.4 F., without chill; at the next seventy-two hour period there was a chill, the temperature reaching 101.4 F. The nephritis was independent of the malarial infection. The return of the dropsy, with chest pain, chills, cough and blood-tinged expectoration was unaccompanied by the recurrence of the sporulating parasites in the peripheral blood, and examination of bone marrow after death failed to show malarial pigmentation. The second patient, a male, was admitted to the Polyclinic Hospital, complaining of hiccup. He had an intermittent temperature. No suspicion of malarial infection was entertained; but at autopsy the very large spleen suggested the nature of the disturbance, and smears made from the expressed spleen-pulp showed a large number of pigmented macrophages and a fair number of deformed and partly degenerated parasites. The lung seemed to be affected by hypostatic congestion. On histologic examination a pneumonic consolidation was seen. The exudate was not that of a true pneumococcus infection.

A Study of the Leucocytes in Tropical Malarial Infections

DR. PAUL T. TALBOT, New Orleans: In the cases studied, the condition had been termed "tropical anemia." The patients all gave a history of ague; with relative white blood count, which showed an increase of the small lymphocytes, with an erratic form of plasmodium. A great amount of

physical depression existed. Every blood disease has its own picture; and it is possible that there is some change in the leucocytes, not yet determined, that represents a certain organism or toxin. Ordinarily, the leucocyte count is a valuable aid in the diagnosis; these cases, however, showed the relative increase in the lymphocytes in the small, rather than in the large varieties. Sometimes the plasmodium was that of an estivoautumnal form. I concluded, therefore, that I was dealing with a different toxin, produced by a different parasite.

Discussion on Malaria

DR. W. S. THAYER, Baltimore: I was surprised that Dr. Bates should have stated that malarial parasites were not found in any greater number in the internal organs than in the peripheral blood. Not infrequently a moderate number of parasites is found in the peripheral circulation and an enormous number in the internal organs. There are occasionally cases of malarial fever in which no parasites can be found in the peripheral circulation, even with the most careful staining. I have seen cases in which tuberculous exactly simulated malaria, but in which the blood showed no parasites. I have likewise encountered trichiniasis resembling malaria most markedly. The paroxysms were like those of estivoautumnal infection.

DR. C. G. BASS, New Orleans: I have seen a case similar to Dr. Swan's. After the patient had been in the ward three or four days, twenty grains of quinin were given to him by mistake. It was immediately stopped, when discovered. The plasmodia were absent the next day; and from that on, until a month and a half later. He had previously shown three crops of parasites. He died two months later, and at post-mortem tuberculous peritonitis was disclosed. In a second case of quartan malaria the patient died within a short time after treatment, and showed markedly few evidences of malaria at the autopsy.

DR. W. S. THAYER, Baltimore: I saw a case of the obstinate type of quartan malaria in a man who had consulted Dr. Osler on account of recurrent chills. Dr. Osler did not think it one of malaria, but I examined the blood and found quartan parasites.

DR. C. G. BASS, New Orleans: In another case of quartan malaria, the patient showed an enlarged spleen and a triple infection, with three crops of parasites. At the end of three days the disease had yielded to quinin, but he was kept in the ward ten days more. The pathologist at the Charity Hospital thought he could recognize a different type of plasmodia in patients coming from Honduras, and has named it the Honduran malarial parasite.

DR. GEORGE DOCK, New Orleans: The old English idea of the greater severity and obstinacy of quartan malaria does not always hold good. An enormous number of parasites was found in Dr. Bass' second case, yet the patient had had practically no symptoms. In regard to the distribution of the parasites in the blood, the circulation does not go on as in a series of tubes without any outlet. In one case I was unable to find parasites in the circulating blood, yet found quantities on puncturing the spleen. I agree with Dr. Bates that most cases of malaria can be checked in forty-eight hours, and believe Dr. Osler's limit of five days to be too long. The microscope should be used, and, if necessary, the spleen punctured.

DR. O. T. LOGAN, Chingteh, China: In the case of the patient who recovered, mentioned by Dr. Bass, I think the recovery explained by the fact that our forefathers recovered from malaria before the discovery of quinin. In China several persons have come under my observation who did not believe in taking medicine. By simply remaining in bed they eventually recovered.

DR. W. P. CHAMBERLAIN, Jackson Barracks, La.: In studying malaria, I have found four patients who resisted the administration of quinin by mouth for four days, the rest yielding promptly to treatment.

(To be continued)

TENNESSEE STATE MEDICAL ASSOCIATION

Seventy-sixth Annual Meeting, held at Nashville, April 13-15, 1909
(Concluded from page 1351)

President's Address: Hippocrates, Past, Present and Future

DR. B. D. BOSWORTH, Knoxville, among other things, said that just sixty years ago came Morton, with ether anesthesia, and, a moment later, Oliver Wendell Holmes, with his clean-handed midwifery. All future years will hold in honored reverence such names as Sims and Sayre, Gross and Eliot, Drake and Senn, and, last but not least, our own beloved Richard Douglas. Have we not withstood the ravages and decay of the inveterate ages? Is not our fame already blazing in letters of fire upon the pages of history? Have we not piled achievement on achievement mountain high, until the welkin rings with praise? Have we not reduced the mortality of typhoid fever to 2 per cent., and its average duration to fourteen days? Have we not sounded the death knell of the Klebs-Loeffler bacillus, and many others, with antitoxin and serotherapy? Yellow fever, as a slimy serpent, has been driven back to her pestilential swamps to perish amid her own pollutions, and our nation thus enabled to triumph over all the principalities of the earth in the assured success of her momentous undertaking to connect two oceans by means of the Panama Canal. Have not our surgeons and gynecologists attained a degree of knowledge and skill little short of the supernatural?

We live in an age of great possibilities, perhaps the greatest the world has ever known.

Cancer of the Breast

DR. GEORGE R. WEST, Chattanooga: The x-ray is unsatisfactory in the treatment of deep-seated cancer. The serum treatment is uncertain. These are simply will-o'-the-wisp methods which defer cases until too late for radical operative procedures to be undertaken. There is no palliative means for the cure of cancer, and cancer of the breast is so located that it can be early and thoroughly removed and the patient positively cured by operative procedure; it is unnecessary and unscientific to wait, when the diagnosis is positive, before we advise surgical interference.

DISCUSSION

DR. CHARLES P. McNABB, Knoxville: I wish to call attention to a series of experiments that were conducted by Moore, of England, in reference to cancer occurring in other parts of the body than the stomach. It occurs in 65 per cent. of the cases. These experiments show a greatly diminished amount of hydrochloric acid in the stomach in cases of cancer occurring in other parts of the body than the stomach.

DR. J. A. WITHERSPOON, Nashville: I have found that the old idea that hydrochloric acid is completely absent in gastric cancer, and that lactic acid alone is present, is an error. I have investigated cases and found not only traces of hydrochloric acid in the stomach, but sufficient to have carried on partial digestion, so that I do not believe that the old teaching of text-books in reference to complete absence of hydrochloric acid in cases of gastric cancer is correct.

DR. WILLIAM LITTERER, Nashville: Dr. Witherspoon is correct in stating that hydrochloric acid is not necessarily absent in gastric cancer. Pernicious anemia will give the same condition. Cancer in other parts of the body than the stomach will cause diminution of hydrochloric acid, sometimes a complete absence, with the presence of lactic acid to such an extent as we find in gastric carcinoma. In gastric sarcoma there is almost the same clinical picture as in gastric carcinoma.

Amebic Dysentery and Appendicostomy

DR. JOHN PELHAM BATES, Nashville: Amebic dysentery is not an uncommon disease in the southern portion of the United States. The amebas are probably a secondary or accidental infection on a primary inflammation present in the large intestine; that is, as long as the mucous membrane is normal the amebas can not find lodgment. In this paper I review the pathology of amebic dysentery, its complications and sequelæ. In treatment, the best results are obtained by

irrigation with normal salt solution and followed by quinin injections from 1 to 3,000 to 1 to 1,500. There should be absolute rest and a milk diet. Bismuth is harmful in amebic dysentery, in that it covers over the ulcers, making it impossible to clean them or to reach the amebas by irrigation. Of 12 patients treated by appendicostomy 6 died; 3 patients who recovered were lost sight of, and 3 returned to the hospital with recurrent amebic dysentery. Appendicostomy is not to be advised until it is clear that palliative treatment is found to be of no avail. A large percentage of the cases treated by appendicostomy will recur.

DISCUSSION

DR. ROBERT CALDWELL, Nashville: I do not think we can treat this disease by rectal irrigations satisfactorily. Amebic dysentery, like all other diseases, varies, in that some cases are mild, and the patients recover practically without any treatment, while others are more intractable from the outset. Each patient must be treated individually. Granting that we can irrigate the cecum by rectal irrigation, I doubt if we can do so successfully; it must necessarily be imperfectly done. We should not wait until the patient is nearly moribund before doing appendicostomy. A timely appendicostomy will greatly relieve, if not cure, a number of these patients.

DR. FENTON B. TURCK, Chicago: It is impossible to reach and get rid of all the amebas by the use of any chemical agents. The amebas are carriers of bacteria, and experimentally it has been impossible to exclude bacteria which are taken up by the amebas, and carried into tissues and there produce their effect in ulceration and even perforation in some cases.

DR. A. B. COOKE, Nashville: Dr. Bates reports a series of 12 appendicostomies, with 6 deaths, and 50 per cent. of recurrences in those who survive. Those who have done a considerable number of appendicostomies in other portions of the United States, eliminating for the moment the results obtained in the Canal Zone, have an operative mortality of zero from this operation. I have talked with various men who have done this operation many times, and have not known any one of them to report a single death from the operation. The fact that these patients die from the operation is because they are reserved for it until they are practically dead.

DR. RICHARD BARR, Nashville: To speak of appendicostomy as a method of treatment of dysentery is an absurdity. Appendicostomy is no treatment in itself. It is the making of an opening for treatment. Appendicostomy is simpler than appendectomy. It is necessary to resort to other measures of treatment after appendicostomy to get results.

DR. J. A. WITHERSPOON, Nashville: I believe that if general practitioners would examine the fecal discharges or the mucus from all cases of chronic diarrhea, wherein blood is seen in the stools, a very large percentage of them would be found to belong to this type of dysentery. I feel that the majority of these patients can be treated as well by irrigation in the old-fashioned way as by appendicostomy. We have no assurance, after appendicostomy has been done, that the patient will not have a relapse or recurrence, as they do by the old method.

Membranous Croup

DR. G. E. VAUGHAN, Clarksville: The name membranous croup is misleading, from the fact that it fails to indicate the true character of the disease, and has no reference to its cause, which is generally admitted to be the Klebs-Loeffler bacillus. Simple diphtheria, or, to be more specific, diphtheritic laryngitis, would be a more appropriate name. It is important to make the diagnosis early in membranous croup, as the administration of antitoxin to be most effective should be given early, within the first forty-eight hours, and in large doses, say from 4,000 to 5,000 units. If dyspnea should continue, intubation or tracheotomy should be done. By following these methods membranous croup will be robbed of its mortality to a great extent. Except for the fact that men with extensive experience with children say that only very rarely is it necessary to intubate in acute catarrhal laryngitis, and also from the fact that membranous croup yields so readily to antitoxin, I would be constrained to believe that cases reported have been

instances of acute catarrhal laryngitis, but I am compelled to believe they were cases of laryngeal diphtheria or membranous croup.

Physiologic Laws Governing the Action of Purgatives

DR. GEORGE E. PETTEY, Memphis: The sympathetic nerve centers control the secretory and motor activity of the intestinal canal. Disease impairs the activity of these centers, resulting in deficient secretion and motion. To arouse these functions four modes of procedure are available. These are chemical, mechanical, electrical and physiologic stimulation. Two of these are direct, two indirect or reflex. Direct stimulation arouses all the cells in the centers to action, indirect stimulation, only a part. Reflex response to local irritation is local and only affects the structures from which the irritant impression came. The same law governs the generation and transmission of sympathetic motor impulses that govern the circulation of the blood. Local irritation begets local motion only. Chemical stimulation, which is necessarily local, is an unreliable and inefficient means of arousing motor activity of the intestinal canal. It reaches with great difficulty all the structures from which motor response is desired. Direct stimulation is much more efficient and dependable.

Leukemia, with Report of a Case

DR. R. J. MCFALL, Cumberland City: Leukemia is an affection of the spleen, bone marrow, or lymphatics, with a persistent increase of leucocytes. There are two main types, namely, splenomedullary and lymphatic. We know not the conditions under which it develops. None are exempt. The affection is most often observed in males. There are dropsy, polyemia and blood clots in the heart and veins. In the former the spleen is greatly enlarged, adherent to the stomach wall, diaphragm or stomach. The marrow is involved. In the lymphatic variety there is a general enlargement of these glands; also of the liver at times. The lungs are usually unchanged. In the kidneys the reverse obtains. The onset is slow. There is enlargement of the stomach, shortness of breath, enlarged glands, pallor or palpitation, which may cause the patient to seek relief. There is usually anemia, hemorrhage, nausea, vomiting, diarrhea. The pulse is rapid, soft; cardiac and nervous symptoms are rare. There is an excess of uric acid. There is often priapism. Fever is slight. A certain diagnosis can only be made by the microscope. Occasionally recovery takes place.

DISCUSSION

DR. BATTLE MALONE, Memphis: The first thing we should do, when we see a case of splenomegaly, is to have a blood count made, and usually a blood count is all that is necessary to make a diagnosis. I do not think we are ever justified in considering or in doing an operation in a case of enlarged spleen until we have the blood count before us. In a case of splenomedullary leukemia any operative procedure is absolutely contraindicated, as the mortality from operations in these cases is about 99 per cent. Some of the other types of enlarged spleen should be operated on, as, for instance, malarial hypertrophied spleen. In the majority of these cases, or in over 80 per cent., the patients, when operated on, recover.

DR. W. S. LAWRENCE, Memphis: In the treatment of splenomedullary leukemia the Roentgen ray gives brilliant results. It is one treatment which should be tried before any other.

DR. WILLIAM LITTERER, Nashville: I have seen several cases in which marvelous results, although not curative, were obtained by the use of the x-ray.

DR. J. HUGH CARTER, Memphis: The first essential in leukemia is to make a diagnosis, and after it is made we can pursue one of two courses, namely, medical or surgical treatment, according to the nature and type of the case.

DR. R. J. MCFALL: I have had no experience with the x-ray. I find, however, that there is as much evidence against it as there is for it. According to the mortality reports, these patients die shortly after the use of the x-ray the same as from other methods of treatment.

Appendicitis

DR. J. HUGH CARTER, Memphis: All agree that in the acute or non-suppurative form we should operate at once. In the suppurative form each case is a law unto itself, and must be treated accordingly. There is no rule which we can apply to all classes of cases. In the acute gangrenous or ulcerative form, if the patient is seen in the first four or six hours, operate at once; if not, treat by the expectant plan, or the Ochsner treatment. After an abscess has formed, open and drain without removing the appendix, unless the appendix can be found easily, then only ligate and drain. With a retro-appendiceal abscess causing obstruction, the appendix should be removed, and a counter drain used. In all cases do not flush out the abdominal cavity, but wipe out with wet gauze sponges. We should only use drainage when we know pus is in the cavity. After all, it means good judgment when we have entered the abdominal cavity.

Intestinal Obstruction

DR. J. W. BRANDAU, Clarksville: Strangulation is the most frequent cause of acute intestinal obstruction, and may be due to bands or cords, the result of peritoneal adhesions, which may be found in any part of the abdominal cavity. Intussusception is the rolling of one portion of the bowel into the lumen of another. A patient having undoubted intestinal obstruction, and who is not relieved by a full dose of castor oil, or other simple but efficient laxative, with the aid of a large enema given in the knee-chest position, should at the earliest possible moment be given the benefit of surgical procedure. No physician would recommend the administration of purgatives or the prolonged use of enemata in a case of strangulated hernia. The mortality increases as operation is postponed, as is shown by the following table by Sargent, quoted by Moynihan: Operated on first day, mortality 37 per cent.; operated on second day, 39 per cent.; operated on third day, 61 per cent.; operated on fourth day, 67 per cent.; operated on fifth day, 73 per cent., and operated on sixth day, 75 per cent. The experience of all operators coincides with this, and the imperative necessity of early diagnosis and early operations are universally admitted. A mortality of over 10 per cent. is the mortality of delay.

DISCUSSION

DR. JOHN A. GAINES, Nashville: Early diagnosis and operation are the most important features in dealing with intestinal obstruction. Any obstruction coming up measurably acutely, in the absence of fever, or associated with symptoms of shock, depression, subnormal temperature, and local tenderness, can be separated distinctly from inflammatory conditions arising from appendiceal and other acute inflammatory conditions. All these conditions, in which we are able to exclude fecal impaction, are surgical from the beginning.

DR. L. E. BURCH, Nashville: If we are in doubt as to the diagnosis of intestinal obstruction, the most important thing is not to give a purgative. This not only applies to intestinal obstruction, but to any lesion within the abdomen. If we are in doubt whether a patient has intestinal obstruction, ruptured appendix, or a beginning peritonitis from a leaking pus tube, we should not give anything by the mouth. Put the patient in the Fowler position, or elevate the bed, give enemas, and the best enema to use is the drip enema of Murphy. Avoid all food and all water, and, above all things, avoid morphin. Take the mechanical form of intestinal obstruction, which only comprises 28 per cent. of the cases, and in every case an immediate operation is demanded.

DR. JERE L. CROOK, Jackson: It is not easy to make an exact diagnosis in a case of mechanical obstruction of the bowel, whether due to a band or to the presence of some foreign body, and in those cases in which we are in doubt it is better to make an exploratory incision.

DR. CHARLES P. McNABB, Knoxville, related a case of spontaneous cure of intestinal obstruction.

A Comparison of the Various Tuberculin Tests in the Early Diagnosis of Tuberculosis

DR. WILLIAM LITTERER, Nashville, after discussing the preparation of tuberculin, Koch's old tuberculin, tuberculin

precipitate, the subcutaneous test, method of administration, the reaction, the von Pirquet cutaneous reaction, etc., drew the following conclusions:

1. The different results obtained by different workers depend on the employment of solutions of varying strengths as well as defective technic in their preparation.

2. In the conjunctival test, if proper technic, proper preparations be used, and the proper selection of cases is made, there is practically no danger in its employment.

3. In pyrexial cases the subcutaneous injections are not applicable, while the superficial tests can be used without affecting their diagnostic value.

4. Cases without symptoms which react should be regarded as a danger signal and not a condition demanding active treatment.

5. It is generally believed that a delayed integumental test and a negative conjunctival reaction mean a healed tubercle. The superficial tests are valuable from the standpoint of prognosis of manifest tuberculosis. A negative or delayed reaction indicates a serious sign. A prompt and vigorous reaction points to a much more favorable prognosis. All the above signs, however, may fail.

6. The subcutaneous test is somewhat more reliable than the integumental and ocular tests. I am becoming more impressed with the Moro test than any of the newer ones.

7. To obtain the best results from tuberculin from a diagnostic standpoint, I would advise the use of the three superficial tests, namely, eye, cutaneous, ointment, be applied on the same patient at the same time, and if any doubt exists as to their interpretation, then follow it with the subcutaneous test.

Primary Malignant Tumors of the Osseous System

DR. W. A. BRYAN, Nashville: I believe that every case of sarcoma of bone demands at the very earliest period a total excision of that bone or amputation at the upper limit of the bone. The only exception I can see to this statement is in certain cases where it is considered ill-advised to amputate at the hip joint and when the patient's chances for recovery from the operation would be better if a lower amputation should be done, but we should always remember that the closer to the tumor we go, the greater the chance of recurrence. The other exception is in those cases in which the tumor appears in a bone that cannot be spared, and these, I think, are almost invariably hopeless, and I doubt seriously whether it is worth while to operate at all after the tumor is well developed. Three times within the last eight months I have removed sarcomata, the largest of which was smaller than a malaga grape, and none of them showed any evidences of malignancy. None of these was osteosarcoma, which is more difficult to recognize. It was only after incising the tumors that my suspicions were aroused as to their malignancy, and the suspicion was confirmed in each instance by a microscopic examination. One of them was a small nodule in the testicle, found accidentally while I was operating for another condition. The patient's physician had suspected the presence of sarcoma and told me so. In the second case a small knot on the leg not larger than a bean was removed and was found to be a fibroid tumor, on the inside of which there were sarcomatous cells. The third one I removed from the lobule of the ear. It was slightly smaller than a grape, and proved to be sarcoma. The point I wish to emphasize is that the suspicion of the medical profession should be aroused when a tumor is seen, and that tumor should be removed on general principles before it has had any opportunity to cause any mischief. Furthermore, I wish to lay stress on the point that sarcoma is not nearly so rare a condition when the microscope is called to our aid as many of us imagine.

Inoperable Tumors Successfully Treated by the X-Ray

DR. W. S. LAWRENCE, Memphis: I give considerable latitude to the term inoperable. First, it will cover those cases in which an operation would mean certain, or almost certain, death to the patient. Intrathoracic tumors serve as an example of this class of cases. Second, it is used to refer to those cases in which recurrence has taken place after one or more operations, and in which further operation is considered inadvisable. Third, it will mean those cases in which the site of the tumor is such as to render its surgical removal mutilating and disfiguring, and therefore extremely undesirable. Malignant growths about the eyelids, nose and mouth are examples. I have had cases coming under each of these heads. The first case was one of intrathoracic tumor. The second case began as an endothelioma of the external auditory meatus, but later involved most of the tissue of the outer ear and parotid gland. X-ray treatment was very beneficial in both of these cases.

Rational Drug Therapy

DR. E. R. ZEMP, Knoxville: Therapeutics is the keystone to the arch of medical science. It is the one branch to which all other branches must come for help. Many of its inefficiencies are due, not to the impotency of drugs, but to a failure to master its principles. Improper teaching and later neglect in its study are responsible for many of its shortcomings. Rational drug therapy is impossible without a knowledge of the physiologic action of drugs. The use of proprietaries continually makes us hopeless cripples; routine prescribing is no better, as in both we lose sight of the fact that it is the patient and not the disease that needs attention. Erroneous ideas concerning drugs are numerous. The therapeutic nihilist is as pitiful as the therapeutic egotist is ridiculous. After years of vain efforts to discover other therapeutic means better than our drugs a great revival wave is sweeping over the profession, and we who believe in them are coming into our own.

Indications for Surgical Intervention in Peptic Ulcer; Choice of Operation

DR. JOHN A. GAINES, Nashville: The classification of peptic ulcer therapeutically must needs be arbitrary, and subject in the early stages to conditions of more or less experimental tests, or dealing with accidents of greater gravity. The non-indurated ulcer is purely a medical disease, and only the occasional complications, as hemorrhage, if persistent, or perforation, make it a surgical disease. It is not possible to diagnose such an ulcer with any degree of accuracy at first, and when suspected a medicinal and dietetic regimen should be followed. All early ulcers should be regarded as medicinal for a reasonable time. I hold that any recognized ulcer not yielding to rest in bed, with proper medicinal and dietetic treatment in from six to eight weeks at most, should be considered as a surgical disease even without the development of accidents or threatening symptoms. The ideal surgical treatment is by gastrojejunostomy with or without dealing directly with the ulcer, as recommended by Mayo.

Lung Puncture as a Therapeutic Measure

DR. T. J. COBLE, Shelbyville: This line of treatment is indicated when we have a hypostatic condition or a hepatized lung following pneumonia, when there has been a faulty resolution and a failure on the part of Nature to clear up the lungs. It is especially indicated in an asthenic patient who is very weak and much debilitated. Puncture is preferable to blisters in these conditions; first, because it is more certain and much quicker, for the reason that this is a chronic or a subacute inflammation, and to hope to get resolution is by increasing the blood supply, or develop an acute inflammation out of the chronic, and thereby stimulate Nature to complete its work. Second, the puncture is practical, without pain, or danger to the patient. Third, with puncture the irritation is in the lung, the seat of the disease, and with the blister it is on the chest wall, and does not increase the blood supply where it is needed. Fourth, after the puncture of the lung, resolution usually takes place in from three to ten days, and the patient is relieved of the necessity of taking the nauseating absorbent mixtures that are usually prescribed.

Surgical Types of Abdominal Tuberculosis

DR. W. D. HAGGARD, Nashville: The intestines and pelvic organs are the strongholds of the disease. The duodenum and stomach are peculiarly immune. In 25 per cent. of cases the tuberculosis gains entrance through the intestinal mucosa. In children the intestines are most frequently affected, and in adults it occurs from uncooked milk and infected food. It is marked by griping pains, diarrhea, with blood, emaciation and tenderness. The ulcer often results in stenosis. Localized ulcers should be excised. Chronic obstruction requires surgical intervention. Ileocecal tuberculous is the most frequent. Ulcerative and hyperplastic types are considered. Illustrative cases, with localized abscesses, are reported. Tuberculosis of the omentum and appendix adherent in a hernial sac are considered. Chronic peritonitis is usually tuberculous; it may be encysted. It usually comes from the Fallopian tubes, which should be excised. Mild cases with ascites are most favorable.

Simple exploratory laparotomy often cures, but the focus of infection, whether in the tubes or appendix, should be removed. The ulcerative and fibrous types are extremely unfavorable. Abscess of mixed infection is almost hopeless. Epigastric tumor of the thickened omentum is characteristic of the chronic form of the disease. Tuberculin is an important diagnostic aid.

Cancer of the Stomach

DR. CHARLES P. McNABB, Knoxville: In my paper I emphasize the following points: First, in rectal feeding we should arrange the enemata to get the greatest number of calories from the smallest number of cubic centimeters of enemata. Second, the colon will not tolerate rough usage, and more than 300 c.c. should never be given in one enema. Third, it takes not more than from four to seven days for acetone to develop, if less than 50 grams of carbohydrates are taken into the system daily, therefore, from 50 to 75 grams of starch and from 15 to 30 grams of grape sugar dissolved in 300 c.c. of water, or peptonized milk, must be given each 24 hours. Fourth, a patient with pyloric stenosis suffers much from thirst, and not less than 1,500 c.c. of water in some form should be injected every day. Fifth, the addition of common salt makes all kinds of enemata much more absorbable by the large intestines.

Other Papers Read

The following papers were also read:

"Intubation and Antitoxin Treatment in the Worst Forms of Laryngeal Diphtheria," by Dr. J. M. Trout, Jackson; "The State Sanatorium in the Prevention and Cure of Tuberculosis," by Dr. Dora Lee Wilder, Knoxville; "Epidemic Cerebrospinal Meningitis," by Dr. J. Overton, Nashville; "Microscopic Findings in a Case of Coccidioidal Granuloma of the Meninges," by Dr. Newton Evans, Nashville; "The Extraction of the Opaque and Partially Opaque Lens in the Capsule," by Dr. L. B. Graddy, Nashville; "Treatment of Myocardial Insufficiency," by Dr. David R. Neil, Nashville; "Diagnosis and Treatment of Eczema," by Dr. J. M. King, Nashville; "Congenital Calculus in the Prostatic and Membranous Urethra of a Seven-Year-Old Boy," by Dr. W. D. Sumpter, Nashville;

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS

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(Concluded from page 1352)

A Postmortem Study of Status Lymphaticus in Adults and Children

DR. CHARLES NORRIS, New York, presented elaborate statistical tables dealing with the external appearances and internal findings in these cases.

Anaphylaxis

DRS. M. J. ROSENAU and JOHN F. ANDERSON, Washington, D. C.: No substance has been found of practical value in preventing anaphylaxis when given before serum injection. Different proteid substances are absolutely specific. Heat causes no appreciable loss of toxicity. The sensitizing and toxic principles are probably the same. Heat has practically no effect on sensitizing properties of substances. One guinea-pig was found susceptible 1,100 days after sensitizing, indicating that this condition exists during the remainder of the animal's life. Experiments now under way indicate that the toxicity of horse serum is increased by the addition of serum from sensitized pigs.

Neurophysiologic Effects of Anaphylactic Intoxication

DRS. F. P. GAY, E. E. SOUTHARD and J. G. FITZGERALD, Boston: These experiments were undertaken to determine the best line of histopathologic attack in testing the toxicity of serum. One of the points determined was that injections into the brain are not so toxic as those into the spaces surrounding the brain. An important point brought out is that suppositions antibodies are in the cells of the nervous system. Work in the future is to be along this line.

Attempts to Determine by the Reaction of Fixation Specific Racial Differences in Human Blood

DR. JOHN G. FITZGERALD, Boston, detailed experiments with the blood of Caucasians, Japanese and negroes. The results

do not warrant the assumption that reaction of the blood is sufficient to differentiate races of people. The forensic value of such proceeding is practically *nil*.

Localized Anaphylactic Intoxication in Human Beings Following Repeated Injections of Diphtheria Antitoxin at Short Intervals

DRS. W. P. LUCAS and F. P. GAY, Boston: Necrosis at the site of the first injection can be induced in animals by succeeding doses of serum. To determine the effect in human beings, the findings in 1,000 children in certain hospitals were tabulated. These children as a routine measure received 1,500 units of antitoxin on admission and at regular intervals as long as they stayed. Some in the list received as high as six doses. In the 1,000 first injections there were no local reactions and only three slight general.

Of 281 second injections, 26 reacted, 61 per cent. being local
Of 103 third injections, 15 reacted, 86 per cent. being local
Of 36 fourth injections, 13 reacted, 84 per cent. being local
Of 25 fifth injections, 12 reacted, 91 per cent. being local
Of 15 sixth injections, 11 reacted, 91 per cent. being local

This demonstrates an analogy between serum anaphylaxis in animals and serum diseases in human beings.

DISCUSSION

DR. JOHN F. ANDERSON, Washington, D. C.: Was straight horse serum used for the injections? In one series of 480 boys precipitated antitoxin, with 23 per cent. total solids, was employed in some cases and local reaction, even to a purple area the size of a saucer, developed in some of the subjects. This reaction might be due to the solids.

DR. GAY: Horse serum only was employed.

Specific Chemical Prevention and Treatment of Syphilis in *Macacus Rhesus*

DRS. SIMON FLEXNER and B. T. TERRY, New York: It is now comparatively easy to produce in monkeys the primary lesion of syphilis; but this can be prevented by local measures, such as the use of 2 or 3 grains of atoxyl. After a visible syphilid has appeared, such measure is also effective. These animals are not protected against subsequent inoculations, those in which the disease is arrested as late as fifteen days after the primary lesion is started being subject to further inoculation just as are normal animals. In other experiments, inoculated animals were subjected to treatment six months after the production of a lesion. Two drugs may be used, acetoatoxyl and a mercuric salt of atoxyl. The lesions in an animal yielded, partially at least, very quickly to acetoatoxyl. The effect was controlled by the serum test, the reaction being very slight after the first doses had been given. Recently the test has become positive, hence the animal is not yet fully cured. In an animal which survived two weeks after treatment by the mercuric salt of atoxyl, the lesions receded somewhat. This salt is extremely disagreeable to use because of the terrific reaction in the tissues induced by it. In addition to the local reaction there was also stomatitis and abscess of the parotid. This would probably make its use in man objectionable.

The Action of Soaps on the *Pneumococcus*

DRS. SIMON FLEXNER and R. V. LAMAR, New York: The object of these experiments was to determine if physically changing the *pneumococcus* will render it more subject to serolysis. It is subject to soap lysis, there being slight changes in outline after being thus treated. If equal quantities of treated and untreated cocci were injected into the peritoneal cavity of rats, all died. In the case of the treated cocci there was a greater emigration of leucocytes into the peritoneum but no more phagocytosis. There was no great change from these results when serum was added, but with antiserum and soap cocci, death did not occur. The physical state of the cocci appeared so altered by the soap that when antiserum was added, serolysis was more active. Experiments now under way indicate that this action may be accomplished by soap after cocci have come in contact with albuminous materials.

Amboceptors Concerned in Fixation of Complement and in Bactericidal Tests (*in Vitro*)

DR. JOHN C. TORREY, New York, detailed experiments made with the object of clearing up the obscurity due to the diversity of substances concerned in these processes.

Intravenous Injection of Heterologous Blood Serum

DRS. LEO LOEB, LUCIUS TUTTLE and A. STRICKLER, Philadelphia: Experiments made to determine what kills the animal in these cases indicate that dog serum kills by causing hemolysis, ox serum by agglutination.

Increased Bactericidal Activity of Phenol Solutions Due to the Addition of Sodium Chlorid

DRS. W. S. LEMON and J. S. LAIRD, Toronto: The results of a large series of tests indicate that within certain limits the effect of salts in solution is an osmotic one. A point to be emphasized is the use of a machine lift in measuring bacteria employed, the ordinary method of lifting them by hand being inaccurate.

A Probable Cause of Liquefaction of Gelatin in Preservation of Specimens by Kaiserling's Method

DISCUSSION

DR. LAWRENCE J. RHEA, Boston: In mounting specimens by this method, from 20 to 30 per cent. loss by liquefaction of the gelatin is the rule. Observation has shown that specimens of acute inflammatory conditions, as lobar pneumonia, are most often involved. In one specimen of carcinoma of the hand the gelatin was firm except immediately over the area of the tumor. As the presence of enzymes in inflammatory tissues have been shown by various observers, it was suggested that these enzymes might be responsible for the liquefaction of gelatin. To decide this, pieces of the tissue were incubated with gelatin and digestion occurred; gelatin alone did not undergo digestion. When formalin was added, digestion did not take place. Hence the liquefaction of gelatin is explained by the presence in the tissues of enzymes. Formalin may inhibit but does not destroy these enzymes.

Acute Hemorrhagic Pancreatitis Due to a Ball-Valve Calculus in the Opening of the Diverticulum of Vater

DR. J. J. MACKENZIE, Toronto: The specimen exhibited was obtained from a man of 54, who for three years had had attacks of gallstone colic and had passed gallstones from the bowel. At autopsy a gallstone was found in the ampulla, in a sac 2.5 cm. long. The border of the opening of the ampulla was very thin and firm, indicating that the passage of stones had injured the boundary of the valve.

Sporothrix (?) Isolated from Two Horses with Epizootic Lymphangitis

DRS. CALVIN G. PAGE and LANGDON FROTHINGHAM, Boston: The specimens shown were obtained from swabs or tissue taken from horses in western Pennsylvania, where, in 1907, there were cases of this affection which has been almost entirely confined to foreign countries. Clinically, the affection resembles glanders. The organism grows in the form of budding spores from the ends and sides of filaments. Rats and mice are susceptible to inoculation, rabbits and guinea-pigs are more resistant. A similar organism has been described by Hektoen and others. Cases have been called sporotrichosis but classification is not certain. From the findings in these cases it may be that sporotrichosis and epizootic lymphangitis are identical.

Case of Actinomycosis Improving Under Vaccine Treatment

DR. F. N. WHITTIER, Brunswick, Me.: A farmer of 26 developed a growth at the angle of the ribs on the left side. A specimen examined after operation contained yellow granules which under the microscope proved to be actinomyces. Cultures were grown aerobically on ordinary culture media and vaccine treatment was suggested. This was begun, though difficultly with the clumps was encountered in preparing the vaccine; they were finally ground. A dose of from 50 to 100 millions was used, malaise and slight rise of temperature fol-

lowing injection. The patient's opsonic index has risen from 0.58 to 1.34 and his weight from 136 to 166 pounds. A question as to the organism in the cultures being the same as that in the pus may arise, but from the appearance and the results I believe it is.

Treponema Pallidum in Syphilitic Aortitis

DR. J. H. WRIGHT, Boston, exhibited specimens from 3 cases in which the treponema was found in the wall of the aorta. In one case, large numbers were found immediately beneath the intima in necrotic tissue. In a second they were fairly numerous in the necrotic fibrous tissue of the intima, in the third they were very few and were found only after a long search. In morphology the organisms are identical with the treponema pallidum. Dr. Wright had found the treponema in about half the cases of suspected syphilitic aortitis. In only two of the cases was the time of the syphilitic infection known; in them it was sixteen years before the aortas were obtained.

A Study of Tubercle Bacilli in Milk and Feces

DR. V. A. MOORE and W. H. BOYNTON, Ithaca, N. Y.: Many conflicting statements have been made regarding the presence of tubercle bacilli in the milk and feces of cattle. Some say that 40 per cent. of infected cattle excrete the bacilli in their feces, others give a much lower percentage. In general, one would be led to believe from current literature that there is the possibility of the inferior grades of milk put on the market containing many tubercle bacilli. Two important questions arise: 1. How frequently are tubercle bacilli found in the milk from supposedly sound cattle? 2. What importance is to be attributed to these bacilli when found? We have examined (1) the mixed milk from herds in which all animals reacting to tuberculin had been removed, leaving therefore only apparently healthy cattle; (2) the milk from individual cows; (3) the feces from individual cows. The mixed milk of 47 different herds was examined. Of these the tubercle bacillus was found, microscopically, by the sedimentation method, in one sample. Guinea-pig inoculation revealed the bacillus in two others, or a total of 3 out of 47 samples. Of 87 samples from individual cows, no tubercle bacilli were found in 85. In the other two, the cows had hard "bunches" in their udders, though not supposed to be tuberculosis; in their milk were enormous numbers of tubercle bacilli. Hence in 134 examinations of milk, tubercle bacilli were found in 3 samples of mixed milk and in 2 of individual milk from cases of udder disease. Acid-fast organisms were found in 2 other samples but caused no disease in guinea-pigs. Of feces, 36 specimens were examined and none contained tubercle bacilli; acid-fast organisms were found in one or two but gave no results from guinea-pig inoculation. We conclude, therefore, that tubercle bacilli are not found in the feces of animals unless they possess open lesions. Tubercle bacilli are rarely in the milk of cows unless there are tuberculous lesions of the udder. There is no justification in the prevalent statements regarding the widespread occurrence of tubercle bacilli in the milk from cattle which show no evidence of disease.

DISCUSSION

DR. ROBERT N. WILLSON, Philadelphia, spoke of the frequency of tubercle bacilli in the feces of tuberculous men, 100 cases furnishing 100 positive results in one series. Guinea-pigs were inoculated and tubercle bacilli recovered from the feces.

DR. H. C. ERNST, Boston: I had occasion some time ago to investigate the question of tubercle bacilli in milk and found the percentage of positive results much larger than did Dr. Moore. In many instances the study of a large number of spreads are necessary for the detection of bacilli.

DR. JOHN F. ANDERSON, Washington: I had occasion to examine the milk from 104 dairies and found tubercle bacilli in 11 per cent. by guinea-pig inoculation.

An Experimental Study of the Relative Importance of Renal Injury, Vascular Injury, and Plethoric Hydremia in the Production of Edema

DR. R. M. PEARCE, New York: In these experiments, potassium chromate was used to act on the tubular epithelium of

the kidney, the venom of the rattlesnake for damaging the endothelium of vessels, and water administered by the stomach to produce hydremia. When these three were employed, the animals developed universal edema. In none of the controls with one of these three elements lacking was edema produced. Vascular poisons other than venom, as ricin and arsenic, also sufficed to cause edema. The influence of nephrotoxic serum on animals suffering from chronic nephritis was investigated. Edema was produced oftener than in the control animals, but I do not not emphasize this because of other factors which must be taken into account.

Formation of Peritoneal Transudate

DRS. LEO LOEB AND M. S. FLEISHER, Philadelphia: In estimating the degree of edema it is better to employ a method by which the fluid can be measured. For this purpose the peritoneal cavity was used. The agents employed were calcium chlorid, adrenalin, heart lesions, and nephrectomy. Calcium chlorid was shown to act on the urine, the peritoneal transudate, and the intestinal fluid, diminishing the first and last and causing an increase of the second. The question as to how calcium chlorid acts on the blood vessels then arose, and further experiments showed that it acts directly on the kidney and not on blood pressure.

DISCUSSION

DR. W. T. COUNCILMAN, Boston: I have been studying cases of chloroform injury of the liver and have noticed that from two to four days after administration of the drug there is a marked increase of peritoneal exudate. This is unusual and the cause is obscure. It apparently is not due to hepatic obstruction.

The Action of Adrenalin on the Pancreas

DRS. C. W. EDMUNDS and A. S. WARTHIN, Ann Arbor: It appeared to us that Pemberton and Sweet, in their studies, lacked sufficient ground for excluding increase of blood pressure as the cause of inhibition of pancreatic secretion. Accordingly, experiments on dogs were made with nicotin, ergot and adrenalin by intravenous injection. The results were inhibition of the secretory action of the pancreas. This indicates that there is nothing specific about the inhibitory action of adrenalin. The effect is due to constriction of the blood vessels, and any drug that accomplishes this result causes inhibition.

The Morphologic Changes in Nerve Cells from Overwork in Relation to Anemia and Surgical Shock

DR. D. H. DOLLEY, Chapel Hill, N. C.: Experiments were made on dogs, shock being produced by manipulation of peritoneal contents and anemia by ligation of vessels, etc. In the former, some were shocked until death (in about 3 hours), others were allowed to recover after from 30 to 50 minutes. Transfusion of blood was employed to maintain blood pressure during the shock. The Purkinje cells of the cerebellum showed the principal changes. There was first an increase, then a decrease of the chromatic material, the cells becoming relatively smaller in size. The chromatic substance of the karyosome was affected last, the final result being a cell absolutely devoid of chromatic material. Setting an arbitrary point at which recovery of the cell is believed impossible, an average of 33 per cent. was found damaged beyond this limit. Correlating these results with those found as the result of overwork, I agree with Hodge as to the shrinking of the cell and the wrinkling of the nucleus. The changes I believe represent the functional activity of the cell carried to its extreme limit.

DISCUSSION

DR. JAMES EWING, New York: I am not sure that the changes in shock and anemia are identical or that the Nissl bodies represent the functional activity of the cell. In 1898 I studied a case of complete anemia, due to thrombosis, which had lasted for a few hours, and found complete loss of the Nissl bodies. There was no evidence of excessive functional activity but there was entire loss of blood, hence anemia was the chief cause of the changes. Heat may also be used to bring about bleaching of nerve cells. Under these conditions some animals die, others recover. It is difficult to determine the degree of change that necessarily means non-survival.

Dr. E. E. Southard, Boston: I have found similar changes in ganglion cells in brains showing encephalitis. A remarkable feature is the focal distribution of such cells, several often being found at one point. I am not sure of their meaning.

Quantitative Changes in Cast Excretion in Experimental Nephritis

Drs. E. C. C. Cole and J. J. Mackenzie, Toronto: This study was made with rabbits. In one instance there was evidently hyaline cast formation from epithelium. A differential count of hyaline and granular casts showed that the latter predominated for 48 hours, then fell away and were replaced by hyaline casts. On the third day 600,000 casts were excreted in the 24 hours. On the twentieth day there were no casts and on the thirty-second day the animal was chloroformed and the kidney washed with saline solution, many casts being obtained. This showed that the longer hyaline casts remain in the kidney the more dense they become.

Lesions Produced in the Rat by a Typhoid-Like Organism (Danysz Virus)

Drs. F. B. Mallory and T. Ordway, Boston: The early stages of typhoid lesions are difficult to obtain in human beings and with the typhoid bacillus lesions can not be produced in animals. By the use of the Danysz virus, however, analogous lesions were produced in rats. A large series of these were shown and all supported the previous statements based on human lesions, namely, that typhoid lesions in the intestine, glands, liver, etc., are due to proliferation of endothelial cells. The necroses in the liver are also due to collections of endothelial cells which later undergo necrosis. I have not abandoned that view that the liver necroses are due to thrombosis, but I can prove the endothelial origin of the areas. It may be that both processes are capable of producing necrosis.

An Experimental Study of Atrophy of the Pancreas

Drs. J. H. Pratt, Thomas Ordway and H. Morrison, Boston: The operation on the first dog consisted in separating the head of the pancreas from the duodenum, leaving only the artery and vein. The animal was kept alive six months and showed absolutely no atrophy of the pancreas or disturbance of metabolism. In a second trial, the head of the pancreas was separated and the omentum placed between it and the duodenum. The animal lost weight rapidly and when killed at the end of two months showed a small, firm pancreas that had decreased from 10 to 3 cm. in length. Microscopically, pancreatic tissue had almost entirely disappeared. No islands of Langerhans could be found. Another dog began to improve at the end of two months and now after four months is entirely well. Glycosuria did not develop in any of the cases.

Papers Also Read

The following papers were also read: "A New Anaerobic Spore-Bearing Bacillus from the Livers of Normal Dogs," by Drs. S. B. Wolbach and T. Saiki; "Sporulation in the Parasitic Ciliata," by Dr. E. L. Walker, Boston; "Autopsy Findings in Guinea-Pigs Inoculated with Semen from Tuberculous Subjects," by Dr. R. N. Willson, Philadelphia; "A Study of the Convoluted Tubules in a Secondary Contracted Kidney by the Born Wax-Plate Method," by Drs. L. Edward and J. J. Mackenzie, Toronto; "Studies in the Biology of Tumor Cells," by Drs. O. T. Schultz and W. T. Howard, Jr., Cleveland; "Demonstration of Specimens from a Case of Ophthalmia Nodosa," by Dr. H. S. Steensland, Syracuse, N. Y.; "A Modification of Culture Media Based on Physico-Chemical Considerations," by Dr. H. M. Adler, Boston.

Election of Officers

The following officers were elected for the ensuing year: President, Dr. F. B. Mallory, Boston; vice-president, Dr. P. H. Hiss, New York; secretary, Dr. H. C. Ernst, Boston; treasurer, Dr. H. U. Williams, Buffalo.

The meeting in 1910 will be held in Washington, D. C.

Miscellany

The Work of Boards of Health

Dr. George A. Soper, in the *Popular Science Monthly*, March, 1909, considers the powers and relations of boards of health from a popular viewpoint. He notes the combination of legislative, executive, and, sometimes, judicial powers granted to such boards, and, while admitting that extensive authority may have been necessary in the emergencies created by epidemic diseases, he questions whether it would not be wise, in view of the extension of the field of operation of health authorities, to limit their powers. Another anomaly in our system is that the highest health authority is the state to which the municipalities are related, but there is no national health board to correlate the action of the various states.

The duties of boards of health may be defined as the collection of vital statistics, the suppression of communicable diseases, the abatement of nuisances, and the education of the people in health matters. It may properly be asked what are to be considered nuisances. There is danger that the health board may occupy itself with inconveniences of a semi-esthetic nature to the neglect of matters of more serious importance in relation to health. Dr. Soper says:

"There is something incongruous about a board of health conducting a crusade against smoke and noise and at the same time allowing the streets to be filthy with dirt and dust and offensive with accumulations of fermenting garbage. Again, a great deal of the attention of health boards is occupied with alleged private nuisances which affect comfort, but not health. The history of every city is a record of more and more strict regulations to minimize the unpleasant as well as the insanitary conditions of household life."

In the sanitary education of the public the important aid given by the press is recognized, but it is to be regretted that the opportunities for systematic school instruction on these subjects are still to a large extent lacking. "In the campaign of sanitary education which is going on it is a deplorable fact that the universities and colleges of the United States are singularly backward. With a few notable exceptions, there is scarcely a school for higher education in the United States where a competent knowledge of hygiene can be obtained. In spite of the fact that many of the largest and most prominent universities have had severe experiences with typhoid, they have been exceedingly slow in providing proper facilities for the teaching of hygiene. One of the greatest needs of to-day is the want of competent teaching for health officers, physicians, engineers and others who may wish to obtain a complete and practical knowledge of their profession. In the absence of suitable facilities for the education of health officers the United States is decidedly behind European countries."

The propriety of the extension of the activity of health boards into the realm of esthetics may be questioned, but they have been granted ample power. The standards of public health and municipal hygiene are continually growing higher. "First and foremost among the defects and needs of public health administration," says Soper, "must be placed the want of adequate knowledge of the principles and practices of public health work on the part of officials having jurisdiction. It is a deplorable fact that special professional qualifications are not as a rule required of health officers in the United States."

"If there is any department of municipal government that should be taken out of politics and put on a high plane of professional efficiency it is public health work. Generally in the United States appointment on a public health board means a thankless and gratuitous service performed for the sake of the small honor which is supposed to go with it. Where a salary is connected with the position the office is too often a reward of political work rather than of professional merit."

"Until the need of high-class health work is demanded, appreciated and properly rewarded by compensation in money and honor, men will not be prepared in the schools for a life-work in the public health service, and the most needed improvement in the work of boards of health will not be made."

Remote Results of Treatment of Round Gastric Ulcer.—H. Westphalen of St. Petersburg remarks that only 50 per cent. of the patients dismissed apparently cured after internal treatment for gastric ulcer are in fact actually cured. The affection is merely in a latent phase in the others and recurs later. Operative measures then are able to effect a cure in about 50 per cent. This is the average he deduces from review of the literature, with which he compares his own experience. He was able to trace 150 of his patients two years and more after the course of internal treatment for gastric ulcer, and he states that 37 per cent. were definitely cured by a single course and 16 per cent. additional by a repetition of the von Leube course of treatment—53 per cent. in all. The interval of latency had been as long as twelve years in some of the cases of recurrence, suggesting that the trouble was a new ulcer rather than recurrence. The recurrence was ascribed to error in diet, lifting a heavy weight, or other mechanical cause in some cases, but it is his impression that in most some emotional cause was responsible. In 47 per cent. of the cases the patients suffered from continued disturbances or complications. The trouble was generally of long standing in such cases; it subsided into latency for a time after treatment, but was ready to flare up again at the least excuse. The slightest divergence from the diabetic regulations imposed was followed by trouble; one patient returned five times to the hospital for internal treatment. In one case a latent gastric ulcer flared up again after a long interval, the immediate cause being the news of the sudden illness of a member of the patient's family. He was an elderly man and a hypersecretion of gastric juice and vomiting followed the emotion and the hyperacidity irritated the latent ulcer into renewed activity. In another patient the ulcer roused from its latent condition under the influence of fright from an earthquake. Perigastric adhesions are probably responsible for the return of trouble after mechanical strain. Operative treatment was applied in 36 of the 70 cases in which the ulcer caused trouble later, with a complete cure in 30 per cent. He advocates a repetition of the course of internal treatment for the ulcer after the gastroenterostomy, stating that the only case in which this was neglected was the one instance in his experience in which a peptic ulcer developed afterward in the duodenum. The importance of careful dieting for a year after internal treatment and after operative measures is now generally recognized. Some of his patients had suffered for thirteen years from the symptoms of ulcer before the internal course was successfully applied, and some with unhealed ulcers were young, while some with healed were elderly. These and other reasons force him to believe that there is some as yet unknown factor which renders certain ulcers refractory to treatment to which others yield so readily. In 9 of his cases brothers and sisters or parents and children were affected, which suggests some family tendency. His comparative study of the subject is published in the *St. Petersburg. medizinische Wochenschrift*, January 16, 1909. The best results from the gastroenterostomy were attained when the symptoms were due to mechanical disturbances, stenosis and perigastritis; the most unfavorable cases were those in which the operation was done on account of the lack of healing of the ulcer or repeated hemorrhages.

Sanitary Conditions in China.—Vice Consul-General Hull, Canton, states that there are no official statistics or records of facts relating to the sanitary conditions and mortality rate of Canton, and that the facts given in this report were gathered by observation. The following summary is quoted from him in the *Public Health Reports* of the U. S. P. H. and M.-H. S. Most buildings in Canton are low, being one story, or a story and a half high, with large openings from the top to the ground floor. Light and ventilation are provided for by ventilators or skylights in the roof. During

the hot season (April to October, inclusive) from 60 to 70 per cent. of these buildings have a bamboo or mat wind shoot or funnel which distinctly reduces the temperature within the buildings. The city streets are largely paved with Hongkong granite. In the center of most of the streets is a surface sewer about 2 feet wide and 3 deep, just beneath the stone pavement, built of sandstone, brick, or tile. While these sewers are often clogged, they are frequently cleared out. About one-half of these sewers, more particularly those outside the walls, are reached by tide water each day, which helps to clear these drains. For centuries past the city water supply has been from surface wells and the river. This is now largely modified by the recent introduction of a modern system of waterworks, pressure being secured by well-constructed standpipes. The source of supply is from the river several miles northwest of the city. Modern machinery, filter beds, and pipes are used and an analysis of the water, shows it to be of good quality. The diseases of Canton are such as are usually found in a semitropical climate. Malaria, dysentery, and typhoid are common, though the latter has prevailed only during recent years. Tuberculosis is rife. Beriberi and bubonic plague are restricted largely to the summer months. True Asiatic cholera has been present twice during the past twenty years in epidemic form. At other times only occasional cases are seen. Smallpox in a mild form is present among the Chinese during the winter (December to February). Leprosy in its various form is frequently encountered among the poorer classes. The population of Canton is generally overestimated. No census has been taken, but a fair estimate of the population of the city and its immediate suburbs, including the boat population, would certainly be somewhat less than 2,000,000. Canton city itself, exclusive of the boat population, which may be estimated at 200,000, would hardly reach 1,000,000. There are almost no native hospitals in Canton, civil or military, worthy of the name. There are many public dispensaries connected with the Shin Tongs, or halls of good work, scattered about the city, but their use is largely restricted to the dispensing of Chinese drugs to outpatients. There is a military hospital in a temporary building or shed, connected with the large camp just outside the northeast corner of the city, near the imperial mint. There is also a Fong Pin hospital just off the northwest corner of the city wall where patients are received as in-patients. The principal hospital and the oldest in the city is the Medical Missionary Society's hospital, commonly called the Canton Hospital. It has 300 beds, and in emergency this number could be largely increased. It is situated on the river front, less than one-quarter of a mile east of the custom house and foreign settlement. Over 2,000 in-patients and 25,000 out-patients are treated annually, while about 2,000 surgical operations are performed each year. There are 10 main buildings, including the medical college building, connected with the hospital. The institution is supported entirely by the local Chinese and foreign communities. There is also the Paul Donour French hospital, located near the electric light works on the river front. It is a neat little hospital of 80 or 100 beds, managed on modern lines, and efficient work is done.

Ultramicroscopic Organisms.—H. Molisch (*Bot. Ztg.*, 1908,, lxvi, 131) states that most of those organisms usually spoken of as ultramicroscopic are rendered plainly visible by an alternating light and dark illumination of the field of the microscope. They are visible by any ordinary microscope and are not ultramicroscopic in size. Most of them are bacteria. In his opinion, if ultramicroscopic organisms were of common occurrence they would occasionally be found to form colonies on culture media. Such colonies would in all probability be visible to the naked eye. At least they would be visible under low magnification. Yet all organisms which form colonies are visible singly under the microscope. He does not deny the possible existence of ultramicroscopic organisms (i. e., organisms of less than 0.2 microns diameter), but as-

serts that up to the present time no one ultramicroscopic organism has been shown to exist. The work of Raehlmann and Gaidukov is criticised. There exists no organism of an ultramicroscopic nature with such characteristics as are attributed to it by these authors.

Cesarean Section in Mexico in the Eighteenth Century.—Dr. M. C. Terry of the Marine-Hospital Service sends us the following excerpt from the "Recopilacion Sumaria de los Autos Acordados de la Real Audiencia de esta Nueva España, 1677-1786," Beleña, Mexico, 1787:

CIRCULAR OF OCTOBER 10, 1772

JUSTICES OF THE PEACE TO GIVE ROYAL ASSISTANCE FOR THE CESAREAN OPERATION

[It is decreed] That all justices of the peace shall supply the Royal Assistance whenever it is asked of them for the performance of the Cesarean operation, under penalty of 500 pesos; compelling, when necessary [the attendance of] physicians; constraining also, the parents, husband or relatives of the dead woman in case of their refusal, opposition, or their failure to give due notice of the necessity of the operation.

It has been suggested that the "Royal Assistance" spoken of was an official institution analogous to the *Assistance Publique* in Paris.

The Asepsis of the Pancreatic Juice.—On the basis of his observations and experiments A. Frouin (*Arch. internat. de physiol.*, 1908, vi, 253) is led to conclude that, normally, bacteria are not found in the pancreatic ducts. Pancreatic juice obtained from the pancreatic duct is bacteria-free when there has been no disturbance of the normal physiologic activity of the alimentary canal. From rough handling of the upper intestine, from violence or after the establishment of a duodenal fistula there may be a back-flow of the fluid intestinal contents into the pancreatic duct. In this manner an infection of the pancreas may be brought about. This, however, seldom occurs, since the orifice of the duct is rather well guarded from a back-flow, and whatever bacteria thus gain entrance into the duct are washed out by the outflowing pancreatic juice before a foothold is obtained by them.

Medicolegal

Hospital Not Made Liable for Autopsy by Notification of Coroner

The First Appellate Division of the Supreme Court of New York says that the case of Darcy vs. Presbyterian Hospital was brought to recover damages from the hospital because a coroner's physician of the city of New York performed an autopsy on the body of John Darcy, the plaintiff's son, who was a patient and died in the hospital. The contention was that the hospital had violated its express duty and implied undertaking to deliver the body of John Darcy after his death to the plaintiff in such a condition as it might be at the time of his decease.

It appeared from the evidence that on the advice of his physician John Darcy had been removed to the hospital, his mother agreeing to pay the hospital \$1 per day. After his death, the physician in charge of the case, being unable to determine the cause of his death, requested the plaintiff to consent to an autopsy, which she refused to do. Subsequent to such refusal the hospital authorities called up the board of health on the telephone, made a statement of the case to the representatives of that board, and was directed by them to notify the coroner's office. A coroner's physician subsequently appeared at the hospital, examined the clinical history of the case and the report of the hospital superintendent, decided that an autopsy was necessary, and performed it without any request of the hospital authorities, after which the body of the deceased was delivered to the plaintiff.

This was the plaintiff's case, and the court thinks it disclosed no cause of action. There was no evidence that the hospital authorities, or those for whose acts the corporation

was responsible, performed this autopsy, had anything to do with or was responsible for it, except so far as the board of health and the coroner's office were informed of the death of the patient in the hospital. This certainly imposed no liability on the hospital corporation. There was no evidence that a false statement was made to the coroner or to the board of health, or that anything was said or done to induce the public authorities to take charge of the case or perform an autopsy. The bare fact that the hospital authorities informed the coroner that a death had taken place in the hospital imposed no liability on the hospital for the acts of the public authorities, taken on their own responsibility, as to the subsequent disposition of the remains.

The sole ground on which there could be any liability would be the fact that the hospital authorities had made a false report to the coroner, and thus induced him to make an autopsy when none was justified by the symptoms of the patient. It is quite clear that the mere report by an attending physician at a hospital to the coroner's office of the case of a person dying in a hospital, so that the coroner or his physicians shall make the necessary and proper examination, imposes no liability on the hospital.

Adulteration of Water

The United States Board of Food and Drug Inspection, in Notice of Judgment No. 41, gives the result, in the Supreme Court of the District of Columbia holding a District Court of the United States for said District, of the case of the United States vs. 350 Cases and 100 Demijohns of Water Labeled "Great Bear Spring." The board says that an inspector of the Department of Agriculture purchased samples of water labeled "Great Bear Spring Water," which were promptly subjected to analysis in the Bureau of Chemistry. The results of the analysis showed that the water contained the colon group of organisms, which indicated that there was a contamination rendering the water unfit for human consumption. The conclusions of the analysts were confirmed by an inspection of the bottling plant and of the methods employed there, which disclosed that the contamination was due to insanitary surroundings and uncleanly methods of handling at the time the water involved in this case was bottled. The facts were reported by the Secretary of Agriculture to the United States attorney for the District of Columbia, and libel for seizure and condemnation was duly filed in the court named with the result of a decree that the water seized be condemned as prayed for in the petition and disposed of by destruction, the spring company to pay the costs of these proceedings, including court costs, storage, cartage, and the other costs, if any, as assessed by the marshal.

Claims for a "Patent Medicine" Too Much for a Court

The Appellate Court of Indiana, Division No. 1, says that the suit of the A. N. Chamberlain Medicine Company vs. H. A. Chamberlain Medicine Company, was for an injunction because of an alleged unfair competition and infringement of the trade-name, "A. N. Chamberlain's Immediate Relief." It was sought to restrain the H. A. Chamberlain Medicine Company from using the words "Chamberlain" and "Medicine" in its corporate name, and from using the words, "Chamberlain" and "Relief" in the name of its medicine: "H. A. Chamberlain's Infallible Relief." The answer was in two paragraphs, the second alleging that the plaintiff, prior to and during the pendency of a former action between the parties, used obscene literature in its advertising matter, and falsely advertised and represented its medicine to be a cure for divers and incongruous diseases.

It was shown by the uncontradicted evidence that the appellant's (plaintiff's) medicine, known as "Chamberlain's Immediate Relief," was widely advertised and represented to the public as being a certain and effectual cure for the following divers diseases: "Eczema or yellow fever, Asiatic cholera in its first stages, or chilblains, catarrh, or seasickness, diphtheria or pimples, cholera morbus or bee stings, bites of poisonous reptiles or piles, dysentery or scratches on horses.

scarlet fever or sour stomach, measles or eramps, neuralgia or general debility, hysterics or hog cholera, la grippe or bloat and scours in horses, eattle and sheep, diarrhea or itching and eruptions, bilious fever or wind galls on horses, bloody flux or sick headache, fever and ague or heaves in horses, eolic or toothache, spotted fever or nervous tremors, sore throat or chicken cholera, cold feet or scalds and burns, rheumatism or earache, dumb ague or cuts and bruises, colds or summer complaint, coughs or colic in man or beast, griping pains or nervous headache, sprains and wounds or diseases of young lambs—all from one and the same bottle.

"We," the court says, "have exhibited the diseases, for which appellant claims its medicine to be a panacea, in the above form in order to show at a casual glance the absurd incongruity of its representations, and thereby illustrating the character of the business that appellant is praying a court of equity to protect. It will be seen that this medicine is claimed to be a sovereign remedy for about all of the ills that flesh is heir to; and, if appellant's said representations are to be believed, and they are certainly made for this purpose, then, as is well said in *Fetridge vs. Wells*, 13 How. Prac. (N. Y.) 385: 'It would seem that so long as this medicine may be procured it will be a folly to grow old and a mistake to die.'

"There is another phase of appellant's advertisements we can not overlook. It not only recommends its medicine as a cure for diphtheria, along with other diseases, but emphasizes this recommendation with a separate line: 'This cure for diphtheria for sale by all druggists.' And advises, by what purports to be testimonials, that doctor bills as well as lives can be saved by using this specific in cases of diphtheria. This wanton advice, with reference to this known deadly disease, this reckless disregard for the consequences on human life, this palpable falsehood, put forth to deceive distressed, ignorant, and credulous people to their detriment, in cases of life and death, in order to make a few more sales of this nostrum, is atrocious and little less than a crime. 'The philosophy of the cure by Chamberlain's Immediate Relief,' says these advertisements, 'is very simple, and will at once commend itself to every thinking person. It is an anti-septic (against putrefaction), and kills poison whenever it comes in contact with it. It will kill the poisonous bacteria that lodge in the throat, and it will also destroy the terrible little animalculæ.' We hardly think it necessary to say more to convince an ordinarily informed mind that the business of appellant transacted through the medium of the trade-name and mark that it is sought to have protected by this court is fraudulent and a deception on the people. We do not say the medicine has no merit. It is unnecessary for us to pass on that point, but it is apparent that it can not have anywhere near the miraculous virtues ascribed to it, and its advertisements present an attempt at a gross imposition on the public, as well as a menace to human life.

"It is an ancient and equitable rule that 'he who comes into a court of equity must come with pure hands and a pure conscience,' and it is also well established by the authorities that, if a complainant in a court of equity claims relief against the fraud or imposition of others, he must himself be free from the same charge with reference to the same matter. If the business of such complainant is, or is sought to be, affected and injured by the misrepresentation or deceit of another, he can not be heard in a plea that by the fraudulent rivalry of another his own fraudulent profits are destroyed or diminished. The exclusive privilege of deceiving or perpetrating a fraud on the public is hardly a fit subject to be entertained in a court of equity, and certainly not one that such a court can be required to aid or sanction.

"It is no defense to the charge here discussed that appellee (the defendant) may be in the same respects equally an offender. It will be considered that it, in a like case, would be likewise dealt with. Appellant's manner of using its trade-name and trade-mark and conducting its business connected therewith is a fraud on and a danger to the public. The law may permit it, but equity will not protect it."

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

April 17

- 1 *Technic of the Wassermann Reaction. E. Castelli, New York.
- 2 *Spontaneous Combustion. J. Knott, Dublin, Ireland.
- 3 *Surgical Treatment of Epilepsy. W. P. Carr, Washington, D. C.
- 4 Importance of Cerebral Lesions Complicating Suppurative Otitis Media. S. M. Smith, Philadelphia.
- 5 *Longevity and Rejuvenescence. J. L. Nascher, New York.
- 6 Long Life and Hot Climates. W. F. Robinson, Palm Beach, Fla.
- 7 *Acute Postoperative Dilatation of the Stomach. D. S. Fairchild, Des Moines, Iowa.
- 8 *Correct Definition for Abdominal Hernia, Illustrated by Two Cases. G. I. Miller, Brooklyn.

1. **The Wassermann Reaction.**—Castelli first enunciates the principle of the reaction and technic. He describes the reagents and modes of obtaining them and the method of obtaining the reaction; discusses the value of the reaction with reference to diagnosis, therapeutics and prognosis, and arrives at the following conclusions:

1. The rôle played by syphilis needs no comment. If we are now in a position to tell the patient coming for advice that notwithstanding his previous syphilitic infection he can marry and create a healthful progeny, we have a tremendous factor of mental tranquillity to offer in very many cases. If we can establish the fact that syphilis is curable it will be another great triumph for medicine.

2. The proof of derangement in mental poise as a result of previous syphilitic infection may be a helpful factor in the administration of justice.

3. The serodiagnosis will be a means of differential diagnosis during the preparalytic stage, when the general symptoms are very indefinite and generally masked by a well-defined neurasthenic syndrome. The differential diagnosis between general paralysis and neurasthenia during this period would represent the real prophylactic warning. This person during the preparalytic stage is already dangerous to himself, to his family and to society at large, and early diagnosis of his condition makes possible the safeguarding of the patient in an asylum before the dangerous manifestations of the disease have resulted in injury to himself and others, and compelled society to take protective and coercive measures against him.

4. While the serodiagnosis at present is not perfect and is moreover necessarily confined by its requirements to the hands of the few, it furnishes such a rich amount of sure diagnostic data over the positiveness of a syphilitic infection that its adoption in the different hospitals and medical institutions should be no longer optional but absolutely necessary.

2. **Spontaneous Combustion.**—Knott points out that spontaneous combustion is still accepted as an article of pathologic faith by recognized leaders in the domain of medicolegal opinion and is taught in the pages of the most comprehensive treatises on medical jurisprudence. He therefore examines the evidence from the earliest times that has been adduced in favor of this belief. The article, which will be continued, is of considerable antiquarian interest.

3. Abstracted in *THE JOURNAL*, Jan. 23, 1909, p. 322.

5. **Longevity and Rejuvenescence.**—Nascher discusses the natural course of life and the effect on it of forced activity. He concludes that the whole question of longevity hinges on the mode of living. If we favor the unnatural precocious development of youth and maintain indifference during the period of maturity, thus shortening both periods, we shall have an early and short period of decline. If we prolong the period of development, and prolong the period of maturity preparing for the succeeding period we shall have a late and long period of decline.

7. Abstracted in *THE JOURNAL*, Jan. 16, 1908, p. 237.

8. **Abdominal Hernia.**—Miller reports two cases and expresses the opinion that a correct definition for abdominal hernia would be "the escape of the abdominal contents in a congenital or acquired sac of peritoneum which is within the abdominal cavity or has passed through some point of its muscular wall."

Boston Medical and Surgical Journal

April 8

- 9 *Examination of the Feces for the Study of the Functional Condition of the Alimentary Tract in Clinical Work. H. F. Hewes, Boston.
- 10 Municipal Hospital for Advanced Consumptives in Boston. E. A. Locke and S. F. Cox, Boston.
- 11 A Cursory Review of Surgical Methods for the Extirpation of Hemorrhoids. T. C. Hill, Boston.

April 15

12. *Some Truths About Hydrotherapy. S. Baruch, New York.
13. The Personal Element in Prescribing Hydrotherapy. H. C. Baldwin, Boston.
14. *Treatment of Fibrinous and Serofibrinous Pleuritis. F. T. Lord, Boston.
15. *Seven Cases of Noma; Two Recoveries; Forty Infected. L. R. G. Crandon, E. H. Place, and W. J. Brown, Boston.
16. Consumption of Alcohol and of other Medicines at the Massachusetts General Hospital. R. C. Cabot, Boston.
17. Therapeutic Action of Rattlesnake Venom in Pulmonary Consumption, in Acute and Chronic Bronchitis, Asthma, Etc., and in Some Well-Recognized Neuroses. T. J. Mays, Philadelphia.

9. **Examination of the Feces.**—Hewes points out that examination of the feces, which is to-day a recognized routine clinical method, may give evidence regarding two different sets of facts: (1) Diseased conditions of the gut, as by the presence of mucus or pus, blood, worms, eggs, or micro-organisms; (2) disturbance of the functional condition of the alimentary tract for digestion and absorption of the food, as determined by the study of food remains in the feces. For the first purpose examination of any specimen of feces will serve; for the second, feces obtained under administration of a test diet are required. The method of examination may be either chemical or macroscopic and microscopic.

He describes in detail the test diet and the method of examination constituting this particular clinical study, whereby the trained observer can determine in a given case the utilization of food products in the alimentary tract. He discusses the significance of the various findings in regard to meat, starch, and fat respectively. The disturbance of fat digestion is gone into at considerable length and findings in normal and diseased conditions are tabulated.

The general usefulness of this method of macroscopic and microscopic study of the food contents of the test diet feces in clinical work is very great, but it does not, of course, provide us with a complete knowledge of the condition of function for the digestion and absorption of the various forms of food included in our diet. It tells us nothing, for example, in regard to the state of proteid or carbohydrate absorption; its indications in regard to the utilization of these two forms of food substance, consist only of evidences of the condition of the function of digestion of one special form of proteid substance, meat fiber, and one form of carbohydrate substance, starch. For indications in regard to these functions, the absorption of proteid and carbohydrate, as also for exact indications of the extent of disturbance of the function of fat utilization, or the proportionate quantities of the various forms of fat substance present, we are dependent on chemical analysis. For such information as it does provide, however, the method is of distinct use in general clinical work.

12. **Hydrotherapy.**—Baruch insistently urges, that in the application of the bath in infectious fevers, the antipyretic effect is secondary to the nerve stimulating and sustaining effect. The cold bath, and indeed every cold procedure, has for its chief object the enhancing of the resisting capacity of the patient to disease. The cause of the prevailing neglect of hydrotherapy—of which he gives numerous instances—is ignorance of the physiologic and therapeutic action of water, and its remedy is the removal by instruction in our schools, which, to be effective, must be obligatory. Baruch says that the average text-book must be avoided by the seeker after knowledge in hydrotherapy, and he cites numerous instances of recent text-books in which the information given is always inadequate and often grossly inaccurate. The practitioner should depend only on works written by physicians who, like himself, have experience in general or hospital practice. The study of hydrotherapy would be simplified, were it regarded as a method of utilizing the physiologic action of thermic excitation through the medium of water. He describes the mode of prescribing minutely hydrotherapeutic treatment.

14. **Fibrinous Pleuritis.**—Lord emphasizes the importance of tuberculosis as a cause of fibrinous and serofibrinous pleuritis. From published records it appears to be established that at least three-fourths of the primary pleurisies with effusion are tuberculous. Out of every 10 cases of primary fibrinous or serofibrinous pleurisy at least 3 or 4 develop pulmonary or

other tuberculosis within an average period of from 4 to 6 years. He suggests that all cases of primary fibrinous and serofibrinous pleurisy, however mild, should be treated as tuberculous until proved otherwise. He discusses thoracentesis in regard to its indications, the question of tapping medium and small effusions, the method of removal of fluid and the amount withdrawn.

15. **Noma.**—Crandon, Place and Brown, from a study of several cases, hold that noma is not proved to be a contagious disease and need not be isolated. Any uncleaned-for mouth, particularly in a sick child, and especially after measles, many contain *B. fusiformis* and *Spirochaeta gracilis*. In such a mouth these organisms may be found without ulceration or in the lesions which have been described as stomatitis gangrenosa, Vincent's angina and noma. The lesions, in other words, may be only round the roots of teeth, on tonsils and pillars, on inner sides of cheek, in nasal fossæ, on the external ear and about the genitals. Any of these conditions, including the extensive gangrene and sloughing of so-called noma, may be different stages of the same disease, which may be, therefore, considered as not necessarily a specific disease, but the successful ingress of mouth bacteria into tissues rendered non-resistant by uncleanness and preceding disease.

Medical Record, New York

April 17

18. *Freezing as a Therapeutic Measure; Liquid Air and Carbonic Acid Snow. G. T. Jackson, New York, and S. D. Hubbard, New York.
19. Early Diagnosis of Syphilis and the Technic of Examination for the *Spirochaeta Pallida*. W. J. Stone, Toledo, O.
20. *Why Mastoiditis is Sometimes Misunderstood. E. Amberg, Detroit.
21. Two Unusual Cases of Appendicitis. A. Nicoll, New York.
22. Gonorrheal Conditions in Women. A. J. Love, New York.
23. Extensive Peritonitis; Perforation of the Rectum. J. H. Stevens, Boston.

18. **Liquid Air and Carbonic Acid Snow.**—Jackson and Hubbard claim more prominence for the name of Dr. A. Campbell White as the first to use liquid air as a therapeutic measure. They describe the making of liquid air and liquid carbon dioxide and the methods of application. They next describe the methods of making and gathering carbonic acid snow, the microscopic findings in frozen skin, and the methods of applying the snow. They consider carbonic acid snow preferable to liquid air, because it is always to be had, which is not the case with liquid air, and because the smallest sized lesions can be frozen with it, whereas with liquid air it is often necessary to freeze a greater area than therapy calls for. Freezing is used mostly as a destructive agent. The authors consider it the best treatment for lupus erythematosus. Every case of this most intractable disease has been cured when the patient has given them the opportunity to complete the treatment. Nevii of all sorts are amenable to freezing, but port-wine marks do not yield so readily as other forms. Epitheliomas, especially of the rodent ulcer type, they regard as a special field for freezing. Other conditions, all of which have yielded to freezing, are keratosis senilis, warts, papillomata, tattoo marks, powder stains, hypertrophied sears, keloid, tuberculosis verrucosa cutis, chloasma and serofuloderma.

20. **Mastoiditis.**—Amberg concludes that at present it is impossible to reach an absolutely certain decision regarding the necessity of surgical interference in some cases of affection of the temporal bone. In some cases the groups of symptoms, and in many cases the presence of one or two marked symptoms, makes surgical interference appear imperative. The danger of general inhalation anesthesia in any operation, especially in persons suffering from tuberculosis, should not be forgotten, and local anesthesia might be more thoroughly tested in cases in which general anesthesia is contraindicated. The temporal bone contains numerous groups of cells which may come into consideration in an affection of this bone, and therefore the term "mastoiditis" is sometimes misleading. The construction of the temporal bone is such that a process can go on in the depth without betraying itself by very plain symptoms; marked symptoms may appear suddenly, and in some instances they pronounce the death sentence of the patient.

Lancet-Clinic, Cincinnati

April 17

- 24 *Municipal Charities of Paris, France, Including the Principal Hospitals. F. Dowling, Cincinnati.
 25 Loss of Blood in the Relief of Mental Agony and Distress. B. Holmes, Chicago.
 26 Pulsation of Large Aneurisms Non-Expansile, but Transmitted. S. Lange, Cincinnati.

24. **Municipal Charities of Paris.**—Dowling writes an interesting descriptive and historical article, illustrated by photographs, concerning the Paris hospitals.

American Journal of Medical Sciences, Philadelphia

April

- 27 *Surgical Anemia and Resuscitation. G. W. Crile, Cleveland, O.
 28 *Influence of Emotional States on Functions of Alimentary Canal. W. B. Cannon, Boston.
 29 *Meaning of Hematemesis. W. F. Cheney, San Francisco.
 30 Concerning Diseases that Depend on Disturbances of Internal Secretion. W. Falta, Vienna, Austria.
 31 *Treatment of Acute Infectious Diseases with Extracts of Leucocytes (Hiss). S. W. Lambert, New York.
 32 Roentgen Rays in Treatment of Deep-Seated Malignant Disease. G. E. Pfahler, Philadelphia.
 33 *Is Percussion as a Method of Testing the Lungs Deserving of Greater Attention? C. E. Waller, Halmahult, Sweden.
 34 Specific Aids in Diagnosis and Prognosis of Tuberculosis. S. von Ruck, Asheville, N. C.
 35 Some Aspects of Calculous Anuria. F. S. Watson, Boston.
 36 Importance of Modifications of the Sensibility in the Diagnosis of Disease. T. A. Williams, Washington, D. C.
 37 Cysts of the Common Bile Duct. R. S. Lavenson, Philadelphia.
 38 Multiple Infection. W. R. Stokes and T. M. Wright, Baltimore.
 39 Diaphragmatic Hernia. E. T. Bell, Columbia, Mo.

27. **Surgical Anemia and Resuscitation.**—Crile reports observations on 20 dogs killed by chloroform and resuscitated after periods varying from 3 to 14 minutes, with a view to determining the limits of recovery after a total anemia of the nervous system. He discusses the histologic findings of presumptive recoveries and fatal cases. In human resuscitation the technic is as follows: The patient in the prone posture is subjected at once to rapid rhythmic pressure on the chest, with one hand on each side of the sternum. This pressure produces artificial respiration and a moderate artificial circulation. A cannula is inserted toward the heart into an artery. Normal saline, Ringer's or Locke's solution, or, in their absence, sterile water, or, in extremity, even tap water, is infused by means of a funnel and rubber tubing. But as soon as the flow has begun, the rubber tubing near the cannula is pierced with the needle of a hypodermic syringe loaded with 1 to 1,000 adrenalin chlorid and from 15 to 30 minims is at once injected. The injection is repeated in a minute if needed. Synchronously with the injection of the adrenalin the rhythmic pressure on the thorax is brought to a maximum. The resulting artificial circulation distributes the adrenalin that spreads its stimulating contact with the arteries, bringing a wave of powerful contractions and producing a rising arterial, hence coronary, pressure. When the coronary pressure rises to, say, 40 mm. or more, the heart is likely to spring into action. Just as soon as the heart beat is established the cannula should be withdrawn. Bandaging the extremities and abdomen tightly over the masses of cotton is very useful. From a personal experience in attempts at resuscitation of the human being, Crile has been impressed by two main facts: (1) The human heart seems to respond even more readily than the heart of a dog; (2) the possibility of drilling an operative staff so that the technic may be begun within two minutes.

28. **Influence of Emotion on the Alimentary Canal.**—Cannon points out that the ordinary physical changes expressive of emotion are mainly superficial, manifesting themselves at the periphery and occurring chiefly in structures supplied with smooth muscle and innervated through the sympathetic nervous system. More deeply lying structures, however, with similar musculature and nervous supply, are similarly affected by emotional conditions. He cites as instances the bladder and alimentary canal, and discusses the latter in detail, showing how profoundly the mental state may affect favorably or unfavorably the secretions of the stomach, so important for the continuation of the digestive process, and how quickly and directly the mental state may entirely check the onward

movement of the food. As already noted, an emotional disturbance affecting the alimentary canal is capable of starting a vicious circle; the stagnant food, unprotected by abundant gastric juice, naturally undergoes bacterial fermentation, with the formation of gases and irritant decomposition products. These, in turn, may produce mild inflammation or be absorbed as substances disturbing to metabolism, and thus affect the mental state. And the depressed mental state that accompanies indigestion may still further prolong the indigestion. The importance of avoiding so far as possible the initial states of worry and anxiety, and of not permitting grief and anger and other violent emotions to prevail unduly, is not commonly understood, for the subtle changes wrought by these emotional disturbances are not brought to consciousness, and are clearly known solely through physiologic studies. Only as these effects are better understood can the bad results be avoided, or, if not avoided, regarded and treated with intelligence.

29. **Hematemesis.**—Cheney refers to the startling effect of vomiting blood and discusses the possibilities that may underlie it. He cites these possibilities, discussing each in turn as follows: Cirrhosis of the liver, gastric ulcer, gastric cancer, splenic anemia, acute pancreatitis, uremia and toxic gastritis.

31. **Extracts of Leucocytes in Acute Infectious Diseases.**—Lambert holds the following conclusions, relating to the use of His' extract of leucocytes in infectious diseases, justified: We have a new remedy representing a new point of view in the study of immunity, proving an intracellular immunity in addition to the accepted types of serum immunity and of phagocytosis. This remedy is applicable to obscure cases of unknown bacterial cause, to cases of disease with unknown or unapproachable lesions. The remedy influences the toxemia of the disease and gives an opportunity to the body cells to overcome the infection by removing from them the necessity of immediately attacking the endotoxins of the bacteria. It is by no means a "cure-all." In application, it is painful locally, but it has caused no other local complications, and the urticaria so often seen in the use of serum has been conspicuous by its absence.

33. This article was discussed editorially in THE JOURNAL, April 24, 1909.

American Journal of Physiology, Boston

April

- 40 Heat Coagulation in Smooth Muscle: A Comparison of the Effects of Heat on Smooth and Striated Muscle. E. B. Meigs, Boston.
 41 Connection Between Changes of Permeability and Stimulation and the Significance of Changes in Permeability to Carbon Dioxid. R. S. Lillie, Woods Hole, Mass.
 42 Factors Regulating the Creatinin Output in Man. P. A. Lavene and L. Kristeller, New York.
 43 *Acapnia and Shock.—III. Shock After Laparotomy: Its Prevention, Production, and Relief. Y. Henderson, New Haven, Conn.
 44 *Rôle of Ash Constituents of Wheat Bran in Metabolism of Herbivora. E. B. Hart, E. V. McCollum, and G. C. Humphrey, Madison, Wis.
 45 *Effect of Smoking on the Blood Pressures and on the Volume of the Hand. J. W. Bruce, J. R. Miller, and D. R. Hooker, Baltimore.
 46 Production by Hydrogen Peroxid of Rhythmic Contractions in the Marginless Bell of *Gonionemus*. O. P. Terry, Woods Hole, Mass.
 47 Studies in the Physiology of the Central Nervous System: 1. The General Phenomena of Spinal Shock. F. H. Pike, Boston.
 48 Hydrolysis of Vitellin from Hen's Egg. T. B. Osborne and D. B. Jones, New Haven.
 49 Hydrolysis of Muscle of Scallop (*Pecten Irradians*). T. B. Osborne and D. B. Jones, New Haven, Conn.
 50 Experimental Studies on Physiology of Molluscs (Fourth Paper). L. B. Mendel and H. G. Wells, New Haven.
 51 The Supposed Connection Between Protein Coagulation and the Heat Shortening of Animal Tissues. E. B. Meigs, Boston.

43. **Acapnia and Shock.**—Henderson has shown that irritation of a sensitive nerve leads to hyperpnea, and the increased rapidity of breathing leads to thorough aëration of the blood, unusual loss of carbon dioxid, or acapnia, and consequently to shock. In abdominal operations there is another factor productive of acapnia and shock, viz., the exhalation of carbon dioxid from the exposed viscera. Henderson sums up the results of his investigations as follows: Acapnia, due to hyperpnea, plays an important part in the central inhibition of

peristalsis occurring under surgical operations. Local acapnia, due to direct exhalation of carbon dioxide, is a factor in the loss of tons in exposed viscera. When loss of carbon dioxide, both by way of the lungs and by direct exhalation, is prevented, and the blood gases are maintained nearly normal, peristalsis can be directly observed in the stomach and in the small and large intestines. The minimum rate of exhalation of carbon dioxide from exposed peritoneal surfaces is from 0.15 to 0.20 c.c. per sq. cm. in the first half hour, or 40 times the rate from the skin. Exposing the abdominal viscera to a current of air at body temperature saturated with moisture rapidly induces congestion and loss of tons and motility. Aëration of the viscera in this manner is an effective method for the production of shock. Restoration of the body's store of carbon dioxide is effective as a method of relief from all except the extreme stages of acapnial shock. These observations, with others which are to be presented in later papers, indicate that the carbon dioxide tension in the nerve centers and in the tissues and fluids of the body is a factor in the maintenance of tonus (in the broad sense of the word) of the same order of importance as temperature, oxygen supply, osmotic pressure, and the equilibrium of anions and cations. Henderson also suggests that rapid respirations, hyperpnea, and consequent acapnia are responsible for lack of uterine tone in some cases of labor.

44. **Rôle of Ash Constituents of Wheat Bran.**—The experiments of Hart, McCollum and Humphrey were conducted on a cow, with special reference to the metabolism of potassium, calcium and phosphorus in the economy and their excretion in milk. They found that, in general, phosphorus and calcium were excreted by the feces and that when the amount of phosphorus was high, potassium was also excreted by the intestine. But when the amount of potassium was high and phosphorus low the greater part of the potassium was excreted in the urine. When calcium or phosphorus was deficient in quantity in the food, the skeletal tissues served as a source of supply thus providing against immediate disastrous results consequent on a sudden deficit in the intake of phosphorus or calcium. Variations within wide limits in the form and quantity of supply of potassium, magnesium or phosphorus did not influence the percentage content of these elements in the milk.

45. **Effect of Smoking on the Blood Pressure.**—Bruce, Miller and Hooker found that smoking raised the blood pressure and the pressure did not fall to the normal as soon as had been stated by Hesse. Due allowance was made for psychic influences. The authors do not believe, however, that their evidence lends much support to the theory that tobacco is an etiologic factor in arteriosclerosis, at least in so far as this theory assumes a mechanical injury to the vessels. The effects of moderate smoking on a man accustomed to its use would seem to be very little, if any, greater than the effects of those stimuli which are necessary consequences of civilized life.

American Journal of Surgery, New York

April

- 52 The Lingual Tonsil. F. C. Raynor, Brooklyn, N. Y.
- 53 Early Diagnosis of Carcinoma of the Uterus. I. L. Watkins, Montgomery, Ala.
- 54 *Value of Vaginal Fixation in Procidentia. S. S. Graber, New York.
- 55 Therapy of the Prostate. C. S. Stern, Hartford, Conn.
- 56 Cystitis. N. P. Rathbun, Brooklyn, N. Y.
- 57 Laryngeal Stenosis in the Adult, Successfully Treated by Intubation: Continuous Wearing of Tube for Four Years. W. K. Simpson, New York.
- 58 Case from Which 205 Gallstones were Removed Simultaneously with Operations on Cervix Uteri and Uterine Adnexa. A. Brothers, New York.
- 59 Thrombosis of Popliteal and Anterior and Posterior Tibial Arteries Complicating an Appendiceal Abscess. J. L. Campbell, Atlanta, Ga.
- 60 *Accident to Infant 17 Months old, with Extensive Injury to Abdominal Wall and Evisceration of all of Small Intestines: Recovery. R. B. Hall, Cincinnati.

54. **Vaginal Fixation in Procidentia.**—Graber discusses the palliative and other operations recommended in complete prolapse of the uterus, and argues in favor of vaginal fixation. He says that certainly this operation can never become so

popular as ventrofixation, for there is too much to it and things are liable to happen, even during the operation. But an operation is of value, other things being equal, in proportion to the percentage of cures. The patients have nothing like so much vesical disturbance as might be expected, convalescence is usually smooth, and there would be practically no fatalities. While vesical fistula has so far not been noticed, he admits that it is not unlikely to become prevalent as the operation is more used, but this would not be the fault of the operation. Dührssen says that complications in subsequent pregnancy are not frequent, if they occur at all. In the one case of subsequent pregnancy seen by Graber labor was smooth. In 1892 Dührssen reported 114 cases with 102 cures, or 89.4 per cent. At the Lebanon and Postgraduate hospitals, Waldo has done 46 such operations and Graber about 24. Each has had one failure, but Graber considers his due to faulty technic and a bad case. But in any case he claims from 85 to 90 per cent. of success, and no other operation compares with this. He describes the technic.

60. Abstracted in THE JOURNAL, Jan. 23, 1909, p. 322.

Journal South Carolina Medical Association, Greenville

March

- 61 *Do We Pay Enough Attention to Prophylaxis? W. J. Burdell, Lugoff.
- 62 Medical Progress and Postgraduate Instruction in English Hospitals. L. O. Mauldin, Greenville.
- 63 Hernia. J. C. Harris, Anderson.
- 64 Treatment of Diabetes Mellitus. J. L. Jefferies, Spartanburg.

61. **The Physician and Prophylaxis.**—Burdell points out the necessity for the individual physician cooperating with his sanitary authorities in the matter of prophylaxis of infectious diseases. He cites three instances in his own personal knowledge of cases of typhoid in which the attending physicians gave no instructions in reference to disinfecting the stools prior to burial, flies, etc.; also with regard to the washing of handkerchiefs of tuberculous patients, etc. Attention to these matters is as important as asepsis in surgery. The surgeons have no monopoly on asepsis. He makes the following suggestions as to the way in which individual practitioners can aid the sanitary authorities in the prophylaxis of transmissible diseases: First, by careful attention to even the most minute details of preventive medicine in the management of those cases that come under his care, and careful and oft-repeated instructions to the families of the sick, and also to their neighbors; second, by each and every physician in the state impressing on the members of the general assembly from his county the necessity of giving the executive committee of the state board of health the legislation it asks for; third, by cooperating freely with the executive committee of the state board of health.

Journal Arkansas Medical Society, Little Rock

March

- 65 Malarial Hematuria. J. G. Waldrop, Augusta.
- 66 *Puerperal Infection. G. A. Warren, Black Rock.
- 67 *Importance of Examining Eyes and Ears of School Children. R. H. T. Mann, Texarkana.
- 68 *Pathology of Bone Tuberculosis. J. P. Runyan, Little Rock.
- 69 Importance of Early Diagnosis and Treatment in Arthritis Deformans. A. E. Cox, Helena.

66, 67, 68. Abstracted in THE JOURNAL, July 18, 1908, p. 250.

American Journal of Urology, New York

April

- 70 Congenital Strictures of the Urethra. Dr. Tedenat, Montpellier, France.
- 71 Summary of Progress in the Development of Modern Cystoscopes. B. Lewis, St. Louis.

Laryngoscope, St. Louis

April

- 72 Two Tests for the Diagnosis of Ossicular Ankyloses, and Instrument for Their Production. E. P. Fowler, New York.
- 73 *The Form of the Hard Palate. H. P. Mosher, Boston.
- 74 Tracheotomy. C. Jackson, Pittsburg, Pa.
- 75 Laryngectomy, Specimen. Method of Artificial Voice Production. J. W. Gleitsmann, New York.
- 76 Asthma Following Operative Measures in Ethmoiditis. D. MacPherson, New York.
- 77 Foreign Body (Toy Incandescent Lamp) in Left Bronchus. J. C. Beck, Chicago.

73. The Hard Palate.—Mosher discusses the asymmetry of growth of the two halves of the face and the hard palate, and believes that in faulty eruption of the posterior teeth, as well as of the anterior, and in their faulty occlusion, we have the explanation of fully half of the cases of asymmetry of the hard palate. In a measure, this paper is a continuation of his paper of last year. With the results of that article and of this one in mind, we have, then, as causes of deviations of the septum, trauma and faulty eruption and occlusion of the teeth. The practical application of both papers is obvious. It is first: To avoid trauma. This we all do instinctively. Second: To look after the proper eruption and spacing of the teeth. In the past, pardonable vanity and toothache have sent most of us to the dentist. In the future there should be a more scientific reason, namely, the attempt to avoid the harmful effect of poorly erupted and placed teeth on the septum and on nasal respiration.

Annals of Ophthalmology, St. Louis

April

- 78 Influence of the Eye on the Ear Under Normal and Pathologic Conditions. M. Rollet, Blois, France.
- 79 Size versus Distance in Test Types. C. Schulliu, Billings, Mont.
- 80 Herpes Zoster Ophthalmicus with Involvement of the Cornea and with Oculomotor Paresis. B. Chance, Philadelphia.
- 81 Atropin—Its Use and Limitations in Correction of Heterophoria. G. D. Murray, Scranton, Pa.
- 82 Optico-Ciliary Vessels; Report of a Case. W. T. Shoemaker, Philadelphia.
- 83 Hereditary Blindness and Its Prevention (continued). C. Loeb, St. Louis.

Journal of Inebriety, Boston

Spring

- 84 The Disease of Inebriety. N. Kerr, London, Eng.
- 85 Alcoholic Psychosis. F. C. Horsford, Morris Plains, N. J.
- 86 *Relation of Salt to Inebriety. H. O. Beeson, Caliente, Cal.
- 87 *Food and Alcohol—A Parallel. W. S. Hall, Chicago.
- 88 The Drink Problem. C. H. Shepard, Brooklyn, N. Y.
- 89 Effect of Deranged Metabolism Causing Exhaustion, for Which Spirits and Drugs Are a Most Grateful Remedy. A. L. Benedict, Buffalo.
- 90 Phototherapy in Nervous Disease. A. D. Rockwell, New York.
- 91 Voice Use and Its Relation to Alcohol. J. M. Brown, Chicago.
- 92 Seven Deadly Sins of Civilization. G. M. Gould, Philadelphia.

86. Salt and Inebriety.—Beeson urges that all supplementary salt with food is superfluous and distinctly harmful to digestion. Salt with food, in proportion of four parts or less to the thousand, is beneficial to digestion, but beyond six parts to the thousand it is positively harmful. The taste for salt in food is acquired in every instance. He discusses the physiology and pathology of the action of salt on the human economy, and says that, in addition to digestive disturbances, it produces genitourinary excitation. Indigestion is the bane of civilized man and the drink evil its inevitable consequence.

87. Food and Alcohol.—Hall presents the following comparative table as representing demonstrable facts and the teachings of laboratory work:

FOOD	ALCOHOL
1. A certain quantity will produce a certain effect at first; the same quantity will always produce the same effect in the healthy body.	1. A certain quantity will produce a certain effect at first, but it requires more and more to produce the same effect when the drug is used habitually.
2. The habitual use of food never induces an uncontrollable desire for it in ever-increasing amount.	2. When used habitually it is likely to induce an uncontrollable desire for more, in ever-increasing amounts.
3. After its habitual use a sudden total abstinence never causes any derangements of the central nervous system.	3. After its habitual use a sudden total abstinence is likely to cause a serious derangement of the central nervous system.
4. Foods are oxidized slowly in the body.	4. Alcohol is oxidized rapidly in the body.
5. Foods, being useful, are stored in the body.	5. Alcohol, not being useful, is not stored in the body.
6. Foods are the products of constructive activity, activity of protoplasm in the presence of abundant oxygen.	6. Alcohol is a product of decomposition of food in the presence of abundant oxygen.
7. Foods (except meats) are formed in nature for the nourishment of living organisms and are, therefore, inherently wholesome.	7. Alcohol is formed in nature only as an excretion. It is, therefore, in common with all excretions, inherently poisonous.
8. The regular ingestion of food is beneficial to the healthy body, but may be deleterious to the sick.	8. The regular ingestion of alcohol is deleterious to the healthy body, but may be beneficial to the sick (through its drug action).

9. The use of foods is followed by no reaction.

10. The use of food is followed by an increase in activity of the muscle cells and brain cells.

11. The use of food is followed by an increase in the excretion of carbonic acid.

12. The use of food may be followed by accumulation of fat, notwithstanding increased activity.

13. The use of food is followed by a rise in body temperature.

14. The use of food strengthens and steadies the muscles.

15. The use of food makes the brain more active and accurate.

9. The use of alcohol in common with narcotics in general, is followed by a reaction.

10. The use of alcohol is followed by a decrease in the activity of the muscle cells and brain cells.

11. The use of alcohol is followed by a decrease in the excretion of carbonic acid.

12. The use of alcohol is usually followed by an accumulation of fat through decreased activity.

13. The use of alcohol may be followed by a fall in body temperature.

14. The use of alcohol weakens and unsteadies the muscles.

15. The use of alcohol makes the brain less active and accurate.

California State Journal of Medicine, San Francisco

April

- 93 *Value of the Moro Skin Reaction as Compared with Other Methods of Using Tuberculin for Diagnosis in Tuberculosis. M. Rothschild, San Francisco.
- 94 Treatment of Burns. C. J. Teass, Kennett.
- 95 Decapsulation of Kidneys. R. Brown, Santa Barbara.
- 96 Typhoid Fever. E. C. Turner, Sacramento.
- 97 Tuberculins. F. Lengfeld, San Francisco.
- 98 Fee Division. R. Brown, Santa Barbara.
- 99 Medical Milk Commissions and Importance of Pure Milk Supply. W. L. Holt, Santa Barbara.
- 100 Milk Commission of San Francisco County Medical Society. A. B. Spalding, San Francisco.
- 101 Persistent Omphalomesenteric Duct with Accessory Pancreas. W. W. Roblee, Riverside.
- 102 Scrotal Galactocoele. H. I. Weil, San Francisco.

93. The Moro Skin Reaction.—Rothschild, as a result of comparing the Moro skin reaction with other methods of tuberculin diagnosis in tuberculosis, states that it seems advisable to use in all cases that appear suspicious of tuberculosis, first the Moro ointment for diagnostic purposes, because it is quick, free from any disagreeable general symptoms, free from any danger and reliable. If, in a suspicious case, the reaction should be negative, it is advisable to use an injection of tuberculin, either subcutaneously or intravenously—1/10 of a milligram intravenously, or 1/3 of a milligram subcutaneously is sufficient in the majority of cases.

Ohio State Medical Journal, Columbus

April

- 103 Headache from a Neurologic Standpoint. W. B. Laffer, Cleveland.
- 104 Headache of Ocular Origin. R. Sattler, Cincinnati.
- 105 Headache from Nasal Causes. W. W. Pennell, Mt. Vernon.
- 106 Infantile Hypertrophic Stenosis of Pylorus. F. E. Bunts, Cleveland.
- 107 *Achyilia Gastrica, with Mechanical Methods of Treatment. J. M. Rector, Columbus.
- 108 Traumatic Hematoma of Scrotum. A. B. Walker, Canton.
- 109 Ulcer of Stomach in an Infant of Six Months. Probably Syphilitic. R. M. Shannon, Piqua.

107. Achyilia Gastrica.—Rector says that most of the acquired cases of achyilia gastrica can be relieved, and the gastric secretions restored. If the motor function of the stomach muscle can be restored, the position of the organ and the state of the glandular structures will cause no trouble, so long as the intestinal digestion is undisturbed. The relation of the secreting glands to the muscular structures proves the hopelessness of medicinal treatment. The medicine and thickened mucosa can be removed by the use of tincture of green soap or a solution of silver nitrate. The slight sloughing will reopen the obstructed ducts. Medicines given in the usual way will not reach the mucosa when it is covered with a layer of mucine, and they are useless to counteract fermentation and bacterial growth.

Mississippi Medical Monthly, Vicksburg

April

- 110 Colles' Fracture. J. T. Walker, Brookhaven.
- 111 Treatment of Compound Fractures. C. H. Rice, Summit.
- 112 Puerperal Infections. O. N. Arrington, Brookhaven.
- 113 Membranous Laryngitis. W. H. Ramsay, Darbun.

Journal of Cutaneous Diseases, New York

April

- 114 *Cancer en Cuirasse. S. Pollitzer, New York.
- 115 Cheilitis Glandularis Apostematosa. R. L. Sutton, Kansas City, Mo.
- 116 *Treatment of Verrucae Plantares. R. L. Sutton, Kansas City, Mo.

117 **Blastomycosis Cutis:** Report of Two Cases, One Becoming Systemic, with Fatal Termination. E. H. Shields, Cincinnati, O.

114. **Cancer en Cuirasse.**—This is a descriptive paper, in which Ponitzer reports a case, sums up the clinical features, and illustrates it with microscopic sections. The most striking feature of the sections was the comparatively slight evidence of change in the cutis, in which the clinical symptoms would have led one to expect profound changes.

116. **Plantar Warts.**—Sutton reports freezing these troublesome lesions with carbon dioxide snow, with excellent results. A pencil of the substance, a trifle greater in diameter than the depression or "well" in the growth, is applied to the center of the wart for from 30 to 60 seconds, with considerable pressure. The tissues are then allowed to thaw and a second application of 30 seconds' duration is made, a slightly smaller stick being used. A simple dusting powder, such as boric acid, is all the after-treatment required.

Journal Tennessee State Medical Association, Nashville

April

118 Some Accidents and Complications of Ovarian Cyst. W. D. Haggard, Nashville.

119 Why Spectacles Are Worn. G. C. Savage, Nashville.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

April 3

- 1 *Treatment of Gastric Ulcer by Immediate Feeding. E. I. Spriggs.
- 2 *Early Diagnosis and Treatment of Cancer of the Stomach. W. H. White.
- 3 *Idem. B. G. A. Moynihan.
- 4 Surgical Treatment of Gastric Ulcer, its Complications and Sequelæ. J. Marnoch.
- 5 Intussusception Containing a Sarcoma of the Intestinal Wall: Enterectomy. Recovery. C. A. S. Ridout and J. F. Palser.
- 6 *The Embryologic and Pathologic Significance of Certain Folds in the Anal Canal. J. B. Dawson.

1. **Immediate Feeding in Gastric Ulcer.**—Spriggs recapitulates the essential features of the Lenhartz treatment as follows: (1) Complete rest in bed for four weeks; (2) feeding the patient from the beginning of the attack with small quantities of beaten-up-eggs and milk, the quantities being increased daily; (3) the application of an icebag to the epigastrium; (4) adding to the dietary, boiled rice, mince, and other semi-solid and solid foods after the first week; (5) the administration of bismuth and iron in suitable form. Of these, the complete rest in bed, the bismuth and iron, and the icebag are commonly advised by physicians; but the plan of allowing food to be put into the ulcerated stomach at the beginning of treatment is contrary to the usual practice. He discusses the subject and reviews published cases and statistics, arriving at the following conclusions:

1. The Lenhartz method of treatment is not more dangerous than treatment by nutrient and saline enemata followed by a graduated milk diet. In these particular cases the recurrence of hemorrhage was less frequent, and there were no deaths.
2. The pain suffered by the patient in the course of treatment is less on the Lenhartz diet.
3. The diet gives far more nourishment than can be introduced into the body by nutrient enemata, and is, therefore, more desirable in patients who have frequently been for a long time in a state of semi-starvation, or have suffered a loss of blood, or both.
4. In patients treated by this method rectal injections may be entirely avoided. This is an advantage in a hospital, and a still greater advantage in treating patients at their homes, where rectal injections are not only regarded as extremely unpleasant, but are seldom efficiently administered.

2. **The Early Diagnosis of Gastric Cancer.**—White says that even if the growth can not be removed or secondary deposits render removal undesirable, much benefit often follows gastro-enterostomy if there are signs of pyloric obstruction. He thinks it clear that there are no means of infallibly diagnosing cancer of the stomach in its early stages. But he believes that by carefully considering a number of points we might sometimes arrive at a diagnosis earlier than we do and therefore give the patient the chance of excision which, generally speaking, can do good only in the early stages.

3. **Cancer of the Stomach.**—Moynihan insists on the importance of the anamnesis, discusses the symptoms of cancer, the relation of gastric ulcer to cancer, exploratory incision, indications for operation, and describes briefly the technic thereof. He sums up his knowledge of cancer of the stomach, as revealed to him by a study of the cases which have come to him for surgical treatment, in the following propositions:

1. Cases of cancer of the stomach when examined in regard to previous history may be divided into three groups: (a) Cases, generally acute, in which the symptoms appear suddenly and progress rapidly; the whole history may be confined within a space of four to nine months; (b) cases in which there is a history of one ancient attack, or of repeated attacks, due undoubtedly to the presence of a chronic gastric ulcer; (c) cases in which there is no previous history of gastric ulcer; in some of them a condition of "ulcus carcinomatosum" may be found.

2. The acute cases are not seldom ushered in by an attack of severe hematemesis, with or without melena. It is possible that such copious bleeding is dependent on multiple hemorrhagic erosions.

3. The importance of a history of repeated attacks of indigestion, alike in their origin, course, and termination, can not be exaggerated. Such attacks are due to a chronic gastric ulcer, which at last becomes malignant.

4. Cancer of the stomach, in so far as it depends on a chronic ulcer for its origin, is a preventable disorder. It is probable that two-thirds of the whole number of cases may be so classed.

5. The final attack is distinguished from former attacks by its lingering character, its rebellion against the treatment, dietetic and medicinal, which has proved helpful before, but chiefly by the presence of a profound distaste for food, anemia, and a progressive loss of weight.

6. The chemical examination of stomach contents is of little or no value in so far as early diagnosis of carcinoma of the stomach is concerned. In the later cases, when a possible diagnosis of malignancy is made on the clinical evidence, the results of repeated chemical analyses of the stomach contents afford additional evidence of considerable value.

7. Surgical treatment should be advised in all cases of stomach disorder in which there is obstruction, stasis, or tumor, and in all cases of chronic ulcer; in this way early cases of carcinoma will be found, and radical treatment will be possible.

8. There are no symptoms, and there are no signs which, individually or collectively, permit of an assured diagnosis of cancer of the stomach, in an early stage. In cases in which there is grave suspicion an exploratory operation should be advised. Such operations should be practiced to enable a diagnosis to be made in an early stage, not to confirm an almost certain diagnosis in a hopeless stage.

6. **Folds in the Anal Canal.**—Dawson draws the following conclusions from an investigation of sagittal sections made by him through the pelves of six fetuses of ages varying from two months to full time:

1. There are commonly valve-like folds uniting the upper ends of the columns of Morgagni.
2. These folds seem to represent remnants of the embryonic proctodeal membrane.
3. The epithelium of the proctodeum may be prolonged upward, under these valves, into the rectal submucosa, and these prolongations may persist as diverticula in the adult.
4. When such diverticula are present it is an indication that the merging into one of rectum and proctodeum has been imperfect to a greater or lesser extent.

The pathologic significance of these upper valves and the sinuses beneath consists in:

1. The occurrence of inflammation in and around them which produces symptoms of painful defecation.
2. The possible part they may play in the formation of submucous fistula.
3. The possibility that the occurrence of inflammatory mischief at a spot where there is partially buried epithelium may originate carcinoma of the squamous variety, such as is found in the anal canal.

Lancet, London

April 3

- 7 *Some Disorders of Cerebral Circulation and Their Clinical Manifestations. A. E. Russell.
- 8 Modern Methods of Treatment of Some Common Skin Diseases. J. L. Bunch.
- 9 *Clinical Value of the Antitryptic Index of the Blood in Tuberculosis. F. L. Golla.
- 10 Spontaneous Cure of Thoracic Aneurism. Sir T. Oliver.
- 11 Amputation Through Hip Joint in which Hemorrhage was Controlled by Intra-peritoneal Compression of the Common Iliac Artery. E. W. Roughton.
- 12 Use of Intra-peritoneal Compression of the Common Iliac Artery During Amputation Through Hip Joint. T. P. Legg.
- 13 Pemphigus in a Nonagenarian; Recovery. J. G. Glover.
- 14 Juxta-Epiphyseal Inflammation of Upper End of Humerus. A. F. Messiter.
- 15 Graduated Rest in Treatment of Pulmonary Tuberculosis. E. E. Prest.

7. **Disorders of the Cerebral Circulation.**—In the first Goulstonian lecture Russell maintains that the fundamental factor underlying both the ordinary faint and the epileptic fit is cerebral anemia. It follows further that the difference between the two is one of degree rather than of kind. We have some clinical evidence of this in the suddenness of some

faints, and in the conversion of faints into fits. The difference he holds to be due to the difference in the rate of development of the cerebral anemia. In the ordinary faint the cerebral circulation slowly diminishes *pari passu* with the falling blood pressure. In the fit there is a sudden cessation of the circulation. Similarly the circulation slowly improves in the faint; in the fit it probably returns with greater rapidity. The fainting proclivity is commonly associated with other evidences of cardiac and vasomotor instability and an exciting cause is usually present. In epilepsy, the ordinary evidences of vasomotor instability are not so obvious and exciting causes are commonly absent. It must suffice for the present to bring forward the above evidence of cardiac inhibition, however scanty, and to examine to what extent it will explain the various manifestations of epilepsy.

9. The Antitryptic Power of Blood Serum in Tuberculosis.—Golla describes experiments to ascertain the antitryptic power of blood serum in tuberculosis, using the method of electrical conductivity, as introduced by Victor Henri and familiarized by the work of Bayliss. The results of using this method have been encouraging. He describes the actual technic employed. While the rise of antitryptic index in the cases experimented on has no direct relation to the temperature from a clinical viewpoint, a consideration of the cases gave the impression that the antitryptic index furnishes some indication of the degree of tuberculous intoxication. In the majority of cases that showed signs of progressive improvement, the antitryptic index was normal or showed only a slight rise. In those cases in which the disease was progressing, the index was much raised. The material so far at disposal does not permit the discussion of the significance of the variations of the antitryptic power of the blood.

Medical Press and Circular, London

March 31

- 16 Treatment of Local Tuberculous Lesions by Injections. A. Calot.
- 17 Death Certification and Coroners' Inquests. F. W. Lowndes.
- 18 Prognosis in Valvular Disease of the Heart. Sir J. F. H. Broadbent.

Clinical Journal, London

March 31

- 19 *Venesection. W. H. White.
- 20 Gastric Hemorrhage. C. Bolton.
- 21 Hemorrhage into the Testicle. V. W. Low.

19. Venesection.—White refers to the fact that the reaction against bleeding which occurred in the fifties, became so exaggerated that 20 or 30 years ago a student might have passed through his entire career without seeing bleeding performed. He quotes many instances to illustrate the abuse of the remedy which occasioned its neglect. The great majority of patients for whom bleeding is desirable are people in whom the right side of the heart is overgorged with blood, most frequently as a result of mitral disease, bronchitis or pneumonia. He quotes Wilks' graphic description of the patient whose condition calls for bleeding as follows:

You see your patient sitting up in bed, the face, tongue and lips blue or purple, and the jugular veins starting out of the neck and often visibly pulsating, the heart beating quickly and perhaps a tricuspid bruit, indicating the gorged right heart and obstructed lungs; the veins in the body are full to bursting.

As to quantity there is no rule, but the average amount is from 10 to 15 ounces. The common idea that a small pulse is a contraindication he negatives by pointing out that such small pulse is to be interpreted as signifying that so much blood is dammed back in the venous system that not much of it gets on to the arterial system, so that the pulse is naturally small. Consequently, he regards it as a good reason for bleeding. A cardiac patient who does not respond to digitalis when in the livid condition will respond to it after bleeding. White describes instances of various conditions in which bleeding gave prompt and noticeable relief.

Archives des Maladies du Cœur, etc., Paris

March, II, No. 3, pp. 129-192

- 22 Independence of the Globulins in respect to the Blood Corpuscles. (Indépendance des globulins par rapport aux globules rouges et blancs du sang.) C. Achard and Aynaud.

- 23 *Operative Treatment of Thrombosis of Brachial Artery. (Artérite et thrombose de l'artère humérale: artériotomie, etc.) P. Lecène.
- 24 *Recurring "Writer's Cramp." (Claudication intermittente du bras d'origine artérielle.) M. de Lépinau.
- 25 Lipoma in the Heart. (Lipome du cœur.) H. Verliac and L. Morel.

23. Operative Treatment of Thrombosis of the Brachial Artery.—In the case reported by Lecène he was able to make a longitudinal incision in the artery, to extract the thrombus and suture the vessel again without reducing the size of the vessel and without inducing any signs of inflammation at the point. The patient was a man of 55, tuberculous, with signs of impending gangrene from arteritis. He succumbed not long after the operation to pneumonia and the progressing gangrene; the artery had filled up again with a clot. The case shows that operations for thrombosis from arteritis have little prospects of success. The trouble is the result of simultaneous obliteration not only of the main trunk, but of the collateral arteries by the progressive thrombosis—the arteritis is scarcely ever restricted to a single vessel or segment of one, and the surgeon is disarmed in the presence of these multiple small obliterations.

24. Intermittent Claudication of the Arm.—Lépinau's case demonstrates that obliterating endarteritis is not the only cause liable to induce this disturbance. It may result from aortic or intracardiac disturbances interfering with the blood supply to the arm.

Bulletin de l'Académie de Médecine, Paris

March 16, LXXIII, No. 11, pp. 323-346

- 26 *Precipitation Reaction in Epidemic Cerebrospinal Meningitis. H. Vincent.
- 27 Official Medical Assistance for the Natives in French West Africa. M. Kermorgant.

26. Precipitation Reaction in Epidemic Cerebrospinal Meningitis.—Vincent states that the cerebrospinal fluid gives a precipitating reaction when added to an agglutinating serum in case of meningococcus meningitis. This precipitation test was constantly negative in the controls and constantly positive in the fluid from patients with epidemic meningitis in which the intracellular diplococcus could be cultivated from the fluid. He centrifugates the cerebrospinal fluid until the supernatant fluid is entirely clear and then adds one drop of specific agglutinating serum to 100 and to 50 drops of the fluid. After eight or twelve hours the fluid in the tube becomes turbid in the meningococcus cases, while it remains limpid in all cases of meningitis of other origin and in health.

Presse Médicale, Paris

March 24, XVII, No. 24, pp. 209-216

- 28 *Reactions on the Part of the Meninges in Various Infections in the Young. (Réactions méningées dans les érythèmes chez les enfants.) Hutinel.
- 29 *Causes of Orthostatic Oliguria and Albuminuria. G. H. Lemoine and G. Linossier.
- 30 *Ferrier's Antiacid and Alkaline Treatment of Tuberculosis. (Le tuberculeux et la méthode "recalcifiante" de P. Ferrier.) M. Letulle.

March 27, No. 25, pp. 217-224

- 31 Immediate and Remote Results of Arteriovenous Sutures. A. Frouin.
- 32 Boxers' Fracture. (Fracture de l'extrémité inférieure du premier métacarpien.) O. Lenoir.
- 33 Antipneumococcus Powder. (Une immunisine antipneumococcique.) L. Bertrand.

28. Reaction of the Meninges in Various Infections.—Hutinel has examined the cerebrospinal fluid in 72 children with various rashes, scarlet fever, measles, etc. The findings show that the meninges usually react to various infections and intoxications, at least in the young, and that there is nothing specific in these reactions unless they are very pronounced.

29. The Causes of Orthostatic Albuminuria.—Lemoine explains this condition as the result of sluggishness in the circulation through the kidneys in the standing position plus some functional insufficiency in the organ, some special sensitiveness, congenital or acquired, to injurious influences.

30. Antiacid and Alkaline Treatment of Tuberculosis.—Letulle used to be very skeptical in regard to Ferrier's views in respect to tuberculosis, namely, that the tubercle bacillus could not thrive except in an acid medium. Ferrier founded a

free dispensary two years ago to apply his views in practice, and Letulle has been visiting the dispensary from time to time to watch the progress of the patients under this "realeifying method." He has thus supervised a large number of the tuberculous of both sexes, belonging to the working classes, and states that all have shown marked improvement, while they have been able to keep at work, free from fever, and proud of being able to earn their living. All this is in marked contrast to the dreary aspect of the tuberculous in institutions, who are awaiting the end in idleness and silent gloom. Ferrier's principle is to prevent the introduction and formation of acid in the organism. Wine and spirits of all kinds are forbidden, also butter, fat and sauces, lemons, oranges, old cheese and vinegar in any form. The meals should not be close together, and not more than 200 or 300 gm. of bread should be taken during the day, and 300 or 400 gm. of meat; the main reliance should be potatoes, carrots, peas, eggs, fresh fish and cooked fruits, with a glass of alkaline mineral water early in the morning and half an hour before each meal. The patient also takes three powders during the day, each containing 0.5 gm. calcium carbonate; 0.2 gm. tribasic calcium phosphate, and 0.05 gm. calcined magnesia. He is also told to work according as he has strength and to sleep as well as he can. Letulle adds that the future will decide the therapeutic value of this realeifying method, but so far it has rendered great services both to the individual and to the community.

Revue de Chirurgie, Paris

March, XXIX, No. 3, pp. 445-659

- 34 *Primary Tuberculosis of Ileocecal Glands. (Tuberculose primitive des ganglions iléo-cæcaux.) Vautrin.
35 *Cancer of the Bile Ducts. E. Quénu.
36 *Ulcer Developing in Hour-Glass Stomach. (Ulcère en évolution et biloculation gastrique.) X. Delore and H. Alamartine.
37 Surgical Forms of Tuberculosis of the Stomach. (Les formes chirurgicales de la tuberculose de l'estomac.) R. Leriche and E. Mouriquand. Commenced in No. 2.
38 *Subphrenic Abscess. (Les abcès sous-phréniques.) P. Guibal. Commenced in No. 1.

34. **Primary Tuberculosis of Ileocecal Glands.**—Vautrin discusses the tuberculous process in the mesenteric lymph nodes at the junction of the small intestine and cecum. It is more common in the young and especially in girls. He describes three cases to sustain his assumption that this may be a primary tuberculous process, the anatomic conditions favoring localization of the tuberculous process in this region with or without involvement of the glands. The abundance of follicles here and the network of absorbing lymphatics make this one of the most important lymphoid organs. The condition here resembles those in the tonsil and the long sojourn of matters at this point promotes infection. Many children are supposed to have torpid appendicitis from the disturbance caused by a tuberculous process here. This is proved by the long duration of the disturbance and the slow subsidence of the swollen ileocecal glands. From this point the bacilli may invade any part of the organism.

35. **Cancer of the Bile Passages.**—Quénu discusses the benefits from palliative operations and the causes for postoperative disturbances. He is convinced that fatalities are more frequent than generally supposed after a simple exploratory laparotomy for chronic jaundice with cancer. Cotte collected from the literature 91 cases of cancer of the biliary passages, and in 6 intervention was limited to an exploratory laparotomy; in the 5 cases in which the outcome is known the patients all succumbed to collapse or hemorrhage, and Quénu himself has had 2 fatalities from this cause and knows of 3 others. In 31 cases in which cholecystostomy was done, 9 of the patients survived, the others succumbing to hemorrhage before the eighteenth day. The survivals were only for a few weeks up to six months. Quénu has done this operation himself twice and one patient succumbed to hemorrhages in two weeks, the other to cachexia in four weeks. In 28 cases in which an anastomosis was made, 19 of the patients died and the others survived for a few months. Study of this material shows that severe jaundice or cholemic hemorrhage is observed only with retention of bile, and secondary hemorrhage

does not occur after operations for cancer of the biliary passages unless there has been retention of bile. Retention from gallstones is seldom followed by secondary hemorrhage. The hemorrhagic complication is evidently the result of the association of cancer and jaundice, and seldom occurs without the two. The addition of the cancer toxin to the toxic products which should have been eliminated by the liver and kidney renders the organism more susceptible to the action of the anesthetic. Chloroform, besides, has a direct hemolytic action. It may be advisable to make a preliminary injection of calcium chlorid or of serum, as Weil suggests, to ward off this tendency to secondary hemorrhage.

36. **Hour-Glass Stomach Due to Developing Ulcer.**—Delore and Alamartine report three cases in which the stomach became constricted under the influence of a rebellious ulcer, and they compare with these cases 27 others which they have found in the literature. The characteristic lesions, the symptomatology and the treatment required by this variety of hour-glass stomach form a pathologic entity which the clinician should know as well as the surgeon. The troubles develop in two phases; first, a long period of digestive disturbances, with ups and downs. The symptomatic triad includes pain, vomiting and, more rarely, hematemesis. The dyspepsia becomes more and more intense and the general condition grows worse until surgical treatment seems to be the only resource. This hour-glass stomach due to rebellious ulcer is fatal without surgical treatment. Perforation of the stomach is the most frequent outcome, but it may occur without symptoms owing to the adherence of the stomach wall to some adjacent organ. The necessity for gastrectomy is beyond question, and they discuss the best technique, with illustrations, citing statistics to show that mediogastric resection is the best means of cure. The mortality in 15 such operations has been only 6.6 per cent. The two patients on whom they have operated in this way are completely and radically cured to date, six and eighteen months since the operation. Late statistics show a mortality of 14 per cent. in 35 cases and confirm the durable benefits derived.

38. **Subphrenic Abscess.**—Guibal concludes this long illustrated article on the various forms of subphrenic abscess with a discussion of the indications and results of operative treatment. One of the main causes for failure is the non-recognition of the abscess when conditions are found otherwise deemed sufficient to explain the symptoms observed. Jeannel made a gastroenterostomy to remedy disturbances from stenosis of the pylorus, overlooking a subphrenic abscess which was found at autopsy in the angle between the ribs and the ensiform process. In two or three other cases a pleural effusion and appendicitis abscess were drained, but autopsy revealed an unsuspected subphrenic abscess of gastric origin. The most common cause of postoperative fatalities is the existence of a second, unsuspected abscess; such mistakes are not always avoidable. Tuberculous abscesses generally prove fatal. Other causes of death were coinciding myocarditis, peritonitis by propagation or perforation of the abscess and suppurative cachexia three months after the operation. Roehard has reported a case of fatal intoxication from mercuric chlorid used to rinse out the cavity repeatedly. The multiplicity and extent of the lesions encountered in so many cases emphasize the importance of early diagnosis and prompt surgical intervention in every case of subphrenic abscess.

Semaine Médicale, Paris

March 31, XXIX, No. 14, pp. 145-156

- 39 *The Work of the Imperial Cancer Research Fund. R. de Bovis.

39. **The Imperial Cancer Research Fund.**—de Bovis reviews what has been accomplished by the British Cancer Research Fund workers, asserting that while the results of the experiments undertaken do not seem to have materially advanced our knowledge of cancer, yet they constitute on the whole immense progress. They entirely sweep away the theories more or less generally accepted in regard to contagion, parasitic origin and toxicity of cancer, and they show conclusively

that the solution of the cancer problem must be sought in the cancer cell itself. The British workers have merely worked along lines already outlined, but they have accumulated such evidence as to establish certain facts beyond question.

Beiträge zur Klinik der Tuberkulose, Würzburg

XII, No. 2, pp. 195-258. Last indexed April 3, p. 1148

- 40 Roentgen-Ray Examination in Diagnosis of Incipient Pulmonary Tuberculosis. (Zur Roentgendiagnostik bei Anfangstuberkulose der Lungen.) H. Rieder.
- 41 Percutaneous or Salve Reaction to Tuberculin. (Klinische Ergebnisse der perkutanen Tuberkulinreaktion.) E. Moro.

Berliner klinische Wochenschrift

March 15, XLVI, No. 11, pp. 477-528

- 42 "Vein Anesthesia." (Ueber Venenanästhesie.) A. Bier.
- 43 Hematoma of the Vulva as Obstacle to Delivery. (Haematoma vulvae als Geburtshindernis.) W. Liepmann.
- 44 Allowing Patients to Get up Early after Laparotomies. (Das frühe Aufstehen nach Laparotomien.) C. Hartog.
- 45 Treatment of Placenta Praevia. G. Binder.
- 46 Mechanism of Action of Atoxyl. (Wirkungsmechanismus des Atoxyls.) W. Roehl.
- 47 Criticism of Bauer's Modification of Serodiagnosis of Syphilis. (Einige Bedenken gegen die Bauer'sche Modifikation der Wassermann'schen Reaktion.) C. Stern.
- 48 Latest Methods of Treating Gonorrheal Epididymitis and Favorable Results of Puncture Treatment. (Die neueren Behandlungsmethoden der Epididymitis gonorrhoeica.) Ernst. Commenced in No. 10.

42. **Vein Anesthesia.**—Bier has named this new method *Venenanästhesie*, and here devotes eleven pages to a complete description of the technic and of his experiences to date with it in 134 operations, including 10 amputations, 37 resections of joints, 12 sutures of bones, 7 extirpations of varices, etc. The results were perfect in 115 cases and satisfactory in 14, only 5 of the total 134 patients experiencing pain. The technic was described in *THE JOURNAL*, Sept. 19, 1908, page 1040. The general circulation is cut off from the region to be operated on and then the tissues are anesthetized in this region by diffusion of the anesthetic which is injected into a vein. The anesthetic may be removed afterward by flushing the vessels in the region with salt solution, if this is deemed necessary. No other method of local anesthesia gives such perfect results, he declares. The constriction is applied with two elastic bands, the same band used for constriction hy-



"Vein anesthesia." Anesthetic is injected at +.

peremia, six feet long for the arm and ten feet for the thigh, wound around to cover a broad area above and below the field to be operated on, after the blood has first been expelled from the limb by winding from below upward. It is necessary to refrain from causing the least pain at the outset, as this destroys the confidence of the patient. He would refrain from the vein anesthesia in case of senile or diabetic gangrene, but otherwise thinks this technic has no more contraindications than any form of local anesthesia. He has never witnessed any untoward by-effects of any consequence, and concludes his communication with the assertion that this form of anesthesia represents a great advance; it throws all other methods of local anesthesia into the shade, he believes, although he advocates it only when the ordinary measures for local anesthesia are inadequate. Its special field is for major operations on the limbs. It supplants spinal anesthesia for all such operations, as it is simpler and harmless.

Deutsche medizinische Wochenschrift, Berlin

March 25, XXXV, No. 12, pp. 513-560

- 49 *Treatment of Malaria. Nocht.
- 50 *Germ Causing Trachoma. (Erreger des Trachoms.) Greeff.
- 51 Purin Metabolism in Gout and Negative Results of Attempts to Influence it. (Purinstoffwechsel bei Gichtkranken.) E. Frank and C. Funk.
- 52 Quantitative Test for Trypsin. (Nachweis von Trypsin und eine einfache Methode zu dessen quantitativer Bestimmung.) R. Goldschmidt.

- 53 *Treatment of Lung and Heart Affections by Application of Heat. (Behandlung von Lungen- und Herzkrankheiten mit Hitze.) A. Heermann.
- 54 Experimental Research on Mode of Action of Hyperemic Treatment. (Zur Wirkungsweise der Bierschen Stauungstherapie.) Y. Shimodaira.
- 55 *Isolated Stiffening of Abdominal Wall after Traumatic Injury of Spine. (Isolierte Bauchdeckenspannung nach Wirbeltrauma.) E. W. Baum.
- 56 *Torsion of the Omentum and Incarceration of Hernia. (Netztorsion und Brucheinklemmung.) A. Brüning.
- 57 Treatment of Backward Dislocation of the Ulna and its Complications. (Die Luxatio cubiti posterior in ihrer Beziehung zur Fraktur des Processus coronoideus ulnae, zum Mechanismus der Reposition und zur Frage der Knochenneubildung im Ellbogengelenk.) Schwenk.
- 58 *Duodenal Ulcers in Infantile Marasmus. (Duodenalgeschwüre bei der Pädatrie.) H. F. J. Helmholz.

49. **Treatment of Malaria.**—Nocht comments on the confirmation of clinical experiences by the discoveries of Schaudinn in regard to the sexual development of the malaria parasites, especially his findings in respect to the adult forms which are not affected by quinin. These forms are the long sought latent form between the initial infection and relapses. Nocht presents arguments and describes clinical experiences to prove the superiority of giving quinin in fractional doses instead of in one single dose. He follows the usual rule of giving 1 gm. (15 grains) every day for six or seven days, then suspending it for three days, then for four days, five days and finally seven days, with three quinin days of 1 gm. each interposed between each interval. More of the quinin is utilized when the 1 gm. is given in five doses during the day. He commences as soon as the diagnosis is made, without regard to impending or existing attacks, and his experience with 376 patients treated on these principles has been extremely favorable. He warns that errors in diet, chilling and over-exertion should be carefully avoided as liable to bring on relapses.

50. **The Causal Agent of Trachoma.**—Greeff's announcement of the discovery of the micro-organism responsible for trachoma was mentioned in *THE JOURNAL*, April 10, page 1192. He here describes the staining technic with illustrations of the germ. See also Berlin Letter, page 1345.

53. **Treatment of Lung and Heart Affections with Heat.**—Heermann reports success in treatment of heart and lung affections by applying heat to the legs to draw the blood away from the congested area. In more than 100 cases the favorable effect of this measure was striking. No effort was made to induce sweating, although this sometimes occurred. He has entirely discarded local application of ice, finding that heat answers the same purpose much more effectually. In one of the cases described a patient with croupous pneumonia was extremely cyanotic, with much dyspnea, respiration 56 and pulse 150. Application of a hot-air apparatus over the lower part of the body up to the stomach caused a remarkable change for the better. In the course of an hour all the congested blood had been drawn away from the upper part of the body. The procedure was repeated at night and the same effect was observed. The benefit on the heart action was so regular and so striking in the lung affections that it encouraged him to try the same measure in congestion from cardiac defects, and he states that it was wonderful to see the improvement in extreme cyanosis with failing cardiac compensation, no effect being obtained from digitalis; all the symptoms of congestion subsided in a few minutes after the hot-air apparatus had been applied to the lower part of the body. Of course the benefit is only symptomatic, but he found that local application of heat to the heart has the same effect in rheumatic troubles as application of heat to the joints. In one obstinate case of pericarditis without effusion he applied a hot water bottle to the heart with immediate improvement. He now applies local heat to the heart in all rheumatic affections once or twice a day for from ten to forty-five minutes at a time. In no instance has there been the least intolerance on the part of the heart; and the relief was so marked that the patients clamored for it. The ice bag should not be used until local heat has been given a trial as it is impossible to determine beforehand the cases in which cold or hot applications will give most relief.

55. Isolated Rigidity of the Abdominal Walls After Injury of the Spine.—Baum reports three cases to show that the persisting tetanic stiffening of the abdominal wall which has hitherto been regarded as pathognomonic of abdominal contusion may also occur as an isolated symptom of injury of the spine. It is evidently a sign of irritation of the nerve roots.

56. Torsion of the Omentum.—Brüning remarks that torsion of the omentum with incarceration of an inguinal hernia on the right side is generally diagnosed as appendicitis. It requires immediate operative intervention and the possibility of this combination should be borne in mind.

58. Duodenal Ulcer in Infants.—Helmholz states that he found duodenal ulcers in eight out of sixteen cadavers of infants who had succumbed to marasmus. He describes these cases in detail with a ninth that terminated in recovery.

Medizinische Klinik, Berlin

March 21, V, No. 12, pp. 419-456

- 59 *Importance of Serodiagnosis of Syphilis for Treatment. (Bedeutung der Wassermannschen Serumreaktion für die Diagnostik und Behandlung der Syphilis.) R. Ledermann.
- 60 *Non-Tuberculous Catarrhal Apical Processes. (Ueber nicht-tuberkulöse Spitzenkatarrhe.) A. Wolff-Eisner.
- 61 Pathologic Anatomy of Hematogenous Diffuse Affections of the Kidneys. (Ueber den gegenwärtigen Stand unserer Kenntnis der hämatogenen diffusen Nierenerkrankungen nach pathologisch-anatomischen Gesichtspunkten.) L. Jores.
- 62 *Mechanism and Treatment of Flatfoot Disturbances. (Ueber Insuffizienz des Fusses.) W. Becker.
- 63 Treatment of Eczema with Ultraviolet Rays. (Erfolge der Behandlung des Ekzems Mittels Uviollicht.) O. Scheuer.
- 64 Dietetics for Children. (Zur Diätetik des Kindesalters.) H. Lungwitz.
- 65 Balneologic Treatment of Respiratory Affections and Relations between Affections of the Upper and Lower Air Passages. (Behandlung von Krankheiten der Luftwege in Bad Salzbrunn unter besonderer Berücksichtigung der Beziehungen der Krankheiten der oberen zu denen der tieferen Wege.) G. Kelbling.
- 66 Pathogenesis of Chronic Habitual Constipation. (Zur Pathogenese der chronischen habituellen Obstipation.) Z. Tomaszewski.

59. Serodiagnosis of Syphilis.—Ledermann has applied the Wassermann test in 550 cases as he relates in detail; 81 per cent. of patients in the latent stage gave a positive reaction when they had not taken treatment, while the reaction was positive in 73.7 per cent. of those who had had one or two courses of mercurial treatment, and in only 47.7 per cent. of those who had taken four or more courses. In syphilis of the nervous system positive reactions were obtained in 100 per cent., although the interval ranged from four to twenty-two years. Only 3 of the 107 patients in this class had had from three to five courses of mercurial treatment, and the majority were untreated. The reaction was positive in 16 children with inherited syphilis. He calls attention to the vast importance of this serum test in balneologic practice. Patients apply to the physician at the health resort with a vague history and obscure array of symptoms, suggesting liver and heart affections and nervous disturbances. The physician may suspect syphilis but nothing tangible can be discovered. Serodiagnosis here fills a long-felt want and the health resorts should be equipped for the serum test as an indispensable preliminary to effectual treatment of the visiting hosts.

60. Non-tuberculous Apical Catarrh.—Wolff-Eisner presents evidence to prove the existence of catarrhal affections of the apices of non-tuberculous nature, which may be differentiated by the local tuberculin reactions. He believes that many patients now under treatment in sanatoria for the tuberculous are in reality suffering merely from a non-tuberculous apical catarrh. The affection may be the result of direct inhalation of dust or of atelectasis from production of a vacuum during inspiration from obstruction in the nose from some valve-like displacement of the walls. In a case described, a young man was sent to the sanatorium as he said he had night sweats and presented the physical signs of an apical process. But the ocular, cutaneous and subcutaneous tuberculin tests gave negative findings and his stay in the sanatorium exposed him to true tuberculous infection. The case teaches that the biologic and the clinical methods are not antagonistic but supplement each other, throwing unwonted light on diagnosis, prognosis and treatment. When tuberculosis is unmistakable, negative findings with the tuberculin tests indicate an abso-

lutely unfavorable prognosis, but negative findings in these cases of a simple catarrhal process in the apices should reassure as to the absence of tuberculosis. In 12 other cases he was able to affirm with certainty the absence of tuberculosis from the negative findings in patients suffering from tuberculophobia. He adds that the sickness insurance companies go to great expense to cure persons of tuberculosis who are not tuberculous at all, as could be readily learned by systematic tuberculin tests.

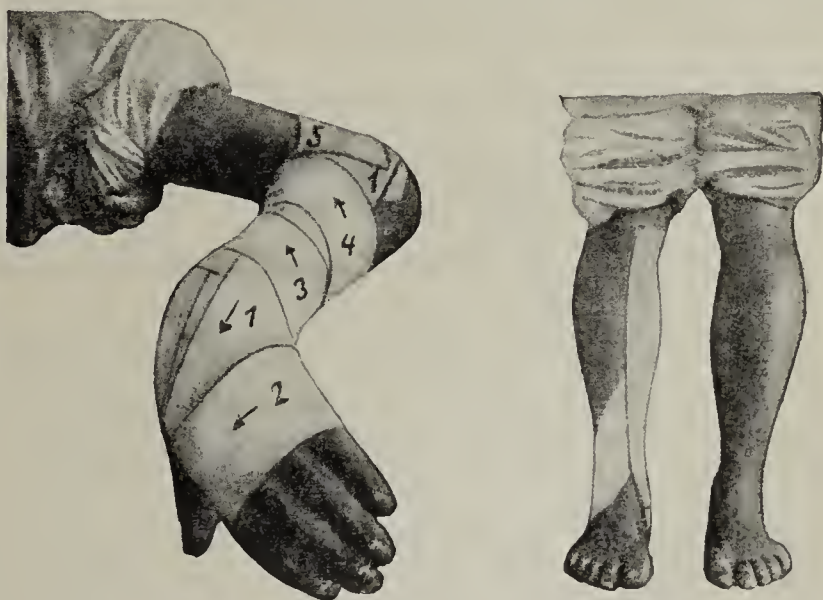
62. Flatfoot Disturbances.—Becker states that the three cardinal symptoms of insufficiency of the foot are that long standing is more painful than walking; that a firm, tight shoe gives more relief than an easy house shoe, and that the pains vanish as one sits or lies and sleep is undisturbed. Treatment should aim to support the foot from below, on the inside, thus preventing the weight of the body from pulling on the ligaments and the bones. The metatarsus should be held as still as possible and the insufficiency of the muscles should be combated by massage and orthopedic exercises. He describes the application of these principles to the various forms of insufficiency of the foot, and urges that the feet of children should not be deformed by incorrectly made shoes; the inside of the sole should be on a straight line from the heel to the tip of the great toe.

Münchener medizinische Wochenschrift

March 25, LVI, No. 12, pp. 593-640

- 67 *Treatment of Fractures. (Behandlung der Knochenbrüche.) E. Lexer.
- 68 Causes of Failure of Antidiphtheria Serum. (Weshalb versagt das Behringsche Diphtherie-Heilserum in gewissen Fällen?) A. Uffenheimer.
- 69 *Sterile Serous Pleural Effusions with Empyema in the Pleura and Abscess in the Lung. (Sterile seröse Pleuraergüsse bei Pleuraempyemen und Lungenabszessen.) H. Königer.
- 70 *Simple Method of Determining Diastolic Blood Pressure. (Eine Bestimmungsmethode des diastolischen Blutdruckes.) Ehret.
- 71 *Roentgen-Ray Treatment of Cancer of Upper Air Passages. (Zur Röntgenbehandlung maligner Neoplasmen der oberen Luftwege.) Mader.
- 72 Lavage of the Stomach. (Technik und Indikationen des Magenausspülens.) Agéron.
- 73 Favorable Influence of Arsenic Mineral Waters on Growth of Rabbits. (Einfluss der Dürkheimer Maxquelle auf das Wachstum von Kaninchen.) C. Bachem.
- 74 Wire-Strengthened Gauze for Plaster Casts. (Eine neue Drahtgipsbinde.) Lunckenbein.
- 75 *Bradycardia and the Adams-Stokes Syndrome. L. Huismans. Commenced in No. 11.

67. Treatment of Fractures.—Lexer treats certain fractures of the radius by bandaging them in overcorrection in such a way that certain movements are still possible although the



movements which might undo the reduction of the fracture are absolutely prevented. He gives an illustration of his method of bandaging as applied in more than 100 cases of typical fracture of the radius. It avoids all the disadvantages of the immobilizing bandage as also those of no bandage at all. The patient is unable to make either active or passive movements which might dislocate the reduced stumps and yet he can move his fingers freely and also to a slight extent his wrist. The simple flannel or adhesive plaster bandage must be taken off every two days and the parts massaged by the

physician and given a warm bath. After the first week a simple spica is all that is necessary, and by the end of the second week no further treatment is required. The physician should inspect the arm every second day. He has applied this principle of immobilization without splint or plaster while retaining the possibility of certain active movements in twenty cases of fracture of the malleolus. The rapid anatomic and functional healing should encourage others to try this method. He thinks that it deserves to rank with extension, operative restoration of continuity and removable casts as a typical method of treating certain forms of fracture.

69. Sterile Effusion in the Pleura with Suppuration in the Vicinity.—Königer relates some experiences in which a putrid abscess in the lung or pleural empyema coexisted with a sterile serous effusion in the pleura. Not being in communication with the infectious focus, the effusion is free from bacteria but it contains numerous polynuclear leucocytes and lymphocytes, the majority being of normal shape. The effusion in these cases is probably a reaction to the influence of toxins from the suppurating process. The physician should not be misled by this harmless appearing effusion, to which Königer applies the name of "cloak effusion"—*Mantelergüsse*—as it surrounds and cloaks the main lesion. Microscopic examination will suggest the presence of an infectious focus in the vicinity from the cell content of the fluid.

70. Measurement of the Diastolic Blood Pressure.—Ehret applies the Reeklinghausen cuff and as the pressure in the cuff is slowly increased he palpates the radial artery at the lower edge of the cuff. The pulse shows a sudden change as the cuff induces complete collapse of the wall of the artery underneath. Numerous tests have shown that the pressure of the cuff under which the phenomenon occurs corresponds to the diastolic pressure.

71. Roentgen Treatment of the Upper Air Passages.—Mader has devised a Roentgen lamp which is introduced into the throat to expose to the direct action of the rays malignant neoplasms of the upper air passages. He reports satisfactory results from this treatment in several cases. One patient with carcinoma in the lower part of the pharynx was cured by this treatment over three years ago, but lately showed signs of recurrence which yielded again to the same form of Roentgen treatment.

75. The Adams-Stokes Syndrome.—Huisman is convinced that the brain cortex plays an important part in the Adams-Stokes syndrome. In one of the eight cases described attacks are brought on by emotional stress.

Wiener klinische Wochenschrift, Vienna

March 25, XXII, No. 12, pp. 402-438

- 76 *Organotherapy of Tendency to Cataract. (Lassen sich Linsentrübungen organtherapeutisch beeinflussen?) R. Possek.
77 *Diagnostic Importance of Examination of Blood in Trichinosis. F. Gaisböck.
78 Transition of Night Frights into Epileptic Seizures. (Übergänge des nächtlichen Aufschreckens zum epileptischen Anfall.) R. Stern.

76. Organotherapy of Cataract.—Possek has been experimenting with rabbits, injecting naphthalin to induce the production of cataract and then controlling this tendency by injection of lens substance. The results confirm Römer's announcement in regard to the possibility of specific organotherapy of incipient senile cataract.

77. Diagnosis of Trichinosis.—Gaisböck reports two cases and expatiates on the importance of increased numbers of eosinophilic cells in the circulating blood as characteristic of trichinosis. This, alone, is sufficient, he asserts, to differentiate the disease, and he is convinced that if the blood were examined more systematically many cases of obscure typhoid and rheumatoid pains in the muscles would be traced to trichinae.

Zentralblatt für Chirurgie, Leipsic

March 20, XXVI, No. 12, pp. 409-448

- 79 *Habitual Dislocation of the Shoulder. (Zur Frage der habituellen Schultergelenksluxation.) R. Wilmanns.
80 Sterilizer for Laparotomy Materials. (Apparat zur Sterilisierung und Erwärmung bzw. Warmhaltung von Tupfern, Kompressen usw. bei Laparotomien.) E. Szili.

79. Habitual Dislocation of the Shoulder.—Wilmanns comments on Dahlgren's report of his success in 25 cases in which the capsule was taken up to make it smaller. Wilmanns' own experience has shown that this making the capsule smaller answers the desired purpose completely, even when there are other complications. Complete and permanent success follows the simple measure of reducing the size of the capsule and it is unnecessary to act directly on the other parts of the joint.

Zentralblatt für Gynäkologie, Leipsic

March 20, XXXIII, No. 12, pp. 409-440

- 81 *Suprarenal Preparations in Cesarean Section. (Adrenalin beim Kaiserschnitt.) M. Bogdanovics.
82 Technic of Dilatation with Tents. (Zur Technik der Laminariadilatation.) O. Piering.
83 Cicatricial Stenosis of the Vagina after Protracted Spontaneous Delivery. (Fall von schwerster Vaginalstenose nach Spontanpartus.) S. Samson.

81. Suprarenal Preparations in Cesarean Section.—Bogdanovics reports a case to show the influence of direct injection of a small amount of a suprarenal preparation in the wall of the uterus. As the uterus becomes anemic it begins at once to contract vigorously. This striking action of suprarenal preparations on the puerperal uterus is exceptionally useful in Cesarean section when labor has not begun or is abnormally weak.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

ATLAS OF THE EXTERNAL DISEASES OF THE EYE, Including a brief Treatise on the Pathology and Treatment. By Prof. Dr. O. Haab of Zürich. Edition 3, Edited by G. E. de Schweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania and Ophthalmic Surgeon to the University Hospital. Cloth. Pp. 244, with illustrations. Price, \$3. Philadelphia: W. B. Saunders Co., 1909.

CAUSES OF DISABILITY AS APPLIED UNDER ACCIDENT AND HEALTH INSURANCE POLICIES. Designed for the Use of Insurance and Fraternal Examiners, General Practitioners and Students of Medicine, Attorneys and Corporations. By Charles Hamilton Harbaugh, M.D., Medical Director American Assurance Company. Cloth. Pp. 650, with illustrations. Price, \$6. New York: The Spectator Co.

ATLAS AND EPITOME OF OPHTHALMOSCOPY AND OPHTHALMOSCOPIC DIAGNOSIS. By Prof. Dr. O. Haab of Zürich. Second American Edition. Edited by G. E. de Schweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania and Ophthalmic Surgeon to the University Hospital. Cloth. Pp. 94, with illustrations. Price, \$3. Philadelphia: W. B. Saunders Co., 1909.

REPORT OF COMMITTEE ON SOCIAL BETTERMENT. By George M. Kober, M.D., LL.D., Chairman of Committee. Professor of Hygiene, School of Medicine, Georgetown University. Paper. Pp. 281. Published by The President's Homes Commission, Washington, D. C., 1908.

REPORT OF COMMITTEE ON IMPROVEMENT OF EXISTING HOUSES AND ELIMINATION OF INSANITARY AND ALLEY HOUSES. By William H. Baldwin, Chairman of the Committee. Paper. Pp. 23. President's Homes Commission, Washington, D. C., 1908.

INFANT FEEDING. By J. S. Fowler, M.D., F.R.C.P., Physician to the Royal Hospital for Sick Children, Edinburgh. Cloth. Pp. 230, with illustrations. Price, \$1.50. New York: Oxford University Press, 1909.

STUDIES FROM THE DEPARTMENT OF PATHOLOGY OF THE COLLEGE OF PHYSICIANS AND SURGEONS, COLUMBIA UNIVERSITY, NEW YORK. Vol. XI. For the Collegiate Years 1906-1908. Reprints. Paper.

STATE HOSPITALS BULLETIN, NEW YORK. Published Four Times a Year by Authority of the State Commission in Lunacy. Vol. I. March, 1909. No. 4. Paper. Pp. 702. Single copies, 50 cents.

TWENTY-THIRD ANNUAL REPORT OF THE OHIO DAIRY AND FOOD COMMISSIONER for the Fiscal Year Ending Nov. 15, 1908. Renick W. Dunlap, Commissioner. Paper. Pp. 84. Springfield, Ohio, 1909.

THE PROPHYLAXIS OF YELLOW FEVER. By G. M. Guiteras. Yellow Fever Institute, Bulletin No. 17. February, 1909. Paper. Pp. 14. Washington: Government Printing Office, 1909.

ANNUAL REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR 1907. Boards. Pp. 146. Calcutta: Superintendent Government Printing, India, 1908.

CONTRIBUTIONS FROM THE WILLIAM PEPPER LABORATORY OF CLINICAL MEDICINE. Reprints. No. 6. University of Pennsylvania, Philadelphia, 1907-08. Paper.

THE STORY OF TWO MOSQUITOES. By Charles Cummins Hunt, M.D. Cloth. Pp. 29, with illustrations. Price, 75 cents. [Dixon, Ill.: L. E. Edwards.]

TWENTY-SECOND ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF OHIO. 1907. Cloth. Pp. 375. Columbus, Ohio.

NINETEENTH ANNUAL REPORT EASTERN INDIANA HOSPITAL FOR THE INSANE, 1908. Paper. Pp. 82.

BIENNIAL REPORT OF THE NEBRASKA ORTHOPEDIC HOSPITAL, LINCOLN, 1908. Paper. Pp. 21.

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Original Articles

THE INSANE DIATHESIS

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Early recognition of temperamental qualities which in the child, youth or adolescent indicate the existence of a predisposition to insanity, may enable the family practitioner, by timely and judicious advice, to counteract or correct the defect and so happily lessen the liability to, or entirely prevent the development of, the disease.

The phenomena which the condition presents may be readily accounted for by assuming a defect or defects in the neurons, the cell units of which the nervous system is composed, of such a nature that stimuli from the environment may not properly reach the neurons of the cortex, or, having done so, the impression made there may not be sufficiently deep and lasting or, in other words, well elaborated. Keeping in mind this conception of neuronal defect, it is easy to understand how certain individuals fail to respond to educational influences, moral or intellectual or both.

The subject of this diathesis may present palpable somatic abnormalities suggestive of similar imperfections in the nervous system. In the order of their importance, when they exist, the most prominent of these relate to deformities of the external ear, cranial and facial asymmetries, anomalies of the jaws, teeth and sexual organs. It should not be forgotten, however, that individuals are frequently seen who present conspicuous signs of bodily stigmata, as commonly accepted, but who at the same time never show any of the mental characteristics of the insane temperament; and, conversely, well-marked instances of alien mental proclivities are occasionally found associated with rare physical perfection. I refer now, of course, only to congenital cases; the condition last named might not be unexpected when the diathesis had been acquired.

It follows, then, that, notwithstanding the significance of bodily blemishes, a diagnosis can only be arrived at finally by an appeal to existing mental characteristics, which may be conveniently, but perhaps somewhat inaccurately, described as symptoms.

Hereditary influence is generally distinct and frequently conspicuous. That marked physical perfection may be inherited from one parent while the characteristic mental peculiarities descend from the other is undoubtedly true, though exceptional. In a majority of instances, the inheritance is mainly maternal, and it is similar; that is to say, similar peculiarities are transmitted.

It is convenient to separate the symptoms arbitrarily into those (a) occurring in childhood, that is, from birth to puberty; (b) in youth, embracing the age from puberty to 18, and finally (c) adolescence, extending from the eighteenth to the twenty-sixth year. In infancy and early childhood there is probably very frequently an increased liability to convulsions, especially at teething or at the onset of exanthemata, and later to such disorders as enuresis, night terrors, chorea and habit spasms. Sexual precocity, sometimes leading to early masturbation, is also occasionally seen during this period.

Passing on to the mental characteristics, the field is such a broad one that I can scarcely hope to do more than mention a few salient features, without attempting a definite description or discussion of them. Among the earliest manifestations may be mentioned violent outbreaks of temper, persistent insubordination to well-directed measures of discipline, extreme jealousy, selfishness and cruelty. Such a child usually—not always—falls behind his grade in school, his most conspicuous failure being in mathematics. His memory may be good, he may imitate well and, indeed, analyze somewhat, but he can rarely construct, except by imitation, nor can he coordinate well. Though he may be exceptionally brilliant even in mathematics, his extreme selfishness renders him antisocial, playmates do not respect his wishes to his liking; contact with them, therefore, irritates him.¹ He becomes solitary and left without resource; he is much in the society of his elders and very commonly forms a reading habit, which is often erroneously regarded as evidence of mental superiority.

At the approach or with the advent of puberty these characteristics may greatly diminish, or, if only moderately marked, entirely disappear. On the other hand, they may become accentuated at this time and, indeed, new ones may be added. These latter usually revolve about the sexual sphere, so that the subject suffers more or less emotional disturbance when confronted by a person of the opposite sex. This may take the form of nothing more definite than general nervousness, tremor, blushing or clammy perspiration, or it may provoke some strong morbid impulse. Cases presenting this last-named feature are liable to develop into the various sorts of "Jacks" now and then obtaining notoriety as rippers, huggers, kissers and clippers in the case of young men or elopements with the family coachman on the part of girls; but it is not with the developed disease that I am now concerned.

1. I have in mind a girl of 14, belonging to a distinguished family, who easily led her class in mathematics, but would steal from the rooms of her schoolmates so that she had to be kept at home. Happily this was one of the few cases of the kind that responded well to treatment, as in the course of about a year the morbid tendency had permanently vanished. Nevertheless, I should regard any stress as parturition through which this patient might have to pass with increased anxiety.

Occasionally there is a morbid attraction toward individuals of the same sex—homosexuality—leading to mutual masturbation or other unnatural sexual practices. Morbid jealousy, leading to homicide, may find its origin here. If the individual has had religious instruction during childhood, there is likely to be some morbid manifestation of religious feeling which is almost invariably associated with more or less sexual disturbance. A severe régime accompanied by a desire to adhere literally to biblical and pastoral injunctions, if persevered in, is suggestive. Penance is rather welcomed and likely to be overdone. Extreme selfishness and egotism, however, are prominent in this no less than in the various forms of licentiousness and debauchery as manifested in the subjects of this temperament.

In adolescence, the innumerable responsibilities of an independent existence have to be met. Many new propositions and problems are presented. Solution of the problem of perpetual motion is often sanguinely attempted by these subjects and tenaciously persevered in through failure to comprehend Newton's law of gravitation. Revolutions of various kinds are advocated very earnestly through inability properly to understand and to estimate the influences which have brought about and perpetuate the conditions complained of. By reason of the noise they make these people occasionally attract attention to an evil which has survived the causes making it a necessity, when abler minds introduce a practical remedy. This diathetic individual is often hailed as a reformer, while, as a matter of fact, he is never anything more than an agitator. He has no constructive talent; he can demolish and sometimes even analyze superficially. He never works out a reformation by himself. This psychopathic or diathetic agitator is always earnest and sincere; he is frequently manipulated, however without suspecting it, by the professional agitator, who is invariably a hypocrite. They both pose as reformers and the indiscriminating public often accepts and applauds them as such.

The ego is always relatively stupendous, even in those who shrink from social contact. They are forced into retirement, they maintain, through the objectionable qualities of other people. Intolerant of criticism, the companionship of the domestic animals suits them best and they not infrequently come to believe that there is a peculiarly intimate understanding between themselves and their pets. I knew one of these individuals to assert seriously that he was positive horses and dogs had souls, but was not yet quite decided as to cats.

These individuals who continue refractory to well-directed measures of discipline readily fall into the criminal (by defect) class when age releases them from parental restraint, and thus their retrograde tendencies are vastly accelerated. All types are liable to drift into paranoia—chronic delusional insanity or monomania—in which the delusional state usually consists largely of an exaggeration of previous personal peculiarities. The reformer proposes to replace a monarchy with a republic; the recluse absolutely refuses to be seen by any one; he is tormented by the mysterious machinations of enemies, darkens his room and insists on having his food passed in to him; the inventor discovers new and mysterious forces; the sexual pervert finally yields to his impulses, removes a woman's shoe by force and escapes with it, clips the hanging braid from a girl's head, or kills a woman and mutilates her genitals; the homosexual pervert kills some one in a fit of

jealousy, and so on. They are all likewise more than ordinarily liable to attacks of acute insanity developing from a relatively slight cause and from which recovery is often incomplete.

If Maudsley's admirable working definition of insanity be accepted, however—"a disease of the brain causing a change of thinking, feeling and acting, of such a nature as to incapacitate the individual from supporting the ordinary relations of life"—then only a very small minority of those who present unmistakable signs of the insane temperament, as above described, ever actually become insane. They are commonly spoken of as odd, queer, eccentric or even as cranks. These peculiarities constitute no part of genius though they are occasionally associated with brilliant talents.

It is a matter of common observation that under favorable circumstances, or sometimes even in spite of unfavorable circumstances these characteristics may greatly diminish or entirely disappear. The person is said to outgrow them. Influences which stimulate and strengthen the natural tendency to overcome these defects may, therefore, fairly be regarded as measures of treatment. The essential indications to be met are, as far as possible, to promote the health of the neurons and to provide them with such exercises as is best calculated to develop in them a normal degree of potential activity. The former object will obviously depend on general hygienic measures, which need not be discussed here. The means that must be used to accomplish the second object are mainly educational, moral and disciplinal. To decide on the proper application of these forces to individual cases is not always easy, but to secure it even when the indications are obvious is often impossible. In childhood, the first requisite to this end is obedience. When, however, this element of government is once firmly established it should be used temperately and kindly. Short, perfectly prepared lessons, frequent reviews, liberal diversion, patience, perseverance and consistency on the part of guardians and teachers are a few of the leading elements of successful management. How frequently it happens that a child who has long been regarded as well-nigh incorrigible quickly and permanently becomes a model pupil on the advent of a new teacher.

Unfortunately, as the condition is so strongly marked by heredity the home influences are likely to aggravate rather than to improve it, so especially in early childhood we are often unable to suggest any other practical means of relief, both because it is difficult and appears cruel to separate a child of tender years from home and family, and because it is not always easy to find a place for him where all desirable influences will surely reach him. A well-regulated boarding school offers the best solution of the problem. There inevitable contact with a variety of other children and moral discipline are in constant operation, and these are all forces of the utmost importance, not only to the children of this diathesis but to normal children. To be sure, that peculiar bond of tenderness and affection naturally existing between mother and child, and whose value when occurring between normal individuals can not be overestimated, has to be yielded; but, under the circumstances hypothecated, this may not be a very weighty concession.

In youth, the influences recommended for childhood should be continued and especially an extra effort should be made to develop the judgment. The person should be encouraged or even frequently compelled to

act on his own responsibility. This he will always attempt to shirk, and the fond parent will almost invariably finally, if not at first, accept his excuses. Particularly youths of this temperament should not be forced to comply with some arbitrary parental conception as to their life work. This ought to be decided late and only after a careful scrutiny of their talents and tendencies. It is in these cases, if not indeed, in all cases properly a problem of adolescence.

Unfortunately, many individuals with this temperament are impelled by undue activity and a weak judgment into speculative enterprises, which of course, exposes them more than anything else to the liability of the development of their latent malady. Practically, it is not nearly so difficult to decide on an occupation or course in life that would be desirable for this or that individual, as it is to secure it for him.

The marriage of two young people of this temperament furnishes some of the darkest chapters of domestic discord and disaster ever written. When they have once fallen in love, however, the mischief has been done, for they can rarely be persuaded even to postpone their nuptials, while violent and forcible measures of interference, even if effective, are liable to precipitate the development of insanity. Unless by strategy he can offer some plausible suggestion that would involve separation and delay, the physician must observe with patient composure the early scenes of a drama, apparently merry enough, but which he knows full well is likely only too soon to be fraught with passages of the most pitiful pathos and perhaps even tragedy.

100 State Street.

CARCINOMA OF THE BOWEL AND OF THE APPENDIX IN THE YOUNG *

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In no part of the body is the onset of cancer more insidious than in the bowel. As it is a local disease at first and becomes disseminated later on, an essential for successful treatment is early diagnosis, and anything tending to aid in this respect is of great practical advantage to the surgeon. It was formerly thought that carcinoma of all structures occurred in middle or later life, and a strong point in the differential diagnosis between carcinoma and an inflammatory mass, or a benign growth, has been the age of the patient. If the age were 40 years or more the chances seemed to favor cancer; under 40 years the likelihood of carcinoma apparently decreased with decreasing years, till its occurrence in childhood has been looked on as a pathologic curiosity.

Recent reports, however, seem to show that carcinoma of the bowel, and particularly of the appendix, is met with in the young more frequently than was formerly supposed. During the past year there has been a large amount of literature on cancer of the appendix. In most cases reported one is struck by the youth of the patient. Thus, Harte¹ collected reports of 92 cases of carcinoma of the appendix and finds 4 cases in patients under 10 years of age, 13 between 10 and 20 years of age, and 34 between 20 and 30 years of age. The age

of 4 patients is not given, so of the 88 patients with carcinoma of the appendix whose ages are known, 51 are under 30 years of age. Harte is impressed with this fact and explains it with the statement that "a large percentage of all carcinomatous appendices are found as a result of operations for appendicitis, and most operations of this character are done between the ages of 10 and 40 years." He believes that small foci of cancer may be found in other parts of the intestinal tract if carefully looked for.

If cancer of the appendix be discovered more frequently in the young because the age of the patient operated on for appendicitis is usually under 40, we would expect to find cancer frequently in other organs usually removed in the young for inflammatory conditions. No one has found any large number of carcinomata in the Fallopian tubes, though they are often removed in the young for inflammatory conditions. Probably the largest number of curettements is done during early child-bearing period, and though the scraping may be carefully examined, it is rather rare to find cancer of the uterus under 35 years of age.

The most probable explanation of the occurrence of such a large proportion of cancers of the appendix in the young is that it is due to the peculiar character of the appendix. Carcinoma is a malignant tumor of epithelial origin, and sarcoma a malignant tumor of connective tissue origin. We know that connective tissue is a simple and hardy tissue, requiring but little nutrition, and is able to overcome difficulties and live under conditions that would be impossible for the more delicate and highly differentiated epithelial tissue. Consequently, we find the connective tissue malignant tumor (sarcoma) can overcome the obstacle of the marked resistance of youth which the epithelial malignant tumor (cancer), being more delicate and a higher order of tissue, can not do. So cancer can gain a foothold, as a rule, only when the resistance of youth has been partly lessened by advancing years; it therefore usually begins in middle life or in old age. The appendix is a vestigial organ; its tissues are often irregularly arranged and its size and blood supply are very variable. It is a rule in anatomy that the more important an organ is the less liable are great variations to occur. A small difference in the size of an important organ like the liver or heart would be most noticeable, yet it is not uncommon to find appendices varying in length from one to six inches. The poor resistance the appendix offers to inflammation is a matter of common knowledge. It is but natural to expect, then, that the resistance to cancer of such an irregular and vestigial organ as the appendix would be very low even in the young, whose other tissues might be fully able to withstand the onslaught of this disease.

The reasons for the occurrence of cancer in the bowel or appendix in the young are these: 1. There may be a weakened resistance in patients whose tissues are prematurely old as a result of hardship or constitutional disease; this condition may, however, be purely local, as in the case of the appendix, in which, on account of the unimportance of this organ to the physiology of the body and its consequent irregular and uncertain structure, resistance to cancer is of a low type. 2. The other reason for the appearance of cancer in the young is that this disease may take a peculiarly virulent form. In other words, a weakened resistance may permit cancer of an average type to gain a foothold, or a cancer of unusual virulence may overcome a normal resistance.

* Read at the Tri-State Medical Association of the Carolinas and Virginia, Charleston, S.C., Feb. 17, 1909.

1. Carcinoma of the Appendix, *Ann. Surg.*, June, 1908.

It has often been noted that cancer in the young is peculiarly likely to be fatal and exceedingly difficult to cure. This is true as a rule, and will readily be appreciated when the cause is either a general loss of resistance on the part of the patient, or the great virulence of the disease, or probably a combination of these two causes. But when that lack of resistance is purely local and due solely to the structural weakness of the appendix, there is no reason to expect any greater degree of malignancy than when cancer develops in persons of more advanced age. On the contrary, if the patient is otherwise of good resistance it seems that the carcinomatous process would be limited by the normal resistance of the other tissues to that portion of the body where the local lack of resistance exists. This is borne out by the fact that, though cancer in the young is usually peculiarly likely to be fatal, in the large majority of cases operations for cancer of the appendix have been followed by no recurrence after a number of years. When cancer originates in an organ whose anatomy and physiology are fixed within definite limits, and whose important functions connect it closely with the rest of the body, it is not a question of a local lack of resistance, but this defect must be shared, to some extent, by other tissues. If the development of the cancer is due to a peculiar virulence of its cells the outlook is grave wherever the cancer originates.



Fig. 1.—Photograph of the tumor before it was opened.

The case reported below is an example of an unusual form of cancer which seems to be prone to originate in the young. It does not proceed with the same rapidity that would be expected from a cancer originating in an important structure in the young. In this instance the origin and course of the cancer may be due to the fact that in the life history of this peculiar cell an unusual change takes place which results in the formation of colloid material within its substance, but not in the surrounding tissues, and after the cell has gained a foothold the colloid which develops as the cell grows lessens its virulence. The tumor, on the whole, presents on palpation and gross inspection the ordinary characteristics of a scirrhous growth, being firm and hard to the touch.

Patient.—Mrs. W. C. W., white, aged 23. Admitted to the hospital Oct. 13, 1906. Discharged, Nov. 15, 1906. Referred by Dr. J. B. Bailey, of Clayville, Va., and Dr. E. W. Gee, of Richmond, Va.

History.—About four weeks before admission to the hospital the patient had been delivered, normally, of a healthy baby. She had suffered with constipation for a number of years. About three days before admission she had severe colicky pains in her abdomen, with absolute obstruction, and gradually increasing tympanites.

First Operation.—A median incision was made. Both large and small intestines were distended. Exploration with the finger disclosed a hard mass involving the lower part of the sigmoid. On account of the great distention, this mass could not be inspected. The patient's condition would not permit of a prolonged operation, so the descending colon was drawn into the wound, fastened with sutures, packed around with gauze, and opened.

She recovered promptly from the operation, discharging large quantities of gas and fecal matter.

Second Operation.—On Oct. 24, 1906, the patient was again operated on under ether, an incision being made in the left rectus, exposing the mass that had been previously felt. It was dissected loose and brought into the wound. The tumor was in the sigmoid, adherent to the broad ligament and abdominal wall, and easily separated. It was two inches in the longitudinal diameter of the bowel and about one inch thick. The tumor replaced the wall of the bowel and almost occluded the lumen. It was hard and firm, the line

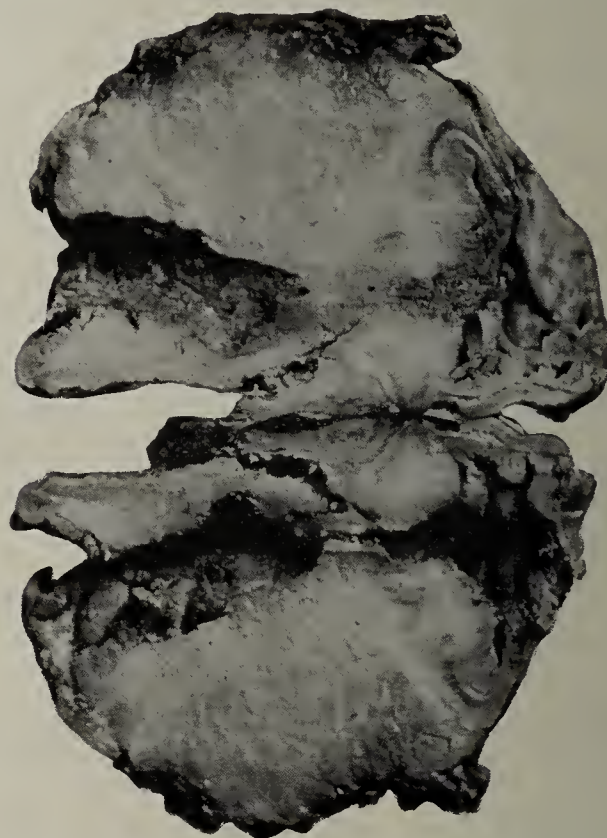


Fig. 2.—Photograph of the tumor from the lumen of the bowel after section.

of demarcation with healthy bowel wall at each end was sharp but irregular, and the mucous membrane seemed to be preserved on the lumen side of the tumor. Above and below the tumor, in the wall of the sigmoid, were small nodules that looked like tubercles, pin-head size. Similar nodules were scattered over the mesentery and the peritoneum of the broad ligament. Because the mass was thought tuberculous, on account of the apparently tuberculous nodules and the age of the patient, it was excised. The irregularity of the bowel ends and its vascularity made it advisable to insert two rows of sutures. The inner row of chromic catgut in a round needle secured all bleeding points and approximated the bowel ends. Outside of this was placed a continuous right-angled suture of silk penetrating all coats. Through a stab wound drainage was carried down to the site of the operation and the wound was closed.

The patient made an uneventful recovery. The artificial anus gradually closed without any further operation. A section of the specimen showed that practically all of the bowel wall except the mucous membrane had been destroyed by the growth, which was thick and firm. The caliber of the intestine at this point had been reduced to about the size of a uterine probe. The immediate cause of the acute obstruction was the absolute blocking of this narrow canal by a clove. The patient left the hospital thirty-three days after admission in good condition and rapidly improved in health and weight. For

ten months she did well, but in August, 1907, further symptoms of obstruction developed.

Third operation.—Sept. 20, 1907, she was readmitted to the hospital and again operated on. As had been anticipated, there was recurrence, not only in the bowel wall, but on the parietal peritoneum and all the adjacent tissues. Nodules were scattered along the whole length of the descending colon. It was impossible to excise the neoplasm, so the upper part of the descending colon was brought into the wound and a colostomy performed.

The patient left the hospital after three weeks and returned to her home. She gradually failed and died about three months later.

Microscopic Report.—The essential cell of the neoplasm was one with which I was unacquainted, so the specimen was sent for examination and report to Dr. Joseph Bloodgood, of Baltimore, to whom I am indebted, not only for the following report, but for the photomicrographs which show strikingly the peculiar cell of this growth:

"Section from one of the nodules. There is the dense zone of fibrous tissue, with a zone of tumor tissue to one side, but on the other side of the zone of fibrous tissue

power some cells may be seen to resemble, in a general way, a section of the eye, the clear portion corresponding to the cavity of the eyeball and the eccentric displaced nucleus the lens and cornea. Of course, it will be appreciated that if the cell happens to be cut in this direction the nucleus will be found as described. Those cells whose nuclei appear to be in the center probably have an eccentric nucleus, but, the cell being cut in a different axis, it looks as though the nucleus were central. This appearance is frequently encountered in a spindle-celled tumor when, instead of the cell being cut longitudinally it is cut transversely, which makes the section of the spindle cell look like a round cell.

Aside from its pathologic feature, this case brings to our attention the possibility of cancer of the bowel originating in the young and shows that when dealing with neoplasms of the large intestine we should not exclude carcinoma because of the youth of the patient. As regards prognosis, when cancer in the young is not due to a lack of general resistance in an important organ or to a peculiar virulence of the disease, but



Fig. 3.—Photomicrograph of a characteristic field of the neoplasm herewith reported.

there are irregular areas of tumor cells. The morphology of the cell and its alveolar arrangement is better shown in the smaller areas than in the larger. The cell is of the cuboidal epithelial type of unusual morphology; the majority of the cells contain a material which does not take the stain—colloid or mucoid material. When the cell is entirely filled the nucleus is pushed to one side and becomes eccentric; there are areas where the entire cell is replaced by this material. Even in the larger tumor there is a definite, but thin fibrous-tissue mesh-work enclosing larger and smaller areas of cells. I believe the tumor is a carcinoma with colloid degeneration, a tumor which produces multiple metastases, and has been observed in young people. It can be called carcinoma cubocellulare colloides."

The cell appears edematous. Its nucleus is nearly always eccentric, which seems to be due to the fact that the colloid material accumulated in some portions of the cell more rapidly than in others and so shoved the nucleus to the periphery. On examining the photomicrograph of the higher

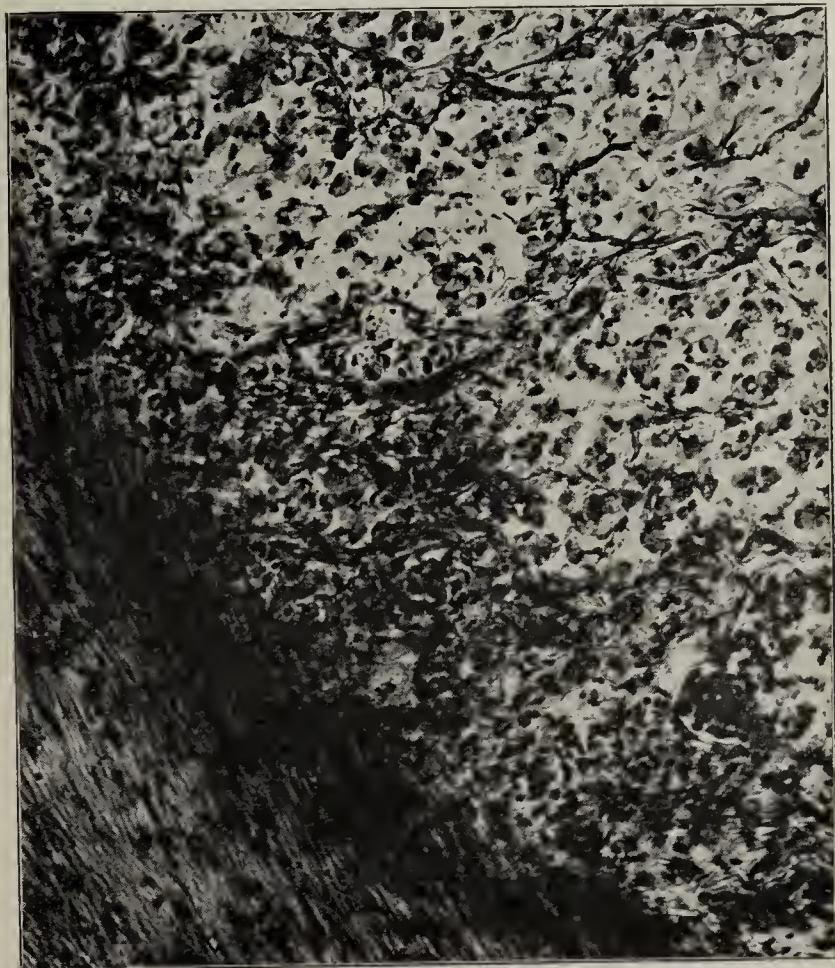


Fig. 4.—Photomicrograph of the same field as shown in Figure 3 under higher power. Note eccentric nuclei and dense connective tissue.

merely to the lowered resistance of a vestigial organ, as the appendix, the chances of permanent cure after excision are excellent.

303 West Grace Street.

Human Intestinal Juice.—Salzberg-Faifel (*Arch. internat. de physiol.*, 1908, vi, 81). From a human intestinal fistula relatively normal and pure intestinal juice was obtained. The intestinal juice was markedly alkaline. The alkalinity was due to the presence of alkaline phosphates rather than to carbonates. Expressed in terms of sodium carbonate the alkalinity ranged from 0.35, 0.46 to 0.56 per cent. The average specific gravity was 1.014; the average freezing point, 0.615 degrees C. On chemical analysis no sugars or other substances which reduce Fehling's solution were present. There were no coagulable proteids. The juice was 98.2 per cent. water and 1.02 per cent. non-combustible material. It contained the following ferments: Erepsin, amylase, invertin and enterokinase.

EROSIVE AND GANGRENOUS BALANITIS

THE FOURTH VENEREAL DISEASE

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AND

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Simple balano-posthitis, due to retained smegma, the secretions of gonorrhea, chancroidal infection and the decomposition of diabetic urine, has long been recognized by the various authors on genitourinary surgery. A specific form of balanitis has been recognized by French authorities for many years and more recently by German authors. The subject seems to have received but slight attention in this country. After a careful survey of the American text-books, including Watson and Cunningham, Keyes and Keyes, Fuller, Taylor, White and Martin, we are unable to find a description of a balanitis due to a specific organism.

At the medical congress in London in 1881 Simon¹ demonstrated a yeast, together with many motile spirochetes, in the secretions from the sulcus coronarius of a diabetic patient.

Bataille and Berdal² in 1889-1891 separated and described a contagious form of balano-posthitis, which they later called *balano-posthite érosive circonée*, and demonstrated its contagiousness experimentally.

Ceillag and Drulle³ found a spirillum in men which was identical with those on the clitoris of women.

In September, 1904, Scherber and Müller⁴ examined fifty cases of balanitis erosiva in Finger's clinic; they were able to isolate a spirillum and a vibrio and to confirm the findings of Bataille and Berdal. The same observers, stimulated by their findings in balanitis erosiva, examined six cases of gangrenous balanitis, and were able to demonstrate the same group of organisms. To those men belongs the distinction of establishing balanitis erosiva circonata and balanitis gangrenosa as a distinct malady, which they called, and, we believe, justly, a fourth venereal disease.

Recently we had under our observation five cases of this specific form of balanitis. Of these we wish to report in detail three case histories.

In presenting this subject we shall have to consider briefly the spirochetel diseases. These include:

1. Recurrent fever.
2. Frambesia tropica.
3. Dourine, a venereal disease of horses.
4. Syphilis.
5. Vincent's angina and other ulcerative diseases of the mouth.
6. Gangrenous processes occurring in various parts of the body, and including the disease under discussion.

The first three diseases, recurrent fever, dourine and frambesia tropica, are of interest to us only inasmuch as they are each due to a specific form of spirochete. Syphilis is now conceded by all to be due to the *Spirochaeta pallida*, whose morphology has been so well described as to need mention only.

The spirochetes found in Vincent's angina, ulcerative stomatitis, noma and other gangrenous processes are so

closely associated with balanitis erosiva or gangrenosa as to merit special discussion.

It has long been known that several forms of spirochete were normally found in the mouth. The following, on account of their intimate relation to our subject, will bear a somewhat detailed description:

1. *The Spirochaeta buccalis of Cohen*.—This organism is 10 to 20 mm. long by 0.5 mm. wide. It often appears threadlike or resembling a whip; the windings are long, the ends are sharp and end in the center of the spiral; they may be ciliated. In the hanging drop they are very refractile and show a bending and snake-like motion. They are very active and vary greatly in size and thickness. In comparison with other forms of the spirochete they are characterized by their greater width. In the body are found at times red nuclear granules.

2. *The Spirochaeta dentium of Koch*.—This spirochete is the smallest and most delicately formed. It usually measures about 4 to 10 mm. in length and is so thin that the breadth is not measurable. Its windings are short and regular. Its elasticity is marked.

This form simulates the *Spirochaeta pallida* somewhat closely. Whether or not these two forms represent varieties of one and the same organism has not been demonstrated.

These organisms have the following features in common:

1. Drying easily kills them.
2. They stain in the cold with the ordinary stains.
3. They are Gram-negative.
4. With the Giemsa stain they are colored bluish-red.
5. They are anaerobic.

Of the spirochetel diseases that occur in the mouth we have Vincent's angina, noma and mercurial stomatitis. In all these conditions the exciting cause seems to be the same.

In Vincent's angina the etiologic factors are a vibrio and a spirochete. This was confirmed by Rauchfus and Plaut in 1893-4. The primary location is usually on the tonsil and edge of the gums and is characterized by the formation of a pseudomembrane which is easily removed, disclosing ulcers. These may become confluent; sometimes they are very superficial. The submaxillary and retromaxillary glands are enlarged, firm, but rarely suppurate. The constitutional symptoms are slight.

Following the exanthematous disease, particularly measles and diphtheria, there occurs at times a gangrenous stomatitis or noma, characterized by extensive gangrene of the cheek, which may extend to the maxillary bones, in most cases being followed by death.

The first symptom to attract attention as a rule is the offensive odor of the breath. On examination a black necrotic spot is seen on the inner surface of the lip or cheek, surrounded by tissues that are intensely swollen and edematous. This rapidly becomes in turn gangrenous and we may have extensive sloughing of the tissues. In the border of the necrotic membrane we find the fusiform bacillus and the spirochete in pure cultures.

Matzenauer⁵ asserts that noma and hospital gangrene are due to the same cause, which is identical with the organism found in Vincent's angina.

1. Simon, O.: Balano-posthomykosis, Tr. Internat. Med. Cong., London, 1881, iii, 132.

2. La balano-posthite érosive circonée, Méd. moderne, 1891, ii, 340.

3. Quoted by Hoffman: Centralbl. f. Bacteriol. u. Parasitenk., 1906, xli, 741.

4. Arch. f. Dermat. u. Syph., lxxvii, 77.

5. Matzenauer, R.: Noma und Nosocomialgangrän, Arch. f. Dermat., 1902, ix, 373; ibid., 1901, iv, 67.

Rona⁶ in 1905 examined three cases of noma following measles. His conclusions are as follows:

Noma begins without exception in gangrenous stomatitis. If the fusiform bacillus and spirochete found in the mouth are etiologic factors in gangrenous stomatitis, since the organisms are found in such abundance in noma, it must be due to the same cause.

Since all these conditions are favored by lowered resistance, which is produced by the exanthematous diseases and the administration of mercury, it is not to be wondered that organisms that are saprophytic can easily become pathogenic.

Lichtwitz,⁷ Sabrazis⁷ and Silberschmidt⁸ found the organism in the antrum of Highmore, Miller⁹ in an alveolar abscess, Pollard¹⁰ in an abscess of the leg.

Perthes,¹¹ Krahn,¹² Ellerman¹³ and Buday¹⁴ found the organisms in the deeper layers of the tissues; Scherber and Müller⁴ found them in the lumen of the vessels, whence they may disseminate and produce a spirochetal septicemia or cause metastatic abscesses. Plantt¹⁵ found the organism in a tonsillar abscess, Raoult and Thierry⁷ in a subtonsillar abscess.

Schmorl¹⁶ demonstrated the organism in abscesses of the liver, spleen and lung, and other observers have found them in abscesses of the brain and appendiceal stump; so we see that there is an abundance of clinical evidence showing the pathogenicity of the organism.

In the preputial sack the moisture and warmth favors the growth and, as these organisms are anaerobic, this location is an ideal culture ground.

DEFINITION

Erosive or gangrenous balanitis is a specific infectious venereal disease, caused by a symbiosis of a vibrio and a spirochete, with local and constitutional symptoms varying with the severity of the infection.

ETIOLOGY

The first predisposing cause is a long tight foreskin, which seems to exclude the air. This must always be present in a greater or less degree, as the organisms which produce this form of balanitis are anaerobic. The second is wetting the labia or penis with saliva. As this form of balanitis is so closely associated with noma, Vincent's angina and mercurial stomatitis in its bacteriology, it is highly probable that the cause of the infection is the same in the two diseases. The third is unnatural sexual relations due to alcoholism.

The existing cause of this form of balanitis, as stated before, is a symbiosis of a vibrio and a spirochete. These two organisms are always found together, but, as the spirochetes are found under normal conditions in the preputial sac, it is highly probable that the pathogenic factor is the vibrio. This organism occurs most abundantly in the deeper layers of the necrotic membrane, while the spirochetes are found less abundantly and in the upper portion of the necrotic membrane. Both have been demonstrated in sections, in the blood vessels and in the inguinal glands.

The vibrio grows under anaerobic conditions on serum agar. It occurs singly or in chains of two or

more individuals. It is a slightly curved rod-shaped organism with pointed ends, measuring from 2 mm. in length to 0.8 mm. in width. It stains by the ordinary dyes and is Gram-positive, although the decolorization must be performed very carefully, as the organism gives up the gentian violet very readily. It is preferable to use 70 per cent. alcohol for this purpose.

The spirochete is Gram-negative, but stains with the ordinary dyes; with the Giemsa stain it takes a bluish red. These organisms are best seen with the dark ground illuminator. They average from 6 to 30 mm. in length and about 0.2 mm. in width. The windings are not acute and the ends of the organism terminate in the center of the spiral. The motion of the organisms is very rapid; they travel from place to place, resembling a small snake; they have a rotary motion, but this is not as pronounced as the backward and forward motion.

PATHOLOGY

The pathologic condition in the milder forms of balanitis erosiva circinata consists simply of a flaking off of the epithelium, leaving small superficial erosions. When the desquamation is more marked there are bright red ulcers, which are surrounded by a small white zone, the remains of the necrotic epithelium.

In the surrounding tissue there is an exudation of leucocytes and plasma. The organisms are found in the secretions from the erosions, but more abundantly in the necrotic membrane. At times they can be demonstrated in the tissues and blood vessels, as shown by Scherber and Müller.

In the more severe grades of infection there is more venous stasis and more exudation, resulting in marked phimosis which predisposes to gangrene. As Scherber and Müller pointed out, the whole condition is one of degree only, but for clinical purposes we may distinguish two types: (1) Balanitis erosiva circinata and (2) balanitis gangrenosa.

SYMPTOMS

Balanitis erosiva circinata commences with the appearance of one or more small grayish white patches in the preputial sack. At the time of the development of the erosion an offensive thin pus is produced, with a characteristic stinking odor and of the usual yellowish-white color; in the more severe cases it becomes grayish-white or grayish-brown.

In the mild cases the foreskin may be easily retracted, but in the more severe forms marked phimosis develops; there is considerable itching and burning behind the glans; the act of urination is practically without pain. In contradistinction to the gangrenous form in this type of the disease, constitutional symptoms are slight or absent.

Generally the sulcus coronarius is the site of predilection; next, the adjacent part of the prepuce, and, last, the glans.

As the process follows no hard and fast lines there are certain deviations from the above picture. The process may be limited to the glans and the inner surface of the foreskin be unaffected. This may be extreme or mild, but is always present on the covered portions of the glans.

The inflammatory condition may remain a purely erosive superficial process and may recover spontaneously, or by the aid of mechanical cleansing and antiseptic treatment.

6. Arch. f. Dermat. u. Syph., lxxiv, 171.

7. Quoted by Feldmann: Wien. klin. Wchnschr., 1906, p. 696.

8. Centralbl. f. Bacteriol., 1901, xxx, 159.

9. Deutsch. med. Wchnschr., 1906, No. 9, 348.

10. Wien. klin. Wchnschr., 1905, xviii, 1236.

11. München. med. Wchnschr., 1902, xlix, 1968.

12. Mitt. a. d. Grenzgeb. d. Med. u. Chir., vi, 202.

13. Centralbl. f. Bacteriol., xxxviii, 383.

14. Beitr. z. path. Anat. u. z. allgem. Path., 1905, xxviii, 255.

15. München. med. Wchnschr., 1907, liv, 340.

16. München. med. Wchnschr., 1907, No. 4, p. 188.

In a number of cases the process does not remain superficial, but develops deep diphtheritic and gangrenous ulcers, which complicate the clinical picture in many ways.

In some cases when one is able to retract the foreskin, one sees after removal of the pus, inside of the erosions small round ulcers varying in size from a pin-head to that of a pea.

These ulcers are moderately deep and on the whole flat and surrounded by a red zone. They are covered by a closely adherent pseudomembrane. In other cases the ulcers are more extensive and deeper, the average size being about that of a dime. These may become confluent and extend over the whole surface of the sulcus or the inner surface of the foreskin.

These balanitic ulcers are of a somewhat irregular outline and are surrounded by a small inflammatory slightly elevated border. This border is clean-cut and the sides somewhat slanting; the base is uneven with a firm yellowish-white or yellowish-brown membrane, which is often edematous and swollen. When more edematous this false membrane appears as a sort of friable slime. Here and there may be hemorrhagic spots which sometimes give rise to hemorrhages from the base of the ulcer.

In the severe forms the constitutional symptoms are more marked. Scherber and Müller noticed in a majority of their cases chills and fever and at the onset vomiting, the average temperature ranges from 100 to 101 degrees. There is marked edema, the external skin being red and edematous; the infiltration may extend to the root of the penis in some cases. The dorsal lymph cord is usually palpable and the inguinal glands are enlarged, but not painful. Unless the phimosis is complete there is no pain on urination; when, however, the urine is not able to pass freely and dilates the preputial sac there is considerable pain.

The discharge is the most profuse in this type of the disease. By gently irrigating the preputial sac with sterile water and wiping the external urethral orifice we can easily exclude a gonorrhea by having the patient urinate in two glasses.

In the majority of cases of balanitis gangrenosa there occurs a marked edema of the subcutaneous tissue of the penis which extends to the root and causes a marked phimosis. If the ulcer is situated on the inner surface of the foreskin it shows externally as a dark, bluish-red area within the surrounding bright red inflammatory tissue. The congestion and abnormal pressure, due to the edema, favor in a marked degree the progress of the disease.

Soon the foreskin over the ulcer becomes black and a complete necrosis of the part occurs. If the ulcer is situated on the glans, in a short time it may produce complete destruction of the same or may even cause an extremely rapid gangrene of the organ which may extend even to the root of the penis, as may be seen by the third case reported in this paper.

The ulcers in these cases are deep, the edges sharp and perpendicular, the base grayish-green or brownish; or it may show hemorrhagic areas or be changed into a black necrotic mass.

The discharge at this time is more offensive than in the erosive type; it has a grayish-yellow or grayish-brown color and at times it may be slightly hemorrhagic, but always with the same characteristic odor. The inguinal glands are enlarged; there is a mild grade of sepsis present. General malaise is marked. There may be

vomiting and the temperature may reach 104. The tenderness of the part is extreme.

DIAGNOSIS

This disease is not so uncommon as one might suspect; in fact we believe that it is very common and is usually mistaken for chancroidal infection. The period of incubation may be the same in the two conditions; but with the characteristic thin yellowish white offensive discharge, in which one finds a vibrio-form organism and a spirochete, the diagnosis should not be difficult.

The ulcers of the two forms of infection may simulate each other very closely. In this form of balanitis when the infection is at all severe there is marked phimosis and considerably more inflammatory reaction. The enlarged inguinal glands are painless, while with a very insignificant chancroidal sore a suppurating bubo is often present.

Chancroidal ulcers are as a rule multiple, but they do not spread with as great rapidity as do the ulcerative forms of balanitis. Whereas the ulcers in both diseases have a clean-cut punched-out appearance, there is greater tendency to undermine the wall in chancroidal infection.

In chancroidal infection we find the Ducrey-Unna bacillus and do not find the vibrio or the spirochete.

On account of the indolent adenopathy that accompanies balanitis erosiva, it must be differentiated from syphilis. In syphilis the period of incubation is longer, although the two infections may occur simultaneously, as reported in one of Scherber's cases. When such a condition exists we may be compelled to defer our diagnosis of syphilis until the period of incubation for syphilis has elapsed; or in case of a mixed lesion the *Spirochaeta pallida* may be easily demonstrated by the dark ground illuminator and is so characteristic as to be easily differentiated from the spirochete of balanitis.

Herpes preputialis always occurs as groups of small insignificant vesicles in which local reaction is mild or entirely absent. This condition simulates somewhat the mild form of balanitis erosiva, but in herpes one fails to find the organisms characteristic of balanitis.

TREATMENT

As a prophylactic measure the practice of circumcision should be encouraged; it is absolutely impossible for balanitis to exist in an individual who has been circumcised.

In many cases in which the condition is mild and the foreskin can easily be retracted all that is necessary is a thorough cleansing, but in the mild ulcerative forms in which there is the slightest evidence of phimosis a dorsal incision should be performed. As the organism of balanitis is anaerobic, this incision serves a two-fold purpose, that is, of admitting air and exposing the diseased parts for treatment.

Previously we were in the habit of burning all these sloughing ulcers in this disease, but such treatment subjects the patient to needless punishment. As we have said above, the organisms of the disease are anaerobic, and as hydrogen peroxid liberates oxygen when in contact with organic matter, it acts as a specific for this form of infection.

We use the ordinary 2 per cent. solution, but in severe cases of gangrenous balanitis, 25 per cent. was painted on the parts.

REPORT OF CASES

CASE 1.—History.—The patient, M. M. W., aged 40, married, denied all previous venereal history. After four days' incubation the patient noticed itching and burning around the glans penis. There were no constitutional symptoms. During the first week this continued as a mild balanitis. The patient was able to retract the foreskin. Treatment was neglected. At the end of the first week conditions suddenly became worse; the foreskin began to swell and the patient was unable to retract it. At this time he presented himself for examination.

Examination.—The general muscular development was good; there were no scars or evidence of previous venereal disease. The penis was swollen and edematous; the edema extended about half way up the shaft of the penis, giving it a pear shape. The skin over the glans portion was red and slightly injected. There was complete phimosis. Exuding from the opening was thin, yellowish-white pus, with a penetrating odor, in which was found a vibrio and a spirochete. There was constant burning pain which was increased on the slightest pressure. There was no urinary pain. The dorsal lymph cord was easily palpable; the inguinal glands were slightly enlarged but not tender. There was no fever.

Treatment.—With a small hand syringe 2 per cent. hydrogen peroxid was injected every hour into the preputial sack. By the second day the foreskin could be retracted, showing numerous small ulcers with sloughing bases with sharp borders, involving the sulcus and the covered portion of the glans.

These healed rapidly under the above treatment.



Balanitis erosiva seu gangrenosa, erosive type.

CASE 2.—History.—The patient, M. W. M., aged 26, Irish, denied syphilis; had had a supposed chancre infection two years previously. Two weeks before presenting himself, the patient had intercourse. After three or four days there was a little itching beneath the prepuce. At the end of six days he presented himself for examination.

Examination.—The temperature and pulse were normal. The general nutrition was good, and there were no signs of latent syphilis. There was a large indurated swelling of the penis. From the preputial orifice exuded a thin, yellowish-white, stinking discharge. This was examined for gonococci but none was present. There was phimosis, but not complete. With dilatation, the little finger was gently passed between the foreskin and the glans. The whole covered portion of the glans and the inner leaf of the foreskin was covered with small ulcers, having necrotic, sloughing bases. Those on the inner leaf extended to the border of the preputial fold; by gently pulling back the foreskin the whole could be plainly seen. The dorsal lymph cord could be plainly felt and the inguinal glands were enlarged but not tender. There were no constitutional symptoms.

Treatment.—The patient was given a wash of hydrogen peroxid, full strength. As he did not return to the clinic, we presume that his condition was satisfactory.

CASE 3.—History.—The patient, A. G. G., aged 43, American, denies all previous venereal history. He had had intercourse nine days previous; at this time, the patient said the prostitute lubricated her labia with saliva. The following day

the glans portion began to swell; there were chilly sensations, no nausea or vomiting. Previous to this time the patient's glans penis was exposed between the preputial fold and the foreskin could be retracted. On account of the rapid phimosis that developed this could not be accomplished later. The local symptoms increased rapidly; by the third day gangrene had set in.

Examination.—When the patient presented himself at the clinic he was well nourished; muscular development good. There was slight septic intoxication. The entire preputial covering for a distance of three inches was one black, necrotic mass. By gentle manipulation the necrotic mass could be drawn away and deep sloughing ulcers, with sharp borders, could be seen extending into the penis above the glans. There was considerable thin, slimy pus, with an odor of necrotic tissue present. Here we were able to find the organism in large numbers. The remaining portion of the penis was dark red and infiltrated the edema extending to the root; the inguinal glands were enlarged. The patient's temperature was 102; malaise was marked.

Treatment.—The patient was sent to the county hospital. Here the necrotic foreskin was cut away, and just above the glans portion, at the site of the inner preputial fold, could be seen two deep ulcers. The glans portion was necrotic. In forty-eight hours the entire glans portion, together with about one and a half inches of the shaft of the penis, sloughed off, leaving a short stump. The patient was treated with irrigations of potassium permanganate three times a day, but the organisms had already invaded the deeper layers and gangrene was unavoidable.

CONCLUSIONS

1. We agree with Scherber and Müller that there is a characteristic clinical picture or form of erosive gangrenous balanitis, which under favorable conditions may cause deep and widespread gangrene, and which is of sufficient importance as to be called a fourth venereal disease.

2. In the erosive and gangrenous types there is regularly found a micro-organism (vibrio), which we consider the cause of the disease. In addition to this organism there is constantly present a Gram-negative spirochete.

3. On account of the rapid development of phimosis with a tendency to produce gangrene, it is imperative that a diagnosis should be made at once.

4. As we have a specific in hydrogen peroxid, its early use will prevent extensive destruction.

5. Whether these organisms are identical with those found in similar processes in the mouth and pharynx is still a question.

103 Randolph Street.

CERVICAL DILATATION

A SIMPLE (AND ORIGINAL?) METHOD WITHOUT LOCAL OR GENERAL ANESTHESIA *

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Dilatation of the cervical canal of the uterus does not yet stand on a thoroughly scientific basis; nor is its mode of action in some cases clear. Probably a mechanical or neuromechanical hypothesis would come nearer answering in most instances, than any other explanation. We all know that its results have not by any means been uniform; sometimes they have been good, oftentimes poor and in other instances absolute failures. Considerable observation has led me to believe

* Read before the Louisville Society of Medicine.

that in many cases failure may be attributed to the fact that the dilatation or the dilatation and subsequent curettage was surgical, with unavoidable surgical traumata, that the operative work was not considered preparatory but was allowed to stand alone as a curative agent without that subsequent treatment for lesions that lay within the pelvis itself, or for those general or nervous disorders that are so often associated with the local conditions that have demanded the intervention of this method.

In these days of aseptic surgery the use of laminaria and tupelo tents has been practically abandoned, because of the likelihood of septic infection, one of, if not, the greatest danger attending dilatation. Many uteri are already infected, and anything that bruises, lacerates or produces pressure, that interferes with the circulation, offers a well-fertilized field of devitalized tissue for microbial action.

Surgical methods to-day occupy the central portion of the stage when it comes to dilating the uterine neck. Few stop to consider or realize the enormous



Illustration of instruments. 1. Bivalve speculum, interior insulated. 2. Massey's flexible electrode. 3. Author's straight intra-uterine electrode. 4. Author's curved intrauterine electrode; note steel cap for holding zinc of electrode. 5. Author's uterine sounds with perforations for attachment of cord. 6. Dilator; note small holes near screw on handle for attachment of bifurcated cord. 7. Tenaculum forceps. 8. Dressing forceps. 9. Bipolar vaginal electrode.

psychic influence of preparation and fear of operation that even the simplest surgical procedure demands. Among the most disagreeable features are the anesthetic and its subsequent effects. Most laymen object to an anesthetic and in fact consider this the greatest handicap to operative procedure, really fearing the knife less than anesthesia.

Surgical dilatation of the cervix uteri requires removal of the patient to a hospital and preparation for at least one or two days before the operation, with a minimum of from two to fourteen days of subsequent confinement to the hospital. This latter is, however, not an unmixed evil, for many of these patients are benefited by the partial rest treatment following the operation.

CURRENTS AND THEIR ACTION

In order to appreciate the *modus operandi* of the method I wish to present, it is necessary to digress somewhat from the main proposition and consider properties of electrical currents and their polar re-action. Electricity has been employed for years in the treatment of various obstructive conditions of human canals, notably those of the uterus and urethra, when these for any reason were closed, distorted or obstructed and I feel sure that it would be more generally used were its varied actions clearly understood by the profession at large.

The currents I employ in dilating the cervical canal of the uterus are the galvanic and faradic; they must be employed with the care, in the manner and in the sequence described in order to secure the results, described in this communication.

Only a passing word can be said of apparatus; the best is none too good. With his electrical apparatus the operator must be as familiar and conversant as the surgeon with his instruments; he must possess a correct technic and be able to so modify and change minor details so as to overcome special or peculiar conditions in any individual case.

Among its many and varied properties, the galvanic current possesses the power to stimulate molecular and osmotic processes, producing an electrolytic action on living tissues, accompanied by a transference of ions. It may be stated here that an ion is an atom carrying an electrical charge. In the method I employ the cathode or negative pole is employed and no other; the positive never. When the galvanic current is turned on slowly and the "flow" between the poles is established a profound hyperemia at the negative pole results, with increased fluidity and a local accumulation and excess of the electro-positively charged ions of hydrogen, sodium, potassium, ammonium and calcium with a resultant formation of their alkaline caustics, the hydrates of hydrogen, sodium, etc. At the same time the current exercises an electro-antiseptic-anesthetic action peculiar to both poles.

With a large pad on the abdomen attached to the anode or positive pole, and with the cathode or negative pole in the uterus, what takes place? The tissues are flooded with blood, rendered more fluid and rapidly softened by the diffusive absorption or accumulation of the alkaline caustics above referred to, this rendering them less resistant and much more easily dilatable. At the same time, those nutritional effects the result of the current *per se*, and its accompanying hyperemia becomes manifest. So much for the galvanic current.

A high tension faradic current, from a secondary coil of exceedingly fine wire, of great length is used. A coil of this character is distinctly sedative, pain-relieving and an obtunder of sensibility. A faradic outfit to possess these qualities must at least have a coil of No. 36 wire (or smaller) of many turns; the ribbon vibrator must "sing" smoothly, evenly and with the least possible variation and be activated by at least four cells or from the "main" current.

METHOD OF APPLICATION

Immediately succeeding a careful local examination and diagnosis, the nurse is instructed to place a large-sized pad on the abdomen attached to the positive pole. I then introduce through a bivalve speculum the small flexible electrode designed by Massey to determine the obstruction, as well as the direction of the canal. This is easily accomplished, as a rule, when five to ten

milliamperes of negative current is allowed to flow. In passing it may be noted that the introduction of the flexible electrode or of my uterine sounds and the dilator is oftentimes much less disagreeable than the introduction of an ordinary uterine sound, because of the resolving influence of negative electrolysis, under which obstructions soften and break down. Having determined that it is necessary to dilate the cervix, the patient is told nothing, but is given a laxative to be taken at night, followed by a brisk saline next morning on arising, such as citrate of magnesia. If it is deemed wise or as an additional precautionary measure an enema may be taken. Prior to leaving home, or in sanatorium practice immediately preceding the dilatation, the patient is given a vaginal douche of hot normal saline. All the instruments are thoroughly and carefully sterilized, and the hands of the operator are cleaned and rendered reasonably sterile.

The nurse places the patient in the dorsal position on the table with a pad on the abdomen; if the position of the uterus is normal or antedisplaced (that is to say ante-version, flexion or lateral displacement) and on the back if retrodisplaced. The cervix is exposed by the ordinary bivalve speculum or my electrical speculum. I select an electrode properly insulated or an electrodilating sound to suit the supposed curve of the canal and introduce it gently into the canal under the influence of the negative pole of the galvanic current. The electrode is then withdrawn and the small dilator gently insinuated into the cervical canal as far as it will conveniently go.

No force should be used and the dilator should never be pushed through the canal. If necessary, the cervix can be steadied by means of tenaculum forceps, though this is not, as a rule, necessary.

The nurse is then instructed to place the De Watteville or the Pope Current Selector on the combined galvanic and high tension faradic current buttons. The switch is then thrown so that the negative pole of both currents travel along the cord which is at this time inserted into the two sockets on the handle of the dilator.

The galvanic current is first employed with an average dosage of ten millimeters. The dilator is gently passed through the canal until its tip just clears the internal os and is there allowed to remain approximately a minute or two, is then withdrawn a little and is then reinserted to permit free exit of any gas generated. While the galvanic current is flowing and with the dilator within the cervical canal, the high tension faradic current is turned on to the point of comfortable tolerance. Then gradual, slow and intermittent dilatation is practiced, the dilator being turned so as to bring every part of the canal and internal os in contact with the lips of the instrument. It will be noted that the dosage of the galvanic current is very small, thus avoiding cauterization at any point.

At the end of from five to ten minutes, first the faradic current and then the galvanic is turned off gradually and slowly; both must be controlled by a reliable rheostat. The dilator is then withdrawn. With its withdrawal there is usually a fair amount of frothy discharge slightly tinged with blood, the result either of the hyperemia or rupture of small blood vessels; this may be disregarded. The cervix is wiped clean with aseptic cotton, and, if it be deemed necessary the cervical canal may be likewise cleaned; this is rarely ever needed. While it is best for the patient to re-

main quiet for from half to one hour, still it is not necessary. I have patients to immediately step down from the table; return to their homes on foot or by a street car, resume their household duties at once and in fact remain ignorant of the work accomplished.

The most frequent complaint that I have had has been of a sense of weight or heaviness. This is due to the action of the galvanic current itself and not to the dilatation, and is often present in cases in which dilatation has not been performed. If this weight (or tenderness, if we so care to term it) is present after the removal of the dilator, remove the speculum and introduce a bipolar vaginal electrode, placing the anterior tip of the electrode well under the cervix or deep in the cul-de-sac; turn on the high tension faradic current slowly, keeping it at the highest tolerance for from seven to ten minutes. This usually gives immediate relief.

Following such a dilatation there is usually a free mucoid discharge, sometimes mucosanguinous for several hours or possibly a day, but this quickly disappears, and no further so-called surgical precautions are demanded, than to keep the bowels open and use a hot normal saline douche the next morning. I usually limit meat eating both before and after the dilatation.

The advantages of the method above enumerated are numerous. The psychic fear of operation, the dread of anesthesia and the confinement to bed in a hospital are avoided. It is rapid and so far as my experience is concerned to all practical purposes a painless operation. There is less likelihood of necessity for subsequent dilatation, although dilatation by this method if need be can be repeated many times. Scars resulting from ordinary or surgical traumata are hard and contractile, while the scar resulting from negative, galvanofaradic dilatation is soft and distensible; a characteristic of galvanic negative polar scars anywhere in the body.

CASES IN WHICH THIS METHOD IS INDICATED

I am satisfied that this method is not available in cases in which there are retained secundines and marked acute infection. These are eminently surgical cases and demand thorough curettage. I consider that this method meets all the requirements of those chronic cases which obstruction must be overcome and drainage secured, sometimes this being all that is necessary.

To overcome obstructions or stenosis in the canal associated with flexions and displacements, whether the stenosis be primary and accompanied by the so-called pin-hole os, or cicatricial following operation, pressure, sloughs, labor, the applications of acids, caustics of ulcerative changes, this method will be found to answer the purpose, by securing free drainage through the cervical canal for the retained uterine secretions or menstrual blood. It will be found of use in dysmenorrhea due to oöphoritis, salpingitis (without suppuration) and in those cases in which the organs seem normal but great pain is present at the menstrual periods, as well as in those cases in which the pain begins before the flow for a few hours and is sharp and intense in character. Patients with metritis, cervicitis, and endometritis, in whom we have to deal with hypertrophied and swollen mucosa, in whom the uterus is flabby and its walls atonic, or in which hard and hyperplastic, and in whom the obstruction has dammed up the secretions, are particularly benefited.

In the imperfectly developed or infantile uterus it is an ideal method for opening the canal preparatory to

intrauterine applications of coarse wire faradic electricity for muscular development, as well as in those cases of sterility in which a mechanical hindrance or a thickened mucosa prevents conception.

It is valuable in uterine hemorrhage as a preliminary to obtaining scrapings or for preparing the canal and uterine body for heavy currents of positive galvanization. In preparing those persistent cases of amenorrhea, with small canals, it is almost a certain panacea, when followed by negative galvanization.

In inflammations resulting from gonorrheal infection it not only secures free drainage but tends to wash out in the hypersecretion that follows its application, the specific germ. If the dilatation is followed the next day by the application of positive copper or zinc-mercury electrolysis, those who have never employed the method will be astonished at the prompt results obtained.

In those cases of hypersecretion or of congested uterus, found frequently in fat women or in the hypersecretion of subinvolution, anemia and chlorosis, it is a preparatory method of value.

I have had access to and searched diligently through the literature of the subject at my disposal and so far have been unable to find a description of this method and for that reason I have stated it to be original.

PENMANSHIP STUTTERING *

E. W. SCRIPTURE, PH.D., M.D.

Visiting Physician for Speech Defects to Randall's Island
NEW YORK CITY

The case to be reported shows a condition that I believe has never before been observed or described.

History.—Mr. A., aged 38, had written shorthand exclusively from 14 to 18 years of age, and then shorthand and type-writing with very little longhand until 22. After three years illness he took up shorthand again for one year. He then

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Fig. 1.—Specimens of the writing of the patient.

obtained employment as a teller in a bank where he had to fill out names on deposit slips. He was told that his writing was bad and was urged to improve it. He tried to do so by taking courses in penmanship, by imitating the penmanship of other persons, etc. This resulted in the ability to write well when he could do so slowly and coolly but in a worse result whenever he did his work at the bank. On entering the bank in the morning he is seized with a nervous fear and a dread of writing poorly. The first few slips will be written fairly well but the anxiety soon brings on a condition in which

the writing grows worse with each word. The specimens reproduced in Figure 1 show that, even in my office where he is not particularly worried, the writing grows steadily more cramped and tremulous as he approaches the end of a word. He explained that he had suffered so much on account of his writing—he had been passed over in promotions and had even thought of changing his occupation—that a nervous fear seized him the moment he took up a pen. Before beginning to write he would make a number of nervous strokes with the pen without touching the paper. There was no trouble whatever in his speech.

The patient was sent to me by Dr. W. S. Thomas of New York City with the suggestion that it might be a case of stuttering in penmanship and that the methods

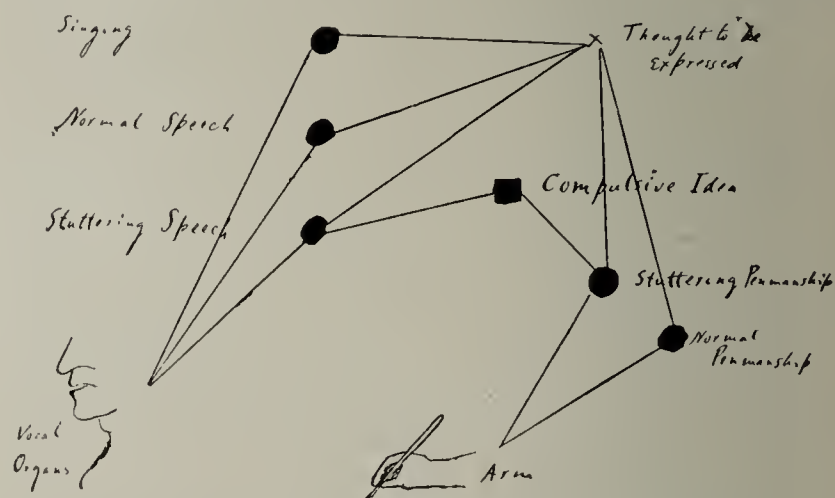


Fig. 2.—Scheme to show the nerve action in stuttering.

used for correcting the speech stuttering might perhaps be applicable. The diagnosis was undoubtedly correct. There were cramps of the muscles of action resulting from a compulsive nervous fear that was aroused whenever the action was contemplated.

The therapy was based on the theory of stuttering that had substantiated itself for speech. The stutterer

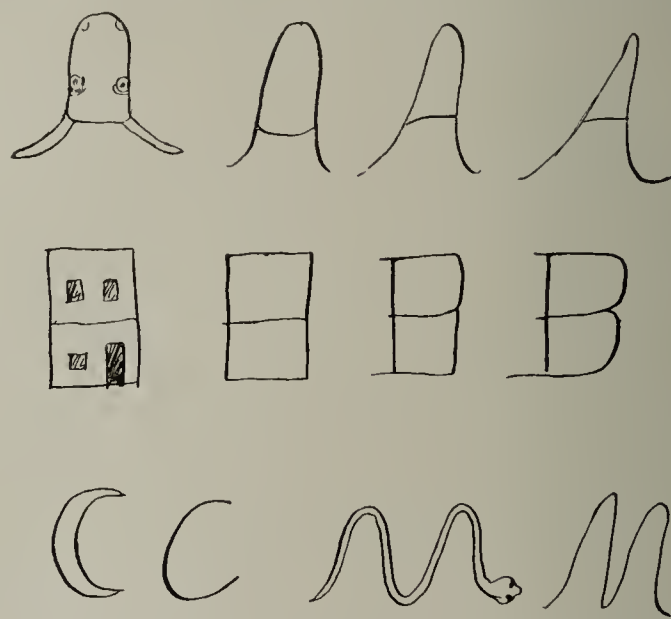


Fig. 3.—Specimens of alphabet devised for this patient.

speaks in a peculiar voice that betrays him to the practiced ear even when he does not stutter. This voice is connected with his compulsive idea, namely, with the thought that he is going to stutter (Fig. 2). He does not stutter when he sings because the compulsive idea is not connected with singing; and he does not stutter when he speaks a dialect, for the same reason. To cure the trouble he is taught to use a form of speech that is utterly new to him, namely, the speech of normal persons. As soon as he understands how normal persons inflect their voices with rising and falling melody, and

* Read before the New York County Medical Society, Mar. 22, 1909.

can imitate them, he can speak without stuttering. His voice is changed from a harsh cramped one to a melodious easy one.

Applying this principle to the penmanship stutterer, I sought a method of imparting thought by written characters that would involve graceful and easy movements of the right arm and hand. This method had to be entirely different from penmanship and yet capable of gradual change to it. Chinese writing brushes were bought. These made it possible to use free and graceful movements of the arm. A new alphabet had to be devised in order to have no connection with the pen alphabet.

For the letter A it was explained that the Egyptians had used an inverted bullock's head; for B they had used an outline of a two-story house; C was the symbol of the crescent moon, and so on (Fig. 3). All the letters were thus regarded as hieroglyphs and felt to be new things. In this way a new means of communicating thought was built up which was quite disconnected from the compulsive fear. The patient was trained to write the letters with the brush until he could make them gracefully and quickly. Then he passed to words, using specially the names that he had to write in his business.

When he could write gracefully with the brush he passed to a pen and drew the letters in a similar fashion. Gradually the speed was increased and greater fluency obtained.

It was constantly impressed on the patient that he was writing in an entirely new way. He learned to know that he could write perfectly and fluently in this way. Any new form of writing might have been used, but this particular form was chosen so that the final result would not differ from the usual style of penmanship.

It is essential that the stuttering patient shall always feel that he is writing or speaking in a new way; so long as he has this feeling he will be free from the compulsive idea. The mere supposition that he is speaking in a new way is often sufficient to instantly stop stuttering in speech. One patient could not dictate to his secretary. To avoid discovery by his superiors he would write his letters in long hand and pass them to be typewritten. I told him to sing various letters to me. He could do so perfectly without hesitation. But he was unable to distinguish one note from another, and instead of singing—as he supposed—he really only spoke the words in a kind of monotone. I sent him back to his secretary with the instruction to always sing his correspondence, knowing that he really would not sing them but that so long as he believed himself to be doing so he would have no trouble.

This principle of training a patient to use an entirely new set of thoughts and movements in accomplishing an act that has become disturbed through nervous troubles may be applicable in still other diseases possibly in the various phobias. It is certainly closely related to the Fraenkel treatment for locomotor ataxia.

87 Madison Avenue.

Port Wine Stains.—In reply to a remark of Sir Frederick Treves, that radium can cure "port wine" stains and the query as to what other available means surgeons have for the same object, Dr. John Donald of Glasgow (*Brit. Med. Jour.*, April 3, 1909) says that for five years he has been using the x-rays for that purpose with remarkably good results.

THE COUNTY SOCIETY

L. ROCK SLEYSTER, M.D.

APPLETON, WIS.

The success of the state and national organizations must have as its logical basis a healthy condition of its constituent parts, the county medical societies. They are the units, and all permanent advancement and improvement is directly dependent on their condition. Increase the interest attendance and enthusiasm of a single county society, and a notch has been gained for the whole. The enthusiasm is mildly contagious. The glow of a live healthy society can not but have a beneficial effect and act as a stimulus on its neighbors. Too little attention has been given to the county society, the difficulties against which it must struggle and the ways and means of solving and meeting them successfully. This is a subject of vital importance and deserving of a most thoughtful consideration.

Now for the county society, its joys, its sorrows, and its needs. Let us study it for a moment under the low power before we try the oil immersion. We find a few counties containing a large or medium-sized city. The county society here practically becomes a city society. Conditions should be ideal. Members can easily reach the place of meeting without any great sacrifice of time or comfort. The advantages of all that is modern, the hospital, the clinic, the laboratory, the keen competition of bright minds—all form an ideal environment for active scientific work, and there is no excuse for other than a prosperous organization. To those in charge I recommend the use of a serum for the toxins of the diplococci of jealousy and the bacillus of indifference. I believe this treatment will cover the majority of their ills; and we will devote our study to those societies in the large majority whose troubles are real, whose members we find scattered over a large territory, often living ten to thirty miles from the place of meeting. With them, to attend a meeting means a sacrifice of time and comfort—often a long drive over bad roads in cold or rainy weather. Given a county with fifteen to thirty physicians and sometimes more—often no more than three in any one town—and the problem of holding successful meetings becomes one which demands no small amount of study. It is to this study that this paper, in a modest way, is devoted and aims to arouse your interest. Now for the high power!

THE REQUISITES FOR A SUCCESSFUL MEETING

First, what is a successful meeting of a county medical society? I do not wish to belittle the value of the papers read, or the study for which their preparation and discussion is directly responsible. Far more important, however, than the actual program rendered is the securing of a good attendance. I hold that a well-attended meeting of a county society has been a success if the members have done no more than to eat a good dinner and play "pedro." They have met in a friendly way, have learned that after all they are all "good fellows," have laughed over and settled little differences, and have gone home with a kindlier feeling toward the neighbor who occasionally "gets into my territory," and a mental resolution to attend the meetings more faithfully in the future. As to the article on "Diphtheria" read by Dr. White of the east end of the county, or the article on "Surgery of the Gall Bladder" read by Dr. Black of the county seat, they were good, showed careful preparation and served the purpose of

a healthy review. They awakened new interest in the subjects, but, the members have an abundance of literature on this subject at home, probably the same from which Drs. White and Black culled their information, and these papers will be forgotten long before the pleasant remembrance of a competitor's hearty handshake, or the contagious laugh of Dr. X., who has been mentally despised all these years on hearsay evidence. That little misunderstanding with Dr. Y. about the Smith case has been explained. Y. was not wrong after all; and Dr. Z. is not making calls to Browntown for three dollars as has been persistently rumored. The fraternal and brotherly feeling has been raised from zero to a pleasant summer heat; "for its always fair weather when good fellows get together." Get your men together and you need not worry about the rest. It is the problem of getting attendance that needs more study just now than any other feature of organization work, and I have failed to find a single column devoted to this subject in any of the organization publications. The whole success of the county medical society—its very life and usefulness—depends on a good attendance, and the attendance depends almost as directly on the most important man in the whole organization—the county secretary.

THE COUNTY SECRETARY

So here's to the county secretary! Your work as such means a sacrifice of time you have planned for something else, and a constant study of local conditions. Often in your efforts to smooth a rough path, to substitute harmony for friction, it will mean casting your pride aside. Your efforts may be appreciated and they may not,—but at the end of the year, when your report is ready for the state secretary, there is a world of satisfaction in knowing that your society has shown a gain, that it compares well with its neighbors, that there has been an awakening of interest and fraternal feeling and that your work has shown results. This is from one who knows.

Regarding the choice of a county secretary: he need not be your brainy man, your most successful man or your best speaker. These are qualities of lesser importance. Pick him rather for his interest in the work and his record of attendance. He should be a popular man, well liked and respected, and in whom confidence is felt, a man with both energy and tact. With these qualities he will be a success. The greatest difficulty which his duties present will be in the matter of securing good attendance. It is far easier to secure a good membership roll than to get your men out regularly to the meetings. The average physician is forgetful and a bit careless about these matters and needs a considerable amount of "stirring up" and numerous reminders. This work naturally falls on the secretary.

The practice of the majority of societies in notifying members is to send a printed form post-card with blanks left for the date and place of meeting. I have found this alone a very unsatisfactory method. It does not bring results. The card is recognized at a glance, creates no lasting impression and in the press of work is soon forgotten. More than one notice should be sent and when this is done the post-card may be used as the initial. It is better to send this about a week or ten days before the meeting. A few days later it is my custom to send a short personal letter urging the member's attendance, giving an outline of the program and business of the meeting, and reminding the member of

clinical material, etc. In addition to this, let him receive a postal the day before the meeting. This need only be a line ("Lest you forget" or "Last call") with the secretary's signature. Of course this means work, but the results are so surprisingly good that one feels well repaid. When these measures have failed to get a man's attendance for two successive meetings, it is well to telephone him the night before the third. The secretary who can make each member feel that his presence is sincerely desired and that his absence will be noted and be a source of disappointment, has discovered the magic key that unlocks the door of indifference and allows the better growth and development of a fraternal conscience.

To obtain the best results there should exist between the secretary and members a cordial relationship devoid of all formality. In every way possible a return to the frank open good fellowship of college days should be fostered and encouraged. An occasional informal letter to the members is of value. Not for its literary value or because I regard it as a model, but rather to illustrate what I mean I append a letter sent to our members the first of the year.

My Dear _____:

You are hereby appointed a "Royal High Barker" for the county medical society for 1909. Your duties are: to attend every meeting, bring all of your agreeable neighbors and those you want made agreeable—even if force is necessary. You are also to bark for the good of the society, throughout the year. Personally, I am offering a golden crown and a halo to every man who does not miss a meeting in 1909. Now's your chance, if ever! Cordially yours,

And every man is "barking" as evidenced by a 75 per cent. attendance at a night meeting held soon after. This meeting was held at a village where but one member lived, the remainder coming by team or train distances ranging from eight to twenty-two miles, and returning the same night. And the month was March!

THE PROGRAM.

A few words about the program. It should be made up at the beginning of the year, subjects assigned, places of meeting named and dates decided. Let it be printed, even though your society numbers no more than ten members. Arrange your meetings at the more central points and choose your dates carefully. Let me illustrate, and remember I have in mind the country society. Hold a morning meeting at your county seat during the county fair or races or other carnival events, and make a holiday of the afternoon. You will be surprised at the attendance. Hold a picnic or outing meeting at a neighboring lake in June or July. Make this an all-day affair. Bring the wives and don't forget the fishing tackle. This "outing meeting" is "the event" of the year in our society. It has never been the means of developing a specific for anterior poliomyelitis, but it is mighty good treatment for the friction and discord so general among medical neighbors. At one or two meetings a year try to provide an outside speaker, a man doing special work, or even a layman on a semi-lay subject. When possible, end each meeting with a good dinner or lunch. It is simply wonderful the way a kindly feeling and a good fellowship will develop around a dinner-table, and the differences and misunderstandings of years will roll away in the fragrant smoke of an after-dinner cigar.

To secure a good attendance, it is important that the program be of interest to the general practitioner and of practical value. Do not overlook the common everyday subjects. They, as a rule, will awaken the greatest interest in the general practitioner, will prove more effectual in securing his attendance, and will bring about a more general discussion, with a host of valuable suggestions and ideas learned in the hard school of experience. Let me outline, as an example, what I would consider an ideal year of practical work for the average county society holding quarterly meetings, a program to appeal to the general worker and to draw his attendance.

FIRST MEETING.—SUBJECT, "HERNIA."

Two papers, one operative, one non-operative treatment of the common hernias. (A near-by surgeon may be secured to read the first.)

SECOND MEETING.—SUBJECT, "FRACTURES."

Two papers, one on fractures of the upper and one on the lower extremity. (General discussion, each member describing and illustrating any particular or original method or appliance with which he has been successful.)

THIRD MEETING.—SUBJECT, "HOW WE CAN INCREASE OUR OFFICE PRACTICE." (OUTING MEETING.)

First Paper: "The General Practitioner as a Specialist." What can he do successfully that he now refers to the specialist. (What eye and ear, surgical, mental patients, etc., can be treated successfully at home.)

Second Paper: "Mechanical Therapeutics, Gynecologic and Genitourinary Treatments."

Third Paper: "The Dispensing of Medicines."

Fourth Paper: "The Physician as a Business Man." Keeping of books and records, investments, collections, etc.

FOURTH MEETING.—SUBJECT, "PEDIATRICS."

Two papers, one on the examination of sick children, one on pediatric therapeutics.

This was found to be a most successful year's program. It covers a wide field; soars over no man's head; is very practical; and, most important, is of vital interest to the private soldier, "the man behind the gun;" and it brings out a wealth of discussion and helpful practical ideas learned in the school of actual practice.

CONCLUDING SUGGESTIONS

In closing, just a few more words about the county secretary, for more depends on him than on any other: I believe his attendance at the state meetings to be as important as the delegate's, for he knows best the pulse of his society. Could the number in the house of delegates be doubled, he would be a most valuable addition. Of still more importance, however, would be a yearly meeting of the county secretaries presided over by the state secretary. This would provide means for an exchange of ideas, a chance to "talk things over," to "get in touch," and would be of inestimable value to themselves and to the organization as a whole. Where this has been tried it has been enthusiastically endorsed, and it should be more generally adopted.

One more suggestion: It is that the official journals of the various state and national organizations give one or two pages each issue to the county secretary, and let it be edited by a man in the field. Let this space be turned over to them and let it be a clearing-house of ideas open to any and all, to the man who has originated an appeal for membership or collections, has worked out a good program, is in doubt and has a question, or has a suggestion on any branch of society work. Progress-

sive manufacturers have installed in their plants a "suggestion box." Into this all employes are invited to place written statements of any suggestions or ideas for improvement. They have found these ideas of the men actually doing the work of the utmost value. Let this journal page be a "suggestion box," and let every man engaged in the work be invited to contribute to it.

So here's to the man in the field, the man with the big hand and the big heart, the man who is bumping over country roads to do his part! His faithful attendance merits much, and one who knows him well, crowns him "the prince of good fellows."

A DISORDER DUE TO EXPOSURE TO INTENSE HEAT *

* Read before the Pittsburg Academy of Medicine, March 23, 1909.

WILLIAM H. CAMERON, M.D.

PITTSBURG

Dr. David L. Edsall, of Philadelphia, has recently described¹ a group of cases characterized clinically by violent muscular spasms and excessive irritability of the muscles. Dr. Edsall says:

These patients presented none of the conditions ordinarily recognized as due to heat; there were, indeed, no symptoms of any moment, aside from the extremely striking muscular disturbance. The muscular spasms, however, were of a remarkable character, and in some of their details they appeared to be sufficient to distinguish the cases from other conditions of spasm that are recognized whatever their cause.

One of the most striking features was a very conspicuous degree of fibrillary contraction, particularly in the muscles of the calf. This was of continuous occurrence, except during the frequent interruptions caused by the most marked of all symptoms, namely, severe tonic spasms.

Without going into further detail Dr. Edsall mentions, in this report, which he calls a preliminary one, the following points:

The spasms lasted from half a minute to a minute each time they occurred and were exceedingly painful.

They involved the muscles of the forearms and legs severely, but were also violent in the abdominal muscles.

The spasms occurred spontaneously with great frequency, but were at once excited, in the intervals of quiet, by any attempt at voluntary use of the muscles.

The spontaneous spasms were almost entirely over within twenty-four hours and no symptoms remained except slight exhaustion and some muscular soreness.

Sensation of all qualities (touch, temperature, etc.) was normal, as were the sphincters and pupils.

In summing up, Dr. Edsall says:

This disorder appears to be, therefore, a condition that is likely to be met occasionally in the course of a general medical experience and one that occurs in a considerable number of occupations with sufficient frequency and severity to be of very distinct importance. I was able to make some studies of metabolism which includes observations of the urinary excretion of total nitrogen, ammonia, uric acid, chlorids, phosphates, sulphates, etc. The conditions of metabolism that I found were extremely striking; they have, as far as I know, no counterpart in any other condition and are very different from any that have been observed in somewhat similar states of spasm. At present I would mention that the conditions of metabolism, together with the clinical features, indicate that it is an individual disorder, and it seems extremely probable

1. THE JOURNAL A. M. A., Dec. 5, 1908, ii, 1969.

that it is due to an acute degenerative process in the muscles.

During the past five or six years I have had opportunity to see a number of cases such as Dr. Edsall has described, and have always felt that such cases must surely be of a distinct type, for the most striking objective symptom did not seem, as far as I could see, to be connected with, or dependent on, any other pathologic condition.

At first the condition puzzled me, and, although it is a well-known and exceedingly common condition among certain classes of millmen, I was unable to find, in ordinary medical literature, any mention of the subject, or to find a description of any condition or disease that would satisfactorily cover the peculiar symptoms presented by this class of patients.

In speaking to some of my medical friends, I was further surprised to learn that they had either never seen a case or, if they had, did not recognize it as a distinct condition, and had never given it any special thought or attempted to classify it other than to use the common term, "mill cramps." This term, by the way, is one that millmen commonly apply to all cases of sudden painful seizures (whether associated with muscular spasms or not) occurring while they are at work.

Being unable to find any authentic description or explanation of the condition, I tried to investigate the matter, principally in order that I might develop, for my own satisfaction, a more rational line of treatment. My investigation, however, was greatly hindered by the very unfavorable circumstances under which I saw my patients.

It was absolutely necessary that they be removed, as soon as possible, from their unfavorable and often intolerable surroundings. I have never found it necessary to send these patients to the hospital where they could have been studied to a better advantage and, unfortunately, I was unable to follow up the cases after the patients had been taken home. Consequently my remarks are necessarily limited to what I have observed regarding cause, diagnosis and perhaps immediate treatment.

My first concern was, of course, to be sure that the most prominent and characteristic feature, "myospasm," was a condition and not a symptom. I found this comparatively easy, for, no matter how severe the spasms, how long they lasted, or how painful they were, the patient's mind always remained clear and the special senses not affected. Another point is that only the large voluntary muscles were affected, and still another point was the fact that there did not seem to be any constitutional disturbances whatever.

The differential diagnosis might, therefore, be summed up as follows: In all other conditions, such as strychnin poisoning, epilepsy, nremia, hysteria, etc., presenting muscular twitchings, contractions or spasms, such twitchings, contractions or spasms are, as a rule, in proportion to the amount of toxemia or morbid condition present. Now, if this toxemia or morbid condition (whatever its character) were present in sufficient amounts to cause the intense myospasms present in these cases, then surely it would be present in sufficient amounts to affect all the voluntary and at least some of the involuntary muscles, and to materially affect the mental, nervous or circulatory systems. That this condition differs from all other recognized conditions due to exposure to heat is shown by the fact that there is absolutely no thermal disturbance.

The next point was to determine the possible cause, and, in looking up this point, I found some very interesting and almost unbelievable facts.

It was first noted that in somewhat over 2,000 calls to attend men, either sick or injured, in and about mills and railroads, not one case of this character was found, unless the patients had been exposed to intense artificial heat. It was also noted that the season of the year had an effect only, perhaps, in so far as the humidity affected heat radiation, for, while most of my cases did occur in the hot summer months, I have notes of cases occurring in October, January, April and May.

This fact, naturally, led to the belief that exposure to intense heat was a factor. The question then came up as to just what degree of heat was necessary.

On investigation I found that all my cases, ten in number, occurred in men who had been working in temperatures ranging from 140 to 235 F. This statement, perhaps, needs some explanation, for, to one who is not acquainted with some conditions found in mills, it would, no doubt, seem almost impossible for men to work in a temperature above the boiling point.

Now, when a furnaceman lifts up the door of an ordinary steel heating furnace, he is exposed, for a greater or less period, to a mass heated to 2,800°, and when a furnaceman engaged in melting crucible steel lifts out a pot he is directly over a mass heated to 3,000°. One can imagine what the surrounding temperature of such places must be, especially when no provision has been made for the free circulation of air.

On the floor, or rather the roof, of a crucible steel-melting furnace it is hot enough at all times to broil a steak; and, remember, it is on this floor that the men have to do most of their work. The men working here wrap their feet and legs in two or three thicknesses of water-soaked cloth, and I have seen them after perhaps a half-minute's exposure come away with these water-soaked cloths dry and even burning. Needless to say that, in this special class of work, the men are actively engaged only about half an hour out of a possible two hours.

The manager of such a department is my authority for the statement that the surrounding temperature on his melting floor will, very often, in summer reach 235.

In going a little deeper into the cause, I found that these men, while exposed to this intense heat, were also obliged to use extraordinary muscular effort. In fact, they were obliged to lift, pull or push a load weighing from 50 to 350 pounds.

It was noted that the attacks came on after the men had been working for some time. Men on the day turn would be attacked toward the close of the morning's or afternoon's work, and the night-turn men about midnight. It was further noted that the attacks came on, not while the men were actively engaged in violent muscular effort, but shortly afterward. A man would be putting on his coat, or walking away from the furnace, or engaged in some other form of light muscular effort, when, usually without warning, the first spasm would seize him.

From these facts one would be inclined to think that overexertion was at least a factor in the causation, and inquiries as to a possible predisposing cause would seem to strengthen this view.

Most of the cases occurred in men who were hard drinkers, although there was absolutely no evidence to show that any one of them had been even slightly in-

toxicated when attacked. Some of them stated, without being able to give any definite symptoms, that they "had not been feeling just right." One patient, who does not use alcohol in any form and who, by the way, has had two attacks, stated that on both occasions his "stomach had been out of order for two or three days previous to the attacks." In fact, in all cases observed I found some more or less definite condition which led me to believe that the muscular tone of the individual was either not equal to or had been lowered to a point somewhat below that which he found necessary to meet the ordinary requirements of his particular line of work.

In this connection it might be as well to state that one attack seems to predispose to others. This is a common observation among millmen, and my observations bear it out.

That I was, perhaps, mistaken in my idea as to a certain susceptibility, or predisposition, and that my estimate of the temperature necessary to bring about the condition was entirely too high, is shown by the fact that Dr. Edsall reports a case of a man who was attacked while walking along the street on a hot summer day. This man's occupation, however, made it necessary for him to be constantly walking about the streets, and it is just possible that his muscular tone was greatly below par.

Like Dr. Edsall, I have never found any thermal change. The pulse is somewhat accelerated, but not more than one would expect in patients suffering intense pain.

Besides the intense muscular spasms, pain is the most marked characteristic feature. I make this statement because I have never seen agony such as these men, apparently, suffer.

The entire length of the acute, violent, spontaneous seizures, with the corresponding periods of quiescence, may be anywhere from one to four hours, when there is a gradual lessening in the severity and frequency of the spasmodic seizures. The patients may have fleeting spontaneous attacks for twenty-four hours but the tendency is for a more or less rapid recovery with some slight muscular soreness resulting. This observation, however, is based only on patients whom I have had under treatment during this period. How long these patients would suffer under the common lay treatment of vigorous massage and large doses of whiskey is rather hard to say.

I have never seen the muscles of the face, neck or back affected. The spinetters remain unaffected and I have never had a case in which I thought that the involuntary muscles were involved. I have been informed, however, that some men have seen fatal cases and this fatality has been due, they say, to "spasm of the heart muscle."

As to the pathology, I was unable to form an opinion. One would imagine, after seeing these patients at the height of an attack, that surely there must be some striking pathologic condition present. The intense spasmodic and more or less constant muscular contraction, and the severe pain would certainly seem to go hand in hand with some marked changes in metabolism, but the comparatively rapid and complete recovery, with apparently no serious consequence, makes one think that whatever changes have taken place must be of a transitory character.

At first, I thought that there were some marked changes in the blood; a deoxidization or a degeneration

of the red cells in the local superficial vessels. This idea was suggested by observing the behavior of the muscular system in patients who have been overcome by furnace gas; a phenomenon which is observed, I believe, only during the very beginning of the inhalation. One can hardly see, however, how this phenomenon could occur locally without affecting the general circulation. Dr. Edsall informs me that he found absolutely no change in the blood, and this, coming from such a careful observer, clears up, as far as I am concerned, any doubt as to this point.

Central motor disturbance was out of the question because of the local manifestations in rather widely separated groups of muscles, and because the spasms, in the groups, occurred, not simultaneously, but one after the other until all the affected parts were involved. This phenomenon occurs so rapidly, however, that one is liable to imagine that the groups are affected simultaneously.

Superficial nerve disturbance as a hypothesis is untenable, because, if the nerve endings had been the seat of the primary lesion, there would have been constant pain.

Unfortunately, I have never been able to obtain a section of muscle for microscopic examination (as far as I know such an examination has never been made), so I am unable to confirm Dr. Edsall's pathologic conclusions except by clinical exclusion.

The treatment in these cases has caused me no little concern. Quick relief of pain is clearly necessary and, in most of my cases, I have not been able to give relief soon enough to satisfy either the patient or myself.

A general anesthetic would seem to be indicated, yet I have never administered chloroform or ether because I make it a rule never to give an anesthetic when the patient has just been undergoing hard manual labor, unless it is absolutely necessary, for I have found that in nearly all such cases the result is bad. I have tried all the antispasmodics, and without effect. I have also pushed the hypodermic use of morphin just as far as I have thought advisable (the more experience I acquire in surgical and medical emergency work, the more conservative I become) and have had to wait for a rather extended period before I had my patients comfortable enough to be taken to their homes.

In one case a very mild interrupted current, generated by the magneto in an old telephone instrument, which was the only electric current convenient, was applied during the quiescent period, and, while it immediately started up a spasm, continued application seemed to shorten it and also to lessen the pain. I tried this application in three cases and these patients certainly recovered more rapidly than any of my former ones. It seems unreasonable, however, to believe that it could have been other than a coincidence, for it is entirely inconsistent to apply an excitomotor to an already contracted muscle.

The fact that Dr. Edsall has found that there is an entire absence of the chlorids in the urine should certainly give a clue to the future treatment.

My reason for selecting this subject was that the article in question is the first I have ever seen on the subject. It has given me a clearer insight into a condition which I recognized as being distinct but could not classify, and because I might, possibly, add a few points from my clinical experience.

There are a large number of men who have been in my position; men who have and will see a number of cases and these men, no doubt, will be stimulated to investigate a subject which, heretofore, has escaped scientific thought and which, until the recognition and preliminary classification by Dr. Edsall, was practically unknown to the medical man at large.

Now that investigation has been started, we may hope for better things in the way of effective immediate treatment and, perhaps, better still, for some method by which millmen may be protected from excessive non-radiated heat—to my mind the undoubted cause of this acute form of suffering.

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A CASE OF POISONING FROM THE BITE OF A RATTLESNAKE

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Few cases of poisoning by the bite of a rattlesnake have been observed by competent investigators with means at their disposal for a careful clinical examination, and for this reason, if no other, the case herein reported is of interest, but even this data is brief compared to what might have been accomplished had we known as much of venomous poisoning at the time of the accident as we do at present. Heretofore the information at our disposal has been chiefly deductions from animal experimentation, and, while in the main correct, fails to convey the bedside picture so necessary for a perfect conception of a case. The individual who is unfortunate enough to have suffered such an accident is rarely in close proximity to a hospital or laboratory, and a study of the patient is attended with difficulties that are quite apparent.

Patient.—R. R., male white, aged 50, attendant at Zoological Park.

History.—He has been a man of temperate habits, using alcoholic stimulants in moderation. From 1884 to 1900 he followed the sea for a livelihood, but for the past eight years he has been employed as an attendant at the National Zoological Park, detailed at the reptile house. It was while following his morning routine that he met with the accident which makes him the subject of this paper. August 17, while cleaning the cage in which five diamond rattlers (*Crothalus adamatus*) were confined, his attention was distracted momentarily. He had the lid of the cage raised and his hand resting on one side, the hand being partially in the cage and about three feet from the snakes. He felt a sharp prick on the middle finger of the left hand, proximal phalanx, and knew intuitively that it was the bite of a rattler.

Treatment.—He immediately sucked the wound and another attendant tied a string snugly about the finger, proximal to the injury. Within fifteen minutes, the wound was freely incised by Dr. Baker, superintendent of the park, and cauterized with 1 per cent. solution of potassium permanganate. The digit was cyanotic and edematous from the ligature. There was entire absence of constitutional symptoms until the ligature was loosened, three-quarters of an hour after it was applied. An hour later a marked change occurred. From a tranquil and comfortable state he became much depressed physically, as indicated by cold sweat, thready pulse, nausea and sanguineous emesis. His condition became so grave that an ambulance was summoned and the patient conveyed to a hospital, not, however, before he was given 1/30 grain of strychnin hypodermically and large quantities of distilled water. One of his associates gave him two small drinks of whiskey.

Course of Disease.—On admission to the hospital, he was given strychnin gr. 1/30 hypodermically and a similar dose of

the drug was ordered to be continued every three hours and continuous proctolysis instituted. The bladder was emptied by catheter and irrigated with salt solution. His temperature on admission was 99, pulse 120, respiration 26 and blood pressure (Riva-Rocca) 87.

Blood examination: Red blood cells, 4,600,000; white blood cells, 14,440 hemoglobin, 95 per cent., coagulation time 7½ minutes.

Urinalysis: Orange color, turbid, sp. gr. 1019, acid, flocculent sediment, albumin positive, sugar negative, urea 3 grains to the ounce. Microscopic examination showed (centrifuged) few granular casts, few pus cells, cell debris and epithelial cells.

General Symptoms: The skin was pale and moist, pupils were dilated but responsive to luminous impressions, and consciousness was retained. He complained of great pain in the hand and arm, and below the wrist the extremity was swollen and purpuric. In the course of a few hours an extravasation of blood appeared at the inner side of the elbow, followed by purplish streaks in the forearm, corresponding to the course of the ulnar and radial vessels. The discoloration did not disappear on pressure. The axilla was soon the site of similar chromatic phenomena, with little involvement of the arm. The swelling in the entire arm was noticeable. At 4 p. m. (approximately six and a half hours after the accident) he vomited eighteen ounces of bloody fluid. The hand was dressed with 1 to 1000 solution of bichlorid of mercury. The bleeding was free and soon penetrated the gauze. He slept for ten minutes between 5 and 6 p. m., and for a few shorter periods during the night. He was restless and frequently complained of pain in his abdomen. Twitching of the feet and hands was reported at 9 p. m., but the strychnin was continued in the same dosage. The salt solution was not well retained. At 11 p. m. 1 gram of Calmette's antivenomous serum was injected in the loose skin below the axilla, and it seemed to be absorbed quickly.

Second Day: First nourishment was given about 12:45 a. m. and an hour and a half later the man vomited blood-stained curds. He slept a few minutes in every two or three hours, and the twitching was well marked. The left side of the thorax anteriorly and posteriorly and the neck became swollen, indurated and purpuric, giving the picture of enormous contusions. Milk was given at 5:15 a. m. and coffee at 7:30 a. m. and immediately after the latter was taken the man vomited sixteen ounces of coffee-colored liquid. He expelled much of the salt solution, but it was estimated that he absorbed thirteen and one-half pints in less than twenty-four hours. Nourishment was suspended after the emesis. The swelling of the entire arm and forearm had become intense, with much interference with the circulation as determined by the coolness of the surface, but the radial pulse was retained. Blebs as large as pigeon eggs appeared on the limb, irregularly distributed. The hand was redressed owing to saturation of the dressings with blood and serum. No bleeding point was seen, only an oozing. The whole arm was swathed in moist bichlorid of mercury dressings. Blood examination (eighteen hours after patient was bitten), red blood cells, 4,000,000, white blood cells, 16,000, hemoglobin, 75 per cent., blood pressure, 100.

Third Day: The patient slept but fifteen minutes in the previous twenty-four hours, the wakefulness being probably due to both the pain and the strychnin. It had been necessary to catheterize him every eight hours until this time, when he became able to void urine. He vomited curds of milk at 12:45 a. m., 1:30 a. m. and 2:40 a. m., but without visible blood. Nausea was almost a constant symptom. All the salt solution was not retained. The arm was dressed with ichthyol ointment and the finger with bichlorid of mercury solution. There was practically no further involvement of the superficial tissues, the edema and extravasation remaining unaltered, except in the abdominal area, especially on the left side. His bowels moved during the afternoon, the first time since the injury. Nourishment was allowed, consisting of coffee and small quantities of milk. He had been decidedly more comfortable. His highest temperature in the twenty-four hours was 100.6, highest pulse rate 124, highest respiratory rate 24.

Blood examination: Red blood cells, 4,000,000; white blood cells, 15,000, hemoglobin, 60 per cent., blood pressure 110. The red cells show vacuoles, and slight crenation. There was no free pigment. Urinalysis: Amber, sp. gr. 1020, acid, flocculent sediment, slight trace of albumin, sugar negative, urea ten grains to the ounce. Microscopic examination (centrifuged), granular casts, pus cells, squamous epithelial cells and mucus.

Fourth Day: During the previous twenty-four hours the patient slept two hours in all. He was allowed solid food at this time, and seemingly enjoyed soft egg and toast. The sanguineous discharge from the finger continued and the hand and arm were redressed. He said that the pain in the hand did not abate. It is not an exaggeration to say that the limb appeared to be nearly double its normal size, with scarcely a spot of healthy skin visible. To the touch it was brawny and cool. On the inner aspect of the right arm, bluish mottling was noted. He spent an uneventful day, but rather more comfortable than the preceding ones. While the anemia was striking, withal his general condition had improved, his pulse rate being lower and his temperature hovering close about 100 F. Blood examination: Red blood cells, 2,800,000, white blood cells, 14,000 hemoglobin, 60 per cent. The disintegration of red cells was more marked than on the previous examination. There was slight crenation and many microcytes; poikilocytosis was noteworthy; blood pressure was 125. Urinalysis: Amber, acid, flocculent sediment, trace of albumin, sugar negative, urea seven grains to the ounce. Microscopic examination (centrifuged), few pus cells, few squamous epithelial cells.

Fifth Day: The man was slightly irrational during the night previous, and got out of bed for a moment. The extravasation had extended almost over the entire right side of the chest and back as low as the crests of the ilia. He was rational at 9 a. m. and ate a breakfast of egg, milk-toast and coffee. The salt solution was fairly well retained, but he expelled from 1 to 2 pints at long intervals. He perspired freely and had a dark brown stool. The arm was redressed owing to an accumulation of discharge on the gauze. His highest temperature in the previous twenty-four hours was 102.6 F. Urinalysis: Amber, 1010, acid, no sediment, no albumin, no sugar, urea, seven grains to the ounce. Microscopic examination (centrifuged), few leucocytes, few squamous epithelial cells.

Sixth Day: He slept several hours during the preceding night and was comfortable during the day. The arm was redressed. The swelling and discoloration had not extended. The wound was ragged and necrotic, the finger cold, bluish black and anesthetic. The salt solution and strychnin were permanently discontinued. The highest temperature in the previous twenty-four hours was 101.4, highest pulse rate 108, highest respiratory rate, 24. He had been entirely rational, generally comfortable and had a splendid appetite. The paleness of the skin and conjunctivæ were noticeable and that he had lost weight was readily seen. Blood examination: Red blood cells, 2,000,000, white blood cells, 12,000, hemoglobin 45 per cent. Urinalysis: Amber, 1009, slight sediment, no albumin, no sugar, urea four grains to the ounce. Microscopic examination (centrifuged), few leucocytes, few squamous epithelial cells.

Seventh Day: He slept the entire night of Aug. 22-23. His only complaint was pain in the back of the neck. The arm was redressed as usual. The swelling had not increased, and the discoloration remained stationary in extent and degree. Administration of two Bland's pills, three times daily was begun.

Eighth Day: The night of August 23-24 was the best he had had, and the long sleep seemed to have refreshed him. The swelling in the arm had diminished, but the circulation in the finger seemed insufficient. He was allowed to sit up for a few minutes. The arm was redressed. Blood examination: Red blood cells, 2,480,000; white blood cells, 11,000; hemoglobin, 60 per cent. Urinalysis: Amber, 1014; acid, slight sediment, no albumen, no sugar, urea six grains to the

ounce. Microscopic examination (centrifuged), pus cells, cell debris, urates and a few squamous epithelial cells.

Tenth Day: The patient had rested comfortably and gained strength in the previous two days. His appetite was good, he slept well and he sat in a rolling chair. The condition of his back and chest was not materially changed.

Eleventh Day: There was no change in the previous twenty-four hours. Blood examination: Red blood cells, 2,800,000; white blood cells, 10,800; hemoglobin, 60 per cent. Urinalysis: Amber, acid, slight sediment, no albumin, no sugar, urea eight grains to the ounce. Microscopic examination (centrifuged), few pus cells, few squamous epithelial cells, amorphous urates.

Sixteenth Day: The swelling in the arm and chest was somewhat less, and the discoloration lacked the intenseness of the early period of the illness, except in the arm and forearm, where the pigment had not undergone any absorption. The finger was nearly mummified except at the seat of the wound, where the tissue was sloughing. Hemoglobin estimation, 65 per cent.

Twenty-second Day: The finger was amputated at the metacarpophalangeal joint under local anesthesia. The swelling of the chest and abdomen was much less, and the discoloration was subsiding. There was a bluish-black pigmentation about 1½ inches in diameter near the left acromion process, and a greenish-yellow spot near the left clavicle and nipple. On the inner aspect of the left arm the extravasation was as deeply tinted as ever. The swelling of the arm had subsided but the arm was still swollen and indurated from the attachment of the deltoid to the finger tips. The affected arm measured 12½ inches in circumference at a point midway between the axilla and the elbow. At a corresponding point on the right arm, 11¼ inches was the circumference. The lobe of the left ear, which was pricked for a blood drop on the day of admission, became extravasated with blood at the time and remained so until this date. The lobe of the right ear from which blood was subsequently drawn, showed no discoloration at any time.

Thirty-third Day: The man had gained in weight and strength, but withal was much below normal. The forearm and arm were still slightly indurated and had a few discolored areas. The finger did not heal by first intention, but discharged pus and required daily redressing. He was discharged from the hospital at this time, but advised to return at intervals for observation.

December 1: The man returned to the hospital on this day for an examination of the blood, which was as follows: Red blood cells, 3,588,000; white blood cells, 9,000; hemoglobin, 87 per cent. He has continued Bland's pills and his anemic appearance has been supplanted by a good complexion. He was much stronger and had been at work for several weeks. The finger had not entirely healed.

Without entering into an extended discussion of the entire subject, a brief summary perhaps would be of interest.

The poisonous snakes are of two general species, the *Colubridæ* and the *Viperidæ*, both with many subclasses. The cobra of India is of the former type, while the rattler is an example of the viperine. The toxic effects of the venom of the *Colubridæ* are manifested by general malaise, slight local reaction, late capillary hemorrhage and paralysis of the respiration, in marked contrast to the viperine venom, which causes an extensive local lesion which almost always results in gangrene, hemorrhages in the mucous membranes and effusions in the serous cavities.

The venom enters the wound by a groove or canula in the fang, communicating by a duct with a maxillary gland in which the poisoning is stored. The sac is ensheathed in muscle, contraction of which expels the venom. The amount which may be collected when the reptile strikes usually varies from 1 to 3 cm. with much variance in toxicity. Calmette found that immediately

after moulting or after a prolonged fast the venom was ten times more active than after a plentiful meal or before the moult. It is estimated that 1 gm. of the cobra venom will kill 165 adults. It is to toxalbumins or, more accurately, protoalbumoses and heteroalbumoses that the properties of venoms are essentially due. *Colubridæ* venoms pass slowly through vegetable membranes and with great difficulty through animal parchments. The viperine venoms are not dialyzable and when heated to 72 C. become almost inert. The venoms of *Colubridæ* destroy the coagulability of the blood, asphyxia supervenes and the death struggle is brief. The venoms of *Viperidæ*, on the other hand, produce violent local changes. Injected into the peritoneum of an animal, there is an enormous afflux of sanguinolent serosity; the capillary vessels of the serous membranes immediately become distended, allowing the blood to filter through their walls, and the animal succumbs in a few hours. The hemolytic action of the venoms of *Viperidæ*, especially the rattlesnake, is very weak. A wide range of differences is exhibited by the various venoms as regards the hemolytic power in the presence of normal heated serum. If cobra venom be added in increasing doses, hemolysis augments up to a certain point, beyond which the destruction of corpuscles shows progressive diminution. The leucocytosis is much more intense and rapid with cobra than with rattlesnake poisoning.

If the therapeutic measures which we possess could be applied promptly in each case of poisoning by the bite of a venomous snake, the mortality would be much lower than the present, from 25 to 40 per cent. The venoms are partially neutralized by ammonia and by potassium permanganate, but the best chemical antidote is 2 per cent. solution of the hypochlorite of lime, which will immediately and surely destroy the venom by contact. When possible to apply the ligature proximal to the wound, we have a means which controls the intake of venom, but endangers the viability of the member so constricted. Calmette states that Halford's method, injection of ammonia near the wound, is worthless, and that Mueller's, free stimulation with strychnin and generous feeding, is no better. In this case, the Mueller treatment was instituted at the suggestion of Dr. Charles Wardell Stiles, of the Hygienic Laboratory. Animal experiments certainly confirm all that Calmette has claimed for his serum, antivenine.

The dose of antivenomous serum is 10 c.c. of the liquid or 1 c.c. of the dried preparation, dissolved in 10 c.c. of warm sterile water and injected under the skin where absorption is rapid, regardless of the location of the bite. In desperate cases, injection may be made into a vein or the subcutaneous dose may be trebled. The time that elapses between the infliction of the wound and the use of the serum bears a definite relation to the efficiency of the serum; as little time as possible should be lost in employing this valuable agent.

The case herein reported may be used by the Mueller school as an argument in favor of that particular treatment, and likewise it may be a source of comfort to the Calmette followers to know that the patient recovered after the use of the serum; A Mueller¹ states:

Cases may occur in which the quantity of strychnin required to subdue the symptoms and to be injected in a few hours may amount to a poisonous dose, but to urge this as a reason against the use of it is—to say the least of it—puerile, since the two poisons neutralize each other, the strychnin not causing

muscular spasms until it has completely disposed of the snake poison.

To inject in urgent cases one-sixth, in mild cases one-twelfth, of a grain every half hour until the effects of the snake poison are entirely removed, is perfectly safe practice which none who follow it will have cause to regret.

Calmette² says:

"Neurotoxin being the essentially active substance in venoms, and that to which the dangerous properties of poisonous snakes as regards man and domestic animals are especially due, it is the effect of this that it is most necessary to prevent. Consequently, the first quality that an antivenomous serum ought to exhibit in order to be capable of being used in the therapeutics of poisoning is the possession of an antineurotoxic power as high as possible. This antineurotoxic power is easily obtained by employing cobra venom for the fundamental immunization of the horses destined for the production of the serum. Antineurotoxic serum thus prepared shows itself perfectly capable of preventing all effects of intoxication from cobra bites, which are much the most frequent in India. In the same way it shows itself sufficiently efficacious with regard to colubrine and viperine venoms, the neurotoxic activity of which may cause death. But as it does not possess any preventative action upon the local effects or hemorrhagin, to which the noxiousness of certain viperine venoms—such as those of *Lachesis*—are almost exclusively due.

In countries in which *Viperidæ* are very common we must therefore not confine ourselves to vaccinating animals that produce serum solely against the neurotoxin of cobra venom, for instance; we must prepare these animals, after having immunized them to cobra venom by injecting them with progressively increasing doses of the various venoms derived from snakes that are most frequently met with in the district.

Nothing, moreover, is easier than to train animals vaccinated against cobra venom to tolerate strong doses of the venoms of *Lachesis*, *Vipera russellii*, *Crotalus*, *Hoplocephalus* or *Pseudochis*. In a few months we succeed in obtaining serums very active against these different venoms.

Utilizing the horse as producer of antitoxin, I have prepared by this method polyvalent serums capable of preventing the local action of viperine venoms, and of suppressing *in vitro* their coagulant and proteolytic effects on the blood."

Calmette's serum can be purchased in New York and Chicago and should be employed in every case possible. When the serum is not immediately available, the strychnin treatment is the best substitute.

Clinical Notes

NECROSIS OF THE LIVER AFTER CHLOROFORM ANESTHESIA *

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It is not so much for its statistical value as again to call the attention of the profession to the dangers of chloroform as an anesthetic that this case is reported.

Patient.—Male, aged 19, weight 152 pounds, student, reared on a farm, good habits.

History.—Previous history is negative, except that the patient was subject to attacks of "indigestion" from childhood. He had an attack in February, 1908, which was diagnosed as appendicitis. At that time there was decided tenderness in the right iliac region over the site of the appendix, some elevation of temperature, and rigidity of the right rectus muscle. After an interval of about two weeks, the patient apparently recovered from this attack and returned to school. On April 16 of the same year he was awakened early in the morning by severe pain in the abdomen, followed shortly

1. Australasian Med. Gaz., Sydney, 1888-9, viii, 41, 209-210.

2. Venoms, Venomous Animals and Antivenomous Serum Therapeutics, 1908, p. 250.

* Read before the Rochester Pathological Society, Feb. 18, 1909.

by vomiting and diarrhea. There was nothing in the diet of the previous day adequately to explain this illness. The vomiting and diarrhea continued until about 7 a. m., shortly after which he was seen by his family physician, Dr. F. A. Wicker, of Livonia, N. Y. At this time there was no elevation of temperature and the pulse rate was 84. Severe pain and marked tenderness to slight pressure were present throughout the abdomen, but most marked over the appendix. By the next morning, April 17, the symptoms and signs of the disease had apparently abated somewhat and the patient seemed to have improved except for a slight elevation of temperature and pulse rate.

Operation.—The patient remained in this condition for the next three days, when he was operated on by Dr. Becker. An opening was made through the right rectus muscle and an abscess, thoroughly walled off, was found in the region of the appendix, containing about eight ounces of foul-smelling pus. The appendix was removed, the pus carefully wiped out and drainage inserted. The anesthetic used was chloroform and the amount employed did not exceed one-half ounce. It was administered by a thoroughly competent anesthetist, and the course of the anesthetic and the operation were uneventful, not occupying more than half an hour.

Postoperative History.—The patient recovered from the anesthetic promptly and was conscious within fifteen minutes. He apparently did well until the third day after the operation, his temperature at no time going above 100 F. and the pulse rate varying between 80 and 90. There was free drainage from the wound, no distention of the abdomen and no vomiting. There was an absence of pain. On the morning of the third day, however, his pulse dropped to 66, his temperature then being 99.2 F. About noon he was noticed by members of his family to act in an irrational manner, and apparently he did not recognize his mother. This was the first indication of mental disturbance. About two hours later acute mania developed, and it required the combined efforts of several persons to restrain him. One-eighth grain of morphin was administered hypodermatically at intervals of about two hours until the following afternoon. This served partly to control the mania. From that time he remained passive, lying on his back, pulse increasing in rapidity and becoming weaker and the temperature gradually rising. He passed urine involuntarily at intervals of about three minutes. After lying in this condition for several hours tonic convulsions developed which were most marked in the arm muscles. This was followed by coma and Cheyne-Stokes respiration. These symptoms became more and more profound until his death, which occurred five days after the operation and about forty hours after the first indication of any mental disturbance. At the time of the operation there was a slight yellow tinge to the sclera. This jaundice became general and at the time of death was rather noticeable.

Urine: After the operation two examinations of the urine were made. The first specimen was of acid reaction, specific gravity 1025; sugar and albumin absent. The second specimen contained trace of albumin, but in other respects was the same as the first.

Autopsy.—Permission to do a partial postmortem was obtained and was performed on the following day by Dr. Williams—about twenty-four hours after death. In deference to the wishes of the family, only the abdomen was examined. No attempt at embalming had been made. The body was that of a young male, fairly well nourished, slight, general jaundice. In the right iliac region there was the incision of the recent operation, about 6 cm. long, closed by sutures and containing a drainage tube. The edges of the wound were clean and presented to the eye nothing abnormal. The abdomen was opened in the median line, the omentum was free and apparently normal. A completely walled-off sac about the size of a lemon, made up of old adhesions, was found in the right iliac region. This sac was empty, clean and practically odorless. The peritoneum, both parietal and visceral, to the naked eye, was apparently normal. The kidneys and adrenals, pancreas and spleen, were carefully examined and presented no evidence of important pathologic change. The gall bladder and bile ducts showed very little evidence of inflammatory trouble—in fact,

the liver was the only organ in the body that exhibited signs of disease, but even the changes in this organ to the naked eye were not particularly striking. It was smaller than normal and weighed approximately 1,350 grams. Its surface was smooth. The capsule was slightly wrinkled and of normal thickness. Inflammatory adhesions were absent. The liver substance was pinkish-gray, and was softer than normal. On cutting, this softening was particularly noticeable and the friability was increased. The cut sections were yellowish-gray. There was but little bleeding. Some portions were distinctly mottled. There was very little discernible change in blood vessels or bile ducts. The lobules were made out with difficulty or not at all. Sections were made of the kidney, spleen, pancreas and liver. The liver alone presented evidence of marked change.

Microscopic Appearance: This was in striking contrast to the macroscopic appearance. The lobules were smaller than normal and were indistinctly defined. The liver cells were practically all necrotic. Occasionally, a lobule would be found in which the change was less evident at the periphery than in the central part. A fat stain was not used. The kidney section showed slight cloudy swelling, otherwise was negative.

Bacterial Examination: Stab cultures in plain agar were made from the various organs examined, including the peritoneum and abscess cavity. With the exception of the latter, all were negative. In the abscess cavity was found a mixed culture of bacilli and cocci—their identity, however, was not established.

Urine: About 50 c.c. of turbid, dark brown urine was aspirated from the urinary bladder and examined. Tests for sugar and bile were negative. Albumin was present in small amount. There was a distinct odor of acetone and a marked reaction was obtained with dilute ferric chlorid solution, suggesting the presence of diacetic acid. Microscopic examination showed a few blood cells and a few hyalin casts.

The history of the case, together with the postmortem findings, led us to attribute the death to necrosis of the liver, which we believe, in the absence of other explanation, to be due to the toxic action of the chloroform used as the anesthetic. It seems proved that chloroform can cause death in either of two ways: first, after the manner more commonly understood, by its depressing and paralyzing action on the respiratory center; and second, by its destructive action on the liver. In the former case, the amount of the drug used and the concentration of the dose bear a relationship to its toxic action and the time of death, which is immediate. In the latter instance, its toxicity is due to its action as a protoplasmic poison on the liver cells and the death, which is delayed for several hours, or even days, results, as has been reasonably explained by Wells,¹ from the perverted metabolism of that organ. Neither the extent of the destruction nor the degree of the toxicity seem to bear any relation to the amount of the anesthetic used or to the method of administration. Rather the chloroform seems to act as a fulminating agent for the marked, perverted katabolism of the liver cells, in which the liver not only fails to detoxicate the poisonous products of metabolism that are brought to it by the blood stream, but it undergoes a process of self-destruction or autolysis, and it is the combined poisons of these two perversions of function which directly induce death.

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1. Arch. Inter. Med., vol 1, p. 589.

Surgery of Peritonitis.—The wise surgeon never forgets that the diaphragmatic zone is the danger area of the peritoneum and should not be interfered with in general septic peritonitis unless it is itself the seat of primary infection, as in perforation of gastric ulcer of the lesser curvature.—G. A. Bingham, *Saskatchewan Medical Journal*, January.

CASES ILLUSTRATING THE PSEUDOPARALYSES OF EARLY CHILDHOOD

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If a large number of sick children be observed it will be noted that apparent paralysis is not rare. In the absence of signs of the causative disease, it will be difficult to exclude true paralysis, such as anterior poliomyelitis, the cerebral palsies, various spastic paralyses and other less common diseases of the nervous system. My case records show that these cases group themselves in three classes:

I. THE PARALYTIC SYMPTOMS OF RACHITIS

Thomas and Furrer,¹ in their article reviewing one hundred cases of rickets, stated that 40 per cent. of infants and children in the hospital class between the ages of 6 months and 2 years have rickets. Morse, of the Infants' Hospital, Boston, showed that 80 per cent. have the characteristic lesions of the disease. One becomes convinced, therefore, that few institutional infants escape rachitis; and I have observed that a large number of dispensary babies are likewise afflicted. Although rickets is a disease of the poor, due to the influence of bad surroundings and bad feeding, it may occur in well-to-do families, where, however, the physician sees the case earlier and the disease is not allowed to go on to the gross changes observed in the neglected cases.

The impairment first noticed is the failure of the child to begin or to keep on walking. In more severe cases, there is complete non-use of the legs and arms; when this so-called paralysis precedes the osseous changes as it commonly does, the case may closely resemble a true paralysis. The muscles of the back and legs become affected by the disease and lose their tone, the ligaments are relaxed. This is as much a characteristic feature as are the nervous and bone changes. Physicians frequently see infants who are unable to hold up the head long after the proper age, and who can not sit erect, due to muscular weakness in the neck and back. There are no distinctive pathologic changes² in the muscles which, under the microscope, look pale and their fibers are infiltrated with fat; sooner or later, these muscles will show atrophy from disuse. If the child does not begin to walk at the normal age, about 24 months, a pathologic cause should be looked for.³ It matters not whether the baby developed the disease early and has never been able to use its legs, or whether, as a later manifestation, there has been a cessation of walking. In either case, the same differentiation from true paralysis must be made. Holt⁴ states that he has seen expert diagnosticians unable to exclude poliomyelitis except by the electrical reactions. The reaction of degeneration is absent in rickets; it is also absent in cerebral paralysis; that measure, therefore, does not aid in the differentiation of rickets and cerebral palsy. The latter condition, however, has increased patellar reflexes, cerebral symptoms and spasticity of the legs.

CASE 1.—J. T., male, aged 2, white. Father and mother have always been well, and are of the prosperous farming class. Four other children are all well.

History.—The patient had whooping cough at the age of two weeks, lasting six weeks, and summer diarrhea at eight months, when cutting first tooth. He began to walk at one year of age. He has all his teeth now. At the age of 21 months the parents noticed that the right leg was "crooked"—markedly knock-kneed—while the left leg was straight. The child began to show a disinclination to walk and in a few weeks stopped walking and would not even stand by holding on to a support.

Examination.—When I first saw him he was 2 years old. The head circumference was 19¾ inches; anterior fontanelle was not closed; intelligence was normal; chest was funnel-shaped, rosary present; there were enlarged epiphyses at wrists and ankles. He was pot-bellied, usually constipated. Weight, 22 pounds; temperature, 99 F. He could move his legs in all directions, but ordinarily refused to do so; he would not stand or walk. There was some atrophy of the leg muscles. Reflexes were present.

Remarks.—The child had been nursed for the first 18 months, but since then (6 months) he had been fed exclusively on boiled cows' milk as he liked it boiled and did not care for other food. Two months later I saw the child after he had been taking an antirachitic diet and he was standing on his legs by holding to a chair.

CASE 2.—C. A., male, aged 22 months, white, American. Family history good, no syphilis.

History.—The child weighed 8½ pounds at birth and nursed 14 months. He began to talk at 10 months and was beginning to walk when, without any apparent illness, he refused to stand or to walk even with assistance. Since then he had made no effort to walk, though he crawled and move his legs in all directions.

Examination.—The head circumference was two inches more than the average; the teeth had been decayed since their eruption; the abdomen was unduly prominent, and rosary was present. Wrist and ankle epiphyses were enlarged. He sweated at night about the head. Since weaning he had been continuously on condensed milk modified with water. The electrical reaction showed no paralysis. Reflexes were diminished; muscles were flabby; no foot drop. Intelligence seemed normal. When last seen the child was beginning to walk.

Out of thirty-three undoubted cases of rachitis seen in my dispensary and private practice in the past two years, these two cases belong to the class that stops walking after once beginning. The other class of cases, in which a pseudoparalysis exists but the child has never attempted to walk, does not vary essentially from the description of the above cases.

II. PARALYTIC SYMPTOMS OF SCURVY

It is not rare for scurvy and rickets to coexist. Koplik and Holt quote statistics from the American Pediatric Society showing that 45 per cent. of scorbutic patients gave undoubted manifestations of rickets, and that most of these cases coming to autopsy showed the gross changes of rickets. This leaves 55 per cent. of patients without symptoms of the disease. Whether or not rickets coexists, a pseudoparalysis or immobility of the legs occurs as the most common symptom of scurvy. In twenty-six cases of scorbutus tabulated by Starr,⁵ in twenty-five there was complete immobility of the legs, and in one it was only partial. Of these 26 cases, 24 showed swelling and enlargement of the legs or thighs; 24 of the 26 infants had cut teeth, and showed scorbutic changes in the gums, while the 2 who as yet had no teeth, possessed normal gums. The spongy gums are present only in infants who have teeth.

The apparent paralysis is a refusal of the child to move the legs due to pain in some cases, due to epiphyseal separation in others. It is at first simply voluntary; later the legs may become helpless. In 184 cases

* Read before the Kansas City Academy of Medicine, March, 1909.

1. Cleveland Med. Jour., December, 1907.

2. Rotch: Text-book of Pediatrics, fifth edition.

3. Guthrie: Functional Nervous Diseases of Childhood.

4. Holt: Diseases of Infancy and Childhood, fourth edition.

5. Diseases of the Digestive Organs in Children.

reported by Holt, all but 2 involved the legs, only 2 the arms alone, and 42, both the legs and the arms. Paralysis of the arms alone is therefore rare and when present it resembles syphilis. Tuttle⁶ states that the false paralysis of scurvy is of a spastic, not flaccid nature. The limbs are flexed because that is the more comfortable position. Sometimes the atrophy is extreme, is present over the entire body, and is not confined to the arm or leg which is the subject of the diagnosis. The electrical reactions show no paralysis; reflexes may be diminished or lost. The swelling which is present in the bones is fusiform, and is responsible for the extreme tenderness and pain. These two symptoms help to differentiate scorbutus from poliomyelitis. Antiscorbutic treatment usually effects prompt and complete cure, of course with no residual paralysis. The history, cachexia, and hemorrhages beneath the skin and periosteum, and the inflammatory evidences around the epiphyses complete the usual symptomatology of scurvy. The following case is typical except that there were no apparent hemorrhages of the skin.

CASE 3.—Baby S., aged 2 years, white, in extreme poverty and filthy surroundings. Parents were afraid to give the child fresh air for fear it would catch cold. Dentition was normal. The child had been fed for two years on boiled cow's milk. It had been sick for six months. The family first noticed that the child cried when handled. Some of the teeth were loose at time of the examination, and the gums were blue and swollen. The arms and legs were so tender that to keep the child from crying it was carried on a blanket. Apparently it could not move its limbs. In two weeks, under the administration of fruit juices, the helplessness disappeared.

III. SYPHILITIC PSEUDOPARALYSIS

My records show that out of four infants of 3 months or less, having early hereditary syphilis, three were brought because of apparent paralysis; in two instances both arms were involved, in the third the legs. The phenomenon that usually accompanies this pseudoparalysis is an enlargement of the distal end of the bone due to an osteochondritis, specific in nature. This occurred in my cases at the lower ends of the humerus and the tibia. The symptom of uselessness of the limb may occur with or without epiphyseal separation, (Tuttle⁶). There is also periostitis, which causes pain and sensitiveness from handling. The condition does not usually exist at birth. In my cases all the infants were normal at birth and developed the immobility at varying periods in the first few months. There are no evidences of real paralysis; the mother notices that the child has stopped moving the limb, and the facts that the infant cries on handling and that in thin subjects swelling is discovered leads the family to believe that the limb had been broken from careless lifting, or from a fall. The evidences of degeneration in the muscles is wanting. In fact, it will be observed that the child can move the limb, but evidently pain causes it not to. Antisyphilitic treatment gives diagnostic results as does the Wassermann reaction, which I have not yet tried. I wish to report one case belonging to this class of pseudoparalysis of the new-born.

CASE 4.—Baby E., girl, aged 2 months, white, American parentage. Mother had had no miscarriages, nor had she had other children. No syphilitic history was obtainable. The baby had had several series of eruptions, which the mother called hives. At the age of 6 weeks the right arm became helpless; four days later the left arm also became helpless.

The mother then noticed swelling at the elbow. The child could move its fingers and could hold up its arms when once raised. It cried when handled or undressed, though it nursed well.

Examination.—This showed a well-nourished infant, arms motionless, swelling above both elbows, motion at elbow joints caused crying. The soles of the feet were covered with flat, dry papules. Temperature was 100.2 F. Daily administration of 20 grains unguentum hydrargyri was effective. Motion returned in a few weeks. Tumor, pain and rash disappeared.

Syphilis as a cause for never beginning to stand or walk is shown in the report of the next case. This child was only 16 months old and might yet have begun unaided to walk, yet the fact that it could not even stand, coupled with the history, shows that the condition was pathologic.

CASE 5.—C. L., negro, aged 16 months. The mother had had the initial sore at the age of 16 and was never treated. The child was nursed at the breast. There were no evidences of rickets. There was a rash on palmar and plantar surfaces at the age of three months followed by enlarged glands and linear ulcers of the lips. He had seven teeth, wide apart and small. At the time of examination there were rhagades in both corners of the mouth. There was a large scar from a chronic ulcer over the sacral region. He had made no effort to walk or to stand. Intelligence seemed normal. He could move legs in all directions.

Treatment.—Bichlorid of mercury gr. 1/200 was given three times a day, and was followed by rapid disappearance of the sores. At last examination the child was beginning to walk.

CASE 6.—This boy, W., aged 5½ years, was much older than the children usually suffering with pseudoparalysis from syphilis. The father had a long standing fetid nasal catarrh; the mother had large chronic ulcer of the face, pronounced syphilis by Dr. Sutton. She had one child which had snuffles and rash, dying at three weeks of age. The patient's milk teeth were all present but had always been bad. He had been delicate since birth and during first few months had an eruption, which the mother called eczema. For several weeks before I saw the child he had been crying at night with pain in both knees. One week previous to examination he fell to the floor—a trivial accident—and was thought to have injured his knees. He had since refused to walk, and showed pain on attempted motion of knee.

Examination.—Reflexes were normal. Knees were apparently somewhat enlarged; he held them flexed and did not attempt to move them, but the loss of motion was only voluntary. Cervical and inguinal glands were enlarged. He had interstitial keratitis, according to Dr. Kimberlin and other oculists who have examined him.

Operation.—Administration of iodids gave no improvement, neither did injections of mercury. Under large doses of protiodid of mercury, grains 2 daily, the symptoms rapidly disappeared, and six months later he had gained six pounds in weight and was walking normally.

CONCLUSIONS

1. Pseudoparalysis is not rare in rickets, scurvy, and syphilis.

2. When it is the earliest symptom noticed in these diseases diagnosis is difficult. Other evidence should be looked for.

3. It would be hard to group three other such serious conditions of childhood which have so favorable an outcome under early treatment.

Altman Building.

A Liberal Education.—The content of learning, the method of instruction, the beauty and force of intellectual atmospheres, religion, the studying of the student, the personality of the teacher, all and each are the forces and conditions which help to make the liberally educated man, and therefore help to constitute a liberal education.—C. F. Twing, *Am. Acad. of Med.*

TWO CASES OF SUPPOSED TRAUMATIC
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The following cases appear of sufficient interest to warrant record as illustrating instructively two weak points in the practice of surgical diagnosis: (1) The easy thoughtlessness with which the ordinarily wide-awake surgeon falls into the habit of either allowing the patient to make his own diagnosis or of carelessly perpetuating the diagnostic errors of his predecessors; (2) the willingness with which the average surgeon accepts the doctrine of "traumatic" hernia, without ever so much as considering the possibility of error in the diagnosis of either hernia or trauma.

CASE 1.—History.—A. B., aged 28, railroad station helper, a tall, lanky, unhealthful looking countryman with indefinite family history; while between a heavy baggage cart and a train, was contused in the left groin and back. There was moderate disturbance in both regions, with no important objective symptoms, and he remained at home for three days. In about four weeks he discontinued work and consulted a surgeon in his home town in southern Illinois for a small swelling in the same groin. The swelling was not glandular, was partly reducible, and was apparently a sacculated structure not identical with any of the anatomic elements of the groin. The surgeon made a diagnosis of traumatic hernia, advised a truss, and a suit for damages was instituted, based on a supposed connection between hernia and accident. The patient wore the truss but a few hours, discarded it on account of pain, and went to another physician, who applied a spica and a soft pad, confirming the original diagnosis. During the subsequent four months this individual saw eleven more medical men who concurred in the diagnosis of traumatic hernia, but were not allowed by the attorneys in charge of the case to operate. He was, however, furnished with several written opinions setting forth the fact of the hernia and its traumatic origin. Meanwhile the defendant in the suit was comforted by the assurance of two of its surgeons that "the hernia was a pretty bad one." After four months the patient felt so much pain that he came—against the advice of his attorneys—to Chicago, where he accepted the offer of operation tendered by the defendant. Prior to the operation, which I was instructed to perform, he was seen by two surgeons, who accepted the diagnosis of hernia. In this diagnosis I incontinently concurred, although I agreed with another surgeon that the hernia was "a queer one."

General Examination.—The patient was rather emaciated; had been in bed or reclining for some time before his journey to Chicago; and was examined—not very carefully, it must be admitted—in bed, prior to operation. He was in the hospital thirty-six hours, during which time the following observations were made: Urine normal; no vomiting; tongue clear; bowels moving normally; leucocyte count 10,000; temperature, a. m. 99, p. m. 100.

Local Examination.—The patient was inclined to lie on the opposite side with knee and thigh slightly flexed to relax tension. The abdomen was rather tense but not distended. In the left groin just above the middle third of Poupart's ligament was a flattish, tender mass, not discolored, capable of partial reduction but returning immediately on removal of pressure, about the size and shape of a *Bent water-cracker*. The mass appeared softish, giving an indistinct fluctuant feel, but was surrounded by a "rind" of harder material, apparently the result of chronic inflammation. On percussion, the mass gave out a note which appeared tympanitic and suggested adherent bowel near the internal ring. One of the examining surgeons suggested that the hernia was of the properitoneal variety, and that the flattened shape was due to the insinuation of omentum between the layers of the inguinal structures.

Operation.—The usual incision for inguinal hernia showed the "rind" to be composed of inflammatory exudate, and a

deeper incision through the "rind" opened a large psoas-pelvic abscess containing cheesy pus without blood. The pus originated from an ulceration of the third or second lumbar vertebra, had burrowed into the pelvis *via* the psoas sheath, had pushed the peritoneum up and back, to point, finally, external to the deep epigastric artery behind and through the structures composing the middle part of the inguinal canal.

CASE 2.—History.—C. D., Polish laborer, aged 26, who spoke no English, fell down an elevator shaft, fracturing the right leg, contusing and lacerating the right thigh subcutaneously, and contusing the sacral region. The sacral contusion resulted in an enormous hematoma, from which later on was evacuated about three pints of blood. The patient was not vomiting, and his bowels were moving.

Examination.—In the left inguinal region, 1 to 2 cm. above the inner third of Poupart's ligament, was a hardish mass, non-tympanitic, irreducible and non-fluctuant, about the size of an apricot, tender and slightly discolored at its most prominent part. There was no impulse on coughing. The mass was painful, and the patient denied that he had ever had any previous trouble at the point in question. This case was brought to my notice as a "traumatic hernia" and was regarded as such by several surgeons who had previously examined it. I am not a believer in traumatic hernias and therefore made a most careful examination with a view to excluding either traumatism or hernia. It was impossible to exclude local traumatism, since convincing positive evidence was present in the form of ecchymosis. Although there was no bowel disturbance, and the swelling was recent, was not tympanitic, was quite rigid and irreducible, it was impossible to exclude hernia on account of the location and shape of the swollen mass. Although in doubt, I ventured the tentative diagnosis of old contused omental hernia of the direct variety without bowel contents. The operator's original diagnosis was femoral hernia. Although the swelling was above Poupart's ligament, this diagnosis was quite possible, since it is a well-known fact that certain femoral hernias, after emerging in the usual manner, turn upward to lie on or above the ligament. Prior to operation the operator altered his diagnosis to hematoma of unknown origin—a safe opinion in view of the ecchymosis.

Operation.—A cautious incision over the swelling opened into a torn and bloody mass of muscular tissue which proved, after the incision was extended across the ligament into the thigh, to be the lacerated and upturned distal end of a proximal fragment of the adductor longus, that muscle having been torn completely asunder by the violence of the fall.

85 Rush Street.

A SIMPLE STAIN FOR BLOOD SMEARS (TIEDEMANN)

JEROME E. COOK, M.D.
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There are certain requirements which a blood stain must fulfill in order that it may be of use in the general routine work of the practitioner. It must be capable of quick and easy preparation; it should keep indefinitely; it must possess absolute simplicity in its application; and it must act quickly and reliably at all times. If, besides possessing these necessary qualifications, it may be used for other purposes—for staining pus, sputum, etc.—its value is so much enhanced. Despite the many modifications of the Jenner-Romanowsky stain which have from time to time been proposed, none which has come to my notice so admirably answers the above requirements as the one described about three years ago by Dr. E. F. Tiedmann.¹ Those who have used this stain have soon discarded all others for their routine work, and I feel that its value has been so thoroughly demonstrated in the rather limited circle in which it has been known and used, that I am war-

1. Quart. Bull. Med. Dep. Washington Univ., December, 1905.

ranted in bringing it more prominently to the attention of the profession. The technic of its application is still simpler than that of the Skelton stain so highly recommended by Hayhurst² recently. The stain is prepared as follows:

a, A 1 per cent. solution of methylene blue (Höchst, medicinally pure) in pure methyl alcohol, and b, A 1 per cent. solution of eosin (Grübler, pure) in pure methyl alcohol are kept on hand. Equal parts of a and b are mixed, and the stain is ready for immediate use. This is a saturated solution of the stain and I have found it better to dilute this with one-quarter to one-half its volume of methyl alcohol. It is also advisable to make up only enough of the mixed stain to last four or five weeks as it is needed, on account of the evaporation of the alcohol which will take place if the stock solution is frequently opened. If kept corked, however, the mixed stain keeps indefinitely, one sample which I made more than four years ago being as good to-day as the day it was made. Especial stress must be laid on the purity of the ingredients, particularly the methylene blue.

I recommend that only the Höchst, medicinally pure, be used. This can always be had from E. Leitz, Chicago and New York, if not elsewhere. The ordinary brands of methylene blue do not give good results. Merck's methyl alcohol, the brand marked "Highest Purity," has proved entirely satisfactory and is easily obtainable; the ordinary methyl alcohol must not be used. The bottles must be chemically clean and dry before using, and must be kept tightly stoppered.

TECHNIC

The stain is particularly adapted for cover-glass preparations. For staining blood the film should be thin, even, air-dried, and preferably not more than twenty-four hours old. No heat fixation is necessary. The cover-slip, held in a good cover-glass forceps, is flooded with the stain by means of an ordinary medicine-dropper. This dropper should be kept separate, should never be used for any other purpose, and should not be washed. The stain is allowed to act for one-half to one minute and is then slowly washed off with distilled water added drop by drop, preferably with another dropper kept aside for the purpose. If a deeper stain is desired, (and I prefer this second technic) the stain should be allowed to act for one minute, then five drops of distilled water added, and this allowed to stand for two or three minutes, and then washed with distilled water. The film should be stained pink. Under the microscope the red cells appear pink, the nuclei deep blue, the neutrophile granules light pink, the eosinophile granules deep pink or bright red, the basophile granules a deep purple, the blood platelets a light blue, malaria plasmodia and bacteria blue. Polychromatophilic stippling is very well shown.

For staining pus, throat smears, sputum, and other exudates the stain should not be allowed to act more than one minute. It is an excellent stain for the gonococcus and the ordinary pus cocci. For staining the diphtheria bacillus I have long ago discarded the Loeffler's blue in favor of this stain. The stain should act from one-half to one minute and shows the metachromatic granules most beautifully.

I can most heartily recommend this stain for all ordinary routine blood work, and for most of the other

usual stained preparations. No other stain which I know of is so simple in preparation and application, gives such uniformly good results, and has such a wide range of usefulness.

A CASE OF BRADYPNEA IN ADVANCED PULMONARY TUBERCULOSIS

CHARLES M. MONTGOMERY, M.D.

PHILADELPHIA

History.—The patient, M. H., aged 18, single, was a clerk. His uncle died of lung trouble over thirty years before. The patient was never very strong, but considered himself healthy. He had had a cough for five winters, and steadily for a year past. The cough was worse since an attack of the grip six months before the patient was seen by me. He had typhoid for eleven weeks two years before he was seen. He was seen for the first time May 5, 1908. His chief complaint was anorexia. He had cough, expectoration (2 ounces), moderate dyspnea, occasional palpitation of heart, no hemoptysis or night sweats.

Examination.—His weight was 133 pounds (138 a year previously), his height 5 feet 11 inches. (He had grown one foot in five years). His temperature was 100.5, pulse 104, respirations 10 to 12. He appeared a little childish for his age, his emaciation was marked, his chest long and flat, expansion poor. The heart showed marked accentuation of second pulmonic sound, otherwise normal. The lungs were extensively involved, practically all of the left lung being involved; also the right upper lobe, part of the middle lobe, and the upper part of the lower lobe. There was a small cavity at the right apex and a large cavity in the left upper lobe.

Course of Disease.—The patient improved temporarily. In September he developed an ischiorectal abscess, which ruptured. The urine about this time was acid; specific gravity 1010; considerable albumin; no diazo reaction; no sugar; many leucocytes; a few dark granular casts and a few epithelial cells. Four days before death the pulse was 112, respirations 13. The patient was remarkably free from pain in chest or abdomen. There were no signs of meningitis. Practically the only drugs used were strychnin, creosote and iodine (locally). The patient died Nov. 13, 1908. No autopsy was obtained.

Respiration.—The respiratory rate per minute out of eight times recorded by myself during the last six and one-half months of the patient's life was 10 once, 11 once, 12 three times, 13 twice, and over 20 once. The respirations were regular, quiet, slow, fairly deep, and unaccompanied with any effort or strain. The patient's mother kept records of the respirations during the last three months of his life, 165 in all. She was intelligent, careful, somewhat familiar with hospital work, and her recorded respiratory rates averaged a little higher than my own. Her and my records together made 173, divided as follows: Respiratory rate per minute: 10, 1 time; 11, 2 times; 12, 41 times; 13, 20 times; 14, 81 times; 15, 22 times; 16, 4 times; 17, 1 time; over 20, 1 time. The rate ranged from 10 to 17, with only one exception. It never rose above 15 with but six exceptions. It was below 15 145 times (83.8 per cent.). The afternoon and evening rates averaged a little higher than the morning rates. The temperature was usually low in the morning, often rising later in the day to 100 or 102.5. The pulse varied between 104 and 132.

Hutchinson gives the normal respiratory rate as 16 to 24. Bradypnea or a diminished respiratory rate has been noted in some forms of cerebral disease, including meningitis, in affections involving the pneumogastric nerves, in respiratory obstruction, in some forms of bronchitis, in asthma, in emphysema, and in nephritis, none of which appear to have been the cause of the lessened respiratory rate in our case.

Out of 1,438 occasions on which the respiratory rate was recorded in nine patients with advanced pulmonary tuberculosis during the last three months of life, on

2. Hayhurst, Emery R.: A Satisfactory Method for Staining Blood Smears, THE JOURNAL A. M. A., April 3, 1909, lii, 1100.

about two thirds the rate ranged between 25 and 34 inclusive, and only on one occasion was it below 20.

The only reference to diminished respiratory rate in pulmonary tuberculosis I have been able to find after looking over a number of standard works, is one by Smith¹ in 1856. In an elaborate study of five cases of pulmonary tuberculosis he found the respiratory rate as low as 13, and speaks of the bad prognosis in cases with low respiratory pulse rates, like 1:7 or 1:8. He noticed the low rates chiefly in phthisical persons of unusual stature, as in some of the regiments of the life guards, and in the early stage. Possibly, the bradypnea in this case and the height and rapid growth may have been due to a common cause. No other cause suggests itself, the condition resembling many cases of advanced pulmonary tuberculosis.

This patient had advanced pulmonary tuberculosis and yet the bradypnea was practically always present during the last six months of life, the rate frequently being below 13 and reaching as low as 10. The respiratory-pulse ratio was low, reaching below 1:10.

MIXED TUMOR OF ADRENAL ORIGIN CONTAINING OSSEOUS TISSUE

O. W. H. MITCHELL, M.D., AND R. B. HILL
COLUMBIA, MO.

Patient. Mrs. D., aged 24, American, housewife, had four sisters and two brothers, all in good health. The family history was negative. With the exception of the usual diseases of childhood the patient had always been in good health. She had three children, the youngest was two and one-half months old.

Present Trouble.—About seven weeks before the examination the patient first noticed an enlargement in the left hypochondriac region. About three weeks later she began to have some pain in her side and back, which did not seem to be getting worse. The growth, according to the patient, had not increased in size and the only pain the patient had now was in the back.

General Examination.—A tumor mass was readily palpated in the left hypochondriac region; this extended several finger-breadths below the free border of the ribs and to the median line in front. There was very little pain on pressure; the tumor was of hard elastic consistency; there was tympany over median border of tumor. When the patient lay on the back a distinct tympany could be percussed over the tumor. The mass extended through to the back and could be palpated from the rear and pushed forward and the entire mass seemed slightly smaller than a child's head. Distention of the colon did not help to clear up the condition. The mass was freely movable with respiration. When the patient stood it was possible to palpate between the upper pole of the tumor and the border of the ribs. Otherwise examination of the abdomen was negative. On vaginal examination the uterus was normal, anteverted and movable. The right adnexa could be palpated and were apparently somewhat thickened.

Urine Examination.—Light straw, sp. g. 1025, alkaline reaction, no sugar, trace of albumin, microscopically, many pus cells, a few red cells and an occasional cast could be seen. Second examination, same as the first, with the exception of the presence of sugar, which could be accounted for by the fact that the patient was nursing a child.

The patient again made application for treatment four weeks later. An x-ray plate made at this time showed a shadow, which was taken to be a stone in the pelvis of the kidney. Since patient was last seen the tumor had increased in size until now it extended beyond the median line.

Clinical Diagnosis.—Kidney tumor, probably hydronephrosis.

Operation.—By Dr. Max W. Myer. Oblique lumbar incision, tumor and kidney exposed, attempt to trocar failed. In the delivery of the tumor mass, which was very difficult owing to size and solidity, the tumor tore and yellowish bloody contents escaped. It was necessary to resect the last rib to deliver the mass.

Postoperative History.—The patient recovered from the operation, left the hospital in two weeks. To date, six months after operation, there are no signs of return.

*Pathologic Report.*¹—The specimen was a tumor mass about the size of two fists, with a thick, fibrous capsule covering it, except at the lower pole, from which yellowish pulpy material protruded. When sectioned the tumor presented difficulty because of osseous or calcareous substance in the capsule, processes of which extended quite deep into the tumor mass. The cut surface presented a variegated appearance; canary yellow areas, which were taken to be the tumor substance proper; red areas, which were thought to be due to hemorrhage; and the substance so resistant to the knife which was calcareous material or possibly true bone. The starch-iodin reaction of Crofton was positive.

Microscopic Examination of Tumor.—Pieces from various parts of the tumor were taken; those from the most resistant parts were placed in nitric acid solution before being blocked. The various slides showed many variations in the microscopic pictures. The cells were much the same, large and clear, with a very large vesicular nucleus, which took a bright, clear stain. The nuclei varied greatly in size. In some areas these cells were massed together without any particular arrangement, while in others they were to be found only in strands or cords, usually double cords of cells. In other places there was distinct tubular formation, with the tubules filled with red blood cells. Many of the lining cells of the tubules were filled with pigment in the form of very minute granules and of a yellowish-brown color. The pigment was of hematogenous origin and reacted to Pearl's iron stain. Some cells gave evidence that fat had been dissolved out of them. The blood vessels, really sinuses or capillaries, were very thin-walled. The tissue, which was placed in nitric acid solution, showed, when stained by Schmorl's method, typical osseous structure. There was definite formation of laminae and canaliculae, and the bone substance took a yellowish-brown stain.

Pathologic Diagnosis of Tumor.—Osteohypernephroma, or better, osteomesothelioma.

Microscopic Examination of Kidney.—The accompanying kidney, which was markedly smaller than normal, firm and quite resistant to the knife, showed on microscopic examination distended tubules, many of which contained large hyaline casts; and great increase in the interstitial connective tissue.

Pathologic Diagnosis of Kidney Condition.—Fibrocystic kidney, atrophy from pressure.

We wish to express our thanks to Dr. Myer for permission to report the case.

ASPHYXIATION FROM GASOLINE FUMES

HUGH S. WILLSON, M.D.
CRYSTAL, N. DAK.

Several cases of asphyxiation in buildings where gasoline engines were being run have come to my attention lately, and I have not come across any reports of such conditions in my limited library or in medical journals.

CASE 1.—The operator of a gasoline fire engine was working in the engine house with the engine running and all doors open. After an hour or so he felt dizzy and fell to the floor, unconscious. There was marked pallor and body was covered with cold perspiration. The breathing was slightly stertorous. The eyes were closed, the pupils slightly dilated. The pulse remained full, regular and at normal rate. The patient winced on pressure at the supraorbital notch but remained unconscious for five hours. He felt weak and had a splitting headache for a

1. Edward Smith, *Medico-Chirurgical Trans.*, published by the Royal Medical and Chirurgical Society of London, vol. 39.

1. From the Pathological Laboratory, University of Missouri.

day after; also nausea and vertigo for two days after. He had been overcome once before under the same conditions but soon regained consciousness in the open air. There was no history or sign of epilepsy or other condition simulating this. Others in the building had the dizzy feeling and headache but reached the open air without help.

CASE 2.—A chop-mill operator disconnected the exhaust-pipe of gasoline engine and turned it into a tank of water within the building, to heat the water. After the engine had been running for half an hour the operator became extremely dizzy and was barely able to escape to the open air.

CASE 3.—A farmer placed his gasoline engine in a large barn, part of which was occupied by cattle. After running the engine for some time he noticed the stock dropping in their stalls, and was unable to get them up. He soon felt dizzy and had difficulty in reaching the open air in time to avoid unconsciousness. He had marked headache and vertigo for some time after.

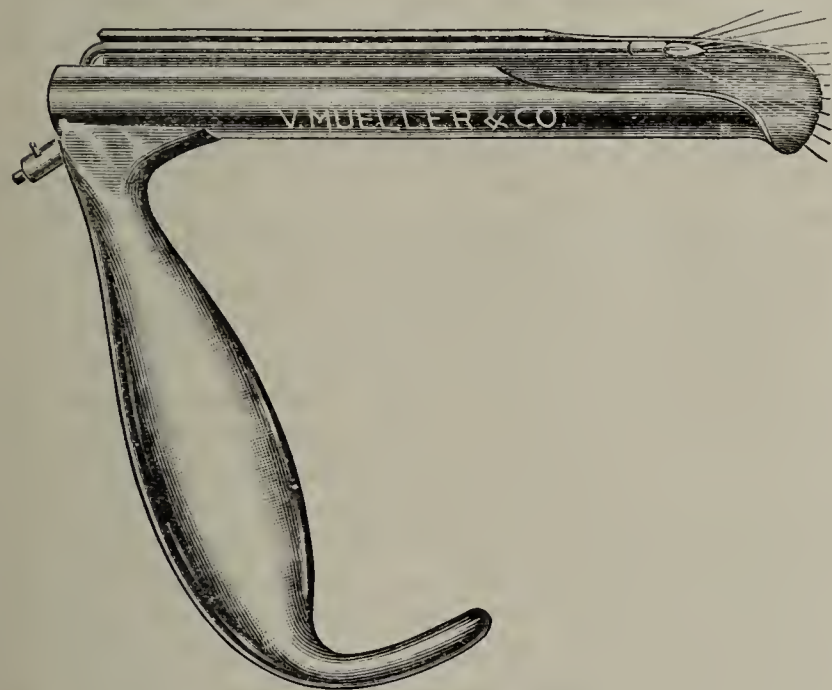
In all cases the buildings were not tightly closed. In Case 1, especially, all doors were wide open, giving very free circulation of air.

OPEN-TUBE LARYNGEAL SPECULUM

E. FLETCHER INGALS, M.D.

CHICAGO

This instrument was designed to facilitate the introduction of the bronchoscope or to be used in direct laryngoscopy either for diagnosis or operations. The handle has been placed at an acute angle to the tube, a feature which is important in enabling the operator to



Open-tube laryngeal speculum.

hold the instrument firmly with the patient either in the sitting or the recumbent position. The tube is open on one side, which permits the easy withdrawal of the instrument after the introduction of the bronchoscope, yet the opening in no way sacrifices the advantages obtained by the tubular instruments heretofore employed for similar purposes, and its use is not attended by the difficulties that have sometimes been experienced in withdrawing the slide that closes the opening in some tube specula. The light is introduced along a protecting groove so that it is out of the way in operative procedures, yet it is not liable to be dimmed by secretions that might find their way into an auxiliary tube. The instrument is made in two sizes, one 14 cm. long for children, the other 17 cm. long for adults. I have found this much more satisfactory than other instruments I

have used for direct laryngoscopy or for introducing the bronchoscope. It may be employed easily when the parts have been properly anesthetized by cocain and suprarenalin. It is best to make the examination or operation when there is no food in the stomach, as the throat is then more tolerant of manipulation and vomiting is much less likely to occur.

34 Washington Street.

Therapeutics

TOBACCO

In this age of the ever-increasing frequency of high blood tension, arteriosclerosis and cardiac weakness, the action of tobacco is becoming more and more a topic of importance. While it is true that the number of non-smokers among men is increasing, it is also true that the number of men, young men, and even boys, who smoke excessively is increasing.

In investigating the exact pharmacologic action of tobacco, while we must seriously and carefully consider the scientific findings of laboratory investigators, it becomes evident that these findings do not express the whole truth of the action of tobacco on the individual addicted to its over-use.

The only active constituent of tobacco seems to be the alkaloid nicotin, and this alkaloid acts principally on the nervous and circulatory system. In concentrated form it is one of the most quickly acting poisons, and may produce death in less than a minute by causing immediate respiratory failure, the heart beating for some time after respiration ceases. In less concentrated doses the symptoms are severe nausea, vomiting and purging, with profuse salivation, sweating and a gradually failing heart and respiration.

When nicotin is injected intravenously or subcutaneously there is first a rise in the blood pressure, which is probably due to an irritant action on the blood vessel walls. This, however, is soon followed by a lowering of blood pressure, due to the disturbing influence on the heart. The action on the heart varies with different doses, and often from minute to minute. At first there seems to be decided inhibitory action, by a stimulation of the pneumogastric nerves. If the dose is sufficient to paralyze the ganglia of the pneumogastric nerves the heart becomes rapid, and soon the heart muscle itself is depressed and later paralyzed. Most of the secretions of the body are increased, especially that of the salivary and sweat glands.

Nicotin is a stimulant to peristalsis, both of the intestines and stomach. Nausea and vomiting, though partially due to excessive stomach contractions, are also doubtless due to the irritant or depressant action on the vomiting center in the medulla.

Cushny says that nicotin first stimulates and later paralyzes all of the sympathetic ganglia. If this is true of large doses, small doses taken in constantly (as by smoking) by young boys must profoundly affect growth and nutrition.

The nervous twitchings and fibrillary contractions of muscles seems to be due to an action on the central nervous system. Nicotin does not seem to be a stimulant to the higher centers of the brain, except possibly during the actual act of smoking or puffing at a cigar or pipe. The almost immediate action is a depressant and quieting one on the central nervous system; in

other words, it acts as a narcotic. While large doses of nicotin will cause dilatation of the pupils, small doses (smoking frequently repeated) will cause the pupils, in the tobacco *habitué*, to be contracted.

While nicotin is mostly excreted by the kidneys, it is also largely excreted by the saliva, and probably slightly by the perspiration.

Like any other narcotic drug, a tolerance for tobacco is soon acquired, the desire for it soon develops, and the tobacco habit is easily formed.

It seems positively physiologically demonstrated that when tobacco is smoked a certain amount of nicotin is absorbed, as, whether the effect is that of acute poisoning, as in a novice, or that of chronic poisoning in the over-user of tobacco, the symptoms and disturbances are those of nicotin. The amount of nicotin that will be absorbed from each "smoke" depends on whether it is a pipe, cigar or cigarette that is smoked, and whether or not the smoke is inhaled.

What it is that causes the tobacco-smoking habit is not positively demonstrable, and perhaps the habit can not be attributed to any one particular thing. The desire for a smoke is probably a combination of the narcotic, quieting effect of the nicotin; the quieting effect of the rhythmical muscular activity of puffing; the desire for the periodic irritant stimulation of the throat, and perhaps larynx; perhaps the psychic effect of watching the curling smoke, and the human feeling of sociability in smoking with others. There seems to be no doubt that cigarette smokers who inhale have the desire intensified by the irritation of the throat, and such smokers are not satisfied with any other method of using tobacco, even if strong cigars are substituted for the weak tobacco cigarettes. Consequently, the nicotin action comprises but a portion of their intense desire, the cure of which is the hardest of the tobacco habits. It is also positively true that the smoker who inhales (and inhaling occurs far and away most frequently among cigarette smokers) is the one who absorbs the most nicotin, and is the one in most danger of chronic poisoning.

The intangible signs of chronic tobacco poisoning are in boys, impaired physical growth and impaired respiratory ability, and in older men, a slowly developing arteriosclerosis. The tangible symptoms and signs of the over-use of tobacco are excessive nervous irritability and excitability as shown by nervous twitchings, fibrillary contractions, increased nerve reflexes, sleeplessness, palpitation, cardiac pains, loss of appetite, digestive disturbances and chronic inflammation of the throat and larynx.

To begin with, the simplest of these conditions, the chronic pharyngitis, lingual tonsil irritations, lingual tonsil cough, and chronic congestion of the larynx, and laryngitis, are conditions frequently seen and generally readily cured by the withdrawal of tobacco and the proper local treatment.

Whether the loss of appetite and dyspepsia are due to the impairment of the saliva which in over-smokers is loaded with nicotin and probably other tobacco extractives, or to excessive stomach irritability, or to impaired circulation (which is generally concomitant with digestive disturbances from this cause) can not be proved, but probably all are factors in causing the impaired functioning of the stomach. In this condition it can generally be promised that if the tobacco is stopped and gentle tonic treatment given the appetite will return, the digestion will improve, and the patient will put on weight.

The most frequent disturbance for which the patient who over-uses tobacco comes to the physician is cardiac disturbance, and generally he has recognized the cause, and has attempted to stop the excessive use of tobacco. The heart is found irritable, palpitating with the least exertion, and sometimes without excuse, occasionally sharp, stinging pains referred to the cardiac region occur, the patient is breathless on slight exertion, and arrives at the top of a flight of stairs with the short, dry, catchy cough so typical of cardiac weakness. Examination of the heart often shows it slightly enlarged, and there may be a mitral systolic murmur, showing an insufficiency of the mitral valve. Such a condition of the heart from tobacco is found occasionally, while an irritable heart from tobacco is of frequent occurrence. Such a heart will generally recover entirely after the withdrawal of tobacco, with physiologic rest (as rising slowly and walking slowly, avoiding all haste, refusing to rush for cars, abstaining from severe muscular exertion) and the administration of small doses of digitalis or strophanthus. Of course during the treatment of such a heart alcohol should be entirely avoided. Entire recovery of the "tobacco heart," if the patient has no other organic lesion, should be expected in from three to six months.

When the heart is seriously affected by nicotin other symptoms are frequently in evidence, such as a small amount of tremor, exaggerated reflexes, and a tendency to cold hands and feet, with excessive sweating, especially of the hands. Such a condition of the hands and feet is particularly noticeable in young men and boys who are over-smoking, and will generally disappear on the stoppage of tobacco and the administration of ordinary doses of strychnin.

Occasionally the first notification of excessive use of tobacco is an impairment of vision. This is of rather rare occurrence, although the tendency to small, contracted pupils is of frequent occurrence. Generally the vision improves after stopping the tobacco.

Much discussion has taken place as to whether the tobacco user gets cerebral stimulation or cerebral quietude from his smoke. As the tobacco user will generally get nervous irritability and probably cerebral irritability if he suddenly stops smoking, and becomes calm and quiet as soon as he takes his smoke, it hardly seems that the nicotin could ever be a cerebral stimulant. Although the rhythmical puffing at the cigar or pipe may produce cerebral stimulation by possibly increasing the blood flow in the brain, and though there may be some cerebral stimulation from the possible slight increase in blood tension due to the act of smoking and the absorption of nicotin, still the action of tobacco as a whole must be put down as sedative and narcotic. The nervousness is quieted, the cerebral irritation becomes diminished, calmness takes its place, and the man thinks and acts calmly, logically and with less haste. This, of course, applies to the man who takes his "smoke" regularly and has not developed chronic tobacco poisoning. The circulatory and nervous depressant effects which occur when the novice smokes his first cigar can not be considered as at all symmetrical with the symptoms produced by a cigar smoked by one who has become tolerant to tobacco. The tobacco user without tobacco not only develops cerebral irritation, as shown by irritability and nervousness, but also has an increased blood pressure from this same nervous tension. In his case certainly, and probably in most instances, though the primary muscular effort of puffing at the cigar may increase the

blood pressure, soon, secondarily, there is a diminished blood pressure, the irritable heart is quieted, the nervous system receives its desired narcotic, and the man feels comfortable and contented. Under such conditions he certainly will do better mental work than without his cigar unless he has entirely broken himself from the habit, and his system does not need or expect the narcotic influence of tobacco.

It seems to be a mistake to have believed that the smoke in a tobacco atmosphere does not contain nicotine, because if patients, who show signs of the over-use of tobacco and who have diminished or even stopped its use, remain for several hours in a room filled with tobacco smoke, or ride for hours in smoking cars, they will again show signs of nicotine poisoning. In other words, a man may smoke one or two cigars a day in the open air or in his own home with impunity, but the same amount of tobacco smoked in smoking cars will often produce symptoms of poisoning.

It has not been seriously enough considered that an habitual tobacco user, who has developed an acute sickness or has been subjected to an operation, during convalescence may suffer from nervous symptoms and circulatory phenomena that are due to the withdrawal of his habitual narcotic. It can not be stated offhand that even so simple a narcotic as tobacco can suddenly be withheld from a system that is undergoing other serious strain without causing serious symptoms. If a heart has become used to the quieting effects of nicotine on its nervous mechanism, and if some of the vital brain centers, especially in the medulla, have become used to this same narcotic, it is probable that serious symptoms may be prevented and a quieted nervous system and better heart action be produced by allowing such a patient to have a more or less frequent "smoke," depending on his previous habit. It is also possible, as so well recognized in the users of opium or morphine, that tobacco to these *habitués*, while not a stimulant to mental activity or causing a patient to be mentally more acute, may still be a positive stimulant to the vital brain centers.

A positive demonstration of such need for tobacco in the convalescence of sickness is well shown by several cases reported by Dr. L. Bolton Bangs, New York, in the *Medical Record*, March 14, 1908.

To draw a moral from the above would be to urge the prohibition of the sale of cigarettes to young growing boys; for physicians to discountenance positively preparatory schools that allow the youth of America to develop or continue the cigarette habit; to teach older boys and young men the physiologic disability that large, and certainly excessive, amounts of tobacco can produce; and to urge, after the young man has acquired his growth, such use of tobacco, if he desires to use it at all, as will be less than enough to cause any of the well-known symptoms, which the man himself can be taught to recognize as these symptoms of over-use of tobacco. The amount that each individual should or may smoke is an entirely individual problem. There is not and never can be a rule as to how much is excessive. One cigar a day may be as serious for one man as are six cigars a day for another.

It is impossible to state how frequently deaths are caused by the over-use of tobacco. Certain it is that not infrequently young boys and young men, generally cigarette users, get into such mental conditions as to become irresponsible criminally, mentally worthless, and even insane. It certainly seems recognizable that seri-

ous heart weakness occurs frequently in acute disease, or after operations, in those who use tobacco excessively. Certainly great care should be exercised to use no drug that will cause cardiac depression in such patients and their hearts should be more carefully watched than the heart of an individual who does not smoke. It is quite possible that even during the acute processes a chronic tobacco user should be allowed an occasional short "smoke."

In breaking off from the tobacco habit the question is, shall the patient stop abruptly or gradually? This is best determined by the man, who knows which is the best method for himself. Sometimes bromids help to diminish the restlessness and nervousness, sometimes strychnin is needed, and generally laxatives are indicated. Plenty of fresh out-door air will generally aid such patients in ridding themselves of the habit.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1909," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(Continued from page 1407)

BARIUM CHLORIDE—*Barii Chloridum*.—*Baryum Chloratum* (Pharm. Germ. edit. 4; Pharm. Helv. edit. 4). Barium Chloride ($\text{BaCl}_2 \cdot 2\text{H}_2\text{O}$) is the barium salt of hydrochloric acid.

Barium chloride occurs as colorless trimetric plates or glistening scales, odorless, non-efflorescent and having an unpleasant, bitter, sharp, saline taste. It dissolves in 2.5 parts cold and in 1.5 parts boiling water, forming a neutral solution; but is insoluble in alcohol. Barium chloride becomes anhydrous when dried at 120°C . (248°F .).

An aqueous solution of the salt yields, with diluted sulphuric acid, a heavy white precipitate, insoluble in strong acids, and with silver nitrate a curdy, white precipitate, insoluble in nitric acid but readily soluble in ammonia water. Diluted alcohol, after remaining in contact with the salt for several hours, should, on ignition, give a pure yellowish-green flame free from red (absence of traces of strontium). An aqueous solution of barium chloride should not be precipitated by ammonium sulphide nor should any residue remain after adding excess of diluted sulphuric acid to the solution, filtering, and evaporating to dryness. Twenty Cc. of the aqueous solution (1 to 20) must not turn blue on the addition of 0.5 Cc. of potassium ferrocyanide T. S.

Action and Uses.—Barium chloride is a toxic substance, its most striking effects being exerted upon muscle tissue, especially unstriated and heart muscle, and in large dose upon the spinal cord and medulla. By actively stimulating peristalsis, through action on the muscle wall, and by its direct irritant action, it readily produces vomiting and purging. It strengthens the cardiac contraction by direct action on the heart muscle, and by this means and still more by direct action on the vessel walls it greatly increases blood pressure, acting like digitalis. It acts on the muscles like veratrin. It first greatly excites and then paralyzes the spinal cord and medulla. Given in very dilute solution, absorption is small and the barium is deposited in the bones. Injected intravenously it causes tonic and clonic spasms, because of stimulation of the spinal cord and medulla.

In fatal doses it causes hemorrhages in stomach, intestines and kidneys.

Its clinical use has had but little success, chiefly because of gastrointestinal irritation and high toxicity. It has, however, been used in cardiac disease with insufficient blood pressure, as a general "tonic," and with less reason in tremors, in sele-

roses of the central nervous system, internally and locally in varicose veins, etc.

In poisoning the most direct antidote against the portion remaining in the gastrointestinal tract is sodium sulphate, which produces insoluble barium sulphate.

Its use is attended with considerable danger.

Dosage.—0.006 to 0.003 Gm. (1/10 to 1/2 grain) or 2 to 4 Cc. (30 to 60 minims) of a 1 per cent. solution (5 grains to the fluidounce). Fatal, 0.80 to 0.90 Gm. (13-15 grains). It should always be well diluted before giving.

Internally used in syphilis, serofula and tremor albus in doses of 0.03-0.10 Gm. (1/2 to 1 1/2 grains) 3 to 4 times per day; for heart disturbances 0.2-0.4 Gm. (3 to 6 grains) per day. Maximum dose per day 0.6 Gm. (9 grains). Externally employed as an eye-wash in serofulous eye affections in 10 per cent. solution.

DIGITALIS PREPARATIONS

The chemistry of digitalis is very imperfectly understood, but several principles have been isolated in a greater or less degree of purity. These include digitalin, digitalein, digitoxin, digitonin and digitin. The term digitalin, unfortunately, is applied in a loose way to all of these principles, and in a more restricted sense to indicate digitalinum verum, or true digitalin, which is probably a definite substance.

Digitalinum purum, or German digitalin, is a mixture of several glucosides, consisting of 50-60 per cent. of digitonin and only 5-6 per cent. of true digitalin. German digitalin is the preparation usually found on the market and is ordinarily dispensed when "digitalin" is prescribed.

French Digitalin, or Homolle's digitalin, is also a mixture of several glucosides, but consists mainly of true digitalin.

Merck's crystallized digitalin is neither digitalin nor digitoxin, but digitonin or digitin, Merck using the three terms, crystallized digitalin, digitonin and digitin as synonyms.

Digitaline cristallisée of Nativelle is not digitalin, but is nearly identical with digitoxin.

It must be remembered, therefore, that Merck's "crystallized" digitalin, Merck's "pure" digitalin and the "true" digitalin of Boehringer and Sons, which naturally might be supposed to be identical, are *different in their action*.

DIGITALIN, TRUE—**Digitalinum verum Kiliani**.—Schmiedeberg's digitalin. A glucoside, $C_{35}H_{56}O_{14}$, found in the seeds and leaves of digitalis purpurea and derived commercially from German digitalin.

To a solution of one part German digitalin in four parts of 95 per cent. alcohol, five parts of ether by weight (Sp. Gr. 0.720) are added and the mixture allowed to stand in a closed vessel for twenty-four hours. In the clear supernatant solution the quantity of dissolved substance is estimated and the whole then subjected to vacuum distillation until its weight becomes 1.6 times that of the total dissolved substance. To this concentrated solution water, in an amount 2.4 times the weight of dissolved substance, is added, forming a solution containing approximately 20 per cent. alcohol, from which crude digitalin gradually separates on standing. The crude product is washed first with 10 per cent. alcohol and then with water and finally dried at a moderate temperature. Further purification is effected by boiling the alcoholic solution with animal charcoal. (Kiliani's method. Hager's Handb. der Pharm. Praxis, Vol. I, p. 1030.)

Digitalin occurs as a white amorphous powder, or in characteristic, granular masses. It melts at 217° C. (412.6° F.) and becomes yellow. It is soluble in 1,000 parts of water and in 100 parts of 50 per cent. alcohol at the ordinary temperature; easily soluble in strong hot alcohol, but nearly insoluble in ether and chloroform. Digitalin dissolved in alcohol and treated with very dilute acid and heat yields digitaligenin and two sugars.

With concentrated sulphuric acid digitalin forms a golden yellow solution which on the addition of potassium hypobromite solution changes to a magnificent rose red or violet red.

If a little digitalin is dissolved in 3 to 4 Cc. of glacial acetic acid to which a trace of ferric chloride solution has been added and the mixture carefully underlaid with concentrated sulphuric acid (Keller's reaction) a deep carmine red band appears; the lower layer of the acetate acid is light yellow changing to brownish. (Difference from digitoxin.)

Sulphuric acid containing a little ferric sulphate gives with a little digitalin at first an intense golden yellow color, and then a red solution; this color rapidly changes to a beautiful and permanent violet. If too much digitalin is used the red color remains and only the surface layer becomes violet.

On heating on platinum foil digitalin should burn without leaving a weighable residue.

If a granule of digitalin is covered with 2 Cc. of 10 per cent. potassium hydroxide solution no color should develop within one minute (absence of other glucosides).

If digitalin is stirred to a thin paste with water and for every 100 parts of water used 22 parts of amyl alcohol is added with shaking, and the mixture set aside in a closed vessel for 24 hours, the presence of digitonin will be indicated by the formation of distinct masses of crystals.

Action and Uses.—The same as those of digitalis. Its emulative action is probably not so great as that of digitoxin.

Dosage.—It is impossible at present to state the correct dose for digitalinum verum Kiliani. Some authorities give

the same dose as that for digitoxin, whereas others give it as much larger. It is best given in pills made by trituration with sugar of milk and massing with glueose. Solutions of digitalin rapidly lose their strength and should be freshly prepared.

DIGITALIN, "FRENCH."—Homolle's Digitalin. Digitaline Amorphe. Digitalin Chloroformique. A mixture obtained from Digitalis purpurea by the method of Homolle, consisting mainly of digitalinum verum, Kiliani.

100 Gm. powdered digitalis leaves are moistened with one liter of water and slowly exhausted in a percolator until the percolate amounts to three liters. This is precipitated with 250 parts of lead acetate and the filtrate from the precipitate treated with 40 parts of crystallized sodium carbonate and 20 parts of sodium ammonium phosphate, in order to remove the excess of lead. The filtrate is precipitated with 40 parts of tannic acid. The tannate is mixed with 25 parts of powdered litharge and 50 parts of purified animal charcoal and dried. From the dried mass the digitalis bodies are extracted with 90 per cent. alcohol, the latter is distilled off and the residue washed with distilled water and again taken up in 90 per cent. alcohol. This is again distilled and the residue exhausted with chloroform. On expelling the latter the digitalin remains behind (Hager's Pharm. Praxis, Vol. I, p. 1035).

French digitalin is a yellowish-white, amorphous powder of a peculiar aromatic odor and bitter taste. It is neutral to litmus, almost insoluble in water, soluble in alcohol and chloroform and insoluble in ether. It softens at 90° C. and begins to melt at 100° C. It is not precipitated by solutions of lead salts; but with tannic acid, it forms a tannate insoluble in water. It is colored emerald green by concentrated sulphuric acid.

Concentrated sulphuric acid dissolves digitalin French, producing a yellow color, which finally goes over to an emerald-green color.

Action and Uses.—Action like that of digitoxin. Uses the same as those of digitalis.

Dosage.—What has been said with regard to the dose of digitalinum verum, applies to the French digitalin; the dose is variously given as 0.00025-0.002 Gm. (1/250 to 1/35 grain). Maximum daily dose 0.006 Gm. (1/10 grain). It must be used with caution and its action carefully watched.

DIGITALIN, GERMAN—**Digitalinum Germanicum**.—A mixture of glucosides obtained from digitalis seeds according to the process of Walz, and consisting largely of digitonin, with digitalin verum and other glucosides.

Digitalis seeds are extracted with alcohol, the alcohol driven off, the extract diluted with water and purified by precipitation with lead acetate. The filtrate is freed from lead by sodium phosphate. From the liquid thus purified the digitalis bodies are precipitated with tannic acid, the tannate well washed with water and decomposed with lead or zinc acetate. The digitalin thus separated is taken up in alcohol, the latter carefully distilled off and the residue washed with ether as long as it takes up anything. The digitalin purified in this way is dried at a low temperature and finally powdered. (Hager's Handbuch der Pharm. Praxis, 1903, Vol. I, p. 1032.)

German digitalin is a yellowish-white, amorphous powder, soluble in water and alcohol, insoluble in ether and chloroform. It is said to contain about 50-60 per cent. of digitonin and 5-6 per cent. of digitalinum verum and the rest of digitalein and other glucosides.

Sulphuric acid containing a trace of ferric sulphate produces with digitalin, German, an intense golden-yellow coloration, changing to red and finally to a permanent reddish-violet.

Action and Uses.—Similar to those of digitalis.

Dosage.—0.001 to 0.002 Gm. (1/60 to 1/30 grain). Maximum dose 0.004 Gm. (1/16 grain); maximum per day, 0.02 Gm. (1/2 grain).

As German digitalin (so-called digitalinum purum) is a mixture of very powerful active principles, the proportion of which may vary with changes in the manipulations, it is very important that the directions for its preparation should be very carefully followed, and caution should be exercised to purchase only such products as the manufacturers can guarantee to have been made with the necessary care.

DIGITONIN.¹—A glucoside $C_{27}H_{46}O_{14} + 5H_2O$ derived from the seeds of digitalis purpurea and belonging to the saponins.

Digitonin is separated from German digitalinum purum by the addition of ether to the alcoholic solution (see digitalin). The precipitate is dissolved in 10 parts of 85 per cent. alcohol and the solution put into water at 45° C. After standing from six to eight hours the greater part of the digitonin will crystallize out.

Digitonin crystallizes in colorless needles or thick warty masses which dissolve in 600 parts of cold water and 50 parts of warm water to a turbid solution, but dissolves to a clear solution in 50 parts of 50 per cent. alcohol. Its solutions are levorotatory. When heated in alcoholic solution with hydrochloric acid it is split into dextrose, galactose and digitogenin.

Concentrated sulphuric acid dissolves it with a red color which is intensified by the addition of a drop of bromine water.

Concentrated hydrochloric acid dissolves digitonin without color, but the solutions become yellow and finally reddish violet on heating or on long standing.

Keller's reaction gives a rose red zone which soon fades.

1. Crystallized digitalin—Merck.

Action and Uses.—Digitonin acts as a heart depressant when introduced into the circulation, but it is not absorbed from the alimentary canal, and therefore exerts no action on the circulation when taken by the mouth, but it renders digitoxin more soluble whether in infusion or when the leaf is taken by the mouth.

DIGITOXIN—*Digitoxinum*.—*Digitoxinum* (Pharm. Helv. edit. 4). Digitaline Crystallisée (Pharm. Française, 1908). Digitoxin, $C_{41}H_{64}O_{11}$ is the chief active principle of digitalis, having the character of a glucoside.

The leaves of *Digitalis purpurea* having been extracted with water and dried are extracted with 50 per cent. alcohol. This solution is treated with lead acetate, forming a precipitate, which is allowed to settle. The supernatant liquid is decanted. The remaining alcohol is evaporated *in vacuo* and the residue repeatedly extracted with ether. The ether extract is then shaken out with water and concentrated by distillation and the residue recrystallized from hot alcohol (85 per cent.) and decolorized by boiling with animal charcoal (Schmidt's Pharm. Chemie, 3d. edit., Vol. II, p. 1640).

Depending on the solvent from which it is crystallized, it is either hydrated or anhydrous. The hydrated form is obtained when crystallized from alcohol and the anhydrous from chloroform and alcohol mixture, forming colorless rectangular leaflets melting at 243° C. (470° F.) (Pharm. Française, 1908). The anhydrous preparation is official in the Pharm. Française, 1908.

It is insoluble in water, benzoin or carbon disulphide, slightly soluble in ether and easily soluble in chloroform. At 15° C. it is soluble in 79.80 parts of absolute alcohol and in 43.04 parts of 90 per cent. alcohol. It is slightly soluble in fatty oils (Pharm. Française, 1908).

Digitoxin dissolved in 2 Cc. glacial acetic acid containing a trace of ferric chloride when poured onto 2 Cc. of concentrated sulphuric acid containing a trace of ferric chloride, will produce a brown color at the zone of contact of the two solutions. This color gradually changes to green and finally an indigo blue; after one-half hour the entire acetic acid layer will become blue. (Pharm. Française, 1908).

It dissolves to a colorless solution in cold concentrated hydrochloric acid, but when this solution is heated on the water bath for some time a green color is obtained. Concentrated sulphuric acid dissolves it, producing a green color.

It should not lose weight appreciably when heated to 100° C. It should be insoluble in water and in benzoin, but completely soluble in chloroform. It should leave no residue when ignited (Pharm. Française, 1908).

Action and Uses.—Digitoxin acts much like digitalis. Its activity varies with the method of preparation. Digitoxin from an unknown source should be tested on animals before it is used on patients. Owing to its slow excretion, it is cumulative in action when too frequently repeated. Locally it is very irritant, and when given by mouth is liable to derange the digestion. Penzoldt claims that gastric irritation may be avoided by giving it only when the stomach is full. Owing to its irritant action it is not suitable for hypodermic injection.

Dosage.—Single dose 0.00025 (1/250 grain); maximum daily dose 0.0010 Gm. (1/67 grain). It should be given largely diluted and repeated cautiously.

Antidotes: Emetics, tannin, nitroglycerin, morphine, alcoholic stimulants or camphor.

GELSEMINE HYDROCHLORIDE—*Gelseminae Hydrochloridum*.—The hydrochloride of an alkaloid, $C_{24}H_{28}N_2O_4 \cdot HCl$ (Gerrard) ($C_{22}H_{26}N_2O_2$ by Spiegel, Ber. d. deut. Chem. Ges. vol. 26, p. 1054) derived from *Gelsemium* (*Gelsemium semper-virens* (L) Ait. f. Fam. Loganiaceae).

Gelsemine hydrochloride occurs in prismatic crystals or a white crystalline powder. Soluble in water, but difficultly soluble in alcohol.

With concentrated sulphuric acid it gives a yellowish, and with concentrated nitric acid a green coloration. If potassium dichromate is introduced into a solution of gelsemine in strong sulphuric acid a cherry red coloration shading into violet which soon becomes green is produced at the point of contact.

Action and Uses.—Pure gelsemine appears to have a very slight toxic action, increasing reflex action in frogs, to some extent, its action resembling strychnine. The effects of the commercial preparations are thought to be due to the gelsemine which they contain in varying quantities.

It has been used in neuralgia, especially trigeminal.

Dosage.—0.0005 to 0.002 Gm. (1/134 to 1/33 grain).

NOTE.—Gelsemine is a very poisonous alkaloid, found in *Gelsemium*, which has an action very similar to that of conium but is more depressant to the central nervous system, and must be carefully distinguished from gelsemine. Gelsemine is a mydriatic but is seldom used as such owing to its irritating action. Merck's "gelseminin" appears to consist of gelsemine and not gelsemine.

Gelsemine (Gerrard) is, according to Cushny (Proc. Am. Ph. Assn., Vol. 41, p. 850), the same as the German "crystallized gelsemine."

SANGUINARINE NITRATE—*Sanguinarinae nitras*.—The nitrate ($C_{20}H_{15}NO_4 \cdot HNO_3$) of the alkaloid sanguinarine, obtained from *sanguinaria canadensis* and other plants.

Sanguinarine nitrate occurs in orange-yellow crystalline needles or deep-orange colored powder. It is soluble in water and in alcohol.

Action and Uses.—Sanguinarine is a violent poison producing in mammals vomiting, purging, convulsions with loss of reflex activity and cardiac depression. The blood pressure is said to be raised by small doses.

The principal use of sanguinarine nitrate is as a stimulant expectorant in chronic bronchitis and in the later stages of acute bronchitis. It is said to be an emmenagogue and used in functional amenorrhea.

Dosage.—0.004 to 0.06 Gm. (1/16 to 1 grain); as an expectorant, 0.004 to 0.008 Gm. (1/16 to $\frac{1}{8}$ grain); as an emetic 0.015 to 0.06 gm ($\frac{1}{4}$ to 1 grain); average dose 0.015 Gm. ($\frac{1}{4}$ grain) to be given with caution.

STROPHANTHIN THOMS.—A crystalline glucoside ($C_{30}H_{46}O_{12} + 9H_2O$), obtained from *Strophanthus gratus*. It is identical with the ouabain obtained from *Ouabaio* wood by Arnaud (the official strophanthin is methyl-ouabain ($C_{31}H_{45}O_{12}$)).

The light-brown dehaired seeds of *strophanthus gratus* are cold pressed to free from oil. The oil free cakes thus formed are broken up and extracted with 96 per cent. alcohol. The alcohol is distilled off on the water bath, leaving a residue, which is described as follows: It consists of several layers—an upper thin layer of oil, then an aqueous alcohol layer, followed by a yellowish brown mass of crystals, under which is a layer of a brown extract, from which an amorphous strophanthin can be isolated. The above mentioned crystals are freed from the mother liquor and recrystallized from hot water. The seeds yield about 3.62 per cent. of crystallized strophanthin.

Colorless quadratic crystals of bitter taste and easily soluble in hot water. Soluble in 100 parts of cold water and 30 parts cold absolute alcohol and 30 parts amyl alcohol. It is slightly soluble in acetic ether, ether and chloroform. Its solubilities require further study. Solutions of 1 part of crystallized strophanthin in 100 parts of 95 per cent. alcohol have been frequently observed to deposit crystals on standing.

A solution of 0.01 gm. in 1 Cc. water run onto a layer of concentrated sulphuric acid colors the latter pink to red and the aqueous layer is colored a dirty green color.

Heated to 105° C., it loses 20 per cent. of water. The strophanthin thus dried melts at $187-188^{\circ}$ C. Upon ignition no weighable residue should remain.

Heating with dilute hydrochloric acid or sulphuric acid produces hydrolytic cleavage, yielding a body which is identical with rhamnose.

Action and Uses.—Its pharmacologic action is probably qualitatively identical with that of the official *strophanthus* or strophanthin, but the crystallized is more than twice as active as the official strophanthin when injected subcutaneously or intravenously. The action of crystallized strophanthin appears to be identical with that of the purest preparation of strophanthin from *Strophanthus Kombe*; this action develops more rapidly, the drug is more quickly excreted, and shows less tendency to cumulative action than in the case of digitalis.

Strophanthin Thoms is used in place of *strophanthus* as a substitute for digitalis.

Dosage.—It is recommended in doses of 5 minims of a 1 per cent. solution by the mouth, gradually increased by 1 minim until the desired effect is obtained, which seldom requires more than ten minims (or about one-tenth of a grain of strophanthin). (H. Schedel, Arbeit a. d. Pharm. Inst. d. Universität, Berlin, II, 1904, p. 97). Single dose by mouth, 0.003 to 0.025 Gm. (1/20 to $\frac{2}{5}$ grain); daily dose, up to 0.03 Gm. ($\frac{1}{2}$ grain). The larger doses are probably not absolutely safe. Intramuscularly or intravenously: The correct dose has not been accurately determined, but it appears to be one-half milligram (1/130 grain) or less for a single dose, and only one such dose should be given in a day as a rule. For intramuscular injection it should be dissolved in about 4,000 parts of distilled water, and even in that dilution it occasions some pain. The intramuscular injection should be repeated only by the physician himself.

AMYL VALERATE—*Amylis valerias*.—Amyl valerate, $CH_3 \cdot CH(CH_3) \cdot CH_2 \cdot COO(CH_3 \cdot CH(CH_3) \cdot CH_2 \cdot CH_3) = C_{10}H_{20}O_2$, is the iso-amyl ester of iso-valeric acid.

Amyl valerate is obtained by separating (by distillation) the ester which is formed when valeric acid or sodium valerate is added to a mixture of iso-amyl alcohol and sulphuric acid and the distillate obtained, washed, dried and redistilled.

Amyl valerate is a colorless liquid, having when dilute an odor of apples. It is insoluble in water, soluble in alcohol, ether and chloroform. It boils at $188-190^{\circ}$ C. ($370.4-374^{\circ}$ F). Its specific gravity is .858 at 15° C.

Action and Uses.—Amyl valerate has been employed in the treatment of gallstone colic, as a sedative and to dissolve cholesterol. Its employment in renal colic is not satisfactory.

Dosage.—To relieve biliary colic, 0.2 to 0.04 Cc. (3 to 6 minims) in capsules every half hour; or 1 Cc. (15 minims) in capsules, three times daily.

(To be continued)

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THE PHYSICIAN AND COLLEGE ATHLETICS

The sanest thing that has been said about college athletics in recent years occurs in a lecture recently delivered by Dr. Edward H. Nichols, medical supervisor of the Harvard athletic teams. The following paragraphs which, as they are reported within quotation marks in the *Boston Herald*, of Monday, April 19, would seem to be authentic, represent conclusions of his medical experience and careful weighing of the situation. He said, in part: "I believe that competitive athletics develop courage, tenacity, a sense of fair play, coordination, self-sacrifice, the control of men, business principles and power, and these to a very high degree in many cases, and that the good far outweighs the detrimental publicity, extravagance, physical energy and excessive work, the evils of the coaching system and the distortion of values. Especially is this so since the evils seem to me controllable, the extravagance by removal of the money which makes it possible, the excessive work and energy by adequate medical supervision, the coaching evils by abolition of the system, and distortion of relative values by changes in the points of view of parents and by increased requirement of work by faculties."

In this, Dr. Nichols points out exactly the evils that everyone who has studied the subject seriously appreciates must be reformed and best of all he indicates the ways and means for the reformation. If athletics are to continue in our universities this reformation must come soon or there will be a revulsion of feeling that may turn us aside from the present movement toward open air life which has many benefits for mankind in its train. Most of the evils center around the professional coaching system. It is through the professional coach that young men are tempted to overdo their strength in athletics and it is his influence that makes a business of the college sport and brings in its attendant train the extremely undesirable publicity, the temptations to extravagance and to betting evils of various kinds which no one who knows anything about the situation can ignore. Athletics must become once more sport and then they will cease to be a detriment to health, an injury to studies, and an unfortunate factor in college social life. To have this pointed out so clearly by a member of the profession is a source of pride, and

his opinion may well help the medical profession of the country to appreciate just where the evils of college athletics lie so that there may be cooperation throughout the country in efforts for their eradication.

This message comes opportunely, for we are just entering on another six months of university life when the air will be full of college athletics from baseball through rowing to football. In each of these sports the evils spoken of can be seen clearly and the abuses which they engender are a serious detriment to the benefits that might reasonably be expected from college athletics. Now is the time, therefore, to insist on the reformation of these abuses which have been growing ever greater and greater in recent years and show no sign of amelioration. Evidently there is need of definite teaching of the public in this matter and no class of men is better situated than physicians and none will command attention so readily on a subject that is of so much importance for the health and the character of the rising generation.

THE PATHOLOGIST AND THE CLINICIAN

We hear many complaints nowadays concerning the superseding of the trained judgment and clinical experience of the practitioner by the laboratory investigations of the pathologist. It is asserted that, with an overweening arrogance, the man who is supposed to represent "scientific medicine" to-day is prepared with his test tubes, his reagents, and his microscope to settle offhand those matters of difficult diagnosis that a little while ago were the peculiar prerogative of the trained clinician.

In *Northwest Medicine* for April, Dr. Griswold turns the tables by a counter attack. He complains that with a yearly widening and increasingly important field, but little opportunity is afforded the pathologist to do justice to his side of the healing art. He is rarely called in consultation, even in hospitals with a pathologist on the staff. "He is everywhere excluded," says Dr. Griswold, "from gaining practical knowledge, and then his work is criticised as impractical. His reports are taken by the practitioner and used in determining a diagnosis, without his being present to interpret the results of his work and give them due importance in the case. He seems everywhere to be considered the agent, never the peer, of the practitioner."

Animal experimentation is the sole field, Griswold continues, that the pathologist is allowed freely to cultivate. His study of gross pathology is based only on such specimens as the clinician may see fit to send him after they have been thoroughly changed by time and mauled with handling; hardly ever, while they are part of the living body. In other words, instead of the clinician becoming more and more at the mercy of the pathologist, it is the pathologist who is entirely at the mercy of the clinician. He suggests

that if pathologists were given a place as consultants, many men of ability throughout the country would be willing to take up the work. He criticises those laboratories that advertise to do work at ridiculously small prices, *e. g.*, an examination of smears and sputum for \$1.00. "One might do well," he says, "examining sputum for men who do not suspect tuberculosis until the disease has advanced to a stage that makes searching for bacilli unnecessary, because in a smear they will be so thick on the slide that every field will contain them; but if doing work for competent practitioners, this fee would mean starvation."

The satisfying part of this disputation lies in the evidence it affords that both sides are realizing the necessity for the same thing, namely, that their work should be cooperative and not mere piece-work. Each should at least know enough of that side of the joint labor in which the other is an expert to enable him to comprehend the united whole with a due sense of proportion.

TYPHOID BACILLUS CARRIERS; THEIR IMPORTANCE AND MANAGEMENT

The fact that persons who have suffered from typhoid fever, and even those who have never had an attack of illness clinically recognizable as this disease, may carry typhoid bacilli in their excreta for years, has been widely recognized only recently. Like all new discoveries, there has been a tendency to overestimate its importance, but it seems fairly certain from recent German work that at least 5 per cent. of typhoid patients become bacillus carriers. This means that the percentage of bacillus carriers among those who have not had typhoid fever is much smaller than this. Nevertheless even this apparently small percentage of bacillus carriers must mean a great many infections individuals in a country where typhoid fever is as prevalent as in the United States. The view that seemed to gain ground for a while, that except in widespread outbreaks the majority of cases were due to bacillus carriers will, we think, have to be abandoned. The danger from bacillus carriers is not so great as it might seem at first sight, for it is necessary that conditions be favorable for transmission of the bacteria from the carrier to other people, and very often such conditions are not present. Perhaps it is only occasionally that the bacillus carrier is in a situation which enables him or her to infect any large number of healthy individuals. The danger from bacillus carriers therefore, while it has no doubt been overestimated in some respects, is still a very important problem.

Just what the percentage of bacillus carriers in the United States amounts to we do not know. No such widespread research regarding this subject as has been carried on in Germany has yet been attempted here to our knowledge. Presumably, the percentage will be the same. If there ever comes a time when it becomes customary with us to investigate every patient with

typhoid fever as to infectivity, as we now do with diphtheria patients, we shall have to decide what is to be done with bacillus carriers. It is obvious that the isolation of 5 per cent. of all individuals who have had typhoid fever is a practical impossibility. It might seem theoretically feasible to form colonies of bacillus carriers as we now do of epileptics, but this is purely utopian, and the public would not stand for the interference with personal liberty and the breaking up of families which would result from this method. Educating the bacillus carriers in strict cleanliness, and impressing on them their danger to their fellow men would not, we think, produce any far-reaching result. Even among the intelligent and naturally cleanly the constant care and watchfulness required would soon become extremely irksome, and the precautions would no doubt lapse. Among the ignorant and dirty, and many carriers belong to this class, education of this sort would avail but little. The effect of frequent and active purgation seems to be almost nil, the bacilli remaining as before. The use of so-called intestinal antiseptics in these cases has been given a good trial by the Germans with practically no result. Attempts at active immunization of the bacillus carriers also seem to have been futile, as perhaps might have been expected, especially in those carriers who had had a definite attack of typhoid which itself no doubt conferred immunity. The conception of Forster that the gall bladder is the site of constant production of typhoid bacilli in these cases has been widely accepted, and makes still more clear the futility of attempting elimination by purgation or intestinal antiseptics. It has led to the suggestion that extirpation of the gall bladder should be practiced on bacillus carriers. This, it seems to us, is almost as utopian as segregation. At present, we have no laws which would permit the forcible incarceration of certain individuals and the removal of their gall bladders; and if we could pass such laws it would be doubtful whether we should be justified in performing so dangerous a major operation on all bacillus carriers. Furthermore, the latest observations carried on by Koch and his pupils seem to show that in bacillus carriers not only the gall bladder, but also the smaller bile passages are infected.

Recent observations of Liefmann¹ indicate that there is one method which may prove to be of value in ridding typhoid bacillus carriers of their undesirable messmates, and this is by changing the intestinal flora, and introducing bacteria inimical to the typhoid bacilli. It is possible that here we have the solution of the problem, not only in typhoid bacillus carriers, but also in cholera and dysentery bacillus carriers. The observations of Liefmann are not extensive enough to place the method on a firm basis however, and further observation is needed.

1. Münchener med. Wchnschr., Mar. 9, 1909.

BETTERMENT OF STATE CHARITIES

Probably one of the most important bills for the betterment of state charities is the Illinois Senate Bill 448, which has been prepared, reported out, and recommended by the Illinois Senate Committee on Charitable, Penal and Reformatory Institutions.

In the first place, it is noteworthy that a senate committee, composed of members of both political parties and sufficiently numerous to furnish every variety of opinion, should have evolved a measure that could be endorsed without a single adverse vote in committee.

Its mode of construction is also noteworthy. It is a composite bill, its provisions comprising the best features of three separate bills of different but allied purport, presented by three different senators. The bill itself aims at that all-important point in efficient economic legislation, the removal of the state charities entirely from the baleful influence of politics. This it effects by placing the control of such charities under a board of administration consisting of five men, each an expert in one of the different fields that the board will have to cover in the performance of its administrative duties. By providing an adequate salary, in return for the devotion of their whole time and residence at the center of administration of the members of the board, it is possible to attract thoroughly competent men for the positions; and by making the tenure of office permanent, subject only to removal for definite cause—which would necessarily amount to a charge of either incapacity or misconduct—it minimizes the temptations to graft; for, unfortunately, until human nature shall be reconstituted, one of the inevitable effects of the short-service official system will be the desire to “make hay while the sun shines,” leading the official ever farther and farther on the path of dishonesty and disregard of public interests.

The principal noteworthy points in the bill itself are: the extension of the civil service system; the continuation and expansion of the present admirable hospital system; the provision of a system of business administration, tending toward a combination of maximum efficiency with minimum waste; an application of the principle of the separation of slight offenders from hardened criminals and of juvenile offenders from all others—which is a recognition of the fact that, if our penal system does not reform criminals, at least it ought not to be allowed to manufacture them; an extension of supervision over boarded-out children—an admirable state charity, or, rather, state insurance system, which has been developed to the fullest extent with the greatest possible advantage in New South Wales,¹ and, finally, the provision of an extra check against all leakage, both in efficiency and in expense, by a local non-salaried commission on charities and corrections assigned to each state charitable, penal and correctional institution.

The only danger to this measure, recommended, as it is, by the unanimous vote of the senate committee, lies in the probability of factional opposition by such members of the general assembly as may place private considerations before public interest. Now, therefore, is the time for the physicians of Illinois to wield their personal influence individually on their respective representatives. If each physician will at once write to his representative urging the passage of this bill as it stands, without any emasculation, and will at the same time exercise his missionary influence among his patients to educate public intelligence on the importance of such matters, an object-lesson in the advantages of organized medicine will be given, the effect of which will reach throughout the entire country.

THE COMING PHARMACOPEIA CONVENTION

As the time approaches for the Pharmacopeia convention, an effort is being made to perfect the list of bodies entitled to send delegates. A circular letter from the Board of Trustees of the United States Pharmacopeial Convention is published in another column, in order to call attention to the qualifications and to emphasize the importance of the selection of delegates as early as possible by all bodies which can qualify. The work of this convention is one of immense importance to the medical profession, and requires men of broad experience and good judgment. The medical societies have an opportunity to show their interest not only by electing the best possible representatives, but also by discussing some of the many points that must be brought up, and perhaps by giving definite instructions to their representatives. There is no doubt that changes are needed in the Pharmacopeia. There is no doubt also that the manufacturing interests will be well represented in the coming convention, as they have been in the recent ones; the interests of the medical profession will be represented if medical societies attend to the matter, otherwise not.

THE COUNTY SOCIETY

The county society is the basis of organization. It is not only the portal of entrance to the state and the national medical associations, but it is the unit that influences the whole organization. As are these units, so will be the whole. The state that has active working county societies will have an active working state society, and practical results of every endeavor will follow. On the contrary, when the county societies do little or nothing, the organized profession of that state will do little or nothing—and will be without influence. Incidentally, the secretary of the county society is the one on whom depends whether or not the society shall be an active working body. Occasionally there will be a sufficient number of members who have the good of the society at heart to overcome a poor secretary, but very seldom. Hence the plan of having an annual meeting of the county secretaries, which has been adopted in several states, is a most commendable one and must re-

1. THE JOURNAL A. M. A., March 7, 1908, II, 771.

sult in good in various ways. These thoughts are suggested at this time by the paper of Dr. Sleyster in this issue. He speaks not from theory or observation, but from practical experience, and brings out many valuable points.

Medical News

ALABAMA

Personal.—Dr. Wooten M. Wilkerson, Montgomery, has been elected a member of the board of trustees of the Alabama-Bryce Hospitals.—Dr. William G. Ward, Mobile, has been elected health officer of Mobile county.—The Jefferson County Medical Society, at its meeting April 26, decided to support Dr. Robert B. Harkness as health officer of Birmingham and virtually defied the demand of the city council for the election of another health officer.

State Society Meeting.—At the annual meeting of the Medical Association of the State of Alabama, held in Birmingham, April 20 to 23, the following officers were elected: President, Dr. Wooten M. Wilkerson, Montgomery; vice-presidents, Drs. Robert J. Redden, Snlligent, and Robert L. Sutton, Orrville; secretary, Dr. James Norment Baker, Montgomery; treasurer, Dr. Henry G. Perry, Greensboro, and state health officer, Dr. William H. Sanders, Montgomery, re-elected for a five-year term. A resolution was adopted making it necessary for physicians to submit their diplomas from accredited medical colleges before being authorized to take the state examination. The Jerome Cochran lecture was delivered by Dr. Lewellys F. Barker, Baltimore, on "Clinical Methods of Cardiac Investigation." The 1910 meeting of the association is to be held in Mobile.

ALASKA

Hospital Burned.—The three-story hospital building at Katalla was destroyed by fire April 14, with a loss of about \$25,000, partially covered by insurance.

License to Be Required.—It is announced from Valdez, that hereafter physicians, surgeons, and midwives desiring to practice in Alaska, will be required to procure a license from the federal authorities. The new law amending the Alaska code, which passed congress February 6, provides that physicians must secure a license, which will be granted to members of the medical profession who have diplomas recognized by the Association of American Medical Colleges.

CALIFORNIA

Personal.—Dr. Thomas E. Cummane, Ventura, has been selected as physician of Ventura county.—Dr. and Mrs. David Haddon, Berkeley, have gone abroad for six months.—Dr. Joseph E. Artigues has been elected surgeon and Drs. Michael H. Etcheverry and Edward A. Besson have been made physicians to the French Hospital, San Francisco.

Hospital News.—A fire in the roof of the main or middle ward of Yuba County Hospital, Marysville, April 7, caused damage of \$10,000 and threatened to destroy the entire institution.—An order is said to have been signed by Judge Cahaniss, April 22, declaring the Clara E. Barton Hospital, San Francisco, insolvent.—Marysville Hospital was opened for reception of patients April 18.—Contracts have been let for the construction of the Adler Sanitarium, San Francisco.—The supervisors of Butte County have decided to expend \$10,000 for repairs and sanitary improvements at the county infirmary.—The Methodist Hospital, Los Angeles, is to be transferred to the Hazard residence, which was recently purchased for \$21,500.

State Society Meeting.—At the annual meeting of the Medical Society of the State of California, held in San Jose, April 20 to 22, the following officers were elected: President, Dr. James H. Parkinson, Sacramento; vice-presidents, Drs. William Simpson, San Jose, and William B. Sawyer, Riverside; secretary, Dr. Phillip Mills Jones, San Francisco (re-elected), and councilors, Drs. Fred Baker, San Diego, Thomas C. Edwards, Salinas, George H. Aiken, Fresno, Henry A. L. Ryfkogel, San Francisco, and Wallace A. Briggs, Sacramento. The following were nominated for members of the State Board of Medical Examiners: Drs. Andrew S. Lobingier, Los Angeles; George F. Reinhardt, Berkeley; Walter Lindley, Los Angeles;

William W. Roblee, Riverside; Fred R. Burnham, San Diego; William P. Burke, San Francisco; Charles D. Ball, Santa Ana; J. Henry Barbat, San Francisco; Abraham L. Cothran, San Jose, and George H. Evans, San Francisco. Sacramento was selected as the next place of meeting.

GEORGIA

Personal.—Dr. Henry M. Fullilove, Athens, has been appointed physician of Clarke county.—Dr. William S. Elkin, Atlanta, has been elected president of the Capital City Club.

Permit for Sanitarium Refused.—By unanimous vote the hospital and charities committee of the Atlanta General Council, is said to have denied the application of Dr. William A. Starnes for a permit to conduct a sanitarium on Edgewood avenue.

More Beds Needed at Grady Hospital.—The new superintendent of Grady Hospital, Atlanta, says that there is urgent need for 100 more beds in that institution. The annual appropriation of \$60,000 is inadequate, and should be increased to \$75,000. He estimates that the addition necessary for the hospital will cost about \$100,000.

State Board Will Distribute Antitoxin.—At a meeting of the State Board of Health, April 23 and 24, it was decided to supply on demand to any physician in the state, a sufficient supply of virus and antitoxin for use in cases of rabies, and to give farmers and others on application a similar preparation for the treatment of hydrophobia in animals.

Commencements.—The annual commencement exercises of the Medical College of Georgia, Augusta, were held May 1. The chancellor, Hon. David C. Barrow, and Rev. E. F. Dempsey delivered addresses. A class of 22 was graduated.—A class of 40 was graduated from the Atlanta College of Physicians and Surgeons April 29.—The Atlanta School of Medicine graduated a class of 51 April 26. The degrees were conferred by Hon. W. J. Northen, and the doctorate address was delivered by Surgeon General Walter Wyman, P. H. and M.-H. Service, who spoke on "The Relation of the Physician in Private Practice to Public Health."

State Association Meeting.—At the sixtieth annual meeting of the State Medical Association of Georgia, held in Macon April 21 to 23, Athens was selected as the place of next meeting. The following officers were elected: President, Dr. Thomas J. McArthur, Cordele; vice-presidents, Drs. Marcus F. Carson, Griffin, and John R. Shannon, Berner; secretary, Dr. Claude A. Smith, Atlanta (re-elected); delegates to the American Medical Association, Drs. George R. White, Savannah, and Henry F. Harris, Atlanta; and councilors, Drs. William B. Hardman, Commerce, ninth district; Wyman W. Pileher, Warrenton, tenth district, and Jefferson D. Hermann, Eastman, eleventh district.

ILLINOIS

Chiroprody Bill Passed.—The house of representatives has passed, by a vote of 18 to 13, Representative Rutzler's bill creating a board of chiroprody to be appointed by the governor, with power to examine and license applicants.

Personal.—Dr. George S. Murphy, Rockford, has moved to Lubbock, Texas, where he is now building a thirty-bed hospital, to be known as Lubbock Sanatorium.—Dr. Rowland L. Green, Peoria, has sailed for Europe.—Dr. William R. Parkes has been elected president of the Evanston Antituberculosis Association.

Society Meetings.—At the annual meeting of the Central Illinois District Medical Society, held in Pana, April 27, the following officers were elected: President, Dr. Don W. Deal, Springfield; vice-presidents, Drs. Franklin A. Martin, Tower Hill, and J. William H. Sparling, Moweaqua; secretary, Dr. Charles Burgess, Pana; treasurer, Dr. John N. Nelms, Taylorville, and censors, Drs. Everett J. Brown, Decatur, John D. Colt, Litchfield, and Louis F. Brown, Hillsboro.—At the annual meeting of East St. Louis Medical Society, April 26, the following officers were elected: President, Dr. Oro J. Culberston; vice-president, Dr. Roy S. Stanton; secretary-treasurer, Dr. Charles W. Lillie, and censors, Drs. John A. Grimes and Henry R. Ressel.

Chicago

Concert for Hospital.—A concert was given in Orchestra Hall May 2, in aid of the building fund for the new German Evangelical Deaconess Hospital at Fifty-fourth place and Morgan street.

Commencement.—Degrees were conferred on a class of 31 by Dr. Jacob F. Burkholder, president of the Illinois Medical

College. April 30. The doctorate address was delivered by Dr. William F. Rittenhouse.

How Communicable Diseases Spread.—The chief of quarantine and disinfection of the department of health summarizes the cause of the spread of diphtheria and scarlet fever as follows: Mild unrecognized cases; hidden cases; mild recognized cases about which sufficient precautions have not been taken, and convalescent cases apparently well.

Personal.—Dr. David Lieberthal, professor of skin and venereal diseases in the Illinois Medical College, has resigned. —Dr. Isaac A. Abt has resigned as associate professor of pediatrics in Rush Medical College, and has accepted the professorship of pediatrics with Dr. Frank X. Walls in Northwestern University Medical School. —Dr. Carl Wagner has been appointed attending surgeon in the Columbia Hospital. —Dr. Thomas A. Woodruff has been elected president of the Calumet Club.

MARYLAND

Gift to County Hospital.—Mr. William Newcomer, Hagerstown, has given \$15,000 to the building fund of the Washington County Hospital, Hagerstown, in commemoration of his golden-wedding anniversary.

The New Bayview Hospital.—Plans for the new hospital to be erected at Bayview, the Baltimore almshouse, are almost perfected. The new building will cost probably \$75,000, and, it is to be hoped, will relieve the present congested condition at the institution, where at present there are nearly 1,600 inmates with accommodations for only 1,200.

Baltimore

Psychiatric Clinic Building.—The plans for the Phipps' Psychiatric Clinic provide for the construction on the grounds of Johns Hopkins Hospital of a building five stories in height, capable of accommodating 500 patients in the early stages of insanity.

Mosquito Ordinance.—The health commissioner of Baltimore has announced his intention of rigidly enforcing the anti-mosquito ordinance which went into effect May 3. The penalty for violation of any provision of this ordinance is a fine not to exceed \$10.

Personal.—Dr. Claribel Cone, Baltimore, sailed for Italy April 24. —Dr. James S. Woodward, for twenty-one years chief resident surgeon of the Maryland Steel Company, Sparrows Point, has resigned and will retire from practice. —Dr. Charles K. Edmonds has returned to Baltimore after six years' absence in China. —Dr. Lillian Welsh has been elected president of the Naples Table Association for the Promotion of Scientific Research by Women. —Associate Professor S. F. Acree, Dr. Carl Vogtlein, associate in pharmacology and physiologic chemistry, and Prof. Harvey C. Jones of Johns Hopkins University will sail for Europe early in June. —Dr. Samuel C. Chew is ill with influenza at the University Hospital.

MASSACHUSETTS

Unlicensed Practitioner Fined.—Anna Podlinski, Turners Falls, charged with practicing medicine without a license, is said to have been found guilty in the district court April 13, and fined the minimum penalty, \$100. An appeal was taken.

Personal.—Dr. Winthrop S. Blanchard has been appointed bacteriologist of the Boston Board of Health. —Dr. Charles A. Drew, Bridgewater, has been appointed superintendent of the Worcester City Hospital. —Dr. William A. Dunn, Boston, has had conferred on him by the pope the honorary rank of Knight Commander of the Order of Gregory the Great.

Lecture and Clinical Talk.—Dr. S. Adolphus Knopf, New York City, gave a public lecture in the White Fund Course at Lawrence, May 5, and afterward gave a clinical talk to the medical profession of the city on the "Early Physical Diagnosis and Prognosis of Pulmonary Tuberculosis," after which supper was served and a reception held.

Harvard Approves of Medical School in Orient.—The movement in the Harvard Medical School for the establishment of a medical school in the Orient, preferably in China, has been approved by the president of the university and the faculty of the school. It is proposed to send Dr. M. B. Edwards to China to carry on investigations with regard to the location and to raise an endowment fund, of which the following have been named as trustees: President Charles W. Eliot, chairman, and Drs. Henry P. Walcott, Arthur T. Cabot, William T. Councilman, Boston; Walter B. Cannon, Cambridge; Henry A. Christian, Boston; and E. C. Moore.

Harvard Alumni Doings.—The annual alumni day of Harvard University Medical School will be held May 20. The regular teaching is to continue. There are to be clinics and demonstrations at the hospital, and a luncheon will be served in the administration building, tendered by the medical school. In the afternoon the laboratories will be open for inspection, and in the evening the triennial dinner of the medical alumni association will be held, over which Dr. Alfred Worcester will preside as toastmaster. —The annual meeting of the alumni association will be held in Sprague Hall, Boston Medical Library, June 29. On June 30, the association will have its headquarters at Stoughton Hall in the College Yard, where lunch will be served for members. —June 8 has officially been set aside for reunions at the American Medical Association, Atlantic City, and Harvard Medical Alumni will hold an informal reunion and dinner on that evening. Arrangements are in charge of Dr. Nathaniel B. Potter, 48 W. 51st street, New York City.

MICHIGAN

Agrees Not to Prescribe Liquor.—At the recent meeting of the Ionia County Medical Society, resolutions were adopted that the members of the society should not write prescriptions for intoxicating liquors to be used as beverages.

Communicable Diseases.—During March 331 cases of pneumonia, 250 of tuberculosis, 87 of typhoid fever, 216 of diphtheria, 29 of meningitis, 89 of whooping cough, 319 of scarlet fever, 720 of measles, and 99 of smallpox were reported in the state.

Personal.—Dr. and Mrs. Frederick H. Williams, Lansing, sailed for Germany, April 27. —Dr. Colonel B. Burr met with a painful fall at the Michigan School for the Deaf, Flint, April 20. —Dr. David J. Levy, health officer of Kalamazoo, has resigned and has been succeeded by Dr. Alvin H. Rockwell. —Dr. Oscar C. Breitenbach, Escanaba, is reported to be seriously ill with typhoid fever. —Dr. Hermann C. Emmert has been made physician of the Wayne County House, Eloise, vice, Dr. Romeo H. Earle, resigned.

MINNESOTA

Vital Statistics.—During 1908, there were 44,247 births and 22,160 deaths reported in the state.

Tuberculosis Hospital.—The assembly has granted a license to the St. Paul Antituberculosis Society for the operation of a tuberculosis hospital on a site on which the society has secured options. It is planned to establish a summer camp for tuberculosis at this place.

In the Hands of the Law.—A jury in the case of Royal M. Bly, Minneapolis, charged with assisting in a criminal operation, returned a verdict of not guilty April 22. —H. E. Coger, head of a dermatologic institute in Minneapolis, is said to have been deprived of his license to practice medicine in the state by the State Board of Medical Examiners, at their meeting April 16. Attention was first called to this individual by the death of one of his patients said to have been due to blood poison following an operation for the removal of a scar, and it was then ascertained that he had not been a graduate of a reputable medical school when he applied for a reciprocal license in January. —Dr. Robert W. Campbell, Swanville, charged with assault and battery on the person of a school teacher, is said to have been found guilty and fined \$25 with the alternative of 20 days in jail. He has appealed the case. —Dr. Charles B. Lenont, Virginia, against whom a verdict for \$231.53 is said to have been returned in the District Court on the charge of malpractice, has filed notice that he will demand reversal of the judgment or will ask a new trial. —Arthur C. Moorhead, formerly of Minneapolis, has filed in the Ramsey County District Court a petition asking that a writ of certiorari be issued against the State Board of Medical Examiners for having revoked his license to practice medicine in the state. The petition asks that the District Court demand the records and proceedings of the hearing and proceed thereon for reversal.

MISSISSIPPI

Society Meetings.—At the session of the Clarksdale and Six Counties Medical Association, held in Clarksdale March 25, the following officers were elected: President, Dr. John S. Brooks, Robinsonville; secretary, Dr. Lewis E. Pierce, Stovall, and treasurer, Dr. Luther D. Harrison, Clarksdale. —At the annual meeting of Lauderdale County Medical Society, held in Meridian March 25, Dr. James Bennett was elected president; Dr. T. J. Houston, vice-president; Dr. Samuel H. Hairston,

secretary-treasurer; Dr. Robert L. Turner, delegate to the state society, and Dr. Henry S. Gully, censor, all of Jackson.

Contract Practice Among Farmers.—In the eastern part of the state, particularly in Jones, Wayne and Jasper counties, the Farmers' Union is said to have become a menace to ethical medical practice by the inauguration of contract practice among farmers. "Union doctors" are established in Heidelberg, Sandersville and other rural towns. They charge a fee of \$10 per annum for family practice, the head of the family making the contract with the physician. Jones County Medical Society, at a recent meeting voted to debar from membership physicians who make individual contracts, as well as physicians who consult such contract practitioners.

NEBRASKA

Personal.—Dr. Frederick J. Wearne, Omaha, who has been abroad for several months, sailed for home April 24.—Dr. Fletcher A. Butler, Harvard, has been elected president of the Clay County Medical Society, and delegate to the state society.—Dr. Lucien Stark, Henderson, has been elected president of the York County Medical Society.

Elections.—At the annual meeting of Richardson County Medical Society, held in Falls City, April 13, Dr. Millard L. Wilson, Falls City, was elected president; Dr. John A. Waggener, Humboldt, vice-president; and Dr. Gaylord M. Andrews, Stella, secretary-treasurer.—Gates County Medical Society, at its quarterly meeting, held in Beatrice, April 8, elected Dr. Charles S. Curry, Beatrice, president; Dr. Ira N. Pickett, Odell, vice-president; Dr. John I. McGirr, Beatrice, secretary-treasurer, and Dr. Louis Penner, Beatrice, censor.—Knox County Medical Society held its annual meeting at Creighton, April 2, and elected the following officers: President, Dr. James H. Mettlen, Bloomfield; vice president and delegate to the state medical society, Dr. Czar C. Johnson, Creighton; secretary-treasurer and alternate delegate to the state medical society, Dr. John B. Bates, Verdigris, and censors, Drs. William H. Britt, Creighton; Edson L. Bridges, Wausa, and Willard K. Clark, Niobrara.—Cuming County Medical Society, at its last meeting, elected Dr. Harry W. Francis, Baneroff, president; Dr. Thompson, Beemer, vice-president, and Dr. Harry L. Wells, West Point, secretary-treasurer.

NEW YORK

Assembly Action.—The assembly has for the second time refused to pass the bill to allow the use of skimmed milk in New York City for manufacturing purposes.—The assembly concurred in the senate amendment to the bill reducing from 15 to 9 the number of members of the State Board of Pharmacy and providing for their control by the State Board of Regents. This amendment will prevent the prosecution of manufacturers for violation of the pharmacy laws outside the state.

May Change Site of State Hospital.—If the present plans for the purchase of a site for a state hospital at Greenvale, Long Island, are not carried out and the land is not actually purchased and conveyed to the state, the commission will still have power to buy other lands at other places, even though they may have gone so far as to enter into contracts for the purchase of the former property. This decision was made necessary owing to the opposition of a large number of residents in the neighborhood of Greenvale to the establishment of the hospital in that locality.

Is State Responsible?—The Deputy State Superintendent of Public Instruction contemplates bringing a test action to decide if the state can not be held negligent because a client of his was afflicted with tuberculosis while in the employ of the state education department at the capital. It is claimed that this client would not have contracted tuberculosis if she had not been required to work in a room which had been occupied by another girl who afterward died of tuberculosis. Two other girls besides the client were also affected by the disease and it is claimed that no move was made to fumigate until after the three girls had become ill.

Senate Passes Bills.—The senate has passed the Hoey bill creating in New York a board of ambulance control, to district the city for ambulance service and to have jurisdiction over such service. The board is to consist of the police commissioner, the charities commissioner, the president of the board of trustees of Bellevue and the Allied Hospitals, and two citizens representing private hospitals, to be appointed by the mayor.—The bill has been passed abolishing the office of the Board of Quarantine Commissioners of the Port of New York, and imposing their duties on the Health Officer

of the Port of New York, Dr. Alvah H. Doty. Dr. Doty has been allowed such assistants as he needs and it is estimated that the work of the quarantine station will now be carried on at about one-half the expense hitherto incurred.

Increase in Insanity.—The sixteenth report of the State Charities Aid Association records the largest increase of insanity in the history of the state. There were in the state hospitals and licensed institutions 30,507 persons, an increase of 1,414 over the previous year. In the previous ten years the average annual increase was 714. In discussing this apparent increase in the number of cases of insanity, Drs. Frederick Peterson, Charles L. Dana, Allan Fitch and Carlos F. MacDonald were of the opinion that the increase was more apparent than real. There was a greater trust in the hospitals and willingness to entrust patients to the state asylums than formerly. Patients are much better cared for than formerly and live longer and this has a tendency to keep a larger number in institutions. Patients were also sent to the hospitals sooner than formerly in the belief that early treatment was more likely to be curative. The migration was no doubt responsible for a part of the statistical increase.

New York City

Money to Combat Tuberculosis.—Mr. Frederick T. Martin has given President Nicholas Murray Butler of Columbia University \$10,000 which he had collected personally for the purpose of combating tuberculosis.

Personal.—In recognition of his services to the Yorkville Dispensary and Hospital for Women and Children, Dr. Herman B. Sheffield was recently presented by the medical staff of the hospital with an electrolier and stand.

Vacancy in Clinic.—The position of first assistant and chief of clinic in the night genitourinary clinic of the West Side German Dispensary is now vacant. Applicants may address Dr. A. L. Wolbarst, 105 E. Nineteenth street, stating experience, etc.

Annual Lecture.—The governors of the New York Skin and Cancer Hospital announce that Dr. William Seaman Bainbridge will give the fifth annual lecture on malignant disease with presentation of patients, in the out-patient hall of the hospital, Second avenue and Nineteenth street, May 12, at 4:15 p. m.

Tuberculosis Exhibition Opened.—The committee of the Charity Organization Society on the prevention of tuberculosis has opened its free traveling tuberculosis exhibition at Fifth avenue and Fourteenth street. Some one is always on hand to answer questions. Lectures are given at noon two or three times each week and literature is distributed freely.

To Protect Life and Limb.—The Commission of Public Service has issued an order compelling street railways to equip their surface cars with fenders and wheel guards. In the report accompanying this order it was stated that accidents on the street railway system during the fiscal year had reached the number of 54,481, that 444 persons had been killed and 2,591 seriously injured.

Still Oppose Consumptives' Hospital.—The Staten Island members of the Board of Aldermen have protested against the appropriation of \$1,350,000 corporate stock for the Sea View Hospital for Consumptives. They have always been opposed to having this institution on Staten Island. The hospital has been built and this money was intended for equipment. The resolution was finally voted down.

Gifts to University.—The Council of the New York University has accepted the gift of \$75,000 from Andrew Carnegie in honor of the successful work done in bacteriology and pathology during the past twenty-five years by the Carnegie Medical Laboratory. This fund will be applied to the extension of the present Carnegie Laboratory Building.—The widow and daughter of Glover C. Arnold have made a gift of \$2,000, the income of which is to be awarded each year to the member of the graduating class of the University and Bellevue Medical College who shall stand highest in surgery.

Physicians Summoned.—In the case of the New York County Medical Society against the Dr. Week's medical office, which was summoned to appear on the charge of practicing medicine without a license on the complaint of the medical society, subpoenas were served on several physicians. The attorney for the defendant claimed that his purpose in doing this was to test the constitutionality of the state statute which gives the fines imposed for convictions of offenses against the medical laws to the New York Medical Society. The subpoenaed physicians did not appear, but in their stead

the attorney for the County Medical Society was present. The defendants were discharged on their own recognizance.

Dr. Ordronaux's Bequests.—The executors of Dr. John Ordronaux's estate have filed their accounting. Under the will Dartmouth College receives \$30,000; the University of Vermont, \$10,000; Trinity College, \$10,000; Nassau Hospital Association of Mineola, \$6,000; the Society for the Relief of the Destitute Blind of New York City, \$5,000; the Episcopal Diocese of Long Island, \$5,000; the Children's Society of New York, \$5,000 for use of its summer charities; the George Washington University of Washington, \$5,000; the Columbia Law School, \$5,000 to be used for yearly prizes; and the Episcopal Diocese of New Hampshire, \$5,000.

NORTH CAROLINA

Personal.—Dr. John A. Pollock, Kinston, has resigned as surgeon general N. C. N. G., and Dr. Robert S. Young, Concord, has been reappointed. This is his third term in that position.—Dr. Chase P. Ambler, Asheville, has declined the republican nomination for mayor of that city.

Commencement.—The annual commencement exercises of the North Carolina Medical College, Charlotte, were held April 26, when a class of 19 was graduated. The address to the graduating class was delivered by Dr. Lewis B. McBrayer, Asheville, and the diplomas were presented by the president, Dr. J. P. Monroe.

NORTH DAKOTA

State Association to Meet.—The North Dakota State Medical Association will meet for its annual session in Fargo May 11 and 12, under the presidency of Dr. Henry A. Beaudoux, formerly of Fargo, but now of St. Paul.

Antituberculosis Association Organized.—The North Dakota Antituberculosis Association has been incorporated by Mrs. E. B. Quain, A. P. Lenhart, Dr. G. A. Rawlings, Bismarck, and Dr. James Grassick, Grand Forks, president of the State Board of Health.

April Vital Statistics.—During April there were reported 653 births and 232 deaths. There were reported during the month 59 cases of diphtheria with 4 deaths, 58 cases of smallpox with no deaths, 55 cases of scarlet fever with 4 deaths, 9 cases of tuberculosis, and 15 cases of typhoid fever with 2 deaths.

PENNSYLVANIA

Nurses' Bill Signed.—The Nurses' bill was signed by Governor Stuart May 1. One year from that date it will be unlawful for any person to use the title of "registered nurse" except by the authority of a certificate issued by the State Board of Examiners for the Registration of Nurses. Nursing by persons not equipped with such certificates is not prohibited, but they must refrain from representing themselves as registered nurses. The examining board is to consist of three physicians and two graduate nurses. Two of the physicians must be connected with a hospital maintaining a training school for nurses.

Philadelphia

Failed to Report Births.—Four physicians and three midwives, who were tried before the Magistrates' Court, April 29, charged with failure to report births within ten days, as required by law, were found guilty and fined the costs of the case.

Dispensary Opened.—A new dispensary for the treatment of tuberculosis was opened in the northern section of the city April 22. The new institution will be under the general supervision of Dr. Alfred Stengel, and Dr. W. C. Turnbull will have direct charge of the work.

Hospital Ex-Internes Meet.—The annual meeting and banquet of the Association of Ex-Resident Physicians of the German Hospital was held May 7. The following officers were elected: President, Dr. Henry F. Page; secretary, Dr. John C. Gittings, and historian, Dr. A. P. Miller.

Money for Hospitals.—An anonymous gift of \$25,000 has recently been made to the Episcopal Hospital.—The will of the late Henry Harmer contains a provisional bequest of \$3,500 to the Home for Consumptives at Chestnut Hill.—The will of the late Edwin N. Benson bequeaths \$50,000 to the Pennsylvania Hospital and \$10,000 to the Chestnut Hill Hospital.—Provisional bequests from an estate valued at \$61,000 to the Episcopal Hospital, Philadelphia Home for Incurables and Home for Consumptives are contained in the will of the late Fannie B. Shoemaker.

Personal.—Dr. J. Leslie Davis has been appointed otologist and laryngologist to St. Agnes' Hospital to succeed Dr. Nathan G. Ward, resigned.—Dr. A. Donaldson Smith has been appointed United States Consul at Patras, Greece.—Dr. Ran-

dall C. Rosenberger, newly-elected professor of bacteriology and hygiene in Jefferson Medical College, was tendered a testimonial dinner by his colleagues, May 1. Dr. Thomas J. Buchanan was toastmaster.—The James A. Meigs Medical Association tendered a reception and dinner, April 29, to Dr. Albert P. Brubaker, who was recently elected professor of physiology in Jefferson Medical College.

SOUTH CAROLINA

Commencement Exercises.—The annual commencement exercises of the Medical College of the State of South Carolina, Charleston, were held April 28, when a class of 36 was graduated. United States Senator E. D. Smith delivered the address to the graduates.

Bacteriologic Laboratory to Be Established.—The State Board of Health, at a meeting in Summerville, April 20, decided to establish a bacteriologic laboratory in Columbia, and Drs. Charles F. Williams and William Weston were appointed a committee to arrange for the institution.

Loving Cup Presented.—A silver loving cup bearing the following inscription: "Presented by the citizens of St. Matthews to the skilful physician, the faithful friend, the devoted Christian, and to their 'Grand Old Man' whose life is an inspiration, whose presence is a benediction. His people love him," was presented by citizens of St. Matthews to Dr. William Lewis Pou on the occasion of his eightieth birthday anniversary. The presentation was made by Rev. D. D. Dantzler Orangeburg.

Hospital Transferred.—Arrangements were completed April 13, for the transfer of the Columbia Hospital, value \$75,000, to an association of Columbia physicians. The new organization has adopted a constitution and by-laws and elected the following officers: President, Dr. Dargan S. Pope; vice-president, Dr. Leonard K. Philpot; secretary-treasurer and superintendent of the hospital, Dr. A. Earle Boozer, and executive committee, Drs. Le Grand Guerrey, Lewis A. Griffith, Samuel E. Harmon, Theodore M. DuBose, William Weston and Lawrence B. Owens.

Personal.—Dr. John J. Kirksey, Saluda, has been elected president of the Saluda County Antituberculosis Association.—At the annual meeting of Laurens County Medical Society, March 22, Dr. William D. Ferguson, Laurens, was elected president, vice Dr. Samuel F. Blakely, Ora, and Drs. Jesse H. Teague, Laurens, and Thomas L. W. Bailey, Clinton, were elected delegates to the state medical association.—Dr. Lewis A. Griffith has been elected health officer of Columbia.—Dr. John L. Dawson has been re-elected vice-chairman; Dr. John M. Green, secretary, and Dr. Robert Wilson, Jr., bacteriologist of the Charleston Board of Health.

State Society Meeting.—The South Carolina Medical Association held its sixty-fifth annual session in Summerville April 20 to 22, and voted to meet in Laurens next year. The following officers were elected: Dr. John L. Dawson, Charleston, president; Drs. Frank H. McLeod, Florence; Charles M. Rees, Charleston, and Augustus H. Hayden, Summerville, vice-presidents; Dr. Walter Cheyne, Sumter, secretary; Dr. Charles P. Aimar, Charleston, treasurer; and Drs. Joseph Maybank, Charleston, first district; Henry G. Eleazer, Peak, second district; R. Andrae Bratton, Yorkville, Fifth District; Joseph J. Watson, Columbia, Seventh District, and Dr. A. Earle Boozer, Columbia, at large, to fill vacancies in the Regular Board of Medical Examiners. Dr. J. Wilkinson Jervey, Greenville, was re-elected editor of the journal of the association.

TENNESSEE

Colleges Will Not Consolidate.—At a meeting of the faculty of the Medical Department of the University of Nashville, April 20, it was decided that the proposed merger between the Medical Department of Vanderbilt University, the University of Tennessee, and the University of Nashville should not be entered into at present, and that the existing conditions will be continued.

Office Building for Physicians.—On the site of the house of the late Dr. N. D. Richardson, which was afterward the home of Dr. John A. Witherspoon, an office building is to be erected exclusively for the use of Nashville physicians. The Parkes Building Company will erect this building, which will be six stories high, 50 by 114 feet, of reinforced concrete and steel construction.

College Applies for Charter.—Plans which have been in progress for some time to make the College of Physicians and Surgeons the nucleus for the University of Memphis, were publicly announced April 7. They contemplate consolidation of

the proposed university with the present College of Physicians and Surgeons, and the establishment of a college of pharmacy, and a college of dental surgery within a short time, and other departments as rapidly as they can be organized.

Graduating Exercises.—The annual commencement of the Tennessee Medical College, Knoxville, was held April 30, when degrees were conferred upon a class of 13 by General O. O. Howard. The doctorate address was delivered by Rev. Heber D. Ketcham, D.D.—At the twentieth annual commencement exercises of Chattanooga Medical College diplomas were given to a class of 24. The speakers of the evening were introduced by the dean, Dr. John R. Rathmell. Dr. German P. Haymore delivered the faculty address. An address was also delivered by Rev. A. R. Riker, Monndsville, W. Va., on the "Modern Idea of the Necessity of Scholastic Preparation for Entering the Professions," and the Hon. George W. Ochs, Philadelphia, delivered the commencement address.

VIRGINIA

Sanitarium Burns.—The Mecklenburg Hotel and Sanitarium at Chase City, valued at \$200,000, and insured for \$75,000, was destroyed by fire April 16.

Personal.—While cranking his automobile April 26, Dr. Edward H. Claude, Portsmouth, sustained a compound fracture of the right arm.—Dr. James M. Whitfield, chemist to the board of health, Richmond, will probably be the first incumbent of the new position of city chemist.

Hospital Notes.—The four Richmond hospitals doing charity work, namely, Memorial, Virginia. Retreat for the Sick and Sheltering Arms, have combined into an organization known as the United Hospitals, the object of which is to furnish charity work done by all at present, and to give other organizations a chance to contribute.—More than \$7,000 has thus far been raised at Harrisonburg for the establishment of a hospital in that place.

Society Meeting.—At the eighth annual meeting of the South Piedmont Medical Society, held in South Boston April 22, the following officers were elected and installed: President, Dr. James S. Irvin, Danville; vice-presidents, Drs. Charles H. Gibbs, Charlotte Court House; W. Macon Smiley, Houston; William J. Innis, Brookneal, and Julian McG. Robinson, Danville; secretary, Dr. George A. Stover (re-elected), and treasurer, Dr. James L. Kent, Lynchburg.

WASHINGTON

Medical Building.—The Cobb Building, to be erected by the Metropolitan Building Company at Fourth Avenue and University street, Seattle, is to be devoted exclusively to the use of physicians and dentists.

Clean-Up Campaign.—The state commissioner of health has made an inspection trip of the cities of Puget Sound to determine the prevalent sanitary conditions, with especial reference to the prevention of bubonic plague.

Chehalis Physicians Take Cards from Newspapers.—Eleven members of the Chehalis County Medical Association have agreed to discontinue the insertion of professional cards in certain local journals because the latter are said to have accepted and published advertisements exploiting medical fakers and quacks.

New Marriage License Law.—A new state marriage license law has been enacted, which goes into effect June 14. After that date each applicant for marriage license will have to present a certificate from a reputable physician showing that both contracting parties to the proposed marriage are mentally and physically sound, and in addition must produce two witnesses who will subscribe under oath that they have known the prospective bride and groom for at least two years.

Personal.—Dr. Elmer E. Heg, Seattle, secretary of the State Board of Health, has been appointed state commissioner of health.—Dr. William L. Ludlow, Seattle, has been chosen physician of King county.—Dr. Rose A. Bebb, Seattle, bacteriologist of the State Board of Health, has resigned.—Dr. Frank P. Witter, Spokane, has been elected a member of the State Board of Medical Examiners.—Dr. Thomas Tetreau, North Yakima, has been continued as physician of Yakima county and city health officer.—Drs. Orville L. Adams and George W. H. Moore, Davenport, have been elected delegates from the Lincoln County Medical Association to the state association, and Drs. Lee Ganson, Odessa, and Joseph I. Kaulbach, Edwall, alternates.—Dr. Nils A. Johanson has been appointed a member of the municipal civil service medical examining board, vice Dr. John P. Sweeney, term expired.

WISCONSIN

Personal.—Dr. W. F. Dearborn, assistant professor of educational psychology in the University of Wisconsin, has resigned to take a similar position in the University of Chicago.—Dr. William J. Griffin, Ashland, sailed from New York for Europe, March 30.—Dr. John E. Meany has been reappointed health officer of Manitowoc.—Dr. George P. Barth has been appointed examining physician of the public schools of Milwaukee.—Dr. George L. Nicklas, Platteville, announces that he is about to retire from practice.

GENERAL NEWS AND COMMENT

Any One Allowed to Treat Leprosy and Tuberculosis.—The leprosy bill passed its third reading in the Hawaiian legislature April 14. It permits any one to treat leprosy, asthma and tuberculosis after regular physicians have decided the case hopeless.

Medical Member of Liberian Commission.—Dr. Percy M. Ashburn, U. S. Army, has been made a member of the commission appointed to go to Liberia to study conditions there, with a view of improving the management of the affairs of the republic, and providing better for its maintenance and integrity.

Delegates to Chemistry Congress.—The state department has approved the attendance of the following American delegates at the International Congress of Applied Chemistry to be held in London this month: Drs. Harvey W. Wiley and Allerton S. Cushman of the Department of Agriculture; Dr. Frank C. Clark, United States Geological Survey; Drs. Charles Baskerville, York; William H. Nichols, Maximilian Toch, Herbert Plant and Morris Loeb, New York City, Dr. William L. Dudley, Nashville, Tenn., and Dr. L. H. Baekeland, Yonkers, N. Y.

Alumni Election.—At the annual home-coming week of the University of Pennsylvania, the medical alumni held their annual meeting and dinner, at which the following officers were elected: President, Dr. Wharton Sinkler, Philadelphia; vice-presidents, Drs. Allen J. Smith, James B. Walker and George A. Piersol, Philadelphia; Dr. Alonzo E. Taylor, San Francisco; Dr. Theodore Diller, Pittsburg; Dr. George W. Guthrie, Wilkesbarre, Pa., and Dr. Edward Jackson, Denver; secretary-treasurer, Dr. Edward A. Shumway, Philadelphia, and historian, Dr. Roland G. Curtin.

Examination for Army Medical Corps.—The Surgeon General announces that preliminary examinations for appointment of first lieutenants in the medical corps of the Army will be held July 12, at points later to be designated. Applicants must be between 22 and 30 years of age, graduates of an authorized medical school, and must have had at least one year's hospital training or its equivalent. The appointment of first lieutenant carries with it an initial salary of \$2,000 per annum, in addition to quarters, mileage, privilege of retirement, etc. Application for information regarding the examination should be made to the Surgeon General, U. S. Army, Washington, D. C.

The Carroll Fund.—The following subscriptions have been received since the last report:

Previously reported	\$3,446.35
Dr. George Homan, St. Louis.....	10.00
Dr. Myles Standish, Back Bay, Boston.....	10.00
Dr. William B. Wherry, San Francisco.....	2.00
Dr. F. N. Mead, Cedar Falls, Iowa.....	1.00
Dr. M. Manges, New York City.....	5.00
W. W., New York City.....	5.00
Dr. Richard M. Pearce, New York City.....	2.00
Dr. Herman G. Klotz, New York City.....	2.00
Dr. H. Kugeler, San Francisco.....	5.00
Dr. Lewis E. Maire, Detroit.....	1.00
Officers of the Medical Corps.....	179.00
	<hr/>
	\$ 222.00

Total amount subscribed.....\$3,668.35

The sum of \$3,800 is still necessary to raise the mortgage on this property. This would be a small contribution for the medical profession to make to the memory of one of the representatives of the commission that did so much for the glory of the profession and for the good of the country. Send all contributions to Major M. W. Ireland, Surgeon General's Office, War Department, Washington, D. C.

Warren Prize.—Dr. Frederick A. Washburn, resident physician in the Massachusetts General Hospital, Boston, announces that the Warren Triennial Prize for 1910 is to be on some one special subject in physiology, surgery or pathology. The dissertation must be either in English, French or German, and must be typewritten and suitably bound. No work that has been previously published will be considered in competition. The name of the writer must be enclosed in a sealed envelope, on which must appear a motto corresponding with one on the

accompanying dissertation. The amount of the prize for 1910 is \$500. Dissertations will be received until April 14, and high value will be placed on original work.

February in the Canal Zone.—The report of Col. William C. Gorgas, Medical Corps, U. S. Army, chief sanitary officer of the Canal Zone, calls attention to the death rate of 10.98 per 1,000 for February among employes, which is the lowest rate since the beginning of work in the Canal Zone. The February death rate for 1906 was 43 per 1,000; for 1907, 25.62 per 1,000, and for 1908, 12.72 per 1,000. A similar marked reduction is noted in the death rate in the entire population of the Canal Zone, which has decreased from 40.20 per 1,000 in 1905 to 18.59 per 1,000 in February, 1909. The amount of illness among employes has decreased from 1,116 daily in January to 951 daily in February. During January there were admitted to the hospital 1,258 employes ill with malaria, and during February only 852. During the month no case of yellow fever, plague, or smallpox occurred on the isthmus.

CANADA

Graduating Exercises.—At the graduating exercises of the Medical Faculty of the Western University, London, Ont., April 23, a class of 26 was graduated.

Subscription for Tuberculosis Hospital.—Citizens of Brantford have subscribed \$7,000 of the \$15,000 required for the establishment of a hospital for the treatment of tuberculosis in that city.

Nostrums Must Be Stamped.—The order has been passed in the council extending from April 15 to May 15, the time allowed for the issuance of stamps by the internal revenue department to be placed on proprietary medicine manufactured prior to April 1, in compliance with the act respecting proprietary medicines passed by parliament at the last session.

Personal.—Dr. John W. McEachern has been elected president. Dr. James D. Lafferty first vice-president, Dr. William A. Lincoln secretary, and Dr. W. E. Graham treasurer of the Calgary (Alba.) Moral and Sanitary League.—Dr. Fred Jeffery has been appointed chief of the resident staff of the Victoria Hospital, London, vice Dr. Ray Holmes.—Dr. James Mills, Toronto, who was operated on at the Cottage Hospital, April 8, is convalescent.—Dr. George A. Armstrong, Montreal, has returned from Europe.

Honor Professor Wright.—The pupils and colleagues of Prof. Ramsey Wright of the University of Toronto, celebrated the twenty-fifth anniversary of his work as professor in the University April 15 by tendering him a complimentary banquet. The chair was taken by Prof. J. Playfair McMurich. The toast to the university was presented by Prof. T. R. Lillie of the University of Chicago, and that to the guest of the evening by Dr. T. McCrae of Johns Hopkins University, and an address was presented to Professor Wright by Prof. A. B. MacCallum.

Coming Tuberculosis Conference.—The ninth annual meeting of the Canadian Association for the Prevention of Tuberculosis is to be held in Hamilton May 19 and 20. The chief subjects for discussion are "The Duty of Municipalities in Reference to Tuberculosis," by Dr. White of the Pittsburg Sanatorium; "How One Can Do Most Good in Arresting Tuberculosis at the Smallest Outlay," by Dr. George J. Adami, Montreal; and "The Duty of the People Toward the Movement for the Extermination of Consumption," in which a number of physicians and laymen will participate.

FOREIGN NEWS

Fifth International Congress for Radiology.—The last congress for medical electrolgy and radiology, held at Amsterdam last September, voted to hold the next congress at Barcelona in Spain, and the date has been fixed as September 13 to 18, 1910. The committee of organization is already at work, with D. Luis C. Salse as president of the committee and congress and D. C. C. Llaberia as secretary, both of Barcelona.

Prison Term for Alleged Malpractice by Prominent Italian Surgeons.—The profession in Italy is in a ferment on account of the sentence recently passed on Professor Galeazzi, chief of the Milan Orthopedic Institute, and his assistant, Anzoletti, condemning them to two and a half months in prison and a fine of about \$17 on account of the death of a patient from gangrene after application of a plaster cast for fracture of the pelvis. The medical experts for both sides agreed in ascribing the gangrene to thrombosis in the local veins, but the experts for the parties bringing the suit ascribed the phlebitis to undue pressure from the cast, while those for the

defense ascribed it to the effects of the trauma causing the fracture. The latter it seems was not discovered for a week, and the leg had been used a little in the mean time. Italy takes a high rank for orthopedic work, and the Milan institute stands about at the head. The patient in question was a prominent local lawyer, and the *Gazzetta degli Ospedali* remarks that it stands to reason that physicians with such a high reputation for skill and devotion would not be guilty of gross negligence for the first time in such a particularly important case. A number of medical societies have passed resolutions since urging the necessity for reform in the system of medical expert testimony to prevent such a spectacle as the contradictory testimony in this case. They protest against one system which allows an incompetent judge or jury to decide questions that tax even specialist skill and experience. They call on all the medical associations to aid in the effort to secure legislation organizing a "board of medical experts," a *collegio peritale*, which some have been advocating for a long time, to be made up of men whose skill, judgment and impartiality are known to be above all question. The various resolutions adopted are being published in the *Policlinico*, in turn. The *Gazzetta degli Ospedali* of April 15 gives the views of a leading lawyer on the above case, citing the Roman law on malpractice. The "Aquilian law" of damage outside of a contract holds to conduct "becoming a good father of a family." The limit of responsibility is the conduct of a *bonus pater familias*, representing the average good father in the social status in question. The responsibility of the physician is that of the average diligent doctor among his peers. The article adds that the movement of modern life and civilization would be impossible if no act were done except those from which all possible chance of injury has been eliminated with scientific precision. There must be some limit to this exclusion of possibility of damage, and the "Aquilian law" can not apply to all the remote and even infinite limits of the fortuitous case. Where to establish these limits, and how far to stretch the law to apply to them is for the court to decide. For this decision it is necessary to bear in mind the two extremes: on the one side, the solicitude for the patient which should be more scrupulous than any contract could call for; while on the other side, it is evident that this scrupulousness can not be carried to such a point as to take away all means of livelihood or participation in the work of society.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 24, 1909.

The Antituberculosis Campaign

At a meeting of the General Council of the Women's National Health Association of Ireland, the wife of the Viceroy, Lady Aberdeen, disclosed a new scheme in the antituberculosis campaign. There are dotted round the coasts of the United Kingdom 68 coastguard stations, placed there for the prevention of smuggling in former times. Modern conditions of commerce, the introduction of steam, etc., has rendered them useless for this purpose, though some of them are used by the admiralty for signaling purposes. It has been decided to convert them into sanatoria for patients suffering from tuberculosis, for which purpose they can readily be adapted. They are commodious, well built, and situated in salubrious localities.

Under the auspices of the National Association for the Prevention of Tuberculosis a popular and educational tuberculosis exhibition has been opened in the east end of London at Whitechapel. It is intended to move the exhibition to other poor districts. The object is by models, diagrams, specimens, and other means, to show to the people the nature of tuberculosis, the extent of its ravages, the possibility of its prevention and arrest, and the methods by which these objects are attained.

The local government board has issued a report by Dr. Eastwood on the American methods for the control of the milk supply. A number of the methods are considered worthy of adoption here. Dr. Eastwood recommends that dairy cows with advanced or generalized tuberculosis should be destroyed, and that milk not provided with a reasonable guarantee of production under sanitary conditions should be excluded from cities. A regulation requiring all milk to be sold under one of three designations, viz., raw, Pasteurized, or officially certified, would be helpful. The possibilities of producing a certified milk on a financially successful basis have not yet been exploited fully. Municipal enterprise in the production of certified milk for the purpose of improving the physique of the poorest class is considered worthy of consideration.

Death Under Chloroform and Workmen's Compensation

Another new point has arisen under the workmen's compensation act. A man in the employment of calico-printers met with an accident. His hand was caught between two rollers and badly crushed. An expectant treatment was adopted and two months later skin grafting was necessary in order to prevent contraction which would have rendered the hand rigid and practically useless. This was done under chloroform and the patient died. The widow applied for compensation but the judge dismissed the claim. An appeal was made to a higher court which reversed the judgment. The principal judge said that it was admitted that the deceased was bound to undergo an operation of some sort. The usual operation would have been amputation of the hand which would have involved administration of an anesthetic and if the man had died counsel for the respondents admitted that the employers would have been liable. Instead of this a skilful surgeon performed an operation which would preserve the hand and render the man not maimed for life but able-bodied, and so relieve his employers from liability. The step taken by the workman in submitting to the operation was not only courageous but in the interest of his employers. The case was therefore sent back to the lower court for the assessment of the amount of compensation.

The Education of Mothers

A novel form of legislation has been introduced into the House of Commons. It proposes to empower local sanitary authorities to assist necessitous women before and after childbirth. The object is to reduce infant mortality by feeding, supervising and instructing poor, ignorant mothers. The local authority is given power to provide food, advice and other assistance for the mother before and for six months after the birth of the child. As a condition it may insist on the mother nursing the child, attending a class for instruction, or refraining from working. The proposal is founded on the experience gained at Ghent where infant mortality was very high. A local physician, Dr. Miele, started a school for mothers, where women of the working class were given advice and instruction before and after labor and encouraged to suckle their children. The municipality gave a grant of \$300 a year to the work and it was found to be much better to feed the mother and encourage her to suckle her child than to facilitate bottle-feeding by supplying humanized milk. The example of Ghent was followed by one of the poorer boroughs of London, St. Pancras, where, as has been stated in a previous letter (*THE JOURNAL*, July 20, 1907, xlix, 253), a school for mothers was founded and led to a great reduction in infant mortality.

The Causation of Dental Caries

The condition of the teeth of our people is appalling; dental caries is practically universal. Investigation shows that at the age of 6 years nearly 100 per cent. of children have carious teeth and that on an average nine teeth are affected. The permanent teeth also rapidly decay; at the age of 14, 85 per cent. of children have caries, and afterward this percentage gradually rises so that only 5 per cent. of adults have a perfect set of teeth. The causes of this deplorable condition have been much discussed in the last few years. Two authorities, Dr. Harry Campbell, who may be described as the most philosophic physician of the day, and Dr. Sim Wallace, a well-known dentist, have urged that the decay of the teeth is due to a faulty mode of diet. Dr. Campbell, who is the author of a monumental work on the evolution of man's diet, has found that before the discovery of cookery little crude starch was taken and this was entangled in a cellulose network which needed abundant mastication. This necessitated an active use of the jaws which tended to their healthy growth and development. Until the agricultural period (which was long after the discovery of cookery) the only source of sugar other than the limited supply of fruits was wild honey. Now man has not only vastly increased his supplies of sugar and starch, but he consumes practically the whole of it in a liquid, pappy, spongy or pulvaceous form. This gives the teeth little or no work. Dr. Campbell recommends that when a child begins to cut its teeth it should be given cautiously solid food for which obviously the teeth are intended. The infant should be given well-baked bread-crust which will compel mastication, and chop and chicken-bones to gnaw. Dr. Sim Wallace recommends similar food for infants and for school children, crisp toast, baked bread, or crusty rolls instead of the ordinary white bread. He also recommends that meals should be arranged so that dessert always follows sweets, for fresh fruit cleans the mouth.

Graduated Labor in the Treatment of Tuberculosis

The value of graduated labor in the treatment of pulmonary tuberculosis was pointed out a year ago by Dr. M. S. Pater-son, medical superintendent of the Brompton Hospital Sanatorium at Frimley. At the annual meeting of the Royal National Hospital for Consumption, the president, Lord Rosebery, bore striking testimony to the success of this treatment. Many patients had gone through the course of graduated labor with the most satisfactory results. He read the following speech made at the recent Christmas dinner by a patient: "Whatever we may have to put up with in the way of discipline, I know the day will come when we shall be thankful to have undergone it, because of its benefits. I came to the hospital four months ago a wreck, and being given two tens (exercise for ten minutes twice daily) found it quite enough. Now I am doing navvy's work in the quarry, shoveling, sifting and taking barrow loads of stone weighing a couple of hundredweight—heavier work than I have ever done. My weight has increased from 132 pounds to 156 pounds and I am better in health than I have ever been in my life. This is the result of plenty of good plain food, open air and the discipline I have spoken of, and I am only one of hundreds."

A Medical Degree for London Students

The medical degree of the London University is obtained by a very difficult examination which is beyond most London medical students, who generally content themselves with obtaining the combined diploma of the Royal Colleges of Physicians and Surgeons (L.R.C.P., M.R.C.S.). They are unable to use the letters M.D. and are not entitled to be called "Doctor," but are styled "Mr." though the distinction is often not observed, especially by the masses. On the other hand many graduates of the provincial Scotch and Irish universities practice in London and in England generally, who are of course "M.D.'s" and entitled to the designation of Doctor. The majority of the London students are therefore in a position of titular inferiority to these, and though a man's ability as a practitioner is by no means always estimated by his qualification, the fact that he is not strictly entitled to the designation of "Doctor" is some disadvantage in general practice. Now it is contended that the requirements for the conjoint diploma are as stringent as those of many of the universities outside London and that the London students are placed unfairly at a disadvantage. The problem has therefore existed for some years of giving an opportunity of obtaining the coveted medical degree to every student who is worthy of it, but the difficulties have so far been insuperable. The London University has naturally been unwilling to lower its high standard which has given it a pre-eminence over the provincial universities, and the colleges of physicians and surgeons, not being universities, have been unable to grant a degree, which is a university distinction. Some scheme, however, appears now to be in sight. Delegates appointed by the colleges have produced a draft scheme for establishing a joint examination with the University of London. It is suggested that the university should retain all its existing rights as to the granting of degrees but should consent to exercise them as regards pass degrees conjointly with the colleges so far as those students are concerned who shall have complied with such conditions as the university and the colleges may determine. Thus the university would continue to grant independent degrees, which might be designated as "honors" degrees, thus meeting the views of those who maintain that the present degrees of the university are of an "honors" standard.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 22, 1909.

The Reactions of Revaccination

Before the Academy of Medicine, April 20, Professor Kelsch, director of the Superior Institute of Vaccine of the academy, made in his own name and in that of his collaborators, Camus and Tanon, a communication on revaccination and its effects. Very frequently when a revaccination does not show at the point of inoculation a pustule equally defined with that of a primary vaccination, one is led to believe that it has been ineffective. Again, besides the classical pustule, there are other manifestations of vaccinia: the papulo-vesicle, the papule and the macule, reddish and slightly indurated. These papules and macules are more prompt to manifest themselves, but at the same time they are more fugitive than the frank papule of the

first vaccination. They must, therefore, be observed very closely, for if the subject is examined five or six days after the revaccination there is a risk of their prior disappearance. They are not, as is sometimes thought, local inflammatory reactions, due to the prick and coming from the microbes of the vaccine or from the skin of the subject, but they constitute real manifestations of vaccinia.

The statistics of revaccination, therefore, must take into account these very important results, and not rest content with mentioning simply positive or negative results. Fresh ministerial instructions, moreover, have taken note of this. The results of revaccination will appear in a form that will be more conclusive when a precise description of the characteristic lesions obtained is mentioned.

The statistics furnished by Professor Kelsch, based on 2,683 revaccinations made between July 1, 1905, and April 5, 1909, have given for 1,539 cases that it has been possible to follow up, 37 pustules of the type of primary vaccination; 315 papulo-vesicles; 912 papules; 169 macules, reddish and slightly indurated. In 108 cases only there has been no reaction, which gives a truly minimum proportion of 6 per cent. of failures.

Kelsch and his collaborators have demonstrated that the organism, far from becoming refractory to the impressions of the vaccine by successive inoculations, is, on the contrary, rendered hypersensitive—anaphylactized; frequently the more the subject has been revaccinated, the more precocious and the lighter are the manifestations of the vaccine, in accordance with the law of anaphylaxis. It is of importance that the public should be made acquainted with the principal forms of the eruption induced by vaccinal reinoculation, for many persons refrain from revaccination in the belief that they are refractory because it does not produce pustules in them.

Dr. Roux, director of the Pasteur Institute, is in accord with this belief, and thinks that it would be opportune to publish illustrations representing exactly all the cutaneous reactions consequent on revaccination. Such an atlas would be of great general utility.

The Laboratories of the Paris Hospitals

The Municipal Council of Paris has decided to raise the subsidies for medical studies, in order to improve the work of the laboratories of the hospital services of the city of Paris; but the increase voted at the end of the year being insufficient, a new credit is about to be given to the chiefs of medical staffs (*médecins chefs de service*). The sum total of 17,500 francs is to be so used. Among the services designated to profit by the subvention is that of Dr. Bécélère, who has created a laboratory intended, first, for the examination of patients by radio-scropy and radiography; second, for the treatment of suitable cases by radiotherapy and radiumtherapy; third, to the study of medical radiology, which has been taught there daily for ten years. Dr. Bécélère has, moreover, collected a most complete library of radiology, in which are to be found all the French and foreign publications relative thereto, as well as a museum containing mouldings (*moulages*) of cases before and after treatment. The subvention will also be granted to Dr. Pierre Marie, physician to the Hôpital Bicêtre, to enable him to pursue his studies on the pathologic anatomy of aphasia. Another subvention is to be granted to the laboratory at the Hôpital Saint-Louis, which forms an important school for dermatologic studies. Thanks to this grant, other hospitals—Lariboisière, Tenon, Bichat, Andral, the Hospital for Sick Children, Trousseau, Necker—will be able to perfect their radiographic services.

International Conference on Cancer

The bureau of the International Congress on Cancer assembled at Berlin, has decided that the next International Conference on Cancer shall meet at Paris, at the end of September, 1910. It will probably be presided over by Professor Bouchard.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 14, 1909.

Examination for Dentists

The regulations for the examination for licensing of dentists, which will not be published officially for several weeks, are as follows: Before taking the examination for a dentist's license, the candidate must pass a preliminary examination. The candidate for the preliminary examination must prove that he has graduated from a German secondary school (*Gymnasium, Realgymnasium or Oberrealschule*) and that he has

attended a dental school of the German Empire at least three half years since graduation from the secondary school. The examination includes anatomy, physiology, physics, chemistry and dental mechanics and occupies nine days. The candidate for the dental examination must show that he has passed the preliminary examination, has studied at dental institutes of the German Empire at least seven half years, and at least three years after having fully passed the preliminary dental examination, he has taken a clinical course of at least two half years on the conservative treatment of the teeth and a course of equal length in mechanical dentistry, has attended regularly a polyclinic for diseases of the teeth and mouth, for three months each has attended the clinic or polyclinic for diseases of the skin and syphilis, and has taken a course on methods of clinical examination. The parts of the examination in which the candidate has failed may be taken again after from two to six months at the option of the licensing board. Any one who does not pass the second examination is not admitted to a further examination. A medical license granted by the German Empire entitles the holder to take the dental examination on furnishing proof that for at least two half years he has taken a course in dental mechanics and a clinical course in the conservative treatment of the teeth and has regularly attended a polyclinic for diseases of the mouth and teeth. At the dental examination he need only pass the examination in diseases of the mouth and teeth, in the conservative treatment of the teeth, and in the surgery of the mouth and teeth and in mechanical dentistry, in addition to the prescribed examination in mechanical dentistry of the preliminary dental examination.

Certificates for Quacks and Nostrum Makers

Quacks and patent medicine manufacturers often attempt to secure greater credibility in the eyes of the public for the testimonials for their alleged cures by obtaining a certificate of the genuineness of the signature of the patient, given by police authorities, mayors or other officials. The official certificate in these cases is frequently given in such a form as to create the impression that it guarantees the genuineness of the entire contents of the testimonial which is naturally very advantageous for fraudulent purposes. The ministers accordingly direct that as it is very undesirable in the interest of the public health that the business of quacks and nostrum dealers so injurious to the public should be promoted by the officials, even in appearance only, the officials in testimonials of this sort shall distinctly confirm the genuineness of the signature merely and avoid every other interpretation of the certificate.

The Campaign Against Alcoholism

By ministerial order of March 3, the distribution of leaflets for instruction regarding alcoholism is directed. These leaflets are to be distributed by the vaccinators with the certificate of vaccination and also by the district physicians in their visits to schools and conferences with teachers. The leaflets are furnished at the rate of 50 cents per 1,000 by the business station of the German association against the misuse of spirituous beverages. In a communication to the German Aerzte-Vereinsbund the supreme lodge of the order of Good Templars opposes the giving of medical recommendations of liquors as they are being spread broadcast by a number of firms for advertising purposes. Physicians should avoid recommending the various wines, beers and whiskeys, and should forbid advertisers to add the sentence, "recommended by physicians," without an express permission has been granted for it. The Berlin central association for the campaign against alcohol announces in the month of April a scientific course for the study of alcoholism, together with an inspection of social hygienic institutions, under the direction of Professor Rubner.

Welcoming Congresses

I have previously referred to the unnecessary expense to which municipalities are put in entertaining congresses of various sorts. Happily the managing committee of the German Städtetag (a meeting of delegates from various cities) has formulated some principles that are intended to mitigate this nuisance. The omission of entertainments is recommended. A festal welcome should be given only to those associations that are invited by the cities and which can claim especial attention for themselves. The ceremonies of welcome should be restricted as much as possible. Of the same tenor is the edict of the imperial chancellor in which a restriction of participation by officials in the proceedings of scientific societies is directed.

Pharmacology

CERTAIN PRODUCTS OF THE ORGANIC CHEMICAL MANUFACTURING COMPANY

Report of the Council on Pharmacy and Chemistry

An investigation by Dr. Torald Sollmann appeared as a report of the Council in *THE JOURNAL*, Sept. 5, 1908, p. 818, under the title, "Formaldehyd Derivatives; Their Fate and Action in the Body. Together with Observations on Some Other Urinary, Intestinal and Wound Antiseptics." In this paper Dr. Sollmann showed that the claims made by the Organic Chemical Manufacturing Company for certain of its products were incorrect. The accuracy of Sollmann's findings was denied by the Organic Chemical Manufacturing Company, who issued a pamphlet in which appeared a report by Messrs. Sadtler & Sons, challenging Sollmann's results, and which pamphlet was endorsed by Dr. Henry Beates, Jr.

In accordance with its regular procedure, the Council appointed a referee with instructions to investigate the matter and report to the Council. The referee submitted to the Council letters from Messrs. Sadtler & Sons, Dr. Henry Beates, Jr., and Dr. Torald Sollmann, together with his own investigations and his report on them. The report of the referee follows: the report, together with the letters of Messrs. Sadtler & Sons, Dr. Henry Beates, Jr., and of Dr. Torald Sollmann in full are issued in pamphlet form.¹

W. A. PUCKNER, Secretary.

REFeree's REPORT

The referee appointed to review the action of the Council on Pharmacy and Chemistry in refusing recognition to certain products of the Organic Chemical Manufacturing Company, submits the following report:

The action of the Council was based on Professor Sollmann's investigations of the products in question, the report of which was submitted to the Council and published in *THE JOURNAL* of the American Medical Association, Sept. 5, 1908.

In a printed pamphlet dated Sept. 15, 1908, the Organic Chemical Mfg. Co. claims to prove not only that Professor Sollmann's report is grossly erroneous and misleading, but that it is also unfair and dishonest. The last four pages of the pamphlet consist of a report from Samuel P. Sadtler & Son,² a Philadelphia firm of analytical and consulting chemists, in which Dr. Sollmann's most damaging statements concerning the so-called formasal products of the Organic Chemical Mfg. Co. are contradicted and severely criticized. As the report of this firm contains the only evidence brought out against the validity of Dr. Sollmann's conclusions concerning the products of that company, it is chiefly the substance of that report which now constitutes the points at issue.

The extravagant claims and the accusations and insinuations of the pamphlet itself to which is attached the name of S. Lewis Summers, the president of the concern, need not, engage the attention of the referee nor the attention of any member of the Council, including Dr. Sollmann, until it has been determined whether Dr. Sollmann's report to the Council or the report of Samuel P. Sadtler & Son to the Organic Chemical Mfg. Co. is in accordance with the facts.

Henry Beates, Jr., president of the Pennsylvania State Medical Examining Board, seems to have experienced no difficulty in reaching the conclusion that the attack of the Organic Chemical Mfg. Co. on the Council on Pharmacy and Chemistry, and especially on Dr. Sollmann, is abundantly justified by the facts. His endorsement of the report of Sadtler & Son is printed in heavy type on the first page of the pamphlet issued by the Organic Chemical Mfg. Co.

In reply to the referee's inquiry of Dr. Beates as to why and how he came to lend his name in support of the literature

issued by that company, a long communication³ was received setting forth the remarkable merits of the products manufactured by the Organic Chemical Mfg. Co. Dr. Beates further gives the personnel of what he calls a "committee" which he appointed, and together with whom he visited the establishment where the products are made.

[We learn that the gentlemen referred to by Dr. Beates as composing the "committee," state that it is a misunderstanding as to there having been a committee: that they merely made a visit to the plant by invitation, looked at it and went away; that while interested in what they saw they made no statement other than one of courteous interest.—Ed.]

The substance of the conclusions, as stated by Dr. Beates, was that "the committee had every reason to feel convinced that true active chemical compounds were being manufactured."

So far as the Council on Pharmacy and Chemistry is concerned, it is manifestly unnecessary for the referee to make any comments on these conclusions. As this report may be published, however, the referee wishes to take this occasion to make a few elementary comments. The essential claim made for the products of the Organic Chemical Mfg. Co. is the same as that made for many other proprietary preparations, namely, that they are chemical compounds made by chemical combination of therapeutically valuable ingredients which are again set free and develop their valuable properties just where they can do the most good inside the human organism. Such plausible claims appeal of course to the laity and to physicians as well, and are extensively exploited by manufacturers of all kinds of worthless products as well as by manufacturers of products which may have some merit. Even physicians do not seem generally to know that because, say formaldehyd, or iodine, or salicylic acid, is used in the preparation of a compound it does not at all follow that such ingredients are easily obtainable from it. Because sugar contains the formaldehyd group and salt contains the element chlorine, it does not follow that sugar and salt will set free these active chemicals within the body. It is clear that all kinds of frauds can enter into such claims for the liberation of active ingredients. The ingredients may or may not be there; if there, they may or may not be there in chemical combination, and if there in chemical combination they may or may not be set free by any agency at the command of the animal body.

The conclusion of Dr. Beates' "committee" that they saw true chemical compounds being manufactured may be all right. There certainly is no reason for denying it, for no one, so far as the referee knows, has denied that at least some of the products of the Organic Chemical Mfg. Co. are more or less pure chemical compounds. It is manifest that Dr. Beates' private "committee" has contributed nothing that is of any use to the referee.

In other parts of his letter Dr. Beates offers sundry pieces of evidence showing that the "formasal products" break up within the human body. This evidence consists of statements which he has borrowed directly from the literature of the Organic Chemical Mfg. Co., or from the report of Sadtler & Son. His statements are therefore either worthless or superfluous, for the evidence submitted by Sadtler & Son does not improve on passing through the editorship of Dr. Beates or of Dr. Summers, and when writing that letter to the referee Dr. Beates knew that the evidence of Sadtler & Son was being investigated by the referee at the request of the Council on Pharmacy and Chemistry.

Finally, as to Dr. Beates' clinical results achieved by means of the formasal products: These may or may not be able to stand close investigation and repetition. Whether they do or not is not important at the present juncture. The chief basis on which the products of the Organic Chemical Mfg. Co. were refused recognition was that unwarranted—because unproved—statements were made concerning their "gradual cleavage in the human body" and repetitions of such claims by the president of the Pennsylvania State Board of Exami-

1. The complete pamphlet may be had on receipt of a stamped addressed envelope.

2. These four pages are reproduced in the complete pamphlet which may be had on receipt of a stamped addressed envelope.

3. Dr. Beates' letter appears in the complete pamphlet.

ners can not be accepted as a substitute for evidence as to the truth of such statements.

So far as the referee can judge from his letter, Dr. Beates has confused his hostility to various persons, including some members of the Council on Pharmacy and Chemistry, with his belief in the products of the Organic Chemical Mfg. Co. In no other way can the referee explain his dark hints as to politics, conspiracies, persecutions and bribery, or his unqualified approval of the slanderous pamphlet issued by the manufacturer of the "formasal" products, or his failure to recognize that loose and irrelevant suggestions of fraud could not do the "formasal" products any good in the eyes of any competent referee.

The "formasal" products were refused recognition by the Council because its first referee, Dr. Sollmann, found that the manufacturer had not proved the claim that these substances break up into their respective constituents within the human organism. Dr. Sollmann tried to verify the statements of the manufacturer, but obtained results which made it seem very clear that the manufacturer could not have even seriously attempted to prove that the formasal products yield appreciable quantities of formaldehyd or salicylic acid, or other active decomposition product within the body.

On receiving information of the action of the Council and a copy of Dr. Sollmann's report, the president of the Organic Chemical Mfg. Co. began, evidently, for the first time, to bestir himself in the direction of attempting to demonstrate the truth of his proclamations concerning the behavior of the formasal products within the human organism. To repeat his own words: "The report sent us as being that of Torald Sollmann is dishonest and within ninety days we shall prove its incorrectness beyond a question of a doubt." As a result of this remarkable decision, we have the report of Samuel P. Sadtler & Son, to the Organic Chemical Mfg. Co. of Sept. 10, 1908.

According to this report Sadtler & Son seem indeed to have found no difficulty in proving the essential point which the manufacturer wanted them to prove and which he should have proved before submitting the formasal products to the Council on Pharmacy and Chemistry, namely, their decomposition into formaldehyd and salicylic acid within the human body. Sadtler & Son write: "Proving this dissociation we have found to furnish no difficulties other than is necessitated by a more detailed analysis of the urine of people taking these remedies in prescribed doses."

The detailed urine analyses to which Sadtler & Son refer are described as follows:

"Sample sent by Dr. ——— from patient (P. D.) taking 140 grains of ur-a-sol per day.

"Day's sample was 1,030 c.c. This was made slightly alkaline with sodium carbonate and extracted with ether to remove neutral substances. After making acid with hydrochloric acid.

"Ether extract, 0.5170 grams (7.50 grains).

"This sublimed in needle crystals, gave a strong FeCl_3 test and had the melting point of salicylic acid.

"The residue was then boiled with caustic soda solution and any possible basic principles extracted with ether and discarded. The residue was then made acid with hydrochloric acid and extracted again with ether.

"Second acid ether extract, 0.4664 grams (7.0 grains).

"This responded to the same test when the sublimed needles were taken."

It will be seen that Sadtler & Son have endeavored to distinguish between the undecomposed methylene-di-salicylic acid of the ur-a-sol and the free salicylic acid which should be present in the urine if the disalicylic acid is decomposed in passing through the organism. They purified the ether extract by subliming it and found that the product so obtained gave the ferric chlorid reaction as well as the melting point of salicylic acid.

These tests they fortified by showing that the solubility of salicylic and methylene-di-salicylic acid in benzol are very different and may be used as a means for distinguishing between the two.

If these tests of Sadtler & Son could be accepted as proving this crucial point, the decomposition of methylene-di-salicylic acid, there would be little need for further discussion. The referee would then move for a reconsideration of the Council's action on the formasal products. Unfortunately, the

tests as described above by Sadtler & Son have no value and seem to represent only an extremely unritical piece of commercial work. As this statement is a rather severe criticism of the work of Sadtler & Son, and since the essential point of the whole controversy is involved in it, it will be necessary to go into this matter in some detail. The referee will, however, be correspondingly brief when discussing the less consequential points raised by Sadtler & Son.

As evidence bearing on the subject, the referee has a communication from Sollmann⁴ describing a repetition of the experiments described by Sadtler & Son. This communication from Sollmann the referee forwarded to Sadtler & Son in order to give them every opportunity to prove their point. Sadtler & Son availed themselves of this opportunity, and so far as Sollmann is concerned, they are therefore having the last word.

Sollmann's subject took in a day 10 gm. ur-a-sol, and he obtained from the corresponding acidified urine 0.47 gm. of ether extract. This residue gave the ferric chlorid reaction, but it showed neither the solubility nor the melting point of salicylic acid.

In these tests Sollmann omitted one point: he did not test the melting point of the sublimed urinary residue, as Sadtler & Son had done. Sollmann gives an excellent reason for not following Sadtler & Son in this respect. He found the pure methylene-di-salicylic acid breaks up and yields salicylic acid when heated until a sublimate is obtained.

In this manner Sollmann proves as definitely as any referee would be likely to require that the findings of Sadtler & Son, as described in their report to the Organic Chemical Mfg. Co., are "based on false premises."

It was a matter of considerable interest to the referee to see what Sadtler & Son could say to this damaging fact brought out by Sollmann.

In their communication⁵ to the referee is found the following paragraph:

"Sollmann's criticism of the testing sublimate obtained by strong heating is quite just. We only did this once, and while the practice was indefensible on theoretical grounds we believe we only fell into it because an ether extract showed such a mass of low temperature sublimed needle-like crystals that it did not take a temperature that would break up methylene-di-salicylic acid. We certainly would not have tried such, as we have been familiar with this acid for five or six years, as we had tested this acid for Dr. Summers about that long ago."

Sadtler & Son is to be given credit for having thus frankly admitted a blunder of fundamental importance in the point at issue. In their remaining discussion on "the presence of salicylic acid in urine," Sadtler & Son "hedge" and explain and shift the ground with some dexterity, but they fail to "make good" on the essential point. Take this paragraph:

"We would not expect to have it so decomposed as to give a sublimate of salicylic, as we had devised a test for the analysis of acetyl-methylene-di-salicylic acid in which the salicylic acid is obtained by heating with fused caustic potash to 250 C., and we found that it had to be heated well up to that temperature to complete the elimination of the formaldehyd residue. This test we have reported to the Organic Chemical Co., but not as yet published. In this case it merely tends to show that methylene-di-salicylic acid does not break up with any great ease, when heated."

The stability of the salt of an acid in hot caustic potash has no particular bearing on the stability of the free acid. Sadtler & Son might as well have tried to prove that carbonic acid or chloric acid is stable because potassium carbonate and potassium chlorate can withstand considerable heat.

On another page we find the following paragraph which evidently is intended to prove that it is permissible to use the sublimate in determining whether the urine contains salicylic or methylene-di-salicylic acid:

"The four printed pages of our report appearing in Dr. Summer's pamphlet did not contain all the points that we observed in making our tests. One of them is that in the test we here described and in several other analyses of urine from people taking ur-a-sol we found to take place, what we have only noticed with very easily sublimable compounds such as salicylic and benzoic acids, namely that as ether was driven off from an extraction, the walls of the flask were covered with crystals. In one case we tested these crystals as to melting point and found them to be salicylic acid. We

4. Dr. Sollmann's communication appears in the complete pamphlet.

5. The communication from Sadtler & Son to the referee appears in the complete pamphlet.

know from having evaporated ethereal solution of methylene-di-salicylic acid that it does not sublime at such low temperatures. We have also found that by heating both acids, viz., salicylic and methylene-di-salicylic, in flasks in an oil bath that salicylic acid sublimes very noticeably at considerably below 100 C., while methylene-di-salicylic acid did not sublime at all at temperatures to which we heated the bath, which happened to be 170 C."

Why Sadtler & Son should insist on using the subliming process in the treatment of their ether extracts after Sollmann has shown how elusive it proved in this case and in their own hands—that they have not attempted to explain. Sollmann has, of course, had no opportunity to reply to the statements contained in the above paragraph.

It may be added that the "experience" of Sadtler & Son as to sublimates deposited on the flasks when urinary ether extracts are evaporated does not agree with that of the referee, who has frequently seen such sublimates obtained from urines where there was no occasion to look for salicylic acid. As a matter of fact, the referee obtained it from his own urine after taking ur-a-sol just as he has often obtained it before when not taking ur-a-sol. Sadtler & Son, in the above paragraph, say that they once tested such a sublimate from a ur-a-sol urine as to its melting point and found it to be salicylic acid. But the melting point of such an unpurified sublimate has little if any value, and Sadtler & Son say nothing about the ferric chlorid reaction of those particular crystals. The referee did apply this reaction to his sublimate and was thus able to exclude salicylic acid. The reaction was entirely negative.

To quote again from Sadtler & Son's communication to the referee:

"As to what Sollmann says of the quantitative separation of methylene-di-salicylic acid from salicylic: It will be noticed that Sollmann only speaks of extracting with ether in the way we spoke of on page 13. A very important part of what we did was briefly described, chiefly on page 14, as follows: 'The residue was then boiled with caustic soda solution and any possible basic principles extracted with ether and discarded. The residue was then made acid with hydrochloric acid and extracted again with ether.'

"Second acid ether extract, 0.4664 grams (7.0 grains)."

"This responded to the same test when the sublimed needles were taken."

"It was this second extraction, after we had gotten out all the acid principles the first time, that we obtained by boiling with alkali. We have not been able to ascertain just what the compound is which is soluble in water but insoluble in ether until boiled with caustic soda and then gives rise to salicylic acid (or if this is objected to, to bodies closely resembling salicylic acid). It is not methylene-di-salicylic acid, as that would have been easily extracted with ether. We believe it to be salicyl-uric acid for various reasons and, if it is, it demonstrates the work of the drug, as it is claimed to be a uric acid solvent. This, however, is not our concern, as in the present paper we are only desirous of substantiating our tests as reported to the Organic Chemical Co. The fact remains that each time we have carried out this test, we have apparently found more salicylic acid in this combination. Dr. Sollmann does not refer to this at all, and if he admitted it, we believe he would have to admit the action of the preparation, as the salicylic acid which is supposed to come from the methylene compound is supposed to be therapeutically active and just such a combination as we have found would be expected."

Here Sadtler & Son have a point against Sollmann. The latter did not go beyond the ether extraction in the acidified urine. On the other hand, there was no apparent reason why any such procedure should be adopted. And as is seen from the above paragraphs, Sadtler & Son do not now, on the basis of the last two extractions, claim the presence of free salicylic acid in the urine. They are now discussing some unknown "compound," which, on boiling with alkalis, gives rise "to bodies closely resembling salicylic acid." The unproved and improbable hypothesis as to "salicyl-uric acid" may furnish Sadtler & Son with an interesting topic for further investigation, but has nothing to do with the practical point at issue. The referee, passing judgment on the basis for the Council's decisions concerning the formasal products, could fairly have left out of consideration the new turn which Sadtler & Son introduce in the shape of this salicyl-uric acid compound. He decided, however, to determine for himself how much basis Sadtler & Son had for advancing such a hypothesis and he regrets to say that here again he failed to find any evidence worthy of serious consideration.

It is clear that in order to demonstrate the presence of any salicylic acid compound in the ur-a-sol urines which is soluble in ether only after being decomposed by boiling alkalis one must be sure that he has first extracted all the methylene-di-salicylic acid which the ur-a-sol urines admittedly do contain, before he boils the remainder with alkali. This Sadtler

& Son did not do. They simply assumed that any methylene-di-salicylic acid present "would have been easily extracted with ether." This assumption is unwarranted. It is also inexcusable since by means of the ferric chlorid reaction one can determine with very little work when the ether extracts no longer take up any more substance giving the characteristic color reaction.⁶

Working with 200 c.c. of acidified ur-a-sol urine the referee found that it took seven extractions. Sadtler & Son worked with fully four times as large a volume and made no check as to when the extraction was finished.

The conclusion is clear. The new evidence introduced by Sadtler & Son is worthless. When acidified ur-a-sol urine is thoroughly extracted with ether subsequent boiling with alkali sets free no weighable salicylic acid. Sadtler & Son, it will be noted, obtained, almost half a gram. The referee obtained perhaps a few tenths of a milligram, i. e., barely enough for one rather faint color reaction. Incidentally it may be remarked that the uric acid fell out in perfectly typical fashion from the ur-a-sol urine after the addition of hydrochloric acid. The referee's ur-a-sol urine was obtained by taking 8.5 gm. of ur-a-sol in the course of about ten hours.⁷ *The urine obtained in the course of twenty-four hours was very rich in methylene-di-salicylic acid or unchanged ur-a-sol but contained at most only traces of salicylic acid.* This essential point the referee has proved in the following manner:

Ur-a-sol is almost completely insoluble in dilute hydrochloric acid; salicylic acid is soluble. Consequently by merely adding enough hydrochloric acid to the urine to make a 1 per cent. solution the expected phenomenon happens, a precipitate comes down at once. This precipitate is very soluble in ether, is very little soluble in benzol and gives the ferric chlorid reaction.

The acidified urine was kept at 5 C. over night and filtered. To the filtrate was added sodic hydrate equivalent to the previously added hydrochloric acid. The filtered urine so obtained gave only an exceedingly faint reaction with ferric chlorid. To be specific it gave less of a color than the original urine diluted forty times. As the filtrate represented urine diluted with one volume of liquid this observation proves that less than one-twentieth of the substance giving the color reaction with ferric chlorid is left in the filtrate. It is certain, therefore, that less than 5 per cent. of the product in the urine could be salicylic acid. How much, if any, of this 5 per cent. actually is salicylic acid is of course immaterial.

In the light of this positive demonstration that the substance which gives the ferric chlorid reaction in ur-a-sol urines is not salicylic acid it is useless to make this report unnecessarily long by going into detailed refutations of the several smaller points raised in the report of Sadtler & Son. In Dr. Sollmann's report to the referee will be found adequate replies to every point.

The referee will, therefore, only very briefly touch on a few points. (1) As to the solubility of salicylic acid and methylene-di-salicylic acid in benzol. The fact that Sadtler obtained a positive color reaction with his "one minute" benzol extract of the urinary ether extract proves not that the substance consisted of salicylic acid, but that the reaction is also obtained with ur-a-sol. The referee obtained a positive reaction with ur-a-sol when he followed Sadtler's directions. The reaction is, however, much weaker with ur-a-sol or with the urinary

6. To test the ether solution it is only necessary to pour some of it in a test tube containing a little very dilute ferric chlorid solution and shake. The aqueous solution assumes a color proportionate to the amount of methylene-di-salicylic acid in the ether.

7. Having myself taken this quantity of ur-a-sol I feel justified in saying something concerning the taste of the stuff, although this is a point that hardly deserves the discussion it has received in the appended communications. The taste of a drug to a healthy person who takes it as an experiment is apt to be very different from the taste to a person who is sick and who believes or hopes that the drug will cure him. To me the stuff called ur-a-sol was very disagreeable, and I had the taste of it in my mouth the entire day. Only once did it have any nauseating effect. That again is, however, largely a matter of personal idiosyncrasy.

It will be noted that Prof. Sadtler now admits a more pronounced salicylic taste (p. 12). It is rather curious that he should have obtained this impression from less than a gram, but not from a "pinch" of the product which has such a slight solubility as ur-a-sol.

extracts than with salicylic acid. Incidentally, it may be said that Sadtler's procedure is more complicated than is necessary and correspondingly less reliable. The use of alcohol can advantageously be omitted. If ur-a-sol be shaken one minute with benzol and a little of the filtered benzol is poured directly into a very dilute ferric chlorid solution and shaken a very decided color reaction is obtained in the aqueous solution. Why diminish the reaction by the addition of alcohol?

(2) The Organic Chemical Mfg. Co. has made all the capital it could out of Professor Sadtler's accusation that Dr. Sollmann had erroneously quoted Fränkel as to the behavior of methylene-di-salicylic acid in the human organism. Fränkel has settled this point in favor of Sollmann.

(3) The question as to formaldehyd liberation when the formalal products are treated with various reagents (water, acids and alkali) has lost its significance since we now know that no salicylic acid is split off when the products pass through the human organism. To quote from the original report of Sadtler & Son "If salicylic acid is found so abundantly in the urine when acetyl-methylene-di-salicylic acid (ur-a-sol) is taken, it is evident that a corresponding amount of formaldehyd was liberated." That no formaldehyd is liberated is now equally evident from the demonstrated absence of salicylic acid from the urine.

The referee has gone over the tests made by Sollmann and by Sadtler & Son (except the phenyl hydrazin test which it seemed not worth while to take up) as to the liberation of formaldehyd by ur-a-sol, sodiformal, iodonuth and guaialin. In view of the sensitiveness of these color tests it is entirely losing sight of the essential point at issue to dispute as to which test is more sensitive or more reliable. If formaldehyd were split off there would be no trouble about getting abundant tests and all results short of most decided positive ones are really negative in so far as any practical point of view is concerned. As a matter of fact, however, none of the products split off any formaldehyd when treated with water, hot or cold, or with dilute acid or alkali. Sollmann's original report is therefore correct and the findings of Sadtler & Son are erroneous.

Sollmann's later tests as reported to the referee give traces or "fair traces" by the Jorissen test when by Sollmann's original test they were entirely negative and by Sadtler's tests distinctly positive. Sollmann's faint reactions as reported to me are due, in the opinion of the referee, to the fact that he reversed the order of adding his reagents. What Sadtler's "distinct" or "strong" tests are due to, the referee does not know. When properly made the Jorissen test gives entirely negative results.

As to the tests used by Sadtler & Son and involving the use of concentrated sulphuric acid the referee entirely agrees with Sollmann who says that such tests are not adapted to prove the formation of formaldehyd under the influence of water or very dilute acids and alkalies. Sadtler's reply to this criticism of Sollmann is rather disingenuous: "How Dr. Sollmann can read into my description of my tests the idea that any of the substances in solid form were put into strong sulphuric acid I do not see, and yet that is what he is apparently talking about."

No, that is not what Sollmann is talking about. Placing "the substance to be investigated in contact with concentrated sulphuric acid" does not imply that the substance must be added in solid form. It also covers the conditions of Sadtler's experiments of adding the solution of a substance to be investigated in contact with concentrated sulphuric acid.

(4) For the sake of completeness the referee ought perhaps to explain the findings of Dr. Latham Clarke, whose report the Organic Chemical Mfg. Co. has quoted so ostentatiously in behalf of their contention that the taking of ur-a-sol gives rise to salicylic acid in the urine. Dr. Clarke was engaged by that company for the purpose of working out a practical method of manufacture of a certain product. On the last day of his engagement in the shop of that company Dr. Clarke was asked to test a "ur-a-sol" urine for salicylic acid. He did so and obtained positive results. The method consisted of passing compressed steam over the dried urine residue and

testing the solution so obtained by means of ferric chlorid. No attempt was made to determine whether methylene-di-salicylic acid would not also go over with steam. *The test was therefore, of course, not conclusive and Dr. Clarke authorizes the referee to say that he is no longer willing to stand for the validity of the test and further that he very much regrets that his name was ever connected with it.*

(5) As to the antiseptic properties of ur-a-sol, Sadtler & Son sent the referee a small sample of ur-a-sol urine which gave a fair ferric chlorid reaction. Twelve hours after this urine was received it began to grow cloudy and in the course of two or three days a considerable deposit had formed. The usual decomposition resulting in the formation of ammonium carbonate and a characteristic odor did not set in. The referee's own ur-a-sol urine behaved in the same manner, while a sample to which he added a little chloroform remained clear. Essentially similar results were obtained by adding ur-a-sol directly to a fresh sample of urine.

(6) Finally it should be said that the letter to the Organic Chemical Mfg. Co. from the secretary of the Council on Pharmacy and Chemistry with regard to the rejection of its products might have been more full in which case it undoubtedly would also have been more accurate. The brevity and the inaccuracy of the letter was, however, more than compensated for by the fact that the company also received the full report of the referee. The pamphlet published by the company indicates that the author of it understood very well the import of the details contained in Sollmann's report, yet chose for advertising purposes to confuse the contents of a mere routine letter with the well considered statements of the referee, Dr. Sollmann.

The referee does not recommend reconsideration of the Council's action on the products of the Organic Chemical Mfg. Co.

Correspondence

Serum Sickness

To the Editor:—The increasing interest in serum poisoning, as shown by the recent report of cases, leads me to relate the following personal experience. I am furthermore induced to do so by the possibility herein shown of the sensitive condition far exceeding the usual time limits.

In 1902, I attended a case of diphtheria. I took an immunizing injection of antitoxin of 1,000 units. No inconvenience or rash followed. A few months later my duties brought me into close relation with bubonic plague and I was injected with Haffkine's prophylactic. This is a vaccine. A very severe reaction followed, temperature rose to 102 F., there was much urticaria and general malaise for two days. I looked on this as a toxic and not a serum reaction. In January of this year I was in very close relation to an unusually severe case of diphtheria, in which I administered 108,000 units of antitoxin to the patient, a child of 7. The latter recovered, slight multiple neuritis followed, but no serum symptoms. The hospital interne and myself were both much exposed to infection, and we thought it advisable to take an injection of 1,000 units each. In the case of the interne no results followed. I remained quite well for seven days, when suddenly much painless swelling, in and around the parotid, appeared. This subsided by the next day, to be followed by the sudden appearance of urticaria, distributed much as in herpes zoster, over the course of an intercostal nerve corresponding to the point of injection of the serum. It subsided in the course of a few hours, to be followed at 10 p. m. by an urticarial eruption over every part of the body. The irritation was unbearable as the night advanced, the temperature rose to 102.5 F. The pulse was 160. Vertigo and partial syncope followed any attempt to rise. I think this may be accounted for by the great engorgement of the skin depleting vessels and brain. Toward morning, much relief was obtained by bathing the surface with ammonia and water (about 1-10). The next day was passed in bed in a state of prostration. There was some recrudescence of the urticaria in the evening, promptly allayed by the ammonia. Good sleep followed, and

the next day I was well except for some pains in the joints, which persisted for nearly a week.

Now the main interest of the case lies in the fact that in 1902 I was not susceptible to the toxic action of the serum; in 1909 I was intensely so. The serum of the latter date was not toxic in itself, as shown by its lack of action in the case of both patient and interne—ergo it would seem as though I had been activated by the first dose and remained so after a period of seven years.

We clearly need the aid of a careful investigation into the question of time limit. It may well be that my experience was not so exceptional as it appears.

H. D'ARCY POWER, M.D., San Francisco.

Delegates for Pharmacopeia Convention

To the Editor:—In accordance with the provisions of Article VIII, Chapter 1, of the by-laws of the U. S. Pharmacopeial Convention, the president of the convention hereby invites the several bodies, entitled under the constitution to representation therein, to appoint delegates to the first decennial meeting of the said convention to be held in the City of Washington, May 10, 1910.

The attention of all concerned is invited to the following extract from the constitution from Article II on membership:

SECTION 1. The members of the United States Pharmacopeial Convention, in addition to the incorporators and their associates, shall be delegates elected by the following organizations in the manner they shall respectively provide: incorporated medical colleges and medical schools connected with incorporated colleges and universities; incorporated colleges of pharmacy, and pharmaceutical schools connected with incorporated universities; incorporated state medical associations; incorporated state pharmaceutical associations; the American Medical Association, the American Pharmaceutical Association, and the American Chemical Society; provided that no such organization shall be entitled to representation unless it shall have been incorporated within and shall have been in continuous operation in the United States for at least five years before the time fixed for the decennial meeting of this corporation.

SECTION 2. Delegates appointed by the Surgeon-General of the United States Army, the Surgeon-General of the United States Navy, and the Surgeon-General of the United States Marine-Hospital Service, and by the organizations not hereinbefore named which were admitted to representation in the convention of 1900, shall also be members of the corporation. Each body and each branch of the United States Government above mentioned shall be entitled to send three delegates to the meetings of this corporation. But no such delegates as are provided for in this article shall be members until their credentials shall have been examined and acted on as provided for by the by-laws. Delegates admitted as members at any decennial meeting shall continue to be members of the United States Pharmacopeial Convention until their successors shall have been appointed and admitted as delegates to the ensuing convention, and no longer.

Notification of the appointment of delegates, accompanied by the necessary certification of eligibility as required by Article II, Section 1, of the constitution above quoted, should be forwarded as soon as practicable to the secretary of the Board of Trustees.

HORATIO C. WOOD, M.D., Philadelphia, President.

MURRAY GALT MOTTER, M.D., Secretary of the Board of Trustees, 1841 Summit Place, Washington, D. C.

Miscellany

Care of Weak Infants and Children.—That something more than temporary relief or routine institutional care is necessary to improve the defective vitality of the sick and ailing infants of the poor and combat the influence of their wretched environment is quite evident from the indifferent results obtained from ordinary methods. Dr. Henry Dwight Chapin (*Charities and The Commons*, March 27, 1909) describes the methods adopted by the Speedwell Society in caring for this

class of children. The plan followed is the boarding-out system, and the results have been remarkably good considering that bottle-feeding has been employed exclusively. The children have been placed in carefully selected homes in a healthful location. A physician and a trained nurse have oversight of the cases. The foster-mother is instructed in the feeding and care of the baby and receives \$12 a month as compensation. Many take a great interest in the work and are very successful in nursing feeble infants back to health. Some tire of the work and others are dropped because of inefficiency, but the aim is to retain the same families in the work so far as practicable. Dr. Chapin says: "The boarding-out method, under careful supervision in the country, is the best plan yet devised to relieve and save these infants. The first series of 121 cases would nearly all have died under ordinary methods of handling and yet nearly two-thirds of them were saved. They were poorly nourished, from bad hygienic surroundings, with various degrees of digestive disturbances from faulty feeding on the bottle, and stationary or losing weight. A large proportion were restored to fair and even vigorous vitality, although kept on the bottle. The greater number of those from three to six months to one year was saved, in the first series nearly three-quarters being the proportion. These are brilliant results considering that artificial feeding and was still of necessity exclusively employed."

Medical Statistics for European Russia in 1906.—The *St. Petersburg, med. Wochenschrift*, March 27, published the vital statistics and public health reports just issued for 1906. The total mortality is stated to have been 29.2 per thousand inhabitants, the births 45.9 per thousand. There were 17,096 civilian physicians, 21,670 "feldshers," 11,032 midwives, 4,917 dentists, and 8,828 pharmacists, to a population of 106,114,589. The number of sick treated in hospitals during the year was 2,458,207, with a mortality of 5.2 per cent. There were 133 asylums for the insane, with 30,671 beds and 566 maternities or obstetric wards with 4,755 beds, and a record of 178,877 deliveries, with a mortality of 0.5 per cent. There are 20 Pasteur institutes, and 19,668 persons were given Pasteur treatment during the year, of whom 106 died. There were 178 medical societies and 44 hygienic laboratories. The total outlay for medical purposes was \$38,760,000 (76,000,000 rubles). Of this 7 per cent. was borne by the central and 50 per cent. by the provincial treasuries, 24 per cent. by the cities and 17 per cent. by private individuals and societies.

Appendicitis in Childhood.—In *Hygiea Festband*, Carlson discusses acute appendicitis during the first fifteen years of life on the basis of 47 original cases. He believes that appendicitis is more serious in children than in adults, because it more often passes over into diffuse peritonitis, because changes in the appendix more often are gangrenous and because the septic form is relatively common. The death rate in his cases has been much greater than in the case of adults, the probable reason being that the children have been seen too late for operation. Every child diagnosed to have appendicitis during the first 24 hours of sickness should be operated on before the end of that time. Operation is also indicated during the second 24 hours. During the third, fourth and fifth days operation should be made in every case that does not show definite and persistent signs of improvement; but it is to be remembered that during this later period the operation is technically much more difficult. After the first attack operation should be made in the free interval. The points on which Carlson lays special emphasis are the great danger of appendicitis in children and the necessity of early and correct diagnosis—not an easy task—so that operation may be done as early as possible during the first attack.

Experimental Researches on Some Ferments of the Bile.—G. Bonanno (*Arch. di farm. sper. e sc. aff.*, vii, 466) finds that the bile of the human being, of pigs, dogs, sheep and calves always possesses amyolytic and lipolytic properties, but no proteolytic action. The amyolytic action is stronger in the bile of herbivora than omnivora, while the lipolytic is about the same for all. Bile from either animal after the addition of pieces of duodenal mucosa shows no proteolytic action.

The amylolytic and lipolytic actions of bile are rapid. Heating to boiling destroys and filtering through a Chamberland filter weakens both the amylolytic and lipolytic actions. Bile collected from a permanent, complete fistula in a dog showed no change during hunger nor with variations in diet. The strength of the amylolytic and lipolytic ferments of the bile are about the same as those of the other body fluids, such as the blood, urine and amniotic fluid. Bonanno concludes that the bile is not to be considered as a digestive secretion in itself. Its function is to reinforce the enzymic digestive action of the pancreatic juice, as was advocated by Brimo.

Fatal Intoxication from Helminths.—The *Revista de Medicina Cirugia*, January 10, contains a report by J. T. Arteaga of Havana of a case which at first suggested yellow fever. The patient was a girl of 13; she succumbed in semicoma just as the microscope had revealed innumerable eggs of the ascaris in the diarrhetic stool. The diagnosis had previously wavered between yellow fever, hemorrhagic smallpox, pernicious jaundice or poisoning with potassium chlorate. Arteaga states that he has never encountered such severe hemolysis even in ankylostomiasis as in this case of fatal helminthiasis.

Association News

New Railroad Rates Granted

The Committee on Transportation announces that it has secured a special rate of \$26.00 from Chicago to Atlantic City and return. These are tourist tickets, on sale beginning June 1, with a thirty day limit, and are sold from the "gateways," as they are called. From other points east and also from western points to these gateways, the previously announced rate of a fare and a half will probably be adhered to. A more explicit announcement will be given next week. Details may also be obtained from the railroads.

The Pennsylvania Lines announce that if tickets are purchased reading via Washington, stop-over of ten days will be allowed on both going and return trip, at Washington, Baltimore, and Philadelphia, provided the tickets so read and are deposited with the agents at those points immediately on arrival.

The Pennsylvania Lines will run the American Medical Special, Chicago to Atlantic City, leaving Chicago at 3 p. m., Sunday, June 6, and arriving at Atlantic City early the next afternoon. The Chicago and Alton Railroad will run a special train from Kansas City and St. Louis to Chicago to connect with it.

NEW MEMBERS

List of new members of the American Medical Association for the month of April, 1909:

ALABAMA		DELAWARE	
Fielder, J. W., Benton.		Chipman, I. L., Wilmington.	
Greenwood, H. A., Greeley.		Kraemer, W. H., Wilmington.	
ARIZONA		DIST. OF COLUMBIA	
Palmer, E. P., Phoenix.		Butz, A. D., Washington.	
Pearson, J. M., Camp Verde.		Tobin, R. F., Washington.	
ARKANSAS		FLORIDA	
Chesnutt, J. H., Hot Springs.		Blackshear, E., High Springs.	
Reamy, Sanford, Hot Springs.		Ross, W. E., Jacksonville.	
Strachan, J. B., Hot Springs.			
CALIFORNIA		GEORGIA	
Friedberger, William, Stockton.		Donaldson, H. R., Atlanta.	
Hawkins, G. G., Middletown.		Kendrick, W. S., Atlanta.	
Hutchinson, Randall, Los Angeles.			
Lafontaine, Emma, C., San Francisco.		IDAHO	
Lund, G. J., Los Angeles.		Callaway, Mary A., Boise.	
Mallory, G. W., Santa Rosa.		Lyle, J. M., Peck.	
Reinstein, A. H., Veterans Home.		Shepard, J. H., Coeur d'Alene.	
Seabolt, Gertrude C., Los Angeles.		ILLINOIS	
Shortlidge, E. D., San Francisco.		Aird, A. J., Carterville.	
Weyer, G. A., San Francisco.		Atherton, C. C., Peoria.	
Worthington, Lois, Bakersfield.		Betts, A. J., Maec, Chicago.	
COLORADO		Blankmeyer, H. C., Springfield.	
Beers, Ida V., Denver.		Goodell, F. W., Effingham.	
Hereford, J. H., Cripple Creek.		Gould, C. W., Fairdale.	
CONNECTICUT		Holland, O. D., Streator.	
Harrison, J. F., Stamford.		Hockman, B. F., Sumner.	
Maloney, M. W., New Britain.		Holm, Henry, Waukegan.	
Lewis, G. F., Stratford.		Huestis, Arthur, Chicago.	
		Kalowsky, M. J., Waukegan.	
		Loomis, R. R., Burnside.	
		Lackner, E., Chicago.	

McQuaide, T. L., Pittwood.
Mullen, M. C., Chicago.
Myers, W. F., Coal Valley.
Newman, F. L., Chicago.
Poole, G. W., Danville.
Tehren, W. A., Aurora.
Urban, R. O., Evansville.
Winbigler, E. S., Alexis.
Winsor, R. F., Peoria.

INDIANA

Burkhardt, A. E., Tipton.
Busjahn, F. A., Logansport.
Green, J. W., Albion.
Lisman, W. A., Carlisle.
Luekett, E. R., Marengo.
Peare, R. C., Bellmore.
Redden, T. O., Jolietville.
Reed, L. D., Hope.
Scudder, J. A., Edwardsport.
Sherrer, H. E., Hammond.
Terflinger, F. W., Logansport.

IOWA

Alcorn, W. L., Gibson.
Barber, O. S., Kent.
Battin, J. F., New Providence.
Carpenter, W. E., Tama.
Cleaves, P. B., Cherokee.
Dean, W. W., Sioux City.
Farnham, A. J., Reinbeck.
Gethman, C. C., Eldora.
Hickman, S. R., Eddyville.
Howell, E. B., Tiffin.
Hoyt, L. F., Jefferson.
Lamb, Leslie, Hedrick.
Lambert, E. J., Ottumwa.
Lewis, W. H., Alden.
Liquist, A. L., Stanton.
Loiseau, T. E., Dubuque.
Lymington, T. J., Ackley.
McEvilly, W. J., Dysart.
Meyers, F. W., Dubuque.
Morton, W. M., Iowa Falls.
Mueller, J. G., Iowa City.
Noble, N. S., Des Moines.
Quire, F. E., Taintor.
Shine, M. L., Winthrop.
Snyder, C. A., Dubuque.
Tait, A. M., Blakesburg.
Thomson, T. L., Toledo.
Wellenweber, E. G., Keokuk.

KANSAS

Anderson, A. G., Wichita.
Dillingham, W. R., Morland.
Graves, H. W., Gypsum City.
Kirby, J. C., Cedar Vale.
Townsend, A. M., Barnard.
Tretbar, F. W., Hudson.
Woodin, J. G., Iola.
Wiley, F. M., Fredonia.
Yereman, O. H., Kansas City.

KENTUCKY

Anderson, J. L., Manchester.
Brand, L., Maysville.
Clark, G. F., Winchester.
Craddock, J. W., Bonnieville.
English, C. C., Louisville.
Fugate, I. T., Middlesboro.
Gambille, J. C., Paintsville.
Hoover, J. C., Owensboro.
Hord, W. H., Maysville.
Hornsby, H. C., Burning Spgs.
Horton, W. A., Grayson.
Humphrey, B. F., Sturgis.
Hunt, J. D., Lexington.
Kendall, J. L., Louisville.
Knox, J. F., Bowen.
Manning, I. S., Manchester.
McKee, E. M., Lexington.
Nunn, W. H., Henshaw.
O'Roark, G. B., Grayson.
Phelps, R. M., Versailles.
Proctor, W. A., Auburn.
Ricketts, C. T., Bright Shade.
Smith, L. O., Williamsburg.
Stovall, J. Q., Grayson.
Taylor, T. J., Richmond.
Webb, G. P., Burning Spgs.
Wood, R. W., Danville.
Wynns, J. G., Sturgis.

LOUISIANA

Sims, E. K., Donaldsonville.

MAINE

Austin, L. K., Waterville.

MARYLAND

Bay, R. P., Baltimore.
Carmine, W. M., Ridgely.
Deming, H. V., Cumberland.
Keller, L. H., Hagerstown.
Maegill, J. C., Catonsville.
McLane, W. O., Frostburg.
Ross, J. A., Trappe.
Smart, L. G., Lutherville.
White, E. W., Poolesville.

MASSACHUSETTS

Cleaves, H. T., Harding.
Cutter, Ephraim, West Falmouth.

Dwight, E. W., Boston.
Farr, I. H., Holyoke.
Frame, Joseph, Rockland.
Giguere, A. J., North Adams.
Hamilton, A. J. A., South Boston.
Holden, C. S., Attleboro.
Keenan, H. J., South Boston.
Le Gro, L. B., Haverhill.
MacCallum, W. P., Boston.
Mixer, C. G., Boston.
Paine, N. E., West Newton.
Raymond, K. P., Wellesley.
Richardson, C. A. C., Somerville.
Richardson, E. P., Boston.
Smalley, F. L., Reading.
Stevens, H. P., Cambridge.
Ward, E. S., N. Attleboro.
White, Levi, Worcester.
Whitney, E. M., New Bedford.

MICHIGAN

Fuerbringer, G. H., Saginaw.
Hewkey, J. W., Alanson.
Howell, A. J., Deford.
Lang, F. W., Marine City.
Long, C. E., Elk Rapids.
McLean, C. H., Caro.
McRae, D. H., Beal City.
Pease, J. F., Big Rapids.
Probert, C. C., Roscommon.
Rand, W. H., Charlotte.
Staley, W. A., Fairgrove.
Stiekley, A. E., Mesick.
Willoughby, L. L., Mancelona.
Woodbury, W. E., Ionia.

MINNESOTA

Allen, H. W., Minneapolis.
Altow, H. O., Brainerd.
Benepe, L. M., St. Paul.
Brede, W. G., Minneapolis.
Daugherty, L. E., Eveleth.
Franchina, F., St. Paul.
Hagen, O. J., Moorhead.
Hand, W. R., Wendell.
Holcomb, O. W., St. Paul.
Mellenthin, M. A., Jamesville.
O'Hair, Patrick, Waverly.
Rexford, L. A., Minneapolis.
Roan, C. M. J., Minneapolis.
Rome, R. R., Minneapolis.

MISSISSIPPI

Anderson, H. M., Tupelo.
Bell, C. G., Canton.
Darden, G. T., Blanton.
Givhan, J. E., Pontotoc.
Marshall, C. J., Lambert.
McKinley, W. R., Columbus.
Orendorf, B. T., Rolling Fork.
Perkins, F. P., Batesville.
Tucker, C. H., Philipp.

MISSOURI

Austin, C. S., Carrollton.
Bend, H. W., St. Louis.
Brewster, R. B., Kansas City.
Crawford, R. O., Eldorado Spgs.
Crump, Archilens, Batesville.
Dailey, F. B., Keota.
De Long, S. W., Blythedale.
Erdhaur, H. B., St. Louis.
Gallagher, J. C., Valley Park.
Griffin, Fred, Mexico.
Harris, J. A., Mt. Vernon.
Harrison, Wm., Marshall.
Hatton, O. F., Sedalia.
Heuske, A. C., St. Louis.
Hull, A. G., Kansas City.
Humphreys, T. H., Kismet Mills.
Humphrey, J. H., St. Louis.
Lapp, J. G., Kansas City.
Long, J. M., St. Louis.
Love, W. S., Bertrand.
Lytle, J. A., Godson.
Martin, S. P., East Prairie.
Mayfield, L. S., Illinois.
McCoy, W. B., Bronaugh.
McCully, James, Dixon.
Nixon, J. H., Springfield.
O'Brien, L. F., Webster Groves.
Prentice, H. S., Pleasant Hill.
Ragsdale, T. J., Lees Summit.
Remme, C. T., St. Louis.
Rice, J. M., Columbus.
Royster, G. D., St. Louis.
Sandperl, Harry, St. Louis.
Scott, E. A., St. Louis.
Seba, J. D., Bland.
Spitze, E. C., St. Louis.
Staats, V. C., St. Louis.
Standard, D. E., Springfield.
Strode, R. C., Mexico.
Taylor, H. L., New Bloomfield.
Vandeventer, D. O., Garrison.
Willis, J. B., Farley.
Witter, W. L. M., Milan.
Woods, R. J., Smithville.

MONTANA

Attix, F. F., Lewistown.
Jordan, Arthur, Twin Bridges.

Lauphler, V. A., Butte.
Rightenour, G. W., Sheridan.
Rindquist, E. M., Missoula.
Shea, W. E., Missoula.
Smetter, M. C., Butte.
Smith, H. F., Pony.

NEBRASKA

Greenman, J. W., Hastings.
McCabe, F. H., Arapahoe.
Moore, M. S., Gothenburg.
Pheasant, L. R., Pierce.
Pheland, L., Grand Island.
Robinson, Amy, Hastings.
Simanek, G. F., Omaha.
Taylor, J. S., Steele City.
Wengert, H. C., Overton.
Wiederanders, E. F., Eustis.
Willis, J. M., Marsland.
Woodard, J. M., Aurora.

NEVADA

Krebs, E. T., Carson City.
Maclean, Donald, Reno.

NEW HAMPSHIRE

Bailey, G. S., Hillsboro.
Barker, R. H., Chester.
Beattie, W. J., Littleton.
Davis, W. S., Sanbornville.
Stearns, H. C., Concord.

NEW JERSEY

Baldwin, W. E., Newark.
Bowman, J. F., Irvington.
Boysen, P., Riverton.
De Grofft, E. E., Woodstown.
Finke, G. W., Hackensack.
Kain, W. W., Camden.
Kaufhold, Frank, Newark.
Kelm, W. F., Newark.
Mareus, M. D., Atlantic City.
Meinzer, M. S., Perth Amboy.
Underwood, J. H., Woodbury.
Wainwright, J. M. B., Jersey City.

NEW MEXICO

Amble, C. J., Manzano.
Burton, S. L., Albuquerque.
McCreary, Marellus, Magdalena.
Ottoson, C. D., Willard.
Russell, J. G., Tucumcari.
Sellers, H. W., Knowles.
Triplett, T. A., Koehler.

NEW YORK

Burke, Joseph, Buffalo.
Clark, T. E., Brooklyn.
Corwin, A. S., Rye.
Cutler, C. W., New York City.
Duchschere, C. C., Buffalo.
Frankel, Meyer, New York City.
Grant, J. P., New York City.
Grushlan, Israel, New York City.
Guenther, T. C., Brooklyn.
Johnston, J. C., New York City.
Kindred, J. J., New York City.
King, L. W., Lowville.
Lyons, J. J., Brooklyn.
Macpherson, Duncan, New York City.
Macumber, J. L., Brooklyn.
Matheson, A. R., Brooklyn.
McCombs, G. M., Hempstead.
Nelson, J. R., Kingston.
Preston, A. W., Middletown.
Radin, M. L., New York City.
Rex, W. F., Brooklyn.
Riedel, A. H., New York City.
Rushman, J. C., Brooklyn.
Schirek, F. F., Nimeola.
Shaut, F. C., Addison.
Smart, I. T., New York City.
Tanner, E. K., Brooklyn.
Whitbeck, B. H., New York City.
White, Davenport, New York City.

NORTH CAROLINA

Boone, W. H., Morrisville.
Brown, Zeno, Greenville.
Faison, I. W., Charlotte.
Lawrence, C. S., Mt. Airy.
Salley, E. M., Saluda.
Schonwald, J. T., Wilmington.
Summers, C. L., Winston-Salem.

NORTH DAKOTA

Hagan, E. J., Williston.
Heimark, A. J., Finley.
McCannel, A. D., Minot.
McLean, Neil, Kenmare.
Moeller, T. O. E., Minot.

OHIO

Berry, J. C., Alledonia.
Bookwalter, W. S., Miamishburg.
Brodberger, W. L., Cincinnati.
Brush, E. C., Zanesville.
Burgess, N. A., Rock Creek.
Foertmeyer, A. W., Cincinnati.
Gantt, S. O., Centerburg.
Hawley, E. N., Norwalk.

Heyn, D. S., Cincinnati.
Hill, E. W., Cleveland.
Jolley, J. W., Morral.
Junkerman, G. S., Cincinnati.
Kennedy, S. V., Washingtonville.
King, Clarence, Cincinnati.
Kunz, Frank E., Greenville.
Lapsley, Inez, Cincinnati.
Lemley, E. P., Vaughnsville.
McCreight, G. C., New Concord.
McGavren, G. W., Van Wert.
Metzger, Jeremiah, Toledo.
Monaghan, E. P., Cleveland.
Nelles, A. B., Columbus.
Pfeiffer, Arthur, Cincinnati.
Ramsey, W. C., Hopedale.
Schuitzbach, J. C., Strasburg.
Stoeltzing, C. A., Cleveland.
Thompson, C. A., Raymond.
Thompson, F. E., Geneva.
Tweedie, A. M., Cleveland.
Weiser, W. J., Marion.
Wills, L. E., Omega.
Yoder, H. M., Smithville.

OKLAHOMA

Bailey, F. M., Carnegie.
Bomberger, C. C., Paden.
Chumbley, C. A., Rocky.
Dunn, R., Davis.
Feild, Julian, Enid.
Gill, W. W., Gracemont.
Haas, Karl, Harrah.
Jackson, T. J., Marsden.
Johnson, G. L., Byars.
Lancaster, L. T., Avar.
McQuaid, J. M., Cloud Chief.
Moore, L. F., Jackson.
Moss, B. H., Willow.
Mullins, G. C., Kiowa.
Neighbors, G. C., Broken Arrow.
Penney, T. A., Tulsa.
Riggin, C. E., Monroe.
Scarborough, J. W., Russell.
Shinn, T. J., Wagoner.
Shull, R. J., Hugo.
Stiles, G. S., Morse.
Tedrowe, C. W., Elk City.
Walker, J. A., Fleetwood.
Weiser, D. D., Alden.
Weller, R. E., Pawnee.
Westermeler, G. W., Anadarko.

OREGON

Babbitt, O. M., Portland.
Beaumont, J. F., Portland.
Brooke, F. W., Portland.
Ellis, R. H., Portland.
Fessler, Theo., Portland.
Koehler, G. F., Portland.
Saylor, A. L., Sherwood.

PENNSYLVANIA

Anders, W. Z., Trappe.
Beattie, John, Lebanon.
Bell, D. M., Claysville.
Berge, W. H., Avoca.
Berryhill, W. G., South Sharon.
Boale, J. A., Vandergrift Heights.
Brallier, S. A. E., Conemaugh.
Brecker, N. F., Philadelphia.
Bunce, W. M., Philadelphia.
Currie, C. A., Philadelphia.
Dibert, C. C., Buffalo Mills.
Dintenfass, Henry, Philadelphia.
Dolson, F. E., Philadelphia.
Dunmore, C. A., Philadelphia.
Field, B. R., Easton.
Fisher, J. V., Philadelphia.
Fox, G. T., Bath.
Greenewalt, F. L., Philadelphia.
Hanna, G. C., Philadelphia.
Koons, P. R., Mechanicsburg.
Liechtenwalner, Sarah M., Philadelphia.
McAvoy, J. F., Catasauqua.
Neel, H. A. P., Philadelphia.
Norris, E. P., New Castle.
Powell, W. E., Philadelphia.
Price, C. E., Philadelphia.
Price, H. T., Pittsburg.
Raby, M. R., Philadelphia.
Reinoehl, D. V., Erie.
Ritter, F. W., Tannersville.
Roberts, M. A., Philadelphia.
Spatz, G. E., Hampton.
Swindells, W. C., Philadelphia.
Waage, F. O., Philadelphia.
Weaver, H. F., Easton.
Weaver, J. M., Allentown.
Weddell, E. P., Scottdale.
Wesley, W. H., Pittsburg.
Wright, G. J., Pittsburg.
Yaeger, C. G., Philadelphia.

RHODE ISLAND

Flynn, H. S., Providence.
Garvin, L. F. C., Providence.
Hopkins, H. W., Warren.
Payne, F. I., Westerly.

SOUTH CAROLINA

Alston, Rowland, Charleston.
Fennell, W. W., Rockhill.

Nardin, W. H., Anderson.
Orr, J. L., Greenville.
Owens, L. B., Columbia.
Smith, R. D., Greenville.
Young, J. L., Clinton.

SOUTH DAKOTA

Holmes, C. F., Hecla.
Homan, C. A., Emery.
Miller, J. L., Kennebec.
Minty, F. W., Rapid City.
Schroyer, C. T., Chester.

TENNESSEE

Anderson, W. S., Memphis.
Blanton, M. A., Union City.
Boyatt, F. M., Oneida.
Brew, James, Jr., Nashville.
Clifton, Joe, Hickory Valley.
Delancy, J. A., Bristol.
Geisler, F. O., Isabella.
Jones, T. ap R., Knoxville.
Morrison, J. C., Clarksville.
Paschall, G. C., Arrington.
Pickens, D. R., Nashville.
Quinn, E. A., Cleveland.
Sells, G. J., Johnson City.
Smith, T. L., Morristown.
Stevens, J. W., Nashville.
Walden, V. A., Fountain Head.
Watkins, E. D., Memphis.
West, E. T., Johnson City.

TEXAS

Braden, C. F., El Paso.
Nash, A. W., Dallas.
Robinson, G. J., Houston Heights.
Warren, W. O., Pecan Gap.
Wilhite, J. T., Austin.

UTAH

Bridge, T. B., Logan City.
Cannon, W. T., Salt Lake City.
Gose, I. T., Eureka.
Snow, Clarence, Salt Lake City.

VERMONT

Duffy, P. S., Barre.
Greene, H. P., Brattleboro.
McGinity, J. T., Ludlow.

VIRGINIA

Brown, Benj., Nokesville.
Curtis, H. W., Denbigh.
Gill, W. W., Richmond.
Hillsman, J. A., Richmond.
Hurst, J. A., Pennington Gap.
Jones, J. F., Richmond.
Lake, N. P., Rectortown.
Lipscomb, P. D., Richmond.
Parrish, C. T., Portsmouth.
Sherrill, Z. V., Marion.
Tompkins, McCaw, Richmond.
Upshur, F. W., Richmond.
Woodson, G. C., Richmond.

WASHINGTON

Bridge, A. W., Eatonville.
Carr, F. L., Montisano.
Grove, C. E., Spokane.
Johnson, A. E., Spokane.
Nagler, F. W., North Yakima.
Parsons, I. W., Hartford.

WEST VIRGINIA

Capito, G. B., Charleston.
Hicks, C. F., Welch.
Nutter, R. B., Enterprise.
Preston, C. B., Burnwell.
Truschel, C. M., Wheeling.

WISCONSIN

Hoffman, Elmer, Gotham.
Hough, A. G., Morrisville.
Lowenhart, A. S., Madison.
Minahan, R. E., Green Bay.
Quick, E. W., Appleton.
Schneider, F., New London.
Schwarz, S. G., Granton.
Tupper, E. E., Eau Claire.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

BOOKS ON MEDICINE FROM THE HISTORICAL POINT OF VIEW

To the Editor:—Please recommend a list of books on the history of medicine for a student's leisure reading. I have read Mumford's "Narrative of Medicine in America."

RECENT GRADUATE.

ANSWER.—The following works would form an excellent introduction to the history of medicine. We name those which are mainly biographic because this department of history is the most interesting; it is persons rather than things that hold our attention.

Richardson, Benjamin Ward: "Disciples of Esculapius," 2 volumes. This contains an excellent series of lives of men who did original work in medicine.

Mumford, James G.: "Surgical Memoirs," Moffatt, Yard & Co., New York, \$2.50. An American volume quite equal to Richardson's in interest and information.

Osler, William: "An Alabama Student," Oxford University Press (American office), New York, \$2.50. This is a very interesting series of biographic papers on American physicians of the last century.

Walsh, James J.: "Makers of Modern Medicine," Fordham University Press, New York (about \$2.50). This traces the development of modern medicine from Morgagni to Pasteur.

"Masters of Medicine," Longmans, Green & Co., New York, \$2 net. Sketches in separate volumes of Hunter, Harvey, Jenner, Simpson, Stokes, Claude Bernard, Helmholtz, Brodie, Sydenham and Vesalins.

Camac: "Epoch-Making Contributions to Medicine, Surgery and the Allied Sciences," W. B. Saunders Co., Philadelphia. One of the most important contributions to the history of medicine; reprints of the papers that have made the ground-breaking progress in modern medicine, together with short sketches of the authors.

Packard, Francis R.: "History of Medicine in the United States, down to 1808," J. B. Lippincott Co., Philadelphia, net, \$4. The early history of medicine in America is much more interesting than is usually thought, and this work of Dr. Packard's is both exhaustive and scholarly.

Walsh, James J.: "History of the Medical Society of the State of New York." Chapters in this book show how much more our grandfathers knew of medicine than we are likely to think. Puschmann: "Handbook of the History of Medicine," 3 volumes (German). This standard work has revolutionized the history

of medicine by showing what fine work was accomplished in some of the old medical schools and especially by the old-time surgeons (thirteenth and fourteenth centuries).

Alibutt, T. C.: "The Historical Relations of Medicine and Surgery," an address at the International Congress of Arts and Sciences, St. Louis, 1904. *American Medicine*, Oct. 15, 1904. Also republished in pamphlet form.

Steven, J. L.: "Morgagni to Virchow: An Epoch in the History of Medicine," *Lancet*, Nov. 4, 1905.

In addition to those given, the following books are well worth reading:

Foster, Michael: "History of Physiology," Macmillan Co., New York, net, \$2.25. Most fascinating and instructive; should be the first one thought of.

Moore, Norman: "Medicine in the British Isles," Oxford Medical Publications, 10s 6d.

Allbutt, T. C.: "Science and Medieval Thought," Macmillan Co., New York, net, \$1.50.

Paget, S.: "Memoirs and Lectures of Sir James Paget," Longmans, Greene & Co., New York, net, \$2.50.

Sprigge, S. Squire: "Life and Times of Thomas Wakley."

Osler: *Æquanimitas*, and other Essays," P. Blakiston's Son & Co., Philadelphia, \$2.25.

Payne, J. F.: "English Medicine in Anglo-Saxon Times," Oxford Medical Publications, \$2.90.

McKay, Stuart: "Ancient Gynecology," William Wood & Co., New York, \$3.

Milne: "Surgical Instruments in Greek and Roman Times," Clarendon Press, \$4.75.

Cordell, E. S.: "Medical Annuals of Maryland."

The three following works are text-books of the history of medicine:

Bass: "Outlines of History of Medicine," G. P. Putnam's Sons, New York, \$6.

Park, Roswell: "Epitome of History of Medicine," F. A. Davis Co., Philadelphia, \$2.

Davis, N. S., Jr.: "History of Medicine," Cleveland Press, Chicago, \$2.

"Biographical Cyclopaedia of Medical History," edited by C. Wells Moulton, with a history of medicine from its origin to the nineteenth century, by J. Bostock, F.R.S., Saalfield Publishing Co., Akron, Ohio, \$2.50. A useful reference book, as it contains brief biographies of a large number of prominent members of the healing art in all ages.

RECENT HISTORY OF SURGERY

To the Editor:—Please refer me to any publications containing information about recent advances in surgery and about the surgeons who have made important contributions to the subject in the past fifty years.
H. N. C.

ANSWER.—The following references may be found of interest on this subject:

Lister, Lord: Points in the History of Antiseptic Surgery, *Lancet*, June 27, 1908.

Tinker, M. B.: America's Contributions to Surgery, *Indiana Med. Jour.*, November, 1902.

Hupp, F. L.: Achievements of Modern Surgery, *New York Med. Jour.*, Oct. 17, 1908.

Inge, J. M.: Developments of Modern Surgery, *Texas State Jour. Med.*, January, 1907.

Vander Veer, A.: Four decades of American Surgery, *Virginia Med. Semi-Monthly*, Dec. 27, 1907.

Niles, M. D.: Twentieth Century Surgical Problems, *THE JOURNAL A. M. A.*, April 14, 1906, xlv, 1071.

Bartlett, Willard: The Present Scope of Stomach Surgery, *St. Louis Med. Rev.*, March 23, 1907.

Oliver, J. H.: The Progress of Surgery in the United States, *Indiana Med. Jour.*, April, 1907.

Abbe, Robert: The Problems of Surgery, *Alabama Med. Jour.*, May, 1905.

Park, Roswell: Progress in Surgery in the Nineteenth Century, *New York Jour. Med.*, March and April, 1908.

Tinker, M.: The First Nephrectomy and the First Cholecystotomy, with a Sketch of the Lives of Dr. Erastus B. Wolcott and John S. Bobbs, *Johns Hopkins Hosp. Bull.*, August, 1901.

Kelly, Howard A.: Early History of Appendicitis in Great Britain, *Glasgow Med. Jour.*, August, 1903.

Ballance, C. A.: Then and Now in Surgery, *Lancet*, Oct. 20, 1906.

Ricketts, B. M.: Appendicitis, *Cincinnati Lancet-Clinic*, May 31, 1902.

Nutt, J. J.: Henry G. Davis: A Review of Some of His Work, *Medical Record*, Aug. 19, 1905.

Clark, Pierce: Biographical Sketch of Michaelis, the Pioneer Worker on Nerve Degeneration, *Medical Record*, March 17, 1906.

Wallace, C. H.: Triumphs of American Surgery, *Jour. Missouri Med. Assn.*, July, 1906.

Lowder, W. L.: Ephraim McDowell, *Canada Lancet*, May, 1903. Recent work is well reviewed in the *Interstate Medical Journal* for January, 1905, 1906 and 1907, by Willard Bartlett, and for January, 1908, by M. B. Clopton.

TREATMENT OF TYPHOID

To the Editor:—I concur in nearly all of the opinions expressed by Dr. J. P. Roark (*THE JOURNAL*, April 3, 1909, p. 1089). I wish to call attention, however, to a point which is too frequently overlooked, namely that the *Bacillus typhosus* can not thrive in a medium that is acid; but does thrive well in a medium that is neutral or slightly alkaline, such as fresh milk. If we do not wish to give the bacilli a favorable medium in which to multiply we shall give the patient food that is liquid and acid in reaction. The buttermilk that Dr. Roark mentions is excellent provided that enough lactic acid has developed in it to prevent or inhibit the multiplication of the germs of typhoid fever; grape juice, because of its acidity, is an excellent food for typhoid fever patients, and any sour fruit sauce is unfavorable to germ life. I am convinced that in buttermilk and fruit juices we have the ideal food for typhoid fever patients.
D. W. REED, Greeley, Colo.

COMMENT.—The use of acids and fruit juices in typhoid is undoubtedly beneficial, but it is doubtful whether the reaction of the intestinal contents can be made sufficiently acid to inhibit the growth of typhoid bacilli. The typhoid bacilli grow in slightly acid media. Further, late investigations show that typhoid fever is a bacteriemia and the bacteria in the blood can not well be influenced by acids given by the mouth, since an acid reaction of the blood appears to be incompatible with life.

SEROTHERAPY OF TYPHOID

To the Editor:—Please give me information regarding an antitoxin or vaccine for the treatment of typhoid fever.

J. W. NOLAN, M.D., Chittababie, Korea.

ANSWER.—The best known antitoxic serum is that of Chantemesse, which is prepared by injecting horses with the dead bacilli of typhoid fever. Chantemesse and others report great success with it, but it has not come into extensive use. V. C. Vaughan, of Ann Arbor, has also produced a residue from the bodies of the typhoid bacilli which he has employed in the treatment of typhoid fever. This agent seems to make the typhoid process longer, but not so severe. It is not probable that an antitoxin can be obtained for typhoid similar to the autitoxin of diphtheria, but the serums may do some good by stimulating the defensive activities of the body cells. The following articles may be referred to:

Brunon and Josias: Serum Treatment of Typhoid Fever, *Bull. de l'Acad. de Méd.*, Nos. 9-10, 1906; abstracted in *THE JOURNAL*, April 28, 1909, p. 1322.

Richardson, M. W.: Specific Treatment of Typhoid, *Boston Medical and Surgical Journal*, Oct. 3, 1907; abstracted in *THE JOURNAL*, Oct. 19, 1907, p. 1400.

Chantemesse: Serum Treatment of Typhoid, *Med. Press and Circular*, Dec. 25, 1907; abstracted in *THE JOURNAL*, Jan. 25, 1908, p. 319.

Vaughan, V. C.: Specific Treatment of Typhoid, *Am. Jour. of Med. Sci.*, September, 1908; abstracted in *THE JOURNAL*, Oct. 31, 1908, p. 1550.

Watters, W. H., and Eaton, C. A.: Vaccine Treatment of Typhoid, *Medical Record*, Jan. 16, 1909; also Vaccine in Typhoid, *Boston Medical and Surgical Journal*, April 22, 1909. Abstracted in *THE JOURNAL*, May 8, 1909.

TO EXPEL BLOOD FROM BODY IN OBSTETRIC WORK

To the Editor:—In your issue of April 17, 1909, page 1303, abstract 116, you advise following Momburg's directions for expelling the blood from lower half of body in obstetric work. Will you please advise where such directions may be found?

GEO. T. CLARK.

ANSWER.—Momburg's articles on the subject were summarized in *THE JOURNAL* July 11, 1908, page 177, and Nov. 14, page 1742.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ended May 1, 1909:

Brooks, W. H., capt., granted an extension of four months to his sick leave of absence.

Carter, W. F., Gibson, R. J., and Johnson, R. W., majors, ordered to report on May 20 at Washington, D. C., for examination for promotion.

Chamberlain, W. P., Page, Henry, Shockley, M. A. W., majors, relieved from duty at present stations in time to sail August 5 from San Francisco for Philippine service.

Krebs, L. L., capt., relieved from duty on transport *Thomas* and from treatment at San Francisco, and ordered to Fort Bayard, N. M., for duty at the Army General Hospital.

Dale, F. A., Roberts, W. M., Farr, C. W., Shook, J. R., Vose, W. E., captains, ordered to report at Washington, D. C., for examination for promotion.

Pinkston, O. W., 1st lieutenant, granted leave of absence for ten days.

Rafferty, Ogden, major, granted sick leave of absence for two months.

Rutherford, H. H., Ruffner, E. L., Whitmore, E. R., Brownlee, C. Y., captains, ordered to report at Manila, P. I., for examination for promotion.

Woodbury, F. T., capt., ordered to report at San Francisco for examination for promotion.

Palmer, F. W., capt., granted leave of absence for two months.

Richard, Chas., lieutenant-col., relieved from duty at Fort Jay, N. Y., in time to proceed to San Francisco and sail August 5 for Philippine service.

Lambie, J. S., Jr., 1st lieutenant, relieved from duty at Fort Monroe, Va., in time to proceed to San Francisco and sail July 5 for Philippine service.

Bowman, M. D., M. R. C., ordered from Fort Baker, Cal., to the Depot of Recruits and Casuals, Angel Island, Cal., for duty.

Enders, W. J., M. R. C., granted sick leave of absence for twenty-six days.

Haley, J. C., M. R. C., relieved from duty at Fort Porter, N. Y., and ordered to Fort Jay, N. Y., for duty.

McCornack, C. C., M. R. C., ordered to active duty and assigned to Vancouver Barracks, Wash., for duty.

Kress, C. C., M. R. C., granted an extension of his leave of absence to June 1.

Wheate, J. M., M. R. C., relieved from temporary duty at Fort Snelling, Minn., and ordered to return to his proper station, Fort Lincoln, N. D.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended May 1, 1909:

Trotter, C. E., and Bass, J. A., acting asst.-surgeons, appointed acting assistant surgeons from April 19, 1909.

Bucher, W. H., surgeon, ordered to treatment at the Naval Hospital, Las Animas, Colo.

Ohnesorg, K., surgeon, ordered to the *Louisiana*.

Breck, F. W., pharmacist, ordered to the navy-yard, Norfolk, Va.

Smith, W. B., P. A. surgeon, detached from the *Helena* and ordered to the *Denver*.

Blackwell, E. M., surgeon, detached from the Naval Academy and ordered to the *Chicago*.

McDonell, W. N., P. A. surgeon, detached from the Naval Academy and ordered to the *Hartford*.

Sutton, D. G., asst.-surgeon, detached from the Naval Academy and ordered to the *Tonopah*.

Clifton, C. L., asst.-surgeon, detached from duty at the Naval Hospital, Philadelphia, and ordered to the Naval Recruiting Station, Cincinnati.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended April 28, 1909:

Wasdin, Eugene, surgeon, granted 1 month's leave of absence from April 22, 1909, on account of sickness.

Wertenbaker, C. P., surgeon, detailed to represent the service at the annual meeting of the Virginia State Conference of Charities and Corrections, to be held at Lynchburg, Va., May 19, 1909.

Trask, J. W., P. A. surgeon, granted 2 days' leave of absence from April 26, 1909.

Hotchkiss, Samuel C., asst.-surgeon, directed to proceed to San Francisco and report to the medical officer in command of the Marine Hospital for duty and assignment to quarters.

Bailey, C. A., acting asst.-surgeon, directed to proceed from St. John, N. B., to Quebec, Canada, for duty.

Bullard, J. T., acting asst.-surgeon, granted 9 days' leave of absence from March 31, 1909, without pay.

Carter, P. I., acting asst.-surgeon, granted 20 days' leave of absence from April 29, 1909.

Duffy, Francis, acting asst.-surgeon, granted 3 days' leave of absence from April 28, 1909.

Gale, R. G., acting asst.-surgeon, granted 30 days' extension of annual leave on account of sickness from Jan. 16, 1909.

Gale, R. G., acting asst.-surgeon, granted 30 days' leave of absence from Feb. 16, 1909, and 9 days' leave of absence, without pay, from March 24, 1909.

Gustetter, A. L., acting asst.-surgeon, granted 1 day's leave of absence, April 3, 1909.

Terry, M. C., acting asst.-surgeon, granted 7 days' leave of absence from April 11, 1909, under paragraph 210, Service Regulations.

Wetmore, W. O., acting asst.-surgeon, granted 2 days' extension of annual leave on account of sickness from April 17, 1909.

Wetmore, W. O., acting asst.-surgeon, granted 12 days' leave of absence from April 23, 1909.

Wherry, Wm. B., acting asst.-surgeon, granted 3 days' leave of absence from April 21, 1909, under Paragraph 210, Service Regulations.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ended April 30, 1909:

SMALLPOX—UNITED STATES

Alabama: Dallas County, Feb. 20-April 12, 12 cases; Selma, Feb. 28-April 12, 26 cases.

California: San Francisco, April 3-10, 1 case.

District of Columbia: Washington, April 10-17, 2 cases.

Georgia: Macon, April 11-18, 4 cases.

Illinois: Danville, April 4-18, 13 cases; Galesburg, April 10-17, 2 cases; Springfield, April 2-16, 6 cases.

Indiana: Fort Wayne, April 6-17, 2 cases; Indianapolis, April 11-18, 1 case; LaFayette April 12-19, 1 case.

Iowa: Davenport, April 11-18, 1 case.

Kansas: Kansas City, April 10-17, 15 cases; Wichita, April 3-10, 2 cases.

Kentucky: Newport, March 30-April 10, 14 cases.

Louisiana: New Orleans, April 3-17, 7 cases, 4 imported.

Massachusetts: Taunton, 1 case erroneously reported by health officer, January 9.

Michigan: Saginaw, April 3-10, 6 cases.

Minnesota: Duluth, April 8-15, 3 cases; Minneapolis, March 27-April 10, 6 cases.

Missouri: St. Louis, April 3-17, 3 cases.

Montana: Butte, March 23-30, 1 case; April 6-13, 1 case, imported.

New Jersey: Camden, April 10-17, 4 cases; Haddonfield, March 26-27, 2 cases; Plainfield, April 3-10, 2 cases.

Ohio: Ashtabula, April 10-17, 3 cases; Cincinnati, April 9-16, 7 cases; Cleveland, 1 case.

Tennessee: Knoxville, April 10-17, 2 cases; Nashville, 2 cases.

Texas: Galveston, April 2-16, 6 cases; San Antonio, April 10-17, 5 cases.

Washington: Spokane, March 27-April 10, 6 cases.

Wisconsin: Appleton, April 12-19, 1 case; La Crosse, April 10-17, 3 cases; Milwaukee, April 3-17, 25 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, Feb. 21-March 6, 6 cases, 1 death.

SMALLPOX—FOREIGN

Algeria: Bona, March 1-31, 18 cases, 12 deaths.

Brazil: Bahia, Feb. 27-March 13, 26 cases, 5 deaths; Rio de Janeiro, March 7-14, 21 cases, 9 deaths.

Canada: Halifax, April 3-10, 1 case.

China: Amoy, March 6-13, present; Hongkong, Feb. 27-March 6, 3 cases, 1 death.

Egypt: Cairo, Feb. 25-March 18, 77 cases, 28 deaths; Suez, Feb. 4-25, 27 cases, 2 deaths.

France: Nantes, March 14-21, 1 case; Paris, March 27-April 3, 5 cases, 1 death.

India: Bombay, March 6-13, 15 deaths; Calcutta, 264 deaths; Madras, March 19, 1 death; Rangoon, March 6-13, 11 deaths.

Indo-China: Saigon, Feb. 27-March 13, 15 cases, 6 deaths.

Italy: General, March 27-April 4, 56 cases; Naples, 15 cases, 2 deaths.

Java: Batavia, March 6-13, 3 cases.

Manchuria: Dalny, March 6-13, 1 case.

Mexico: Acapulco, Feb. 7-14, 3 cases; Monterey, April 4-11, 7 deaths.

Portugal: Lisbon, April 3-10, 2 cases.

Russia: Moscow, March 20-27, 35 cases, 11 deaths; Odessa, 4 cases, 1 death; St. Petersburg, March 13-20, 17 cases, 2 deaths.

Spain: Barcelona, March 23-April 5, 4 deaths; Madrid, March 1-31, 28 deaths; Valencia, March 26-April —, 7 deaths.

Straits Settlements: Singapore, Feb. 27-March 6, 1 death.

Turkey: Bassorah, May 20-27, present.

YELLOW FEVER

Barbados: April 3-10, 3 cases.

Ecuador: Guayaquil, March 13-27, 28 deaths.

CHOLERA

India: Bombay, March 16-23, 1 death; Calcutta, March 6-13, 98 deaths; Madras, March 13-19, 1 death; Rangoon, March 6-13, 6 deaths.

Russia: St. Petersburg, April 1-6, 11 cases 4 deaths.

PLAGUE

Azores: Fayal, April 1, 1 case.

Brazil: Bahia, Feb. 27-March 6, 2 cases, Rio de Janeiro, March 7-14, 4 cases.

China: Amoy, March 6-13, present; Chang Poo, March 13, epidemic; Chin Chow, present; Hongkong, Feb. 27-March 6, 3 cases, 2 deaths.

Ecuador: Guayaquil, March 13-27, 15 deaths.

Great Britain: Elstree (Plague Laboratory), Feb. 1-4, 1 case, 1 death.

India: Bombay, March 16-23, 436 deaths; Calcutta, March 6-13, 85 deaths.

Indo-China: Saigon, Feb. 27-March 13, 3 deaths.

Russia: Libau, March 28-April 5, 1 case.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Medical Legislation in Various States

FLORIDA

A bill has been introduced into the state legislature providing for a separate board of osteopathic examiners. The bill will probably become a law unless the medical profession of the state can be aroused to the danger of such a measure and the importance of securing its defeat.

COLORADO

Dr. S. D. Van Meter, secretary of the Colorado State Board of Medical Examiners, reports that the bill to amend the Colo-

rado medical practice act was defeated by a small margin. The osteopathic bill was also defeated. H. B. 61, providing for the licensing of all hospitals, dispensaries and institutions for the treatment of the sick by the State Board of Health, became a law. Several changes in the laws administered by the State Board of Health were also adopted. The optometry bill was defeated by the introduction of a bill placing the regulation of opticians in the hands of the State Board of Medical Examiners.

One of the most noteworthy occurrences of the legislative session was the introduction of the so-called West bill providing for a supplementary surgical license. This bill, known as S. B. 137, introduced by Senator West, provides that it shall be unlawful for any person to perform any surgical operation, by the use of any surgical instrument, in the nose or throat, or on the eye, ear, brain, deep structures of the neck or any of the abdominal or thoracic organs unless he possesses a license from the State Board of Medical Examiners authorizing him to perform such surgical operations. A penalty of fine, imprisonment or both is provided. The State Board of Medical Examiners is authorized to grant licenses to perform surgical operations on any one or more parts of the body to any person who shall file an application and satisfy the board of his ability. Only those persons who possess licenses to practice medicine under the laws of the state are eligible to obtain such a license. General reputation, preliminary education, courses of study pursued, college degrees received, number of years of practice, experience in hospitals, licenses to practice medicine in other states or countries, experience as a teacher, and experience in the practice of operative surgery are to be considered. Circumcision and the necessary surgical procedures in childbirth, except Cesarean section, as well as any emergency operations, are exempt.

The introduction of this bill by a layman is of singular significance, since it shows, at least, interest enough in medical qualifications and licensure to lead to the introduction of a bill requiring stricter and more rigid qualifications of the surgeon than of the general practitioner. Such a law would practically make two classes of physicians, those possessing the qualification and permission to perform all surgical operations and those without such a qualification. The suggestion is a novel one, at least so far as medical license in this country is concerned.

ILLINOIS

The osteopathic bill has been advanced to third reading in the house and will probably pass that body. S. B. 447 to reorganize the state charities and the correctional system, now on second reading in the senate, is a combination of three bills introduced for the same purpose. As it now stands, the bill is a non-partisan one and contains the best features of the three previous bills. It provides for a board of administration of five and places the entire management of the state charitable, penal and correctional institutions in their hands. The bill provides for an alienist, a penologist, an expert on charitable work, a business man as an adviser on fiscal and administrative matters, and a president. Members of the board are to be appointed by the governor and are to draw salaries of \$7,500 per annum. All employees of all state institutions with the exception of superintendents and wardens, are to be under civil service rules. A system of business administration under a centralized management, as well as a carefully worked-out system of inspection, is also provided for. This bill, if adopted, will put the state institutions of Illinois in a position to compare most favorably with those of any state in the union and far in advance of most of them.

IOWA

The optometry bill has been defeated in the lower house.

MISSOURI

An amendment to the medical practice act has been adopted which prevents a physician whose license has been revoked by the state board from continuing practice, pending an appeal. According to the amendment, when a license is once re-

voked, the physician affected can not resume practice until the appeal is decided in his favor and the license restored.

MASSACHUSETTS

Most of the objectionable bills introduced into the legislature have been defeated. These include several antivaccination bills, an antivivisection bill, an optometry bill, and the bill to consolidate all the boards of registration under one head. A bill relative to the charging of juries, which has some bearing on expert testimony, was defeated. The osteopathic bill, which was voted down, has been reconsidered, and is still before the house.

RHODE ISLAND

The optometry bill passed the house on April 6 and the senate on April 17, and has been signed by the governor.

Optometry in Texas

The following letter has such a marked bearing on the problems of medical legislation as applied not only to so-called "optometry" laws but also to the entire question of sectarian legislation and the attitude of physicians toward it, that the letter is here presented. The problems which the committee of the Dallas Medical and Surgical Society encountered are the same as those confronting the profession elsewhere. The principal difficulty is to arouse the profession to the dangers involved in legislation of this type. The next difficulty is to convince prominent and intelligent laymen that such legislation involves questions which vitally concern and affect both themselves and their families, the usual tendency of the public being to regard all of these matters as "doctors' rows." The third and perhaps the most difficult problem involved is the proper and effective presentation of these questions to the members of the state legislatures. Irrational and partisan medical legislation is opposed by physicians, not because their personal interests are threatened or involved, but because they know that lowering the standards of medical practice involves dangers to the public. These facts must be shown to the legislature specifically and not in general terms, and all possible suspicion of personal interests should be eradicated. The average member of the legislature instinctively suspects that any man (or body of men) who persistently and uniformly urges a certain line of legislation, does so from selfish motives. The sectarian, being usually a recent convert and having but little scientific training, is usually more enthusiastic and zealous than the average physician. Having a strong selfish interest in the proposed law, he is also generally inclined to do more work and make greater sacrifices to secure his ends. It is consequently found that the representatives of the osteopath, optometrist, chiropractic, naturopath and other latter-day sects is generally on the ground before the legislature convenes and stays there until the last bill is passed, while the physician contents himself with sending a committee to represent him, which committee usually devotes a few hours or at most a day or two to a hasty visit to the state capital. These facts, as well as those brought out by our correspondent's letter, explain why bills have been put through state legislatures by a handful of sectarians, although opposed, at least in spirit, by the medical profession of the state. The letter is as follows:

To the Editor:—Recently some of the Texas opticians, who styled themselves "optometrists," have been agitating an "Act to Define and Regulate the Practice of Optometry, to Create a Board of Examiners in Optometry for the Examining and Licensing of Optometrists, to Prescribe the Qualifications of Applicants in Optometry, etc." This bill passed the Texas Senate unanimously in January. Early in February, the Dallas Medical and Surgical Society appointed a committee to study this bill and to advise the society as to its import; and also to take any other steps the committee saw fit.

After some effort, this committee succeeded in getting five specialists of the state to drop their business, pay their own expenses to Austin, and confer with the House Committee on Public Health. These specialists explained to the house committee the lack of justification for such a bill, the impossibility of correct refraction without a cycloplegic, the ex-

treme delicacy of the process of refraction, the dangers of cycloplegies in the hands of ignorant men, the dignity of license by a board appointed by the state, the inadvisability of making so many "eye-doctors" by such a quick process, etc., etc.

The house committee reported the bill unfavorably to the house.

The similar committee in the senate was somewhat handicapped, since it had received explanations of the bill from one standpoint only—that of the opticians.

The house unanimously killed the bill.

During the progress of the discussion of the bill in the committee, some peculiar but very important conditions developed:

1. The opticians present claimed a specialty of "optometry," in which they were experts. They were not "opticians." The sign of the most prominent one present, however, had read "Optician" for ten to fifteen years; and this sign still hangs in box-car letters over his place of business. Another well-known optician and jeweler displayed several large signs, which seemed to embrace everything: "Eyes Examined," "Expert Optometrists," "Refracting Opticians," "Manufacturing Opticians," etc.

2. Several cases were reported in which opticians had used atropin, or determined the refraction of diseased eyes. A case of glaucoma caused by an optician's having used atropin was cited. The best optician in the state (and, by the way, a fine man personally) was reported as having fitted a pair of glasses to eyes in one of which a piece of steel was imbedded. He was present before the house committee.

3. The oculists as a whole were lukewarm in their opposition to the bill. Some were lukewarm naturally; some had acquired lukewarmness because they thought or seemed to think that atropin was not necessary to correct refraction; and some had had lukewarmness thrust upon them because they were working in conjunction with opticians or owned stock in optical houses.

HENRY B. DECHARD, M.D., Dallas, Tex.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month

SECOND WEEKLY MEETING

EXTERNAL EAR

AURICLE

MALFORMATIONS.—Undeveloped helix, absence of lobule, microtia, polyotia.

PERICHONDritis.—Etiology, treatment.

OTHEMATOMA.—Pathology, treatment.

TUMORS.—Sebaceous cyst, fibroma, angioma, sarcoma, epithelioma; diagnosis of each.

CUTANEOUS AFFECTIONS.—Acute eczema; diagnosis, treatment.

Chronic eczema: symptoms, diagnosis.

Noma: pathology, diagnosis.

Lupus erythematosus: symptoms, treatment.

Lupus vulgaris: etiology, diagnosis.

EXTERNAL AUDITORY MEATUS AND CANAL

OTITIS EXTERNA CIRCUMSCRIPTA, FURUNCLE.—Etiology, symptoms, differential diagnosis.

OTITIS EXTERNA DIFFUSA.—Symptoms, prognosis, treatment.

OTOMYCOSIS.—Diagnosis, *aspergillus niger*, *A. glaucus*, treatment, recurrence.

FOREIGN BODIES IN AUDITORY CANAL.—Diagnosis, prognosis, treatment in detail for animate objects and for inanimate objects.

IMPACTED CERUMEN.—Symptoms, treatment.

SYPHILIS OF AUDITORY MEATUS.—Diagnosis, local and internal treatment.

EAR COUGH.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

FLORIDA: Tallahassee, May 19-20. Sec., Dr. J. D. Fernandez, Jacksonville.
MASSACHUSETTS: State House, Boston, May 11-13. Sec., Dr. Edwin B. Harvey, Room 159, State House.
MISSISSIPPI: State Capitol, Jackson, May 11-12. Sec., Dr. S. H. McLean.
MISSOURI: Kansas City, May 17-19. Sec., Dr. J. A. B. Adcock, Warrensburg.
NEBRASKA: State Capitol, Lincoln, May 25-27. Secretary, Dr. E. J. C. Sward, Oakland.
NEW YORK: Albany, May 18-21. Mr. Charles F. Wheelock, Albany.

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

Fifth Annual Conference, held at the Auditorium Hotel Chicago, April 5, 1909

(Continued from page 1447)

Report on Medical Curriculum

DR. BEVAN: I would like to make a brief statement in regard to this curriculum and this committee. The entire subject of medicine was divided into ten parts, a chairman for each part appointed, and with the chairman nine other members were selected for each section, thus providing one hundred men specially qualified in their different departments to develop a medical curriculum. This medical curriculum to be reported to-day is regarded by the Council as educational and suggestive, and is not advanced as a hard and fast requirement. In order that there should be no misunderstanding on this point, the following resolution was unanimously adopted:

WHEREAS, The object of the Council on Medical Education in appointing this committee on curriculum was that such a curriculum should be entirely educational and suggestive; and

WHEREAS, The impression prevails among medical teachers and members of state medical examining boards that the curriculum is being framed for the purpose of having it serve as a standard to which medical colleges must conform, or be condemned by the state authorities as not in good standing, therefore, be it

Resolved, That every publication of any curriculum hereafter to be made by the Council, its members, or its officers as such, shall state explicitly that the Council does not consider it in the interests of true progress in education that any standard curriculum whatever shall be uniformly adopted by all medical colleges.

It seems to me desirable to make that statement; at the same time, I am personally—and I think all of the members of the Council are—impressed with the fact that the work done by this Committee of One Hundred is really of very great value.

MEDICAL CURRICULUM*

The following gives the complete schedule of hours in the various subdivisions of the medical curriculum as given in the reports of the ten subcommittees. At a subsequent meeting of the ten chairmen the totals for each department by vote were reduced to the figures in the third column.

Subject and Subdivision.	Hours.	Original Total.	Reduced Total.
I. Anatomy	370	760	700
Dissection	140		
Histology	90		
Neurology	90		
Embryology	70		
Topographical Anatomy .....	...	550	530
II. Physiology, Organic and Physiological Chemistry	80		
Organic Chemistry	200		
Physiological Chemistry	270		
III. Pathology and Bacteriology .....	...	500	500
Bacteriology (approximately) ..	200		
Pathology	300		
IV. Pharmacology, Toxicology and Therapeutics .....	...	268	240
Pharmacy, Chemical Toxicology and Elemental Prescription Writing	40		
Experimental Pharmacodynamics	60		
Systematic Pharmacology and Prescription Writing	72		
Non-Pharmaceutical Therapeutics ..	16		
General Therapeutics and Prescription Writing	48		
Therapeutic Clinics and Prescription Writing	32		
V. Medicine .....	...	885	890
Physical Diagnosis, Normal	45		
Lectures or Recitations	90		
Diagnostic Clinics (Observation Classes)	30		

* The complete reports of the various subcommittees are not ready for publication, but will be issued soon in pamphlet form and may be had on application.

Clinical Pathology	60		
Ward Classes, Diagnosis (Junior)	30		
Pediatrics (Junior)	100		
Neurology (Junior)	60		
Didactic, or Recitation, or Case Method	30		
Ward and Laboratory (Senior) ..	180		
Clinic and Clinical Conference ..	60		
Out-Patient Clinics	30		
Neurology	90		
Pediatrics	80		
VI. Surgery	680	650	
Bandaging and Practice Dressing	30		
Surgical Pathology	60		
Surgical Anatomy	30		
Principles of Surgery	210		
Minor Surgery	60		
Regional Surgery	150		
Operative Surgery	50		
Orthopedic Surgery	45		
Genito-Urinary Surgery	45		
VII. Obstetrics and Gynecology	300	240	
Obstetrical Lectures, Recitations, Manikin Work, etc.	120		
Obstetrical Clinical Work (Dispensary, Hospital and Laboratory)	30	180	
Amphitheater Clinics	30		
Gynecology Lectures and Recitations	60		
Gynecology Dispensary Clinics, "Touch Course"	30	120	
Gynecology Amphitheater Clinics	30		
VIII. Diseases of Eye, Ear, Nose and Throat	140	140	
Eye—Didactic (Entire Class) ..	15		
Eye—Clinics (Hospital and Dispensary)	15	50	
Eye—Section Work (Dispensary and Hospital)	20		
Ear—Didactic	20	40	
Ear—Clinical	20		
Nose and Throat—Theoretical ..	20	50	
Nose and Throat—Practical ..	30		
IX. Dermatology and Syphilis	90	90	
X. Hygiene and Medical Jurisprudence	305	120	
1. Public Health and Hygiene—			
The Legal Mechanism for the Control of Disease, Federal State and Municipal	12		
Vital Statistics	4		
Transmissible Diseases and Their Epidemiology	60		
Occupational Diseases, not including infections	10		
Milk Supply in Relation to Disease	10		
Food Supply, Meat Inspection, etc.	10		
Water Supply and Sewage Disposal	20		
Sanitary Engineering and Architecture, including Plumbing, Ventilation, Hospital, School, Dwelling, and Public Sanitation, etc.	3		
Social Economics—Economic Cost of Disease	10		
Publicity in Relation to Public Health	10		
Disinfection	5		
Sanitation of Travel	5		
Inspection of Hotels and Restaurants in Relation to Cleanliness, Sanitary Facilities, etc., and also Medical Inspection of Those Who Handle Food, Water, etc.	2		
School Hygiene	10		
Hygiene of Public Institutions, for the Insane, Feeble-Minded, Deaf, Dumb, Blind and Correctional Institutions ...	30		
Eugenics .....	...	
Hygiene of Venereal Diseases. (Course to be provided and coordinates by subcommittee) ...	...	
Sanitary Aspects of Embalming, Funeral Direction and the Transportation of the Dead. (Course to be provided and coordinated by subcommittees.) .....	...	
Naval and Military Hygiene. (Course to be provided and coordinated by subcommittees.) .....	...	
Tropical Medicine. (Course to be provided and coordinated by subcommittees.) .....	...	
Personal Hygiene. (Time will vary according to amount of time chargeable to other subcommittees.)	23		
2. Medical Jurisprudence. (Time will vary according to amount of time chargeable to other subcommittees.)	60		
3. Medical Ethics, Publicity, Economics, Organization, Relationship, etc.	10		
Grand total	4,418	4,106	

The Medical Curriculum from the Standpoint of the State Examining Board

DR. GEORGE W. WEBSTER, CHICAGO

I was asked a few days ago to open the discussion on this subject from the standpoint of the medical examining boards. I am very glad to do so, chiefly because it gives me the opportunity to express my appreciation not only of this kind of work, but of this particular piece of work which this Committee of One Hundred has performed. I think from the standpoint of the examining boards, the report of this Committee of One Hundred is, without question, the most important piece of work the Council on Medical Education of the American Medical Association has ever done, and for many reasons. It is important from its educational point of view and not simply because of its value as a guide to examining boards. Of that I shall speak in a moment. In times past the curriculum of the average medical school might have been described as were the inhabitants of Europe in one of our very ancient histories, "a heterogeneous mixture of people promiscuously thrown together," and the average medical curriculum in the average medical school was, like the "peace of God that passeth all understanding." The work of this committee will help very much to correct this condition of affairs.

Now, we may inquire, Why is the medical examining board interested in a standard curriculum? The examining board is not engaged in medical teaching, but it is vitally interested in educational methods. Why? Because the examining boards have realized for a long time what many teachers and medical educators have not seemed to grasp fully when we discuss, as we do at such length, the character of the medical examination as conducted by examining boards. The examining boards must also take this position: If a young man is compelled to spend eight years at a grammar school, four years at an approved high school, the character of which is prescribed and approved, and then four years in a medical school in which there is a standard curriculum as described here this forenoon, and in which right methods are employed, then you have supervised that man's education for sixteen years, during which time the methods pursued by him in his education are correct, and the product must be good. We are interested, gentlemen, in the product. That is why state boards are interested in your methods. If your methods are correct, if the equipment is all that it should be, and we have supervised that man's education from the time he enters the grammar school until he leaves the medical school—sixteen years—I care very little whether he passes the medical examination or not, except as a matter of form. In such cases men will be better equipped for the practice of medicine because they will have been sifted out at the grammar school, the high school, and the medical school before they come to the examining board. The examining board is interested in the product and is vitally interested in the methods by which that product is produced. This work is of vital importance from an educational standpoint, but it will also be of very great value to examining boards for this reason: It is necessary for every examining board to have certain rules and to have a schedule of minimum requirements that are deemed requisite for a medical college that is to be considered in good standing. Such a schedule of minimum requirements was reported to this body a year ago, was satisfactory in every way, and similar to that which is in operation in the work of most of the examining boards. But such a schedule does not go far enough. It is not quite specific enough. For example, in the rules of each of these boards we have a rule something like this: the character of the entire equipment, including teachers, laboratory equipment, clinical facilities, etc., "shall be such as obtains in the majority of medical colleges in the United States." Well, a college says, What is the character of the equipment that obtains in the majority of medical colleges in the United States. With perhaps the exception of Dr. Bevan, Dr. Colwell, or Dr. Zapffe, or perhaps some three or four men in the hall, there is no one that knows what that average equipment is. Neither the medical colleges nor the state examining boards have had any very clear conception of exactly what that equipment should be, and even among this picked committee there is not an absolute consensus of opinion, but very nearly so, as to what should be considered a standard curriculum or standard equipment. We have a schedule of minimum requirements, as adopted last year, and which is in operation by most of the state boards. If we can go one step further and describe to a certain extent the character of that equipment, and the character of teaching meth-

ods, if you please, that should be adopted by the medical schools, you can see how much advantage that will be. Of course, I want all of you to understand clearly that I do not believe we can or should adopt a schedule of minimum requirements that specifies how many hours shall be devoted to this or that subject, and exactly the equipment that shall be considered the minimum, but I do believe the boards can give this information to the medical schools in an advisory way—at least, for the present—and can have this as a guide for themselves in the conduct of the examinations. Later on we may be able possibly to specify more exactly in regard to the number of hours, in regard to the exact equipment, but there is danger in specifying too minutely just what is demanded in the way of equipment or the exact number of hours in each individual branch.

Some five years ago I presented to the National Confederation of State Medical Examining and Licensing Boards a standard curriculum, which was not original with me, but merely a continuation of the work that had been done by others, and in which I made certain arguments in favor of such a standard curriculum, and, with your permission, I will present them here, as I think they will bear very well on the present situation, and I see no reason to materially change my mind from that time to this:

"The adoption of a standard uniform curriculum will be in the interests of an improved, as well as a higher standard of medical education. It will add symmetry to the course. It will give to each subject that relative importance which rightfully belongs to it, and no more. It will enable students to receive due credit for work done in any recognized school which adopts and conforms to this standard, thus enabling them to take the first two years in institutions remote from large cities, going to the latter for the last two years of clinical instruction. It is the most important single step toward future inter-state reciprocity on a rational basis. It will result in closing up some inferior schools of low grade. It will serve as a basis for reform in state board examinations. In most state boards all studies have equal rank, the applicant being required to answer to the same number of questions in each subject, a manifest injustice to the applicant. For example, some boards ask as many questions on physical diagnosis, gynecology, pediatrics and obstetrics, as they do in general medicine or general surgery, while the relative importance of these subjects and the relative time devoted to them is much smaller than to the major subjects."

I want to emphasize the fact that the greatest value of the work of this committee is in an educational way as a guide to the colleges in improving, standardizing and co-ordinating the work of medical teaching.

"A uniform standard will be set up for the whole country, instead of the heterogeneous regulations of state authorities. Singleness of policy will be substituted for the present unfortunate diversity of practice. It will unify and harmonize effort and will make possible the interchange of licensure, reciprocity. It will enable students to receive credit for work done and to make their scientific and laboratory instruction in one place or state, and complete their clinical course in the large cities, where there are abundant clinical opportunities.

"The medical degree will have a reasonably uniform standard of value, and will mean something to its holder.

"We realize that quantitative standards are educational evils, but sometimes it is 'any port in the storm.'

"We do not assume for a moment that what we have suggested is perfection; that we have attained the ideal; we know that after the summit is reached, all roads lead downward. We only offer this as a working plan.

"In this evolution of an ideal, or even a satisfactory, medical curriculum, I freely grant that there is no such thought in my mind as arriving at the ideal; there is no such thing as a stopping place, a resting place; but may there not be a halting place, where we may go forward as a unit, as a solid phalanx and not as stragglers, each one fighting by himself and for himself?"

(To be continued)

Medical Education and Nostrums, Tenth Letter

This is the last of a series of letters issued jointly by the Council on Medical Education and the Committee on Medical Teaching of the Council on Pharmacy and Chemistry:

To Medical Teachers:—This letter contains some suggestions to the clinical departments. It is especially important that the clinical instructor should set an example, to the

student and hospital interne, of clean, careful and painstaking prescribing; for it is the clinical instructor who finally molds the practice of the young physician. He is the embodiment of the success for which the beginning practitioner is striving, and thus he is looked on with especial confidence and respect. His methods and ways are carefully copied in all things, and his example, therefore, is extremely potent. A thoughtless or a careless word or act may have a far-reaching influence on the student in this plastic period. One clinical department is as important as another in this respect; and the influence of the youngest assistant makes itself felt, as well as that of the department directors. Wherever nostrums are habitually used the graduates will be nostrum-prescribers. Wherever thoughtless empirical therapeutics is the fashion the graduates will be thoughtless empiricists. Wherever the clinical staff has forsaken the standard materia medica, the graduates will also forsake it.

The practice, prevailing in many hospitals and dispensaries, of prescribing frequently-used mixtures by serial numbers, or by alliterative or suggestive titles, is an example in point. It robs the student of therapeutic independence, and induces habits of indolence in prescribing, which form an easy step to the use of nostrums.

Confederation of Reciprocating Examining Boards to Meet

The annual meeting of the American Confederation of Reciprocating, Examining and Licensing Medical Boards, will be held at the Seelbach Hotel, Louisville, Ky., May 12, the session to begin at 10 o'clock a. m. Reports regarding medical curriculum, constitution and preliminary education for entrance to recognized medical colleges will be presented.

Colorado January Report

Dr. S. D. VanMeter, secretary of the Colorado State Board of Medical Examiners, reports the oral and written examination held at Denver, Jan. 5-16, 1909. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. Thirty-two applicants were licensed at this examination, 4 of whom passed the examination, and 28 were registered on presentation of satisfactory credentials, including state licenses. Four of the applicants appearing for examination failed to make the required percentage. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Denver and Gross College of Medicine.....	(1908)	76.6	81.7
Johns Hopkins Medical School.....	(1908)	86.8	
McGill University, Canada	(1906)	77.5	
College	LICENSED ON CREDENTIALS	Year Grad.	State Licenses.
George Washington University.....	(1906)	Dist.	Colum.
Bennett College of Eclectic Medicine and Surgery.....	(1898)		Illinois
College of Physicians and Surgeons, Chicago.....	(1892)		Illinois
Northwestern University Woman's Medical School.....	(1898)		Iowa
Rush Medical College.....	(1896) Indiana; (1906)	(1907)	Illinois
University of Iowa, Homeopathic Department.....	(1893)		Iowa
Medical College of Indiana.....	(1894)		Illinois
Kentucky School of Medicine (1893) Minnesota; (1897)			Ohio
University of Louisville	(1901)		Indiana
Northwestern University Medical School.....	(1894)		Illinois
Missouri Medical College	(1898)		Oklahoma
University Medical College, Kansas City.....	(1908)		Kansas
Barnes Medical College.....	(1899)		Kansas
Ensworth Medical College	(1908)		Kansas
University and Bellevue Hospital Medical College.....	(1899)		New York
Columbia University, College of Physicians and Surgeons, (1903)			
Kentucky; (1905) New York.			
University of Buffalo	(1884)		New York
Dartmouth Medical School.....	(1879)		Mass.
Medical College of Ohio.....	(1893) (1907)		Ohio
Starling Medical College.....	(1907)		Ohio
Pulte Medical College.....	(1875)		Tennessee
Miami Medical College	(1907)		Ohio
Western Reserve University	(1882)		Nebraska
College	FAILED	Year Grad.	Per Cent.
Denver Homeopathic College	(1908)		63.3
Baltimore Medical College.....	(1908)		70.4
St. Louis College of Physicians and Surgeons.....	(1901)		60.
Meharry Medical College	(1908)		55.4

New Mexico January Report

Dr. J. A. Massie, secretary of the New Mexico Board of Health and Medical Examiners, reports the written examination held at Santa Fe, Jan. 11, 1909. The number of subjects examined in was 13; total number of questions asked, 108; percentage required to pass, 75. The total number of

candidates examined was 6, all of whom passed. Nineteen candidates were licensed on presentation of satisfactory credentials. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Kansas Medical College	(1904)		78.
University of Michigan	(1907)		83.5
Medical College of Georgia	(1907)		88.
University of Nashville.....	(1900)	80.8; (1908)	93.
University of Tennessee	(1901)		75.5
College	LICENSED ON CREDENTIALS	Year Grad.	
University of Arkansas	(1891)		
Rush Medical College	(1892)		
College of Physicians and Surgeons, Chicago.....	(1904)		
Northwestern University Medical School.....	(1898)		
Hospital College of Medicine, Louisville.....	(1890)	(1904)	
Louisville Medical College	(1886)		
University of Michigan	(1906)		
Barnes Medical College.....	(1897)		
St. Louis College of Physicians and Surgeons.....	(1889), (1902)		
Omaha Medical College.....	(1898)		
Jefferson Medical College.....	(1890)		
Vanderbilt University	(1884), (1886), (1893), (2, 1900)		
Galveston Medical College.....	(1870)		

Book Notices

MOVABLE KIDNEY. By C. W. Suckling, M.D., M.R.C.P., Consulting Physician to the Queen's to the Children's and to the Orthopedic and Spinal Hospitals. Cloth. Pp. 155. Birmingham: Cornish Brothers, 37 New street, 1909.

This is the second edition of a work which attempts to show that movable kidney may be found very frequently if correctly sought for, and that it is the cause of a much larger number of ailments than is commonly supposed.

Suckling's position may be briefly stated as follows: If a careful and skilful examination of patients be made the right kidney can be palpated in about 6 per cent. of the males and in 40 per cent. of the females. A normal kidney can not be felt. Every palpable kidney is, therefore, a proof of a pathologic condition, and symptoms referable to this lesion may be elicited if they are sought after. Every movable kidney is not only pathologic and productive of symptoms, but is to be treated by surgery, i. e., nephropexy. Few contraindications to the operation exist, such as old age, weak heart, or advanced Bright's disease. To be sure that a loose left kidney be not untreated, there should be an exploratory incision down to this kidney whenever nephropexy is performed on the right kidney, and if the left viscus is found movable it also should be anchored in place. This exploratory operation is to be done whether the left kidney be palpable before the operation or not. The reason why every movable kidney is to be thus treated by operation is that it is sure to produce disease, chiefly through toxemia due to faulty elimination, the result of mechanical interference with its function, especially the free outflow through the ureter. These diseased conditions vary all the way from mild nervous disorders, neurasthenia, insomnia, headaches, etc., to albuminuria, hematuria, pyuria, leucorrhea, dilatation of the stomach, rectal pain, incontinence of urine, constipation, diarrhea, colitis, mucous colitis, sexual troubles, backache, epilepsy, hysteria, mental failure and insanity. "Movable kidney has now been proved to be a common cause of insanity." "When the kidneys are properly fixed up, in quite nineteen cases out of twenty the insanity is cured."

How to take such a monograph is a question. Should it be treated seriously, should argument be attempted to prove the falsity of the conclusions reached by the author, or should it be utterly ignored as unworthy of notice or be mercilessly shown up as ridiculously absurd? We are perhaps not called on to perform any of these tasks. We merely express the opinion that there is some truth in much that is said concerning movable kidney and its relation to varied forms of illness. But the work is based on such flimsy pathologic theory, the histories of cases are so slipshod, the diagnoses so loosely made, the whole book is pervaded by such intense and even offensive egotism and such ignorance of the studies

and experiences of others along similar lines, it betrays such lack of a scientific and logical reasoning and such a wild jumping at unwarranted conclusions that one must in all seriousness condemn the book and be truly thankful that the author at the end of his preface says: "I do not intend to write any more on the subject of movable kidney." We can only trust that he will be true to his word.

DISEASES OF THE HEART. By James Mackenzie, M.D., M.R.C.P. Cloth. Pp. 386, with illustrations. Price, \$9.00. New York: Oxford University Press.

Dr. James Mackenzie is well-known as a writer on disease of the heart and allied subjects; especially is he an authority on the physiologic disturbances of this organ, and naturally a large part of his book is devoted to an interpretation of its physiologic action and its perversions.

Thoughtful and judicious comments and records of the author's observations and experiments are found throughout the work, which is full of originality, and, unlike many treatises, is not a mere compilation. Everything is briefly stated, there are few repetitions, and the clear, simple English makes agreeable reading. The book is copiously illustrated, chiefly with radial, carotid, jugular and apex tracings, but also with diagrams and sketches.

Dr. Mackenzie distinguishes Nothnagel's vasomotor angina pectoris from the more common form, which in his opinion is not due to hypertension, as his own measurements of arterial tension during attacks do not prove its existence. He also states that the cause of constriction of the chest, which is often severe and accompanies or follows the characteristic pain of angina, is due to spasm of the intercostal muscles. Instrumental examination of the arteries, veins and apex of the heart is described fully, but Mackenzie believes the finger to be the best determiner of the condition of the circulation. In acquiring a trained perception, however, instrumental examination is a great help. Far-reaching deductions have been drawn from variations in so-called arterial or blood pressure and diastolic pressure. In his opinion the latter, as recorded by the clinical instruments usually employed, is fallacious.

The scope of the volume will be comprehended from the following list of subjects of chapters: Principles underlying the production of heart failure; fundamental functions of the heart muscle-cells; development, anatomy and physiology of the heart; preliminary examination of the patient; respiratory symptoms; reflex or protective phenomena; angina pectoris; heart affections and a hypersensitive nervous system; instrumental methods of examination; position and movement of the heart; examination of the arterial pulse; arterial pressure; venous pulse; increased frequency of the heart's action; sinus irregularities; extrasystole; the nodal rhythm; affections of the conducting functions of the primitive cardiac tissue; exhaustion of contractility; dilatation of the heart; acute febrile affections of the heart; valvular defects; cardiosclerosis; adhesive mediastinopericarditis; congenital affections of the heart; heart disease and pregnancy; chloroform in heart affections; prognosis; treatment.

PRINCIPLES AND PRACTICE OF PHYSICAL DIAGNOSIS. By John C. DaCosta, Jr., M.D., Associate in Clinical Medicine, Jefferson Medical College. Cloth. Pp. 548, with illustrations. Price, \$3.50. Philadelphia: W. B. Saunders Co., 1908.

This book concerns itself with the physical diagnosis of thoracic and abdominal diseases. Diseases of the head, the extremities or of the nervous system are not included. There is no consideration of special laboratory technic, such subjects as the examination of the blood, feces, urine or stomach contents being referred to only incidentally. In the discussion of physical signs especially emphasis is laid on the regional anatomy, both normal and pathologic, as well as on normal and disturbed function, as explaining the origin and mechanism of the physical signs of health and of disease. Explanations are in general clear, and there is little or no obtrusion of dogmatic opinions of the author or of a confusing mass of more or less conflicting notions of others. The book shows, as stated in the preface, that it has been carefully adapted by a practical teacher to the needs of the class-room. While some topics are considered in a manner that might at

first strike one as somewhat elementary, this after all is an advantage, especially when considering the book as one suited to the needs of the undergraduates. Of very great value are the illustrations showing regional anatomy, location of physical signs, etc., together with numerous reproductions from photographs of patients suffering from the various diseases under consideration or of the organs in the morbid state in which the physical signs are to be noted. Many of these illustrations will help materially to a better understanding of the mechanism of the signs and will impress forcibly on the student the physiognomy of disease.

We question the taste of inserting some of the studies from the model. Not only is the female form not quite as well suited to the study of physical diagnosis of the chest as is the male form, but some of the models would seem to be more interested in the artistic pose and in displaying their beauty than in such prosaic things as location of painful spots, friction sounds, etc. And some of them, e. g., the one on page 153, are too suggestive of corset advertisements, or even of the photographs on sale in the streets of Paris to have a place in a book of this character.

As a whole, the book has been carefully prepared, is pervaded by a sane, judicial tone and deserves to take high rank among the good books in English on the subject of physical diagnosis. And we are pleased, on one account at least, to see physical diagnosis divorced from the more strictly laboratory diagnosis, for, while the two must always go hand in hand, it is well at the present time to emphasize the importance of auscultation, percussion, etc. There is too often seen a tendency to exalt the laboratory findings and to degrade those of the ordinary physical examination as out of date and old fashioned. Da Costa's work will serve to call attention to the fact that even without the aid of elaborate instruments of precision or of complicated laboratory technique, the unaided yet trained eye, ear and finger will, if guided by a logically acting brain, lead to a reasonably accurate understanding of many of the processes of disease.

HANDBUCH DER BIOCHEMIE DES MENSCHEN UND DER TIERE. Herausgegeben von Prof. Dr. Phil. et Med. Carl Oppenheimer. Berlin. Instalments 2 to 14. Paper. Price, 5 marks each. Jena: Verlag von Gustav Fischer, 1909.

The general statements made in the review of the first instalments of Oppenheimer's "Handbuch" (THE JOURNAL, July 11, 1908, li, 147) may be equally well applied to each succeeding issue and to the series as a whole. Further, it may be well here to direct attention particularly to the scope and thoroughness of the work, which is more deeply impressed on the reader by each additional instalment. At the end of the thirteenth instalment a general index of the whole work is given which appears to cover the entire field of biologic chemistry in its various branches and divisions.

In the later instalments there appear sections devoted to the following subjects: "Proteins," "Animal Coloring Matter," "Colloids," "Chemistry of the Cells," "Blood and Lymph," "Secretory Glands and Secretions," "Digestion," "Gases of the Body and their Interchange" and "Food Metabolism." Under each of the above main headings from one to eleven subchapters are incorporated, each chapter an exhaustive work on the particular phase it covers, full of the latest findings of biologic research and of valuable references, thus covering the subject-matter in a most thorough manner.

The series, taken as a whole, must be regarded as a well-planned compilation of the latest and best work in biologic chemistry covering the whole field and a reference book in this branch of chemistry which has no equal. While the handbook can not be recommended as a text for general reading, as a comprehensive and up-to-date work of reference it should be assured a place in the libraries of those interested in the subject.

REPORT OF AN INVESTIGATION OF WATER AND SEWAGE PURIFICATION PLANTS IN OHIO. Made Under Authority of an Act of Legislature, Passed Feb. 23, 1906. 1906-1907. Cloth. Pp. 888. Columbus: F. J. Heer, State Printer, 1908.

This volume comprises one of the most important contributions made to sanitary practice by American engineers. Un-

like the classic studies on water and sewage purification conducted by the Massachusetts State Board of Health, it deals not so much with specially devised experiments as with the problems arising in the operation of existing water filtration plants and sewage disposal systems. The book has the merits and the defects of such a treatment. While it lacks of coherence and orderly arrangement, it possesses the advantage of giving a comprehensive survey of the whole field and an epitome of the present state of the best practice and opinion in a commonwealth that ranks as one of the foremost in sanitary matters. In its conception and in the main in its execution the report may serve as a model for other states.

Only one special point may be mentioned here, although we may have occasion to refer to some other features of this report later; this is the great stress laid on the necessity of providing expert management and control for both large and small plants. "Ignorance and carelessness in operation, and even absolute neglect . . . are responsible for most of the failures." No matter how thorough and long-continued the preliminary experimentation, if the completed plant is left to the mercy of an inexperienced and untrained engineer the results are sure to be unfortunate. The United States is slowly and painfully learning that energy and goodwill can not take the place of capacity and training. This Ohio report contains many suggestions for sanitarians and health authorities; the large amount of assistance and guidance that a thoroughly informed state board of health can render to grouping local officials is certainly not one of the least valuable.

A FIRST STUDY OF THE INHERITANCE OF VISION AND OF THE RELATIVE INFLUENCE OF HEREDITY AND ENVIRONMENT ON SIGHT. Eugenics Laboratory Memoirs V. By Amy Barrington, of the Galton Eugenics Laboratory, and Karl Pearson, F.R.S. Paper. Pp. 61. Price, 4 shillings. London: Dulau & Co., 37 Soho Sq. W., 1909.

The work of Miss Barrington and Mr. Pearson is conducted in accordance with well-established principles of statistical investigation, and serves to exhibit the marked influence of heredity as compared with a minor action of environment in determining defects of vision. Doubt is thrown on the theory that school work produces myopia and it is suggested that the increasing number of myopics shown in the higher classes is evidence of a law of growth and selection and not due to environment. The necessity of more careful statistical work, dealing with larger numbers of pupils and covering all classes without selection, is emphasized, but the authors are of opinion that the results of their work show a preponderating influence of the hereditary factor.

PRACTICAL BACTERIOLOGY, BLOOD WORK AND ANIMAL PARASITOLOGY. By E. R. Stitt, A. B., Ph.G., M.D., Surgeon, U. S. Navy. Cloth. Pp. 294, with illustrations. Price, \$1.50. Philadelphia: P. Blakiston's Son & Co., 1909.

This little book is concerned chiefly with methods, outlining briefly the interpretations from these methods. By far the larger part of the book is given over to bacteriology, including keys for identification of organisms, methods in immunity, such as hemolysis, etc., and the clinical bacteriology of the eye, mouth, nose, feces, etc. The discussions of animal parasites and of molds are especially commendable. The two chapters on blood work are brief. On the whole the book is satisfactory.

FUN IN A DOCTOR'S LIFE. By Shobal Vail Clevenger, M.D. Cloth. Pp. 291. Price, \$1.00. Atlantic City, N. J.: Evolution Publishing Co., 1909.

Dr. Clevenger has supplied us with a rather disconnected autobiography in this work, and it would seem that he had plenty of material, since he has had an adventurous life. Born in Italy, his boyhood spent in St. Louis, Cincinnati and New Orleans, in his later life he was an Indian trader on the plains, a soldier in the Civil War, a newspaper editor, a magistrate, a telegraph operator, a government surveyor, a steamboat man, a signal service observer, a printer, then a medical student, an asylum official and superintendent, and a neurologic specialist. This variety of occupation, the details of which are scattered disjunctively through the book, has certainly given a spice to life in his special case. His experiences with politicians in asylums are vividly told. In some instances he fails to do justice to one or two worthy members of our pro-

ression, but no more, we regret to say, than he does to himself in one or two places in his book. In fact, we should say that it is here and there somewhat inconsiderately written. There is considerable basis of truth, however, in what Dr. Clevenger says concerning the political management of insane hospitals.

GUIDE TO THE CLINICAL EXAMINATION AND TREATMENT OF SICK CHILDREN. Ed. 2. By John Thomson, M.D., Fellow of the Royal College of Physicians of Edinburgh. Cloth. Pp. 629, with illustrations. Price, \$3.75. Chicago: W. T. Keener & Co.

This little volume commends itself to the reader as a practical and useful one. It approaches the subject rather from a clinical than a purely didactic standpoint and in many ways supplements the standard text-books, while in no way intended to supplant them. Thus Dr. Thomson devotes 13 pages to pyloric stenosis, and nearly 40 pages to mental defects, while infant-feeding is dismissed with about 30 pages. This tendency is further seen, and advantageously, in the many excellent and original illustrations, notably of pyloric stenosis, meningitis, chloroma, and of that interesting and, in this country, rare lesion, rheumatic nodules. The book distinctly reflects the ideas, methods and interests of one of the great English teachers of clinical pediatrics, and should find a welcome among us.

Marriages

ELAM T. MURPHY, M.D., to Miss Mabel Mary Brassil, both of Chicago, April 26.

WILLIAM ESIEN HAWK, M.D., to Miss Mabel Botkin, both of Duquesne, Pa., April 21.

J. A. MCCOY, M.D., to Miss Pauline E. Simmons, both of Picayune, Miss., April 12.

GEORGE A. CAMERON, M.D., to Mrs. Henry R. Moore, both of Philadelphia, April 21.

HAROLD EDWIN HOLBROOK, M.D., to Miss Enid Elizabeth Scott, both of Milwaukee, April 14.

JOHN P. TURNER, M.D., Philadelphia, to Miss Mary C. Harris of Washington, D. C., April 15.

FRANK E. THOMAS, M.D., Mason, Mich., to Miss Ada Lyon of Bowbells, N. D., at Chicago, April 20.

LAWRENCE HENRY HILL, M.D., Greenway, Ark., to Miss Celia Blair Keller of Centralia, Ill., April 21.

JOHN C. KIRBY, M.D., to Miss Bertha McNeeley, both of Cedar Vale, Kan., at Winfield, Kan., April 19.

LLOYD W. STEPHENSON, M.D., Washington, D. C., to Miss Mary Virginia Haswell, at Baltimore, April 20.

ROSSLYN PHILLIP HARRIS, M.D., Athens, N. Y., to Miss Susan Marion McKenna of Rhinebeck, N. Y., April 21.

Deaths

Ezra Mitchell, M.D. Dartmouth Medical School, Hanover, N. H., 1867; a member of the American Medical Association; and one of the best known practitioners of northern New Hampshire; a medical cadet with the Eighth Maine Volunteer Infantry during the Civil War; at one time president of the New Hampshire Medical Society; from 1882 to 1885 surgeon general of the state; a member of the legislature; a constant advocate of the state tuberculosis sanatorium which he lived to see constructed at Glencliff; president of the Lancaster Savings Bank and Lancaster Trust Company; died at his home in that city, April 20, aged 67.

John William Caughlin, M.D. Trinity Medical College, Toronto, Ont., 1879; a member of the American Medical Association; at one time president of the Bay County, Mich., Medical Society; a member of the staff of Mercy Hospital, Bay City; for ten years a member and eight years president of the local board of health; a member of the local board of pension examining surgeons, and for four years its president; died at his home April 20, from nephritis, aged 53.

Henry Erskine Pressly, M.D. University and Bellevue Hospital Medical College, New York City, 1899; of Birmingham, Ala.; a member of the American Medical Association; visiting surgeon to St. Vincent's Hospital and local surgeon for the

Louisville and Nashville, and Seaboard Air Line railroads; died in Johns Hopkins Hospital, Baltimore, April 23, aged 34.

Hugo A. Auler, M.D. Washington University, St. Louis, 1890; of St. Louis; a member of the Missouri State Medical Association; consulting physician to St. Louis City Hospital; physician to Mount St. Anne's Consumption Hospital and Mount St. Rose's Hospital; died in Elgin, Texas, April 20, from heart disease, aged 41.

Michael P. Reynolds, M.D. St. Louis University School of Medicine, 1901; a member of the American Medical Association; formerly a member of the medical staff of St. Francis Hospital, Colorado Springs; and secretary of El Paso County Medical Society; died at his home in St. Louis, April 17, from pneumonia, aged 42.

Charles Richard Moxley, M.D. Queen's University, Kingston, Ont., 1905; of North Bay, Ont.; a member of the Ontario Medical Council; died in the Royal Victoria Hospital, Montreal, March 20, from appendicitis and pelvic peritonitis, with intestinal obstruction, for which several operations had been performed, aged 26.

Allen Sidney Whetstone, M.D. University of Michigan, Ann Arbor, 1880; formerly professor of operative surgery and preventive medicine in the Minneapolis College of Physicians and Surgeons; a veteran of the Civil War, and surgeon to George N. Morgan Post, G. A. R.; died at his home in Minneapolis, April 19.

Hugh A. Maughlin, M.D. University of Maryland, Baltimore, 1864; assistant surgeon of the Sixth Maryland Volunteer Infantry during the Civil War; for four terms adjutant general of the department of Maryland, G. A. R.; since 1877 an inspector of customs in Baltimore; died at his home from pleurisy, April 17.

John Hutchins Gaines, M.D. Tulane University, New Orleans, 1853; a charter member of the Garland County-Hot Springs (Ark.) Medical Society; died at his home in that city, April 19, aged 77. At a special meeting of the medical society, April 21, resolutions of regret and sympathy were unanimously adopted.

Alfred Quin Donovan, M.D. Bellevue Hospital Medical College, New York City, 1882; of Elizabeth, N. J.; a member of the American Medical Association; attending surgeon and chief of staff to Alexian Brothers' Hospital, Elizabeth; died in that institution, April 26, after operation for cancer of the liver, aged 52.

Willoughby Hector Gunn, M.D. American Eclectic Medical College, Cincinnati, 1880; died at his home in Oklahoma City, Okla., from the effects of morphin believed to have been self-administered with suicidal intent, while despondent on account of cancer of the throat, aged 59.

Alexander Miller Campbell, M.D. Western Reserve University, Cleveland, 1880; a veteran of the Civil War; a member of the Seneca county, Ohio, board of pension examining surgeons; died suddenly from cerebral hemorrhage, at his home in Tiffin, April 22, aged 62.

John W. Berry, M.D. College of Physicians and Surgeons, Baltimore, 1884; a member of the West Virginia State Medical Association; died at his home in Flatwood, April 21, from poisoning by carbolic acid taken in mistake for aromatic spirits of ammonia, aged 45.

Willis Alston, M.D. University of Maryland, Baltimore, 1869; a member of the Medical Society of the State of North Carolina, and one of its founders; for six years a member of the State Board of Medical Examiners; died at his home in Littleton, April 20, aged 62.

William P. Via, M.D. Washington University, St. Louis, 1872; for more than twenty years a practitioner of Oregon, and once coroner of Washington county; a Confederate veteran; died at his home in Forest Grove, April 17, aged 66.

John E. W. Sanderson, M.D. College of Physicians and Surgeons, New York City, 1886; visiting neurologist to St. Mary's and the Eastern District hospitals, Brooklyn; died at his home in New York City, April 19, from heart disease, aged 49.

Charles William Littleton, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1866; for four years treasurer and later commissioner of Labette county, Kan.; died at his home in Oswego, March 29, 1908, from bronchitis, aged 76.

Thomas Houston Garvin, M.D. University of Louisville (Ky.) 1875; a member of the Kentucky State Medical Association, and a Confederate veteran; died at his home in Horse Cave, April 20, from heart disease, aged 67.

Edwin W. Pugh, M.D. Vanderbilt University, Nashville, 1893; a member of the Florida Medical Association; and president of the Dade County Medical Association; died at his home in Miami, April 18, from tetanus, aged 42.

Zachariah Pleasant Glass, for fifty-eight years a practitioner; formerly proprietor of Elmwood Park Sanitarium, Hannibal, Mo.; died at his home in San Bernardino, Cal., from senile debility, March 16, aged 88.

George Augustus Ingram (license, Luzerne county, Pa.); for thirty-nine years a practitioner of Summit Hill and Lansford; died in Bryn Mawr, Wales, Dec. 1, 1909, from cerebral hemorrhage, aged 71.

Theodore Parker Crosse, M.D. Rush Medical College, Chicago, 1879; a member of the State Medical Society of Wisconsin; died at his home in Sun Prairie, April 20, from erysipelas, aged 53.

John Kilgour White, M.D. University of Maryland, Baltimore, 1884; of Woodland, Md.; died suddenly from pneumonia, while making a professional call, April 4, aged 48.

Eli Gilmore McDivitt, M.D. Miami Medical College, Cincinnati, 1873; of Richmond, Ind.; died in the Reid Memorial Hospital in that city, April 18, from senile dementia, aged 62.

Minnora Sprague Marshall, M.D. University of Michigan, Ann Arbor, 1896; formerly of Montpelier, Va.; of Fruitville, San Francisco; died at her home April 10, from cancer, aged 39.

James Robie, M.D. Vermont Medical College, Woodstock, 1853; a pioneer practitioner of Black River Falls, Wis.; died at his home in that city from heart disease, April 21, aged 82.

William Vincent Shaffer, M.D. Miami Medical College, Cincinnati, 1880; formerly of Middletown, Ohio; died in the German Hospital, Newark, N. J., April 21, from pneumonia, aged 55.

Josephus Davis, M.D. Western Reserve University, Cleveland, 1860; at one time mayor of New Carlisle, Ind.; died at his home in that place, April 18, from pneumonia, aged 74.

Daniel Futrell (license, Ky., years of practice); a practitioner of Kentucky for more than fifty years; died at his home in Melber, February 26, from heart disease, aged 83.

Robinson John Cotton (license, Tenn., 1889); of Memphis; a Confederate veteran; died in Memphis, Nov. 24, 1908, after an operation for the removal of gallstones, aged about 62.

John T. Bethel, M.D. Kentucky School of Medicine, Louisville, 1870; a member of the American Medical Association; died at his home in Henderson, Ky., April 23, aged 70.

William Abel Lytle, M.D. University of Tennessee, Nashville, 1902; of Oklahoma City, Okla.; died at his former home in Eagleville, Tenn., April 12, from tuberculosis, aged 36.

William H. Shaffer, M.D. Starling Medical College, Columbus, Ohio, 1881; formerly of Columbus; died in Elkhart, Ind., April 4, from tuberculosis of the kidney, aged 65.

David Dunlap Oates, M.D. University of Pennsylvania, Philadelphia, 1860; of Merkel, Ala.; died suddenly in Birmingham, Ala.; April 23, from heart disease, aged 74.

Andrew J. B. Jenner, M.D. London, England, 1859; afterward a clergyman and bishop of the Anglican Church; died at his home in Detroit, Mich., April 15, aged 72.

Julius M. Gilbert, M.D. Georgia College of Eclectic Medicine and Surgery, Atlanta, 1882; died at his home in Danville, Ga., April 7, from general debility, aged 62.

Jesse McCoy (license, Iowa, 1886); a member of the Iowa State Medical Society; died at his home in Fort Madison, April 16, from heart disease, aged 72.

Cooper Fenimore McBride, M.D. University of Pennsylvania, Philadelphia, 1875; died at his home in Youngstown, Ohio, from pneumonia, April 13, aged 58.

Frank Levasseur, M.D. University of the Victoria College, Coburg, Ont., 1886 died at his home in Haverstraw, N. Y., March 29, from uremia, aged 47.

James P. Bone, M.D. Kentucky School of Medicine, Louisville, 1859; a Confederate veteran; died at his home in Arlington, Tenn., April 11, aged 77.

Lambert Laurens, M.D. Iowa Medical College, Keokuk; of Le Sueur county, Minn.; was burned to death March 21, near Montgomery, Minn., aged 60.

Edward J. Dickinson, M.D. Albany (N. Y.) Medical College, 1866; died suddenly at his home in Corydon, Iowa, April 19, from heart disease, aged 70.

Thomas S. Potter, M.D. Medical College of Ohio, Cincinnati, 1869; died at his home in Carthage, Cincinnati, April 20, from pneumonia, aged 75.

James M. Chadwick, M.D. Vanderbilt University, Nashville, 1890; died suddenly, April 19, at his home in Murfreesboro, Tenn., from heart disease.

Henry Bascon Burkett, M.D. College of Physicians and Surgeons, Baltimore 1878; of Hillsboro, Ala.; died in Birmingham, Ala., April 23.

Robert J. Jordan, M.D. Eclectic Medical College of the City of New York, 1881; died at his home in Philadelphia, April 18, aged 79.

Casimir A. Landrum, M.D. Tulane University, New Orleans, 1876; died at his home in DeFuniak Springs, Fla., April 23, aged 70.

Henry King McLean, M.D. Albany (N. Y.) Medical College, 1850; died at his home in Hoosick Falls, N. Y., April 7, aged 84.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

American Academy of Medicine, Atlantic City, June 5-7.
Am. Assn. of Genito-Urinary Surgeons, Pocono, Pa., May 31-June 1.
Am. Climatological Association, Fortress Monroe, Va., June 4-5.
American Confederation of Reciprocating, Examining and Licensing Medical Boards, Louisville, May 12.
American Dermatological Association, Philadelphia, June 3-5.
Am. Gastro-Enterological Association, Atlantic City, June 7-8.
American Gynecological Society, New York, May 27-29.
American Laryngological Association, Boston, May 31-June 2.
American Laryn., Rhin. and Otol. Society, Atlantic City, June 3-5.
American Medico-Psychological Assoc., Atlantic City, June 1-4.
American Neurological Association, New York, May 27-29.
American Orthopedic Association, Hartford, Conn., June 14-16.
American Pediatric Society, Lenox, Mass., May 27-28.
American Proctologic Society, Atlantic City, June 7-8.
American Surgical Association, Philadelphia, June 1-3.
American Therapeutic Society, New Haven, Conn., May 6-8.
American Urological Association, Atlantic City, June 7.
Arizona, Medical Association of, Prescott, May 19-20.
Arkansas, Medical Society of, Pine Bluff, May 18-21.
Association of American Physicians, Washington, D. C., May 11-12.
Con. of State and Prov. Bds. of No. Am., Washington, June 4-5.
Connecticut State Medical Society, Hartford, May 26-27.
Illinois State Medical Society, Quincy, May 18-20.
Iowa State Medical Society, Dubuque, May 19-21.
Kansas State Medical Society, Emporia, May 5-7.
Louisiana State Medical Society, New Orleans May 4-6.
Maine Medical Association, Portland, June 16-17.
Maryland, Med. and Chir. Faculty of, Baltimore, May 13-15.
Massachusetts Medical Society, Boston, June 15-16.
Missouri State Medical Association, Jefferson City, May 18-20.
Montana State Medical Association, Missoula, May 12-13.
Nat. Assn. for Study and Prevention of Tuberculosis, Washington, D. C., May 13-15.
Natl. Con. State Med. Ex. and Licensing Bds., Atlantic City, June 7.
New Hampshire Medical Society, Concord, May 13-14.
New Jersey Medical Society, Cape May, June 23-25.
North Dakota State Medical Association, Fargo, May 11-12.
Rhode Island Medical Society, Providence, June 4.
Texas State Medical Association, Galveston, May 11-13.
Wisconsin State Medical Society, Madison, June 30-July 2.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-fourth Annual Meeting, Celebrating the Centennial of McDowell's Operation, held in New York City, April 20-22, 1909

The President, DR. J. RIDDLE GOFFE, in the Chair.

An address of welcome was delivered by Dr. Clement Cleveland, New York, and was responded to by Dr. J. Montgomery Baldy, Philadelphia.

SYMPOSIUM ON CESAREAN SECTION; INDICATIONS IN PLACENTA PRÆVIA, AND THE JUSTIFIABILITY OF STERILIZATION IN THIS CONDITION

Cesarean Section in Placenta Prævia

DR. CHARLES JEWETT, Brooklyn, N. Y.: The essential consideration in weighing the claims of Cesarean section as against obstetric measures in placenta prævia are blood loss, shock of operation and life-saving possibilities to the child. The lessened risk of infection and of uterine lacerations have some force, but the question of sepsis scarcely disturbs the balance.

and lacerations are largely the result of avoidable violence. Accidents of obstetric manipulations in the matter both of infection and of uterine injuries, while not wholly preventable, belong more to past than to present day methods. Subsidiary questions which must be considered are existing anemia and exhaustion, the extent of implantation, the stage of dilatation, and the dilatability of the cervix, the viability of the child. While in certain cases eclampsia, pelvic contraction or narrow vagina may determine the choice, here the indication is concerned with the complication more than the faulty placental insertion. Our present concern is with placenta prævia as of itself an indication for the Cesarean operation. In complete placenta prævia, and when complicated with an undilated and rigid cervix, abdominal section claims consideration. Certain of the more conservative sectionists accord a place to the Cesarean operation in these conditions when it can be performed in a hospital. But the benefits of a hospital environment obtain in a similar measure for obstetric delivery. Even in complete previal implantation, and with undilated cervix, bleeding is amenable to one or more of the usual obstetric procedures, gauze tamponade or water bag, within the cervix, or the latter passed through the placenta, podalic version. Grave hemorrhage in placenta prævia is due more to failure in the timely and well directed use of the obstetric measures at our command than to any lack of them. With ligation of the uterine arteries, as proposed by Miller of Pittsburg, I have had no experience in vicious implantation of the placenta. We know its value in certain other uterine hemorrhages, and, if its author's claims are borne out by further trial, nothing more is required for the management of the kind of hemorrhage under discussion. From the standpoint of shock, the major operation is at a signal disadvantage. The abnormal implantation is seldom or never recognized until bleeding has begun. Abdominal section is a grave risk after much hemorrhage. In a greatly depleted patient it is almost certainly fatal. Cesarean section, once begun, must be carried to completion, whatever the condition of the woman. It admits of no waiting for recuperation. On the other hand, no shock attaches to the introduction of a hydrostatic bag, and little or none to a Braxton-Hicks version. The obstetric procedure may be moderated to suit the needs of the individual case. Bleeding controlled, time is permitted for returning strength and a slow and gradual dilatation and delivery entail a minimum of tax. In a considerable proportion of cases expulsion or extraction is made easier by immature fetal development. In nearly 25 per cent. the child is non-viable, and here often extraction may be simplified by craniotomy. As between a skilful section and an equally skilful obstetric delivery, less shock should obtain in the latter.

The principal claim for Cesarean section in placenta prævia is its diminished fetal mortality. Under obstetric treatment the death rate of the child is formidable. For this, three causes are responsible—prematurity, the effect of maternal blood loss, and the delay and traumatism incident to delivery by the natural passages. In practically all cases the resistance of the fetus is in greater or less degree impaired by maternal hemorrhage. A large proportion of the children are doomed to death, whatever the method of delivery. Of the possibly viable children, Cesarean section may save many lives, but by no means all. Vaginal Cesarean section has no greater claim to consideration than the suprasymphyseal operation. While it may offer quite as good a prognosis for the mother, the chances for the child are not as good, owing to the somewhat greater fetal risks in extraction through the natural passages. Not only do we find little rational basis for Cesarean section in placenta prævia, but its claims receive scant support from experience. In 2,010 cases of placenta prævia from the German, French and Italian literature of the last two years, the maternal mortality under obstetric methods of delivery was 221, 10.9 per cent., the fetal 1,159, 57.3 per cent.; 726 of these cases, reported by Füh, were collected from the practice of midwives and general practitioners. Many patients were subjected to prolonged tamponade and were examined by needless hemorrhage. Exclusive of Füh's cases the maternal mortality was 6 + per cent., and the fetal 68.8 per cent.

Comparing these results with those of 95 abdominal Cesarean operations collected from seven publications, all but one of the last year, we find in the latter a mortality of 11.5 per cent. for the mothers, and 34 per cent. for the children. Sellheim, in one vaginal Cesarean section, saved both mother and child. In twelve uterovaginal sections reported by Bumm the maternal deaths were 8.3 per cent., and the fetal 83.3 per cent. Hammerschlag refers to twenty-six vaginal Cesarean sections, with a fetal death rate of 55 per cent. How many mothers were lost he fails to say. The few vaginal operations make a better showing for the mothers than the abdominal, but the percentage of fetal deaths is no less than under obstetric methods. If conclusions may be formulated on so small a number of cases, the "Cesareanists" have not yet established their cause.

The Indications for Abdominal Cesarean Section in Placenta Prævia

DR. HENRY D. FRY, Washington, D. C.: The principal dangers to be overcome by the obstetric treatment of placenta prævia are hemorrhage, laceration of the uterus and sepsis. Delivery from above escapes these dangers to a great extent, because removal of the infant and placenta by a Cesarean section does away entirely with the first and second stages of labor. Abdominal Cesarean section, however, brings dangers of its own; shock, sepsis, acute dilatation of the stomach, and other postoperative complications. The indications for the classical Cesarean section are primiparity, small vagina, rigid and undilatable cervix, and placenta prævia centralis. This combination will be encountered in about 5 per cent. of all cases of placenta prævia; therefore, the purely obstetric management will best meet the indications of 95 per cent. of cases. The indications for Porro-Cesarean section include those women who have been subjected to preliminary obstetric interference, plus the classical Cesarean indications mentioned.

The Advisability of Cesarean Section in the Treatment of Complete Placenta Prævia

DR. FRANCIS S. NEWELL, Boston: The advocates of Cesarean section claim that the maternal mortality under the ordinary methods of treatment is so great that some change must be made. Hirst states that in the hands of the general practitioner a mortality of approximately 40 per cent. is present in complete placenta prævia, but believes that in the hands of experts the ordinary mortality should be in the neighborhood of 1 per cent., or, in other words, an accidental mortality. Other authorities admit a mortality varying from 3 to 6 per cent. in a large series of cases, presumably under the care of experts. The maternal mortality from abdominal Cesarean section for placenta prævia is variously given as from 20 per cent. upwards even in expert hands, and it seems probable that if abdominal Cesarean section is adopted as the routine treatment by the profession as a whole, a constant high mortality will be maintained, since the results of surgery performed by the general practitioner are always worse than those obtained by competent abdominal surgeons. While the maternal mortality in the hands of an expert averages from 3 to 5 per cent., in the hands of the general practitioner the mortality is 40 per cent. The fetal mortality in cases of complete placenta prævia varies from 60 to 65 per cent. under the ordinary methods of treatment, and it would seem at first sight that this was the indication for the performance of Cesarean section. However, any one who studies carefully the causes of the fetal death rate, must be impressed with the fact that no such improvement in statistics is to be expected as would seem probable at first sight. If there is any factor which claims recognition in determining the advisability of substituting Cesarean section for the ordinary methods of treatment of placenta prævia, it would seem that the morbidity attendant on dilatation and extraction is the one. There can be no doubt but that the trained surgeon, who has had no obstetric training, will have better results in treating placenta prævia by Cesarean section than if he tried to perform an operation with which he has had little or no experience. The advocates of Cesarean section have not recognized that their personal limitations furnish the great indication for an abdominal delivery,

and not the exigencies of the ease. Recently vaginal Cesarean section has been urged as the best solution of the problem, and the advocates of this operation claim that it is simple and easy for the trained surgeon and carries much less risk with it than the abdominal delivery, but my feeling, based on a limited experience with the operation, is that it is not so simple a procedure, even in uncomplicated cases, as is commonly stated, and I feel that, although in the rare cases in which the cervix is more or less rigid, it is probably a safer operation than abdominal delivery, as a routine procedure, in complete placenta prævia it has few, if any, advantages over the methods heretofore in use.

Cesarean Section in Placenta Prævia

DR. EGBERT H. GRANDIN, New York: Except when the patient may be kept under constant observation, the rule should be to empty the uterus as soon as the diagnosis is made, rarely, therefore, will the question of Cesarean section offer. Less radical means will suffice from the standpoint of the woman, and in marginal instances for the child. In central implantation near or at term the child may be disregarded, and unless the cervix be diseased, undilatable and not incisable, the question of Cesarean section will not offer. When time permits, if the vaginal portion has merged, dilating measures suffice associated with the Dührssen operation. In marginal instances, the vaginal Cesarean section may enter into consideration.

Sterilization in Cesarean Section

DR. JOHN OSBORNE POLAK, Brooklyn, N. Y.: I feel that the obstetric surgeon should sterilize the woman who is subjected to a Cesarean section, first, if she request the procedure; second, after the second section in the presence of the absolute indication, if the proper consent can be obtained; third if the pathologic conditions present necessitate extirpation of the uterus in the interests of the patient's life and health, sterilization may be done, if necessary, without consent. In elective and uncomplicated hysterotomies, excision of the proximal ends of the Fallopian tubes at their origin in the uterus and occlusion of the severed end by flattening it out and suturing it to the peritoneum on the posterior fundal wall is the operation of choice. When infection, disease or atony with uncontrollable hemorrhage of the uterus is present, hysterectomy or the Porro operation should be elected, to secure to the patient immunity from future conception and gestation. Finally, whenever possible, one or both ovaries should be retained in order that an operative menopause may be averted.

The Justifiability of Sterilizing a Woman After Cesarean Section, with a View to Preventing Subsequent Pregnancies

DR. CHARLES M. GREEN, Boston: It is ethically and morally unjustifiable to sterilize a woman in performing Cesarean section, even if she and her husband request it. The burden of proof to the contrary rests with those who advocate it. Opportunity may properly be taken, in performing Cesarean section, to remove pathologic organs; and the result may be that the woman can never again become pregnant, as in bilateral salpingo-oöphorectomy, or in hysterectomy for neoplasms. But in the presence of disease requiring total ablation of the pelvic generative organs, pregnancy could not again occur were the organs not removed. If the indication for Cesarean section is absolute, and husband and wife are so informed, they may abstain from subsequent pregnancies. If the indication is relative, and the disproportion of minor degree, the woman subsequently may be safely delivered of living children; she may deliver herself. In either case, experience teaches that repeated section may be performed as safely as the primary operation. A husband and wife may not ethically ask that either be sterilized with a view to preventing pregnancy and avoiding repeated section. If such a request is made and acceded to, not only is the operation morally wrong, but in the event of a second marriage may be bitterly regretted. I furnish statistics in support of these opinions.

Discussion on Cesarean Section

DR. ALBERT F. A. KING, Washington, D. C.: In discussing this subject, we must bear in mind that obstetrical patients

must be divided into two classes, those who can be treated in hospitals with surgical aid and those who are treated in their homes without surgical aid, as, for instance, women in the country. In considering any method of treatment, those two classes must be borne in mind.

DR. HERBERT SPENCER, London, England: I have had little experience with abdominal Cesarean section or vaginal Cesarean section in the treatment of placenta prævia. My own treatment has been usually Braxton-Hicks version, and leaving the case to Nature, delivery usually being effected in this way without any further hemorrhage in the course of about three hours, on an average, but this method results in a high fetal mortality. We must consider whether we are going to take into account the mother or the child, or both. The use of the Champetier de Ribes bag is exceedingly valuable, and while I have not had much experience with it myself, my colleague has had, and says that it reduces the mortality of the children considerably, with some increased mortality among the mothers. If Cesarean section is indicated, the abdominal is preferable to the vaginal route.

PROFESSOR HOFMEIER, Würzburg, Germany: In my opinion, the treatment of placenta prævia by abdominal section is limited to a small percentage of cases, because it is practically impossible for the general practitioner to follow out this method of treatment. The old method of combined version and extraction, generally accepted in Germany, and treatment by means of metreurynters in case of large and strong children has given good results.

DR. E. W. CUSHING, Boston: I do not think that any one has a right to determine whether a woman shall be sterilized or not. A woman's body belongs to herself. If she has been malformed by Nature and can not be delivered of a child without repeated surgical operations which involve the risk of life, and she desires to avoid that subsequent risk by having a sterilizing operation done, she has a right to do so.

DR. HENRY D. FRY, Washington, D.C.: My rule is to explain the situation to the woman and her husband and allow them to decide whether or not she shall be sterilized. I do not believe we can make a dividing line, on account of the social position of the woman.

PROFESSOR HOFMEIER: I have performed sterilization not only with the consent of the woman and her husband, but at their urgent request. I do not think it is possible for women to abstain from subsequent pregnancy, as indicated by Dr. Green.

DR. CHARLES JEWETT, Brooklyn: I performed Cesarean section two months ago on a woman on whom I did the same operation two years previously, and at the request of both the husband and wife I felt justified in doing an operation of this character. I resected the tubes from the cornu of the uterus, then simply caught the end of the tube down on the suture line.

DR. HERBERT SPENCER, London: I do not consider we are justified in saying, in the absence of pathologic conditions, such as fibroid tumors, cancer or infection, that a woman shall not have any more children. From a purely ethical standpoint, I can not see any difference between consenting to operate on a woman and preventing her from having children by this sterilization operation and committing an abortion because she asks it. The so-called sterilizing operation is not always reliable. A distinguished abdominal surgeon in England supposedly sterilized a woman, but subsequently, much to her annoyance and mortification, she again became pregnant, and I delivered her of a child. I delivered this woman for the seventh time after so-called sterilization.

DR. J. MONTGOMERY BALDY, Philadelphia: Nature has so arranged matters that some women, apparently healthy, will not bear children. Pathologic processes set in which render them incapable of bearing children. A woman is not in this world to be a beast of burden, although she has reproductive duties to perform, and there comes a time when, after she has performed those to the best of her ability, Nature has so deformed her, perhaps maimed her, that she no longer can be delivered of a child without a surgical operation, and for the sake of her health, comfort and happiness, she is the best

arbiter as to whether sterilization shall be done or not. My sympathies go out largely to women in this respect. If a woman, guided by the conscientious judgment of the physician, decides to be sterilized, we have a right to sterilize her and prevent reproduction in the future in this individual case, but this does not mean that this operation should be done on every woman who requests it.

DR. ANDREW F. CURRIER, New York: I place myself on the side of those who believe that it is an injustice to a woman, aside from any desire she may have for children, to subject her repeatedly to an operation which risks her life. The desire for offspring is a natural and proper one in most cases. The mere physical conditions alone which result, or are likely to result, should be a strong argument and should influence us materially in regard to the question of future pregnancy.

DR. SETH C. GORDON, Portland, Me.: A woman has a right to say whether she shall be sterilized or not. Oftentimes a woman will say, "Doctor, I don't want a child." But when she is subjected repeatedly to an operation which we know to be dangerous to life, in order to be delivered of a child, she certainly has a right to say whether or not sterilization shall be performed.

DR. C. C. FREDERICK, Buffalo: I have sterilized women at their request and at that of their husbands in cases in which Cesarean section had been done for the absolute indication, with narrowing of the pelvis to a degree that it was absolutely impossible to deliver a viable child through the pelvis.

DR. ALBERT F. A. KING: Self-preservation is the first law of nature, and preservation of the species is the second law. I agree with those who have expressed the opinion that women and their husbands have a right to decide this question of sterilization.

DR. J. WESLEY BOVEE, Washington, D.C.: I concur in the view that the husband and wife should decide whether the woman is to become pregnant or to be sterilized, but the surgeon has not the right to act as he chooses to produce sterility. The decision of the question rests largely with the husband and wife, and not with the surgeon. The surgeon has no right to remove a woman's possibility of future pregnancy except for grave pathologic lesions in the organs of generation themselves.

The subject was further discussed by Drs. George Gellhorn, Willis E. Ford, Egbert H. Grandin, Philander A. Harris, and the discussion was closed by the various essayists.

What Shall We Teach the General Practitioner Concerning the Treatment of Abortion?

DR. FREDERICK J. TAUSSIG, St. Louis, Mo.: The curette is still popular with the general practitioner because it requires less technical skill for its use. The summarized experiences of many large clinics show that no one method of treatment is available for all cases, but that each has its special field of usefulness. An attempt to construct a simple table of operative procedure varies according to (1) the stage of pregnancy at which abortion occurs (first six weeks, second six weeks, third to fifth month); (2) the stage of the abortion (imminent, inevitable, incomplete); (3) the experience of the physician in charge (country practitioner, city practitioner, specialist); (4) surroundings (country residence, city residence, hospital).

DISCUSSION

DR. JOSEPH TABER JOHNSON, Washington, D. C.: This is an important subject, and as gynecologists as well as obstetricians we have much to do with the effects of badly managed cases of abortion. In Washington as in St. Louis, the dispensary and charity hospital class of patients, who come for diagnosis and treatment, state that they attribute their present ill-health to their last abortion, and by questioning these patients we find their case was badly managed, in the great majority of instances. It would be a good thing if this society could formulate some method of treatment for these cases. As to whether the curette or the finger should be used to scoop out of the uterus the remains of an abortion, I agree with Dr. Taussig that in the first six weeks, when the neck of the uterus is

dilated only a little, it would be doing violence to the parts to attempt to dilate to such an extent as to permit the index finger to pass into the uterus and scoop out what remains there. On account of the great damage done by the curette, I should advocate, in the series of cases which he has detailed, after the sixth week, the seventh and eighth weeks, that the woman be anesthetized and the finger introduced into the uterus instead of the curette and the remnants of the after-birth or membrane removed. The finger is a much more intelligent instrument than the curette.

DR. WILLIAM H. WATHEN, Louisville: I have no reliable statistics as to the relative number of surgical operations I do when the pathologic condition has been caused by abortion or gonorrhea, but it is so frequently caused by abortion requiring extirpation of the diseased adnexa, that certainly we should strive to prevent this occurrence. The placenta should always be removed immediately after the delivery of the child, because delay in this regard is dangerous, and we never know when danger is going to come. Not only do practitioners perforate the uterus with a curette, but they never know when they use the curette whether they have removed all the secundines or not. We should never under any circumstances, in my judgment, use the curette to remove retained secundines, but should rely on the educated finger.

DR. THOMAS J. WATKINS, Chicago: I not only follow out the old treatment of the vaginal pack in cases in which the uterus can not be emptied without a great deal of traumatism, but pack the uterine cavity. This should be done in all cases in which the uterus can not be emptied without considerable traumatism, and especially when the cervix is not well dilated. This treatment can be extended even to the cases of infection. Sometimes a woman is sent to the hospital with a temperature of 104-5 F., suffering from criminal abortion—she being possibly two or three months pregnant—with undilated cervix, and we no longer think it necessary to empty the uterus at once, but it is much better for the patient to pack the uterine cavity as full as possible in the form of a vaginal pack. The next morning the temperature is generally normal. During the day the woman may expel the gauze from the uterus, and usually expels the fetus and membranes with it. We leave it in forty-eight hours, as a rule, at the end of which time it has either expelled itself or can be removed with very little traumatism or shock to the patient.

DR. MALCOLM MACLEAN, New York: I want to speak for myself, and possibly a few others, on one phase of this subject. Dr. Wathen has referred to practitioners who are not able to dilate the uterus and empty it by the finger. I am one of those. I can dilate the uterus, but can not empty the horns of the uterus and feel sure that I have removed all debris from this organ. I want to know how a man's finger has become so elongated and prehensile that he can reach the corners of the uterus and safely feel that he has removed all detritus. There are undoubtedly men, such as Dr. Wathen, who can do this. I can not. I believe the mistake is made frequently by good operators who think they have emptied the uterus by the finger, and Nature comes to their salvation and empties the uterus afterward of pieces of placental tissue which otherwise might give trouble.

DR. EUGENE C. GEHRUNG, St. Louis: If we wait three or four hours after the expulsion of the ovum, we will have very great difficulty in inserting the finger, while if it is done immediately it can be effected with great ease. I agree with Dr. MacLean that the finger is too short to reach the fundus of the uterus in some cases, but when the finger is inserted well, if we take care to put the other hand on the fundus of the uterus and press the area over the finger, the little spaces can be cleaned out. That has been my practice and I have succeeded in removing any retained pieces of placenta.

DR. JOSEPH E. JANVRIN, New York: Like Dr. Watkins, I pass a small wad of gauze up into the cervix and tampon the vagina thoroughly to excite contractile pains.

DR. F. TAUSSIG: I presented this paper not as a subject for discussion by us as regards our own technic, but with regard to the technic that we would advise the general practitioner to use, and I think in that respect we must be very

clear and definite in our instructions. The tampon, the curette, the finger, each should be used in certain instances, and we should impress on the general practitioner the exact indications for each of these methods.

Latero-Lateral Anastomoses of Ileum and Sigmoid Flexures for Chronic Mucous Colitis

DR. GEORGE H. NOBLE, Atlanta, presented a preliminary report on 27 cases, in which he had resorted to these operations. Among other things, he said: Results show cures in the majority of cases, considerable improvement in others, and little improvement in a small percentage of them. Mucous discharges were cured in the first series of older cases, and decreased in those recently operated on. Colic and soreness of abdomen have been relieved, or cured in almost all cases. Headaches from intestinal toxemia have also been relieved and the general health of the patients improved to a greater or less extent. The operation does not cure constipation in all cases, but in face of this fact, patients with constipation report either cures or improvement in the mucous colitis. The author pointed out the principles involved, discussed the effect of sulpho-ethers in the urine, and gave a short history of the surgical treatment of chronic colitis. In addition to operation, it is essential to correct complicating lesions which either lead to constipation or interfere with a free outdoor life. It is likewise essential to regulate the diet in order to secure good results in all cases.

DISCUSSION

DR. EGBERT H. GRANDIN, New York: A simpler method sometimes answers for the cure of mucous colitis than anastomosis of the ileum and sigmoid flexure, and that is the removal of the appendix. Since it has become my custom to take the appendix out, as a routine measure, whenever in the course of an abdominal section for other lesions the condition of the patient allows the extra few minutes, I have noticed frequently that mucous colitis has disappeared. I have done that empirically with the full consent of the patients, with a knowledge that the operation was empirical, and I have deliberately taken out the appendix for the cure of mucous colitis in one case, the patient having been an invalid from that trouble twelve years before I removed the appendix. The appendix was post-cecal, and slightly adherent, but not an appendix requiring an operation for appendicitis.

DR. LEWIS S. McMURTRY, Louisville: Since a large number of our men have been in the Philippines and contracted amebic dysentery, this subject has received more consideration and has developed the rather surprising fact that so far north as Cincinnati amebic dysentery is indigenous. I have had the opportunity to give some attention to this subject, and have been surprised at the number of cases of amebic ulceration of the colon that have been discovered in people who have never been out of this country, nor even in any tropical climate. They have been treated for years in various ways, but they would not come under the class of cases discussed by Dr. Noble with a view to surgical treatment in the manner he has indicated. By position, inverting the patient, and using an instrument which will allow the colon to be examined and illuminated a good distance, the characteristic ulceration of this form of lesion of the intestine will be discovered, and it is almost incurable by enemata and by systemic treatment. It goes on for years with a diarrhea, with wasting of the patient, and there has been no operation that has been more useful in the treatment of this class of diseases than that of appendicostomy. In the hand of colleagues I have seen perhaps half a dozen patients who have been treated in this way in the last year. The scrapings from these ulcers, when examined, are found to be literally alive with amebas. I would suggest this as one of the possibilities in all the cases that have been described by the essayist, and I would further suggest that in these cases the parts should be illuminated carefully and examined before resorting to the operation that has been described.

DR. FRANKLIN H. MARTIN, Chicago: If the author had read all of his paper, undoubtedly there would be observed a similarity between the operation he has described and the one suggested by Arbuthnot Lane, namely, the removal of the colon for the treatment of constipation. This operation provides a

remedy for that part of the colon which is dead, leaving a portion of the colon unused by the Arbuthnot Lane operation. I would be glad to hear what Dr. Noble has to say in reference to the Lane operation.

DR. J. RIDDLE GOFFE, New York: In regard to the presence of amebic dysentery below the Ohio River as having been discovered in the last few years, I have heard this explanation, that it has been brought back by our soldiers from the Philippines and may have become indigenous at the present time from that cause.

DR. G. H. NOBLE: I avoided purposely saying anything about amebic dysentery and similar conditions because the treatment is so well known, and so many operations have been done for their relief. In reference to removal of the colon, such an operation would hardly be justifiable in mucous colitis. That operation belongs to another disease; it is too severe a remedy for the disease.

(To be continued)

AMERICAN SOCIETY FOR THE STUDY OF ALCOHOL AND OTHER DRUG NARCOTICS

Semi-annual Meeting, held in Washington, D. C., March 17-19, 1909

The object of this meeting was the presentation of some of the latest and most authentic conclusions based on laboratory and clinical experience concerning the alcoholic problem.

The treatment of inebriety was a subject of many papers, all urging that the disease side be recognized and that the patient be treated as a ward of the state, irresponsible and requiring exact care.

The unusual prominence given by the press in the daily reports shows that the subject has aroused intense interest in the public mind. It also indicates that public opinion is turning to the physician for facts and conclusions for scientific study above the present theories. The members of the society feel that the whole alcoholic problem is rapidly coming into prominence as a hygienic health subject in which physicians are the most competent, and that they will become the real teachers and students of the causes and its prevention.

Temperance Movement in the South

DR. HENRY O. MARCY, Boston: The rapid change of public sentiment favorable to more radical measures for the suppression and control of the sale of alcohol as a beverage is not mere sentiment or theory, but is due to the deep feeling of alarm and the recognition of the influence of alcohol in intensifying and increasing the social perils of home life and good government. Medical and hygienic study based on statistics, and mortality tables, indicate that alcohol as a beverage is a most active cause of degeneration and disease among the colored and illiterate classes of the South. The unrestrained use of alcohol is literally anarchy. The alcohol problem has a sanitary side of the most absorbing interest, which must be recognized as becoming a part of the practical life of every community. The unsettled condition of homes, race prejudices and conflicts incident to the evolution of a new South should have no complications from alcohol or other forces destructive to healthy growth. Industrial progress and development of the resources of the South will be obstructed and retarded unless the use of alcohol as a beverage can be controlled.

The Alcohol Problem in Every Day Life

DR. HOWARD A. KELLY, Baltimore: This problem is becoming more apparent every day in degenerations and injuries directly traceable to the use of alcohol. Alcohol as a beverage and even as a medicine has an unknown danger that may come into prominence in a great variety of diseases and conditions. It is a dangerous and uncertain drug, and as a beverage should have no place in healthy normal living.

Future of the Alcoholic Problem

DR. THOMAS D. CROTHERS, Hartford, Conn.: At present there are positive indications of the early solution of the prob-

lem by the means and measures that can not be mistaken. Experience and laboratory research have shown alcohol to be a narcotic, and its effects on the system produce a distinct disease both curable and preventable. This question is one of public health and sanitary science. The saloon for the promotion of the sale of spirits is a center for the promulgation of the disease, and is doomed to extinction from a larger and more exact knowledge. Science shows that alcohol as an anesthetic has a value in medicine, but its real power is that of a fuel, light and force producer. Cheap alcohols can be made from a great variety of sources that will be active competitors to electricity, gasoline and steam. What is needed is the invention of boilers, lamps and means to utilize and make practical this great power of alcohol. Every distillery and brewery in the country will be required for the manufacture and distribution of cheap alcohols when the inventor supplies the missing links. Alcohol will become one of the great rivals of electricity to do the world's work, because it can be made from the waste and by-products in every section of the country. Beer, spirits and all other forms of alcohol as beverages will disappear when the inventor shows us how to harness and utilize this new latent power of civilization. The future of the alcoholic problem will be followed by a great revolution in commercial industry and will be a question of sanitary science and inventor's skill.

Alcoholic Neuropathic Entailments

DR. CHARLES H. HUGHES, St. Louis: Alcohol sears and taints race stock with as much certainty as syphilis or tuberculosis; and the damaged brain or depraved blood extends far in the future. Heredity is not a theory. It is a fact that 80 per cent. of the children of drinking parents show the degeneration that has been transmitted in different forms and conditions.

Need of Legislation for Inebriates

DR. LEWIS D. MASON, Brooklyn: The defective inebriate needs legal care and control. He is more dangerous than the insane, more degenerate in his influence than the criminal and pauper, and should be segregated in special hospitals and colony homes on military plans, the inmates to contribute to the support of this institution by manual labor and to be held responsible by reward and punishments.

Effect of Alcohol on the Body

DR. BITTLE C. KEISTER, Roanoke, Va., discussed the effects of alcohol from a scientific point of view, and stated that modern laboratory research and clinical experience denies the tonic and stimulant value of alcohol, and declares that its action is that of an anesthetic and narcotic. The use of alcohol as a beverage, therefore, is a relic of barbarous times.

Responsibility in Intoxication

DR. ALBERT GORDON, Philadelphia: No one who uses spirits to excess should be considered sane and responsible. The degree of mental and moral paralysis in each case must be settled by a study of the facts. The attempt to draw dividing lines between sanity and insanity is unreal and unscientific. Intoxication is literally insanity and irresponsibility under any circumstances, and will be so regarded in the future.

Laboratory Research

DR. WINFIELD S. HALL, Chicago, in his paper on laboratory researches concerning the action of alcohol on the cell and tissues, concluded as follows:

1. Alcohol is a waste product of tissue metabolism.
2. Alcohol produces a toxic effect on living substances.
3. Alcohol in common with other toxic substances is oxidized in the body.
4. This oxidization is a means of defense, as the products are far less injurious than the alcohol.
5. Because of this defensive oxidization of alcohol, which takes place largely in the liver, the ingestion of more than a small amount of that substance makes the body more liable to other toxic invasions.
6. Alcohol can not in the nature of the case be considered a food.
7. Alcohol decreases the efficiency of muscles, glands and nervous system.
8. Alcohol is a narcotic in its drug action.
9. Alcohol given in minute doses to lower animals seriously impairs fecundity and increases degeneration and race suicide.

Toxins as Active Causes of Inebriety

DR. G. H. BENTON, Chester, W. Va.: Modern research has proved beyond doubt that inebriety is the result of poisons introduced from without, and manufactured within the body. Alcohol is a toxin that is constantly changing and that not only absorbs the water of the body, but deranges the cell material and furnishes soil for the growth of poisonous bacteria. The inebriate is literally a laboratory where all sorts of germ poisons are continually growing, and the more spirits used, the greater the derangement and weakening of vital energies.

Laboratory Study of Inebriates

DR. A. MACDONALD, Washington, D. C.: Inebriety must be studied by scientific means and measures before remedies of value can be applied. Inebriety is curable and preventable but the remedies must not be theory or sentiment. First, find the exact nature of the disease, then the problem can be settled by breaking up the breeding-places.

Alcohol and Public Health

DR. GEORGE W. WEBSTER, Chicago: The alcohol problem is more important than tuberculosis because of its far-reaching effects. It costs the United States in direct money over two billion dollars. It causes directly and indirectly at least 10 per cent. of all deaths in the United States. It predisposes to infection, destroys acquired immunity, prevents the occurrence of artificial immunity, lowers vitality and increases mortality in all diseases and in surgical operations. It lessens the power of individuals to resist the injurious influences of extreme heat and cold. It causes deterioration of the quality of mental work. It diminishes the power to withstand fatigue and lessens the efficiency of the individual. It should always be classified as a poison and never as a food or stimulant. It is a public health and sanitary question, and not a moral one, but should be treated the same as fevers, smallpox and malaria and by scientific men alone. The alcoholic problem is a medical one, and can only be solved when studied from a scientific point of view.

Effect of Alcohol on the Stomach

DR. D. H. KRESS, Washington, D. C.: Functional and organic disturbances of the stomach are both a cause and effect of the use of alcohol. All forms of alcohol are dangerous remedies for stomach disorders, as while it quiets pain and discomfort for a time, it creates new sources of discomfort and derangement. Alcohol acts on the appetite and digestion, diminishing the nutrition of the body. All forms of spirits at meals are injurious, and the use of remedies containing alcohol for stomach diseases is contradicted by scientific research and shown to be most dangerous.

Danger from Mixed Drinks

DR. HARVEY W. WILEY, Washington, D. C., discussed the danger from mixed drinks, particularly absinthe, which he declared the most dangerous drink in existence, and urged that legislation should be enacted prohibiting its use in the United States. He called attention to the many tonics on the market whose only value comes from the narcotic action of the contained alcohol or narcotic. An exhibit was made of more than fifty samples of proprietary drugs and drug cures, some of the latter containing as much as 20 grains of morphin to the ounce.

MISSISSIPPI STATE MEDICAL SOCIETY

Forty-second Annual Meeting, held at Jackson, April 13, 1909

The President, DR. JAMES W. GRAY, in the Chair

Election of Officers

The following officers were elected: President, DR. D. W. Jones, Brookhaven; vice-presidents, Drs. J. S. Saunders, Pascagoula; J. C. Armstrong, Water Valley, and Thomas Purser, McComb City; secretary, DR. E. F. Howard, Vicksburg (re-elected); treasurer, DR. H. L. Sutherland, Rosedale (re-elected).

President's Address

DR. JAMES W. GRAY, Clarksdale: The State Board of Health has done very valuable work during the past year. The very high standard of qualifications required of licentiates to practice medicine promises much good to the people, and to the profession. The public interest being aroused through the efforts of the board in matters of hygiene and public sanitation is remarkable, more especially when we remember the inadequate appropriation at the disposal of the board. Since "*mens sana, in sano corpore*" in the individual is the most valuable asset of the state, an appropriation of fifty times the present amount would seem much the wiser policy.

The medical profession is regarded as the final authority in matters of hygiene and sanitation, and it is proper that it should have a larger influence in the making of the laws governing these problems. The committee on public policy and legislation has received scant courtesy at the hands of the law makers, and I believe that this is due to the fact that we have begun our agitation for reforms too late. Any candidate for election is more amenable to reason and proper argument before election than after he is safely seated, and I recommend that the Committee on Public Policy and Legislation be appointed for a period of five years, the terms of no two members to end the same year, and that an auxiliary committee be formed consisting of one member from each county in the state. The duties of the regular committees shall be the same as now, and after the policy and legislation desired shall have been decided on and outlined, the conclusions shall be communicated to each county member, and by him presented to the various candidates for senate and house, and pledges of support secured. The united strength of organized medicine in the state is a force which, if properly used, at the psychological time, will cause a would-be solon to awaken to reason. The determined, insistent purpose and action of our profession can put any just law we want on the statute books. Since the vigorous discharge of the duties of the chairman of the committee under this program would entail much labor and expense, I recommend that a liberal appropriation for clerical expenses be made, especially during the year of a general election. The increasing number of blackmailing malpractice suits against physicians suggests the necessity of this association adopting some plan of cooperative medical defense. The prevailing impression has been that malpractice suits are more numerous in the larger cities, and that Mississippi, having few large cities, the physicians of the state do not need such means of protection. The experience of other states shows conclusively that this is not true, but, on the contrary, such suits are much more frequent in the rural districts.

As some evidence of our appreciation of the heroism of Major James Carroll, I earnestly recommend that the association appropriate not less than one hundred dollars for his widow.

Our constitution recites that the president shall be the real head of the profession of the state during his term of office, and, as such, I consider it my duty, as it will be my pleasure, to tell you a few plain truths about yourselves. As individual physicians, in your relations to your patients, no nobler, kinder nor more charitable men ornament the earth. But, as an organization, and in the discharge of your civic duties, you have been stung by the tsetse fly, and a curative serum must soon be found, or you will sleep your life away. The purposes of this organization, among others, are to aid in the "enactment and enforcement of just medical laws" and in the enlightenment and direction of public opinion in regard to the great problems of state medicine, so that the profession shall become more honorable and capable within itself, and more useful to the public in the prevention and cure of disease. And how are we discharging these sacred duties? By meeting in annual session, giving birth to most commendable and altruistic resolutions and memorializing the legislature! In the limbo of unaccomplished things are many measures of great importance to the state, and to the profession, that were pressed forward with fine enthusiasm; that were discussed and earnestly recommended by the association, and then we memorialized the legislature—and went to sleep. Periodic paroxysms of perfervid

oratory, and spasmodic attacks of strenuous travail have never yet accomplished useful results. We may memorialize the legislature until the end of time, and, unless we put some force behind the memorial, we shall continue to be treated with the paltry consideration we have always received.

(To be continued)

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, held April 14, 1909

The President, DR. FREDERICK P. HENRY, in the Chair

SYMPOSIUM ON THE PHYSICIAN'S ETHICS AND INCOME

Why Medical Undergraduates Need Training in Business

DR. I. NEWTON SNIVELY: It is becoming increasingly difficult for the general practitioner to make a living. Physicians have ever posed as poor bookkeepers and worse business men. In any other field, similar lack of business sense would promptly lead to bankruptcy. Adequate business training is needed in the practice of medicine because of (1) the increased demands on would-be medical graduates; (2) the growing competition and constant evolution in medical practice. A medical diploma entails a monetary outlay of at least \$2,000, and beyond this a year or more of hospital experience is greatly encouraged. This makes it practically impossible for a man to enter on paying practice before the age of 25. Once in actual work, the practitioner of medicine, more than any other wageearner, is up against hard factors that make for low pay, slow pay and no pay. The professional, sociologic and legal demands on the profession are constantly increasing without a jot of regard for the material welfare of its members. Public opinion has decreed everywhere that it is a physician's duty to save life, to cure and to prevent disease; it is nowhere decreed that he must save his own life, that he must look out for the material welfare of his family. Tacitly, the profession is pledged to every demand of preventive medicine. But here no fee schedule applies, while every success that is scored only reduces the paying end of practice.

Ethical and Business Training of the Prospective Physician at the Medico-Chirurgical College

DR. JAMES M. ANDERS: On the request of the Board of Trustees and Faculty of the Medico-Chirurgical College, I deliver annually one lecture on medical ethics and another on medical economics to the senior class. Concerning the business side of the physician's life the most important period is the first decade after graduation. The recent graduate must maintain his interests in technical laboratory work, in clinical medicine, in special pathology and physiology. The public will demand physicians whose abilities have been tested by the laboratory and hospital wards and whose record is clean and good. The vital question of providing for a rainy day must be met and solved by every physician. Perhaps the best investment for a young man in medicine is a small life insurance policy in a reliable company. I should advise against the purchase of property until a reasonably accurate estimate can be made of its value ten years hence. The stock market and mining interests are to be severely let alone. The best investment for the physician's savings is in first-class guaranteed bonds bearing a moderate rate of interest. In settling in a given locality I should recommend that the physician ascertain the rate of remuneration of the physicians in the neighborhood and not expose himself to the charge of bidding for patients by making lower charges than his fellow-practitioners. The advantages of a properly organized profession are multiple, and especially can it be made to operate in bringing about better fees, better protection in case of unjust suits for malpractice and assaults on individual members, as well as a greater force, respectability and dignity as a body. From an ethical standpoint it is the duty of every physician to bring the local profession, wherever he may settle, into good repute, by attempting to overlook the imperfections so patent in others, and by reposing with confidence in the fair-mindedness and liberality of his competitors. The request for a

consultant on the part of the patient's family should be cheerfully complied with, though there may be no apparent necessity, provided of course, that the consultant desired be a regular physician. No one can afford to decline to consult with a regular practitioner of the female sex and the same is true of the graduate in homeopathy who does not practice sectarian medicine. The post of a consulting physician is one of momentous importance and grave responsibility. The rights, privileges and interests of the attending physician must be jealously guarded and never must advantage be taken of any circumstances incident to the consultation. In any critical emergency, a physician should not hesitate to visit the patient of another physician, but must voluntarily withdraw from the case as soon as the services of the attending physician can be procured, unless the latter should insist on his remaining connected with the case. When great probability of an early demise arises, it is the physician's duty to give timely warning either to the patient himself or those most directly concerned. The ministrations of the clergy are a solace and a comfort to the desperately ill and dying.

The Possibilities of a Mutual Business Bureau

DR. A. B. HIRSH: The lack of systematic financial training of the undergraduate, the ever-increasing socialization of medicine, contract practice, growth of plainly commercial new cults, so called, are largely responsible for the physician's lessened opportunity. It is only through united efforts by our rank and file that protection against the dishonest patient will be secured. It is along the line of credit and collection offices that Philadelphia physicians must find relief. Chicago physicians have obtained marked benefits from their year-old "business bureau." From supposedly uncollectable accounts over \$22,000 have been received. Within the past year there have been formed in various parts of Philadelphia business leagues. Others will be established and later there will follow their union into a central business bureau for collection of accounts and for information as to undesirable patients, when there will be in existence a credit guide covering the entire city. The details are as follows: Each member of a medical district league, on payment of the one-dollar annual due, receives sufficient blank catalogue cards for his questionable pay patients. By the use of an easily understood cipher code, each card serves for the history, etc., of one family, or of one patient. When filled out by the physician these are returned to the secretary for filing in his indexed desk drawers and kept under lock and key. The physician's number, but not his name, is on each card, this number agreeing with that on a book list of physician-member addresses in the secretary's safe. Information wanted by a physician about a new patient is obtained by telephone from the secretary's office, the doctor's number only being used in such a conversation. Confidences are thus always assured. The secretary's recompense is 5 cents per message. The plan warrants up-to-date information, while printed lists are found obsolete because of frequent removals of delinquents. By multiples of each card of details an exchange system between the leagues is possible. My plea is for early organization of a business league in each part of the city so that the central business bureau can be realized at the earliest possible date.

Discussion on Business Methods

DR. A. M. EATON: These business leagues are not for the purpose of collecting bills, but to prevent a class of undesirables from robbing physicians, and we think that we shall be able to accomplish that purpose. A case in point is that of a young physician who was asked to withhold his bill for over \$120 for a year, when the people promised to pay in full. At the end of the year, they paid \$10. Fearing to lose all the money he continued his attendance for three years and then stopped. They then owed him nearly \$400, for which, after some years, he sued. He settled the claim for \$100 and paid the lawyer \$50.

DR. AARON BRAV: I do not think it good teaching to say that the young practitioner should ascertain the average charge of physicians in his locality and then make his own to

correspond. If the young man, surrounded by hospitals and dispensaries, insists on the same fees as those received by the man in practice for twenty years, he, of course, will not succeed. I do not feel that contract practice should be condemned utterly. Under some conditions I can see that a man could so practice without doing harm to his fellow-practitioners and that he might save many families from attendance on the hospitals and dispensaries, the abuse of which is responsible for all the ills. Medical ethics should be taught, but they ought to be on a sound basis and with some degree of fairness as to what constitutes ethics.

DR. SAMUEL P. GERHARD: I do not like the word "business." Some other word ought to be used. It seems to me that in the college the student ought to be taught first that the practice of medicine is not solely humanitarian, as so many people claim. Students should be taught that they are entering the practice of medicine to relieve suffering and to treat disease, and they should expect to be paid for it.

DR. ALBERT E. ROUSSEL: I am inclined to think that a very common fault exists among ourselves. In the early years of my practice I remember a physician who had an exceedingly large practice, actually working day and night, and who was known as a man who never sent out a bill. He did not collect 25 per cent. on his work and literally worked himself to death. Many people think that a medical practitioner should not sue for his bills. I have collected over 80 per cent. on the work I have done by frankly going after my patients. I should think the idea of establishing a bureau as suggested by Dr. Hirsh would be a very good one.

DR. JOHN A. MCGLINN: When we remember that there is one physician to every five hundred people we recognize that the profession is overcrowded and that the first thing to do is to raise the standard of medical education. We must recognize also that a man graduates in medicine at a time when other men of his age are making money and at twenty-six he is up against a proposition, with competition so keen that he can hardly be blamed if he accepts contract practice, a low rate for insurance examinations or lowers his fees. The public also should be taken into the confidence of physicians and the mysticism of medicine done away with.

DR. SENECA EGBERT: I feel that the standard of medicine is being raised and that the number of physicians in the future will be less than in the past. The idea of establishing a central body like the Chicago bureau is most admirable. We have done our share in pauperizing people. I agree with Dr. McGlinn that we do not sufficiently educate the public in regard to medical matters.

DR. HIRSH: The size of fees and contract practice will have to be viewed from more than one standpoint. We must remember that the various classes of population, gradations of wealth, native and foreign-born inhabitants are factors in this question. I believe the free choice of the physician will be the solution of the contract practice problem. Great advantages are to be secured by an early organization of the business leagues as described to be located throughout the city with the ultimate establishment of a central business bureau.

Sodium Benzoate as a Food Preservative

The following resolution was adopted by the society:

WHEREAS, there has passed the legislature and is now before Governor Stuart, a bill which would legalize the use of sodium benzoate as a food preservative in the quantity of one-tenth of one per cent.; and

WHEREAS, the vicious features of this bill in its original form, such as the main label clause and the notification clause, were sufficient to indicate plainly that it was not drafted in the interests of the public, but rather that of powerful special interests; and

WHEREAS, it is declared by manufacturers of the very class of products which it is desired to preserve with sodium benzoate that its use is unnecessary, provided good sound materials and proper sterilization methods are employed,

Therefore, the Philadelphia County Medical Society places itself on record as believing that the bill as it has passed the legislature would be against sound public policy, inasmuch as it would permit the incorporation into food of a drug which would benefit the manufacturers of food products at the expense of the consumer.

Resolved: That this body urges on Governor Stuart the propriety of vetoing this bill, so that the progress which has been made in the regulation of pure foods may not be reversed and the door opened to the chemical preservation of many products which now enter into the daily food supply of the people of Pennsylvania.

MISSOURI VALLEY MEDICAL SOCIETY

Semiannual Meeting, held at St. Joseph, Mo., March 18-19, 1909
Public Health Problems of the Nation

SURGEON-GENERAL WYMAN, U. S. Public Health and Marine-Hospital Service: Two kinds of problems must be considered: sanitary and legal. Of the two, the legal are the least settled. Scientific knowledge of disease and methods of prevention are far in advance of legal provision and executive administration. A comparatively short time ago smallpox, cholera, typhus, yellow fever, plague and leprosy were problems of a scientific as well as legal character. For centuries these diseases baffled the wisdom of man, inspired terror and gave rise to investigations, theories and procedures which were of no avail. The quarantine of to-day is not deserving of the same name as the first quarantine which was imposed at Venice in 1403 against plague. Then vessels were simply held at a short distance from shore, and the disease was allowed to run itself out. To-day quarantine is simply the isolation of the sick and the detention under observation of exposed individuals during the period of incubation of the disease in question. Another problem practically solved or being solved is that of immigration. Until the passage of the immigration law of 1891 there was no hindrance to the influx of immigrants afflicted with diseases other than those which were quarantinable. Our cities and towns were receiving immigrants afflicted with loathsome diseases, particularly favus and trachoma, but this invasion has practically stopped and other diseases of like nature are regularly excluded. In regard to international hygiene and sanitation the various international sanitary bodies may be expected to have an aggressive effect on sanitary reforms. The manner of making international sanitary agreements and organizations having a practical bearing is one of the greatest of modern problems. In the American republics the matter has gone so far as to be included in resolutions adopted at the third International Sanitary Conference of American States held in Rio de Janeiro in July, 1906, namely: "The adoption of measures tending to obtain the sanitation of the cities, and especially of the ports, and to attain as far as possible to better knowledge of the greater observance of hygienic and sanitary principles." The National Government, aside from quarantine regulations, regulations regarding the manufacture and sale of the various vaccines, antitoxins, etc., and those relating to pure food, is engaged chiefly in investigations and the dissemination of information, and in bringing about cooperation between its own organizations and those of the various states.

Oration in Medicine: Diagnosis of Kidney Disease

DR. N. S. DAVIS, Chicago: The limitations for the diagnosis of renal disease was emphasized by Cabot two years ago, when he reported the results of his attempt to ascertain what urinary findings were actually related to definite pathologic lesions by comparing the histories and especially the urinalyses in a large number of cases. The presence of albumin and casts in urine indicates disturbance of function or change in structure, but nephritis may exist without the presence of either albumin or casts. Large numbers of red corpuscles in the urine indicate an actively developing lesion—either acute, or an exacerbation of a chronic one. A large amount of sediment, composed chiefly of casts or epithelial cells, or both, indicates extensive involvement of the renal tubules; but few casts and no epithelial cells do not mean that the tubules are not involved. In the differential diagnosis of the various diseases of the kidneys it is necessary to give as much weight to other symptoms, to the etiology, and to the course of the disease as to the urinary findings. Acute nephritis may be caused by the exanthema, pregnancy, septicemia, typhoid, diphtheria, tonsillitis, pneumonia or rheumatism. Varicella, vaccinia, syphilis and tuberculosis are rarely causes. Intestinal toxins and some drugs may also be causes of acute nephritis. Chronic indurative nephritis is caused by an acute attack or by a chronic constitutional disease which leads to anemia or cachexia. Exposure to cold is intentionally omitted from this recapitulation of causes because it should be con-

sidered simply as a predisposing factor, not as a direct cause. In determining the gravity of kidney diseases, it is not enough to know that the kidneys are involved or even to know their exact pathologic condition—it is extremely important to ascertain whether or not they are functionally active and competent. In testing the function of the kidneys it is just as necessary to give a test meal as in examination of the function of the stomach. Milk is the most practical substance to give, as its constituents are fairly well known.

Oration in Surgery: Cancer of the Uterus

DR. H. J. BOLDT, New York: As a reason for belief in the possible correctness of the hemic theory of the origin of cancer, is the fact that some pathologic processes causing decided alteration in the blood set free strong antagonistic factors to cancer. The malignant neoplasms of the uterus resemble each other so closely that it is almost impossible to differentiate them. In practically every case of uterine cancer there is a history of previous endometritis. Jewish women do not seem to be so susceptible to cancer as Gentile women. If pain were an early symptom instead of the latest, the diagnosis would be made much earlier, and many lives would be lengthened. The bladder and kidney complications are the most important. Rectal symptoms do not develop till late in the disease. In treatment, total extirpation is the most important thing. Prolonged anesthesia should be avoided as much as possible, and for this reason the patient should be thoroughly prepared for the surgeon before being anesthetized. In cancer of the vaginal part of the cervix and body, it is not necessary to do such extensive operation as in cancer starting from the cervical canal. The abdominal route for extirpation should be limited to cancer of the cervix, and to cases in which the uterus is too large for vaginal extirpation or in which there is adnexal disease. A larger number of patients may be operated on by the abdominal than by the vaginal route. I have had no experience with vaginal hysterectomy with a galvano-cautery, and have never favored the high amputation of the cervix or of its vaginal part; I believe that this operation will soon be relegated to oblivion. When diabetes complicates malignant disease, in cases seen early enough to give hope of cure, operation should be done, but without general anesthesia, and should be rapidly performed.

How the Physician Can Best Serve the Community in which He Lives

DR. E. H. MILLER, Liberty, Mo.: Some physicians have opportunities only to relieve suffering, and are thereby deprived of the real beauty of their profession. This is particularly the case with the specialists and the city physicians. The country practitioner, however, is an important part of the community in his professional capacity. He is no longer called on merely to treat suffering individuals, but must aid in the great movement for prevention of disease and injury, and for the uplifting of the general condition of the community. The public can not be expected to swallow anything the physician tells it about a public necessity, unless something tangible is brought forward for it to grasp. Therefore, education of the public is the most essential necessity in all public health work and the country practitioner can do this better than others because he is brought into contact with people of all classes, under circumstances that render them especially susceptible to his influence. There are many ways in which the physician can assist in the prophylaxis of disease. For instance, he may cause the health officer to inspect the milk supply at proper intervals, and particularly he should visit the public schools, not only in time of epidemics, but at other times, to notice whether the light, air, water, etc., are properly supplied, without waiting for the death of one of his patron's children to stir him to action.

The Management of Enlarged Spleen

DR. T. E. POTTER, St. Joseph, Mo.: In the hands of competent operators the death rate in splenectomy is from 10 to 20 per cent. Anything that will remove this high percentage of failures should be gladly received. In 1878 I began the hypo-

dermic use of ergot in enlarged spleen, as advised by Da Costa, and with happy results. To accomplish results with this treatment requires time and patience. The x-ray may be as good or better than ergot, but I have had no experience with it.

Anesthesia in Children

DR. WILLIAM W. STEVENS, St. Louis: When operation for adenoids or large tonsils is to be done the child should be examined by a pediatricist for enlarged thymus and the status lymphaticus, the presence or absence of lymphotoxemia being noted. If present, operation should be deferred if possible. Nitrous oxid is not a good anesthetic for very young children. The statement that chloroform is harmless in children is altogether erroneous. Chloroform is the most poisonous of all anesthetics in the status lymphaticus. The picture presented by a child during chloroform anesthesia is one of profound depression. The margin between an overdose and "just enough" is infinitely smaller in children than in the adult. False anesthesia is present more often in children than in adults, and is most often seen when chloroform is used. The charge that ether is more dangerous to the kidneys is not proved. For children, ether on an open mask by the drop method is the best and safest routine anesthetic; the closed method is not suitable for young children. The delivery to the child of an ether vapor which has been warmed after the air or oxygen has been laden with ether is without doubt the most ideal method yet suggested.

Osteomyelitis

DR. F. H. CLARK, El Reno, Okla.: Whenever it is possible to do so, the microscope should be used to determine the germ causing the disease. Palliative treatment should always be instituted and persisted in until improvement ceases or there is danger of the disease becoming general instead of local. If the case is seen in the acute stage, cutting down and draining by trephining into the bone gives great relief. During the subacute or chronic stage all necrotic bone including the sequestra, should be removed. In the tuberculous form, iodoform seems to be especially helpful, used in some one of the numerous ways suggested; also tuberculin promises us some assistance in this condition if carefully used. In the young, prognosis as to recovery and function may generally be very favorable, while in those older it should be more guarded.

The Mastoid Operation

DR. CORNELIUS WILLIAMS, St. Paul, Minn.: I wish to go on record as favoring early operation. Formerly, mastoid wounds were packed in various ways and for the incomplete operation that must yet be done. Packing adds to shock, prolongs the period of healing, renders first dressing painful and infection more likely; also, the scar in packed wounds is prominent. After removing all diseased bone and opening all cells the antrum should be well cleaned, all pus and blood being removed from the auditory canal, and incision made through the membrana tympani, if necessary, and the middle ear aspirated several times with a rubber bulb. A gauze wick, wet with normal saline solution is then introduced near the bottom of the canal, the gauze mask removed from the side of the head, the skin wiped dry, brushed again with the iodine solution, and the incision closed by subcutaneous catgut suture to the mastoid tip, the wound covered with a yoke-shaped pad of gauze, well padded with cotton, and the head bandaged. Unless skin infection occurs, the wound should heal by first intention, except at the lower angle, where there will be oozing of bloody serum, as well as from the middle ear. This oozing hastens cure by its action on the micro-organisms.

Other Papers Read

Among the other papers read were: "The Use of Carbon Dioxid Snow in Dermatology," by Dr. R. L. Sutton, Kansas City, Mo.; "A Study in Reflexes," by Dr. L. Crafts, Minneapolis; "Diphtheritic Paralysis," by Dr. F. E. Coulter, Omaha, Neb.; "Auto-intoxication," by Dr. A. E. King, Blocton, Iowa; "Possible Means for a Better Comprehension of Immunity," by Dr. J. Block, Kansas City Mo.

THE AMERICAN SOCIETY OF TROPICAL MEDICINE

Sixth Annual Meeting, held at the United States Naval Medical School, at Washington, D. C., April 10, 1909

(Continued from page 1449)

Schistosomiasis (Japonicum), with Special Reference to Observations in Hunan Province, China

DR. O. T. LOGAN, Chingteh, China: The existence of this disease seems to be connected with wet farming. Diagnosis is usually easy, though it may be necessary to make examinations on several days before the characteristic ova are found in the stools. It is believed that the infection takes place through the skin in persons who wade in stagnant water. The prognosis is bad in heavy infections; and even light infections lower the vital resistance, and render the patient more liable to concurrent infections.

Prevalence and Importance of Uncinariasis Among Apparently Healthy Southern-Bred White Men in the U. S. Army

MAJOR WESTON P. CHAMBERLAIN, Louisiana: Uncinariasis is common among soldiers of less than three years' service. Of one hundred serving in their first enlistment, sixty were infected. It is believed that uncinariasis in childhood is the cause of the poor development so common among southern-bred recruits. Those who lead a farm life are frequently infected with hookworms, as most persons on farms habitually go barefooted in childhood; more than half of these have, probably, suffered from ground-itch during their youth.

Mild Uncinaria Infections

DR. CHARLES C. BASS, New Orleans, called attention to the fact that the negro presents few symptoms, even when laboring among parasites. He then described in detail the method of obtaining the ova by the means of the centrifuge.

Discussion on Parasites

DR. W. S. THAYER, Baltimore: It would be of great interest to study the stools of *Strongylus stercoralis* by the method described by Dr. Bass, in order to determine the relative measurements of these eggs and those of uncinaria. The eggs of the former are rarely found in the stools; and when they are found, are so like uncinaria that there is sometimes a question as to which they are.

DR. J. M. SWAN, Philadelphia: A patient recently came under my observation who at periods of four weeks had had epileptiform attacks of considerable severity. On examination of the blood, an eosinophilia of 15 per cent. was found. A rather large flagellate infection was discovered by examining the stools. After appropriate treatment for two months, there was no return of the convulsions. In spite of repeated examinations of the stools, I failed to discover any uncinaria eggs.

DR. JOSEPH SILER, Port Jay, N. Y.: The question of prophylaxis of uncinariasis ought to have more attention, as the South will never get rid of the hookworm unless the subject is taken up by the government. The fact that nearly all the children of the South are infected makes me believe that if that section could get rid of the hookworm much would have been done for humanity.

MAJOR CHAMBERLAIN: My cases were widely distributed, every state in the South being represented, even as far north as Maryland.

DR. C. C. BASS: Ridding the South of this infection is of great importance. I think, however, that the question must be one of education, rather than of legislation, as it would be impossible to force the layman by law to observe such sanitary measures as would be necessary to prevent this disease.

The Relation of House Flies to the Spread of Disease

DR. HENRY SKINNER, Philadelphia: This insect oviposits in horse manure, decayed vegetable matter, decayed meat, cow dung, fowl droppings and human excrement; but the vast majority of house flies are bred in horse manure. The house fly

as a carrier of typhoid infection is very dangerous. Whenever flies can gain access to material containing the *Bacillus typhosus*, they are almost certain to carry it to food. They have long been suspected of being agents in the dissemination of cholera and other intestinal diseases. So far as is known, however, the house fly is only the mechanical conveyer of bacteria, and is not the host of any known animal disease-producing organism similar to the protozoan organism that causes malaria. If the insect can be prevented from depositing its eggs in horse manure, the fly as a pest will soon be a thing of the past. The manure should be packed into barrels that can be tightly covered.

DISCUSSION

DR. P. M. ASHBURN, U. S. Army: Some time ago I prepared some slides covered with serum, when I discovered a fly busy eating some of this serum. I caught the fly and found in its proboscis two larval nematodes that were indistinguishable from strongyloides. I thought that in this way the fly might be a carrier of intestinal parasites—possibly of uncinaria. In the Philippines flies are much less common than in the United States in the summer time.

DR. LOGAN: In China the blue-bottle fly is more common than the house fly.

DR. GEORGE DOCK, New Orleans: The only way to get rid of house flies is to observe absolute cleanliness. If a soup plate containing sugar water and a 10 per cent. formalin solution is placed in the room, it will be found effective in keeping the flies down. The odor can not be perceived, but the flies are absolutely destroyed.

MR. H. L. VIERECK, Washington, D. C.: At the laboratory in Harrisburg, Pa., while specimens were being immersed in 4 per cent. formaldehyd solution, it was found that the flies were attracted by the formaldehyd solution, which they sucked up, and that they died in great numbers.

DR. H. SKINNER: There are numerous records of places in the tropics in which house flies are very abundant. Further information would be very valuable, as the pest is one distributed pretty well all over the world, and is especially prevalent in southern Europe.

The Etiology of Pellagra

DR. C. H. LAVINDER, U. S. Public Health and Marine-Hospital Service: After an exhaustive review of the subject, I have reached the following conclusions: The cause of pellagra is essentially unknown. The idea, in one form or another, that there is an etiologic relation between pellagra and the use of maize as a food is not likely to be abandoned, as it rests on the observations and experimental work of many able men. Sambon's suggestion of the possible sporozoa nature of the disease rests largely on an argument from analogy and is, at present, little more than a suggestion. It offers new and possibly profitable fields of investigation.

Relation of the Production and Utilization of Maize to Pellagra

DR. CARL L. ALSBERG of the Bureau of Plant Pathology: The greater prevalence of pellagra in the United States than formerly may be attributed to (1) differences in the variety of corn grown; (2) changes in the climate; (3) the spreading of the corn-belt northward; (4) the manner of transporting corn, and (5) changes in the methods of milling. In the south the germ of the corn is left in when it is milled; for this reason, the meal milled in the south contains a much higher percentage of toxins. I suggest that the standardization of grain be carried out by the Federal Government, which should enforce the proper drying of corn.

Discussion on Pellagra

DR. GEORGE DOCK, New Orleans: From Dr. Alsberg's remarks, one might get the idea that pellagra had developed in this country simply through the change of conditions for the raising and selling of corn; but I am certain that I had heard of cases before the existence of these changed conditions. I think that the main point is that the disease exists now, in a form difficult to recognize, and very often mistaken, as the

clinical recognition of the disease is difficult in the less marked cases.

DR. J. M. ANDERS read a note from Dr. Theodore C. Merrill, enclosing a report on "Pellagra in the State of Texas." The note was, in part, as follows: Some time ago I reported a case, which I took to be pellagra. I was duly cautious, and examined thoroughly the suspected corn meal. But with this exception (which is doubtful), it is gratifying to be able to report general absence of this disease for the state.

DR. ANDERS then called attention to the fact that of 196 cases of pellagra collected by Dr. Wood, 70 occurred in North Carolina. He said that the acute form of pellagra proved fatal in from four or five weeks to three months, this form being unknown in Italy. The average duration of cases here, in the chronic form, was only three years; whereas in Europe it was at least five years.

DR. EDWARD STITT, Washington, D. C.: In not a single case of pellagra that was shown me in Egypt, could I see any typical symptoms.

DR. WILLIAM THAYER, Baltimore: In a case that I saw in 1905, the patient had had two previous attacks, associated with diarrhea, an eruption on the back of the wrists and marked stomatitis. This condition lasted about a month and then cleared up. Intensive arsenical treatment had produced some very good results in trypanosomiasis. Therefore, it was tried in cases of pellagra on two successive days. In many cases there was a prompt recovery, and it was unnecessary to give the treatment a week later. I consider this result so remarkable that I can not help feeling skeptical regarding it.

DR. T. B. FUTCHER, Baltimore: Is it known how long a person must be subjected to the infection in order to develop the disease?

DR. C. L. ALSBERG: I do not think that there were any exact data regarding exposure to infection. I think that a good many cases are overlooked in this country, especially in colored people.

DR. C. H. LAVINDER: Not enough reports have been received from men who have seen the disease clinically to enable one to draw conclusions. While the Italians do have an acute pellagra, what they mean by this term is an acute exacerbation of a chronic case.

The Method of Teaching Tropical Medicine

DR. EDWARD R. STITT, Washington, D. C.: I refer here entirely to the teaching conducted in schools outside of the tropics, in which no tropical material is available. Instead of showing a tropical climate case and giving the differential diagnosis from a temperate-zone disease, one should exhibit a case with a disease common here and differentiate it from one common in the tropics. More attention should also be given to epidemiology, and to relate an amusing anecdote in connection with the description of a disease will often impress students as nothing else will.

Ipecac Treatment of Amebic Dysentery

DR. GEORGE DOCK, New Orleans: I urge the more frequent use of ipecac, the neglect of this drug being in direct opposition to the strong recommendations made by experienced physicians in India, the United States and Manila. Vomiting is hardly ever produced, even with doses of 60 or 80 grains a day. The clinical result is most striking; the amebas disappear quickly, as a rule. Subjective discomfort is often surprisingly slight.

DISCUSSION

DR. STITT, Washington, D. C.: In the Philippines excellent results are obtained by the use of ipecac. I had an amebic affection for two or three years, and the only thing that did me any good was ipecac. After using it for three or four days, I would lose my appetite, and be forced to discontinue the drug.

DR. J. M. ANDERS, Philadelphia: Has Dr. Dock encountered any patients who were cured? I have found the cure only temporary.

DR. P. M. ASHBURN, U. S. Army: I have seen only two patients who did not promptly recover under ipecac treatment if they could retain the drug. If I can not cure the disease within a month I feel doubtful of ever curing it.

DR. G. DOCK: I have been unable to follow all of my cases up. I consider ipecac more effective than any other drug in acute cases and have had better results from it in cases of long standing.

Other Papers Read

The following papers were also read: "A New Method for the Preparation of Flat-Worms for Study," by Dr. A. J. Mink, Washington, D. C.; "Report of a Case of Dermatobia Noxialis Infection Contracted in Southern Mexico," by J. D. Manget, Atlanta, Ga.; "Blood Pressure in Yellow Fever," by Dr. J. B. Guthrie, New Orleans.

Medicolegal

Life Tables and Expert Testimony

The Supreme Court of Iowa says, in the case of Peterson vs. Brackey, that life tables offered in evidence were objected to on the ground that it affirmatively appeared that in view of the habits of the decedent such tables did not tend to show what his expectancy of life would have been. But such tables may go to the jury for what they are worth, although they relate to the expectancy of a person in good health, and without impairment by bad habits. They are not conclusive, but may be considered by the jury in connection with evidence as to the physical condition, vocation, and habits of the person whose probable length of life is to be estimated by the jury.

The jury was instructed in this case that if the evidence introduced on the trial showed the acts, conduct, demeanor, and conditions of the decedent to have been substantially as stated in certain hypothetical questions, then the testimony of the medical witnesses, based on such questions, might be given such weight and value as the jury believed them fairly entitled to. If, however, the evidence did not substantially sustain the supposed state of facts presented in the hypothetical questions asked such witnesses, or if the testimony of such witnesses was in conflict with physical facts, then the jury should attach no weight whatever to the answers of medical witnesses founded thereon. While it was left to the jury in this instruction to determine whether the facts assumed in the hypothetical questions had been found to be "substantially as stated in such hypothetical questions," yet the jury were told that if not found to be substantially as stated, the answers of the medical witnesses to such questions were to be given no weight whatever. This the court thinks to be in accordance with the rule announced in its prior decisions, in other cases, where it was held erroneous to leave it to the jury to say whether the facts stated in the hypothetical questions were unsupported by the evidence in material respects or how much weight should be given to the answers if there was a discrepancy between the facts assumed in the questions and those shown by the evidence.

In one of those cases an instruction was criticized which left it to the jury to say whether the statements of fact assumed in the hypothetical questions were substantially correct, but it was not intimated that the case would have been reversed on this ground. It certainly is not necessary that the facts assumed in a hypothetical question shall be proven in every material detail to the dotting of an "i" and the crossing of a "t," and, while the court might properly have omitted the word "substantially," it is not believed that the jurors were misled by its use. It was not left to them to say which of the facts recited were material, but only to say whether the facts recited were substantially proven; that is, whether each of them was in substance found supported by a preponderance of the testimony.

Skill and Care Required of Specialists

The Supreme Court of Vermont says that the plaintiff in the case of Rann vs. Twitchell, a robust boy of 13 years,

found a railroad torpedo which he laid on a plank and exploded by throwing a stone on it. A flying fragment struck him under the inner corner of the right eye. The cut made in the lower lid of the eye was approximately an inch long, and at the upper end next to the inner corner of the eye the lid was cut off so that it hung down over the cheek, disclosing a wound under the eyeball into the socket of the eye. The boy was at once taken to a physician who took medical charge of the case and treated the injury for about a week.

In the meantime, the physician became convinced that there was a foreign substance lodged in the eye or socket, and being uncertain whether or not or how far the eye itself might be involved, and, not feeling competent to operate on the eye in these circumstances, he advised the employment of an eye specialist. The boy was taken to another town for the purpose of consulting an expert, but the latter was away, so he could not be seen.

The accident occurred on April 19, and on the 25th the first physician, and another who had been called in to assist, and who agreed that there was a foreign substance in the eye, made preparations to operate for its removal. But, when it came to the point of beginning the operation, the first physician telephoned to the defendant, in still another town, that the plaintiff had been injured by an explosion, and that some foreign substance had entered the orbit of the eye, and that he did not feel competent to remove it, and he arranged with the defendant to send the plaintiff to him for treatment. The plaintiff was thereupon taken to a hospital, where the defendant undertook the treatment of the case. He made no effort to learn anything further of the history of the case or its prior treatment. He did not attempt to determine by probe or otherwise whether or not there was in fact a foreign body lodged in the eye or its orbit—beyond an external examination more or less cursory in character, according to the evidence—though it was plain that the use of a probe would have easily and safely discovered the presence of the piece of tin which was afterward removed. He gave the eye attention for a few days, and then sent the plaintiff home, assuring him that there was nothing in the eye and with instructions to the first physician as to its subsequent treatment.

The eye grew steadily worse until July 18, when the first physician operated on it and removed from the orbit a piece of tin nearly an inch long and about one-half inch wide, which was buried in the tissue to such a depth that its nearest point was about a quarter of an inch from the surface. This action for malpractice was subsequently brought against the defendant and the hospital jointly, but during the progress of the trial, at the plaintiff's request, the court ordered a verdict for the hospital and the trial proceeded against the defendant alone. At the close of the plaintiff's evidence the court ordered a verdict for the defendant. The propriety of this action of the court was the only question presented to the Supreme Court.

At the outset of the discussion the parties disagreed as to the rule which was to be applied to this defendant to test the sufficiency of his diagnosis and treatment of this injury. The plaintiff claimed that the evidence was such that the defendant must be judged as a specialist, while the defendant insisted that there was no evidence to warrant the application of anything but the rule governing general practitioners. The Supreme Court quite agrees with the court below that this defendant must be judged in this case by the more exacting rule which applies to specialists.

More of the evidence on this subject came from the defendant himself. From him the court learned that he was a physician and surgeon, and for the 12 years preceding the trial he had been a specialist in the medical and surgical treatment of the eye. As early as 1902 he was regularly appointed ophthalmist of the hospital mentioned, and then presumed that he would be and later knew that he was so named in a certain pamphlet issued by the hospital that year. At the time here involved, he had charge of the eye, ear and throat department of that institution. He said that the term

"ophthalmatist" means an eye specialist; one who does everything that is required for the eye, medical or surgical. True, he said the term does not imply any special skill in such matters, but in this statement he was too modest. His 12 years of specialized practice, his selection by an institution of the high standing of the hospital to take charge of the very important department named, implied skill in the lines specified.

Moreover, the very circumstances in which he was employed in this case unmistakably showed that it was the special skill that he was understood to have in the surgical treatment of the eye which alone induced the plaintiff to seek his aid, and it was perfectly plain that the defendant so understood it when the physician made the arrangement with him to treat this injury. So the court must test his professional conduct in this matter, not by the standard applicable to general practitioners—the oft-cited and recently approved rule of *Hathorn vs. Richmond*, 48 Vt. 557—but by the stricter rule applicable to specialists. Whether or not this was determinative of the case the court does not say.

One who holds himself out as a specialist in the treatment of a certain organ, injury or disease is bound to bring to the aid of one so employing him that degree of skill and knowledge which is ordinarily possessed by those who devote special study and attention to that particular organ, injury or disease, its diagnosis and its treatment, in the same general locality, having regard to the state of scientific knowledge at the time. 5 *Thompson on Negligence*, section 6714; *Feeney vs. Spalding*, 89 Me. Ill.; *Baker vs. Hancock*, 29 Ind. App. 456; note to *Gillette vs. Tucker* (Ohio), 93 Am. St. Rep. at page 664.

The duty of exercising this degree of skill attached to this defendant at the time of his employment and was the measure of his responsibility in the diagnosis of the case to determine the nature and condition of the injury, as well as the proper treatment to be applied. *Thomp. Neg.*, section 6717; *Ely vs. Wilbur*, 49 N. J. Law, 685. He was not to be judged by the result, nor was he to be held liable for an error of judgment. His negligence was to be determined by reference to the pertinent facts existing at the time of his examination and treatment, of which he knew, or in the exercise of due care should have known. It might consist in a failure to apply the proper remedy on a correct determination of existing physical conditions, or it might precede that and result from a failure properly to inform himself of these conditions. If the latter, then it must appear that he had a reasonable opportunity for examination, and that the true physical conditions were so apparent that they could have been ascertained by the exercise of the required degree of care and skill, for, if a determination of these physical facts resolved itself into a question of judgment merely, he would not be held liable for his error. *Manser vs. Collins*, 69 Kan. 290; *Langford vs. Jones*, 18 Or. 307; *Staloch vs. Holm*, 100 Minn. 276.

Tested by this rule, the evidence tended to show that the defendant's conduct did not measure up to its requirements. He had a fair chance to examine the eye, and, with the indications of the presence of the piece of tin so strong as the testimony of the first physician tended to show, it could not be said as a matter of law that the defendant in his preliminary examination to ascertain the essential data on which to predicate a professional opinion met the requirements of the rule above stated. The testimony tended to show that he did not, and the question should have been submitted to the jury, for the evidence showed that the tin ought to have been removed at the earliest possible moment.

Wherefore the Supreme Court reversed the judgment rendered by the lower court in favor of the defendant specialist and sent the case back for a new trial.

Duty When Passenger Becomes Insane on Train

The Supreme Court of Arkansas says, in *Iron Mountain & Southern Railway Company vs. Woodruff*, that when a passenger unattended becomes insane on a train it is the duty of the railway company to remove such passenger, where the comfort and safety of other passengers on the train require

it. But in performing this duty to the other passengers the company must not neglect the duty it owes to the unfortunate insane and helpless one who is also a passenger. Here an unattended woman passenger who became insane on a train was removed from it and left in charge of the night operator at a station, whose discretion, it appeared, caused him to abandon in haste the poor unfortunate left in his care. The law, however, required that his discretion should be exercised in the direction of the woman's comfort and safety, and not in leaving her to her fate. His duty was to exercise such care as any reasonably prudent person should, under the circumstances, to protect her against harm and to provide for her comfort. If he was so alarmed that he could not do this himself, it was his duty to call to his assistance others who could. He wholly failed to discharge this duty, and for any injury that resulted to the woman from this cause the company was liable.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

April 24

- 1 *Theories and Problems of Heredity. J. Wright, New York.
- 2 *The Psychologic Basis of Inebriety. T. A. Williams, Washington, D. C.
- 3 *Acute Suppurative (Phlegmonous) Ethmoiditis in Children Resulting in Death. F. Krauss, Philadelphia.
- 4 Spontaneous Combustion (continued). J. Knott, Dublin, Ireland.
- 5 Further Investigation of the *Spirochæta Lymphatica*. F. Proescher, Pittsburg.
- 6 Bilateral Ununited Fracture of the Patella with Good Functional Result. S. Lange, Cincinnati.
- 7 Significance of High Blood Pressure in Life Insurance Examinations. R. Grace, New York.

1. Theories and Problems of Heredity.—Wright discusses the affiliation of the specific problems of cancer with the specific problems of heredity, and endeavors to establish the point that visible pathologic morphology in cancer, like physiologic morphology in heredity, is dependent primordially on forces which influence molecular, rather than molar, arrangement.

2. Inebriety.—Williams asks the following questions: What is the nature of this impulse? What is its origin? Why is it so irresistible? Finally, can it be overcome in those in whom it occurs, and how may its occurrence be prevented in others? The nature of the impulse is a state of feeling, the call of the unsatisfied, the miserable and the depressed. It is the unfortunate appanage of certain individuals, but in most cases it has arisen from ignorance and has been fostered by mismanagement. Experiments show how persons differ from day to day in mental capacity, in bodily secretions, and in activity. This is equally true of the feelings. Nearly all of us, then, must necessarily encounter phases during which our feeling is one of incapacity, even of inaptitude, discontent, dislike of surroundings, anxiety, etc. If fortitude is not forthcoming to support this it is ended by an artificial stimulus. The outcome is the need for a large stimulus to overcome a trifling feeling; for the power of resistance progressively decreases by non-use. The immediate satisfaction of desire at all cost is a habit that can be made or unmade at will. It is toward this factor that the prevention of inebriety must be directed. The remedy is the teaching of mothers to form healthy emotional habits in their children. The overthrow of the method of obedience has enthroned, especially in this country, the immediate impulse of the ruling factor. The surest forerunner of unreasoning conduct in an adult is a childhood that is taught to act without understanding and to understand without acting. A vast majority of parents and teachers do not appreciate the tremendous possibility of character building through play. The superiority of play as against work in the development of a child's character is due to the interest it gives which stimulates effort. Play is the best developer of

altruism. The tremendous friction of a life of restraint on normal activity causes nervous exhaustion, and this feeling is so painful that one readily flies to what removes it, hence inebriety. On the other hand, there is danger in the non-cultivation of inhibition, for impulsiveness then rules, and meets with innumerable inducements to intemperance. It is from these two extreme types that the intemperate are mainly recruited. Another cause conducing to a psychic state favoring inebriety is the impelling by an ambitious or art-loving desire beyond one's endurance, which entails consequent loss of sleep, hasty meals, unsettledness and anxiety, often justified by business oscillations. The fourth type of inebriate differs from the others in being not psychopathic, but the creation of the environment—as in draymen, commercial travelers, our three-bottled ancestors, etc. The number of this class is rapidly diminishing with the spread of knowledge. The problem of preventing these injurious effects must be solved by economists, sociologists and legislatures, occupying themselves with the various factors of the problems pertaining to their respective sciences. But without a precise determination of the psychologic character of the individual against which they must direct their efforts, their labors must be sterile, if not injurious. Each and all must found their procedures on the study of morbid psychology.

3. Suppurative Ethmoiditis.—Krauss reports two fatal cases of suppurative ethmoiditis in children. He describes three acute types of ethmoiditis and sums up as follows:

1. There is an increasing conviction that acute suppurative ethmoiditis causing orbital and cerebral symptoms is not so rare a condition as has been thought.

2. It is often rapidly fatal, especially in the young.

3. Indications for operation in acute ethmoiditis are sudden increase in temperature, delirium at night, tumor formation in the inner wall of the orbit, the slightest exophthalmos. Operation should not be delayed too long. As in appendicitis, early operation is a harmless procedure, late operation generally useless.

4. When there is bilateral exophthalmos, operation is generally useless, as the disease has probably extended through the cavernous and circular sinuses, causing a general toxemia and pyemia, or fatal brain lesion.

Boston Medical and Surgical Journal

April 22

8 Case of Infrapubic Cystotomy. Three Cases of Bladder Tumor. B. Tenney, Boston.

9 Intracranial Hemorrhage in the New-born. J. R. Torbert, Boston.

10 *The Luys Urine Separator. Second Report of Forty-One Cases. B. S. Barringer, New York.

11 *Peculiar Form of Family Nervous Disease Resembling Multiple Sclerosis Occurring in Children. I. H. Coriat, Boston.

12 *Vaccines in Typhoid. W. H. Watters and C. A. Eaton, Boston.

10. The Luys Urine Separator.—Barringer supplements his first report on this instrument, which was published in the *American Journal of Medical Sciences*, March, 1907 (abstracted in *THE JOURNAL*, April 20, 1907, p. 1378), with a further record of 27 cases, making 41 in all. Further experience with this instrument extending over three and one-half years, confirms the conclusions of his first paper and leads him to consider the Luys separator only second in point of value to the catheterizing cystoscope.

11. A Peculiar Family Nervous Disease.—Coriat describes a peculiar type of nervous disease, observed so far exclusively in children of Russian-Hebrew parentage. The earliest symptoms date from before puberty. The disorder seems to represent a transitional form of nervous disease, related on the one hand to Friedreich's ataxia, and on the other to multiple sclerosis, the symptoms of the latter largely predominating. There was a strong tendency for it to run in families, either in its complete form or as a group of isolated and discrete symptoms. The symptom-complex in all four cases was characterized briefly by a tremor of the hands, increased on voluntary movements, ataxia and marked changes in the reflexes. The knee-jerks were never normal, but were either diminished, absent or exaggerated. Ankle clonus was obtained once and atypical Babinski reflex twice. In two cases the ankle jerks were slight, in a third they were absent. One case showed a transitory spasticity, in another there was an atrophy of the small intrinsic hand muscles with a reaction of degeneration pointing to a bilateral affection of the anterior horn

cells in the eighth cervical and first dorsal segments. There was no optic atrophy in any of the patients, and in only one case was a true nystagmus demonstrable. None of the cases showed any staggering or a tendency toward a progressive dementia or loss in weight. In two of the patients there was a moderate degree of feeble-mindedness, but even in these cases the tremor and ataxia can not be interpreted as a form of motor incoordination which is sometimes found in feeble-minded individuals, because the degree of mental weakness was too slight to permit of any such interpretation. The onset in all the cases was a gradual one. In none of the cases was there a history of an immediately preceding infectious illness. A search through the literature failed to disclose any cases that were exactly identical with the author's.

12. Vaccines in Typhoid.—Watters and Eaton report a further series of cases of typhoid treated by the hypodermic administration of vaccines made from dead bacilli. The patients were a mother and three children, all attacked at the same time, and infected from another boy, who also came to the hospital. Typhoid was clearly demonstrated in all cases by Widal reaction, leucopenia, lymphocytosis and roseolæ. Vaccines were used on all but the youngest child, who was only slightly ill. The mother and the two children who received vaccines showed immediate abatement of clinical manifestation, and in the children, also, a rapid fall in temperature. The youngest child, however, who was not inoculated, became steadily worse, till on the fourteenth day of the disease the temperature was 104.8 F. It fell immediately with abatement of clinical symptoms on the administration of vaccines. From an observation of forty cases, the authors suggest that the early administration of typhoid vaccine seems able in many cases to shorten materially the duration of the disease or to improve the symptoms and cause it to run a mild course.

Medical Record, New York

April 24

13 *Practice of Medicine as a Career. A. Jacobi, New York.

14 *The Army Medical Service. E. L. Munson, U. S. Army.

15 *The Naval Medical Service. W. H. Bell, U. S. Navy.

16 *The Public Health and Marine-Hospital Service. M. J. Rosenau, Boston.

17 *The Insurance Examiner. H. H. Schroeder, New York.

18 *Railway Surgical Service. C. B. Herrick, Troy, N. Y.

19 *Medical Service in the Merchant Marine. J. F. Donnelly, New York.

20 *Institutional Work for Young Physicians. W. P. Spratling, Baltimore.

21 *Salaried Positions Open to Medical Men in the Larger Cities. W. G. Wood, New York.

22 *Legal Rights and Obligations of the Medical Practitioner. A. N. Taylor, New York.

23 *Postgraduate Study in Europe. G. Mannheimer, New York.

24 *State Medical Practice Laws. R. J. E. Scott, New York.

13 to 24. Fields of Employment for Physicians.—Jacobi discusses the conditions, prospects and requirements of private practice. Munson, Bell, Rosenau, Schroeder, Herrick, Donnelly, Spratling and Wood describe the scope, advantages, duties, pay, allowance or other emoluments offered by the various government services and by municipalities, insurance societies, railways, and other institutions to members of the medical profession. Taylor and Scott discuss various phases of the law in relation to the physician and to the practice of medicine. Mannheimer discusses the conditions, expense, localities, etc., of postgraduate instruction in Europe.

Lancet-Clinic, Cincinnati

April 24

25 Antiseptics in Minor Surgery. E. F. Nippert, Cincinnati.

26 Medical Chemistry. E. B. Reemelin, Cincinnati.

27 *A Disregarded Principle in the Action of Mineral Water Applied Externally. C. H. Persson, Mount Clemens, Mich.

27. Action of Mineral Waters.—Persson says that in making external therapeutic applications of water we look for physiologic results chiefly, perhaps exclusively, from its reflex and mechanical effect. The surface is connected reflexly with the interior of the body, each portion of the skin periphery being associated through the nerve centers which supply it with nerve filaments, with some visceral periphery or vascular area. The reflex effect of external applications of water to the internal vascular area is similar to, but less in intensity than,

those observed on the vascular area of the skin reflexly associated with it. The mechanical effects of external applications are commonly the reverse to those of the reflex, therefore the fundamental disturbances within the human body, the results of taking a water bath, are dependent on the relative intensity of these reflex and mechanical effects. Irritation of cutaneous nerves gives rise to contraction of the blood vessels of the surface and likewise of the small blood vessels of the interior of the body, simultaneously stimulating the accelerator nerves of both the blood vessels and the heart. The duration of the reflex effects depends on the intensity of the stimulant and of the irritant, and to some extent on the area involved. On *a priori* grounds, therefore, logical reasoning will bring us to the conclusions that if a prolonged continuous irritation is produced, reflex and mechanical effects of the same duration will be established, which would cause within the body disturbances alternative in their nature. Persson calls attention to the fact that this would explain the therapeutic effect of many saline mineral waters.

Medical Fortnightly, St. Louis

April 10

- 28 *Normal Salt Solution in Septic Conditions of the Peritoneum. J. M. Taylor, Fort Smith, Ark.
29 *Acute Traumatic Tetanus Treated by Magnesium Sulphate. A. P. Heineck, Chicago.

28. Abstracted in THE JOURNAL, Nov. 14, 1908, p. 1726.

29. Published in *Surgery, Gynecology and Obstetrics*, January, 1909, *Chicago Medical Recorder*, February, and *Atlanta Journal Record of Medicine*, February, 1909.

Northwestern Lancet, Minneapolis

April 15

- 30 Fracture of the Femoral Neck, and Its Treatment. A. S. Rider, Flandreau, S. D.
31 Diagnosis of Joint Disease. A. R. Colvin, St. Paul.
32 Case of Gangrenous Appendicitis. G. G. Balcom, Lake Wilson, Minn.
33 Deformities Resulting from Burns. J. C. Whitacre, St. Paul.

Annals of Surgery, Philadelphia

April

- 34 Analytic and Statistic Review of One Thousand Cases of Head Injury. C. Phelps, New York.
35 *Rational Treatment of Non-Malignant and Borderline Tumors of the Breast. C. L. Gibson, New York.
36 *Mesocolic or Retrogastric Hernia. W. J. Mayo, Rochester, Minn.
37 Inguinal Hernia of the Cecum. J. B. Carnett, Philadelphia.
38 Hernia of the Appendix. J. A. C. Macewen, Glasgow, Scotland.
39 Cystic Dilatation of the Appendix. J. A. Kelly, Philadelphia.
40 *Prostatic Abscess. S. Alexander, New York.

35. **Borderline Tumors of the Breast.**—Gibson holds that all neoplasms of the breast should be considered malignant until their innocence is proved. The proportion of cancer to other tumors is from 80 to 85 per cent. It is in the relatively simple conditions that seem so clear, chronic or involution mastitis, adenomata, and the several forms of cyst, that the danger lurks, for we may let pass the golden moment when a beginning process, absolutely unrecognizable except for the revelations of the microscope, might have been seized on as a local disease and surely extirpated. Gibson discusses what are dubious or borderline cases, and the question of diagnosis and treatment, and concludes that in younger individuals, up to 30, in the cases devoid of significant features, we may rely on ordinary clinical findings. Past that age it becomes more and more imperative to make the diagnosis certain. Once arrived at the carcinoma age it can and must be made anyhow, as some form of interference must now be the rule, so that, in the later group, the procedures of diagnosis and treatment will be simultaneous, that is, a sufficient exposure of the diseased breast must be made by an incision for the demonstration, gross and microscopic, of its nature. He then recommends and briefly describes the operation of plastic resection of J. C. Warren.

36. **Mesocolic Hernia.**—Mayo reports two cases of interest, not only on account of their rarity, but also because of the primary pathologic condition which appears to have been the important factor in the production of the hernias. Both patients were of the type of build Martin describes as typical in

Glénard's disease (*Surg. Gyn. and Obstet.*, December, 1908). The kidney of each was prolapsed, the uterus low and retroverted, and undoubtedly there was in each case a primary prolapse of the stomach. The duodenal ulcer, which existed in both, had undergone a chronic perforation, causing dense adhesions and fixing the duodenum beyond the stomach, just as the cardiac end is held normally by the esophagus. Had the ulcer been the usual type of saddle ulcer of the lesser curvature of the stomach, the hernia could not have occurred, because of the adhesive obliteration of the upper part of the lesser cavity of the peritoneum. The obstruction in both instances was extreme, the huge stomach sagging down in front of the intestines. The patients were emaciated and dehydrated, and for months had been in the habit of emptying the stomach every 24 to 48 hours of a great accumulation of undigested and unpassed food products. The abdominal muscles exerted great force in these violent efforts at vomiting, compressing the intestines behind the stomach, which was fixed at each extremity and greatly prolapsed in its middle part. In this way pressure was brought to bear on the transverse mesocolon upward in the line of least resistance, causing this peculiar form of hernia.

40. **Prostatic Abscess.**—In cases of multiple abscess, instead of the median perineal section and drainage of the abscess into the urethra, as described by him in 1904, Alexander believes that time can be saved and a more perfect cure made by the entire removal of the diseased lateral lobe or lobes by median perineal prostatectomy. Multiple abscesses are much more common than single abscess, and the typical large prostatic abscess is formed by the union of several of these. Operation on a single small abscess will often be followed by subsequent development of another which has been overlooked. Alexander analyzes the results of histologic examination of suppurating prostates removed in this way, and finds that they show progressively the following reason:

1. A purulent catarrhal inflammation, with exudate chiefly within the gland tubules.
2. An interstitial purulent process starting from the tubules invading the surrounding stroma, destroying the tubules and stroma and forming military or larger abscesses—the larger abscess being produced by the union of two or more abscesses, caused by necrosis of the intervening tissue.
3. Chronic exudation and productive processes. These are later manifestations of the same progress of inflammation. These processes are characterized by infiltration of the stroma of the prostate with mononuclear cells, the appearance of compact foci of lymphocytes, chronic edema, areas of softening composed of leucocytes, swollen degenerated epithelial cells and other fixed tissue elements, and occasionally of advanced hypertrophy and metaplasia of the tubule cells.

All these lesions are often combined in a single case of prostatic abscess, showing in different portions of the prostate all three stages of the process.

Journal of Infectious Diseases, Chicago

April

- 41 *Fecal Bacteria of Healthy Men. W. J. MacNeal, L. L. Latzer and J. E. Kerr, Urbana, Ill.
42 *Virulence of Old and Recent Cultures of *Bacillus Pestis*. G. W. McCoy, U. S. P. H. and M.-H. S.
43 Experimental Study of Joint Affections Induced by the Typhoid Bacillus. A. G. Ellis, Philadelphia.
44 *Differential Methods for Detecting the Typhoid Bacillus in Infected Water and Milk. D. D. Jackson, and T. W. Melia, Brooklyn, N. Y.
45 *Proliferation of Epithelium Induced by Sudan III, Scharlach Roth and Paraffin Effects of Roentgen Irradiation on the Same. R. L. Dixon, Ann Arbor, Mich.
46 *Autolysis of the Gonococcus. C. T. McClintock and L. T. Clark, Detroit, Mich.
47 *Immune Bodies in Urinary Infections with Colon Bacilli and Treatment by Inoculation. D. J. Davis, Chicago.
48 *Immunologic and Experimental Studies on Pneumococcus and Staphylococcus Endocarditis. E. C. Rosenow, Chicago.

41. **Bacteriology of Feces.**—In connection with an experiment to determine the influence of cured meats on human health, an elaborate study of the fecal flora of normal adult men was undertaken by directly counting microscopically the number of bacteria in a homogeneous suspension of the feces diluted 1 to 100. The results obtained, which can not be detailed here, form a valuable contribution to the bacteriology of the intestinal tract.

42. **Bacillus Pestis.**—McCoy finds that cultures of the pest bacillus may remain highly virulent for guinea-pigs and white rats after being cultivated artificially over long periods.

44. **Detection of Typhoid Bacillus.**—Jackson and Melia used a medium containing bile and lactose. In this medium the colon bacillus causes much gas and acidity, enough to stop its own growth so far that in the end the typhoid bacillus, which in the mean time multiplies rapidly, becomes the predominating organism. Transplantations in varying dilutions into Hesse agar from lactose—bile inoculated with water or milk and incubated at 37 C.—give rise to characteristic changes when the typhoid bacillus is present. By this method, typhoid bacilli may be isolated from the feces with certainty at any stage of typhoid fever, and Jackson and Melia isolated the bacillus from various sources of drinking water, including the Hudson River.

45. **Epithelial Proliferation.**—Dixon finds that a saturated solution of sudan III in pure olive oil, injected into the skin of rabbits, may cause a simple epithelial hyperplasia about the hair follicles without, however, any carcinomatous infiltration taking place. Roentgen irradiation inhibits this proliferation.

46. **Gonococcus Autolysis.**—In gonococcus cultures autolysis occurs to a marked degree, and the products of this autolysis inhibit effectively the growth of the gonococcus on artificial culture media. The effect their use may have in combating gonorrheal infection in man is to be considered later.

47. **Immune Bodies in Urinary Infection.**—Davis finds that in urinary colon infections the bacteria may vary much in certain details, and that inoculation treatment in such cases should be carried out only with the homologous germ. In the cases so treated by him good results appear to have been obtained. The fact that opsonification, bacteriolysis and agglutination in cases of urinary colon infection do not run parallel, is most readily explained by assuming the existence of specific opsonins, lysins and agglutinins.

48. Discussed editorially in *THE JOURNAL*, April 24, p. 1336.

Journal of Nervous and Mental Disease, Lancaster, Pa.

April

- 49 *Case of Sacral Tabes with Necropsy. S. Leopold, Philadelphia.
- 50 Adiposis Dolorosa Showing Imperfect Development of the Ribs and Vertebrae. G. E. Price, and H. Hudson, Philadelphia.
- 51 Case of Amyotonia Congenita. T. J. Orbison, Los Angeles.

49. **Sacral Tabes.**—Leopold reports a case of tabes in which the Achilles tendon reflex was absent on both sides, and in which there was no Babinski reflex or ankle clonus. The patellar reflex was obtained on each side very promptly, especially in view of the marked wasting of the thigh muscles. The pathologic findings show that the degeneration of the posterior root zone was pronounced through all the sacral segments, and extended as high as the fourth lumbar segment. It was slight at the third lumbar segment, and in the middle thoracic and lower cervical segments only the columns of Goll were involved. The degeneration was throughout more pronounced on the right side and involved the posterior root zone from the fourth lumbar down on the right, whereas on the left side in the corresponding area many normal root fibers entered the posterior horns. In this case, preservation of the patellar tendon reflexes and the disappearance of the Achilles tendon reflexes are satisfactorily explained by the pathologic findings. Ordinarily in tabes the lumbar segments are involved, and the typical symptoms arise, including loss of patellar reflex. In this case the sacral segments showed pronounced degeneration, the lower segments were involved, but the pathway for the reflex arc had not been destroyed. The slight involvement of a few of the fibers of the reflex collaterals of the right side corresponds to the finding of a slight diminution of the right patellar reflex.

New Orleans Medical and Surgical Journal

April

- 52 Where was the Coin? O. Joachim, New Orleans.
- 53 *Nervous and Mental Effects of Masturbation. E. M. Hummel, New Orleans.
- 54 Case of Removal of the Gasserian Ganglion. C. W. Allen, New Orleans.
- 55 *Comparative Study of Blood Culture and the Agglutination Test in Typhoid. R. Lyons, New Orleans.

- 56 Unusual Case of Infection of Genitourinary Tract, Apparently not Amenable to Vaccine Treatment. C. W. Allen, and C. C. Bass, New Orleans.
- 57 Antigonococcus Serum. C. Chassaignac, New Orleans.
- 58 Actions of Certain Drugs on the Blood Vessels. J. B. Guthrie, New Orleans.
- 59 *Relative Value of Polynuclear Neutrophiles (Leucocytes) in Diagnosis, Prognosis and Treatment of Tuberculosis. W. J. Durel, New Orleans.
- 60 Dietetic Management of Diabetes Mellitus. I. I. Lemann, New Orleans.
- 61 Endoaneurismorrhaphy of the Posterior Tibial Artery. W. M. Perkins, New Orleans.
- 62 Traumatic Aneurism and Arterial Varix. W. M. Perkins, New Orleans.
- 63 Purpura Hemorrhagica. F. A. Larue, New Orleans.

53. **Masturbation.**—Hummel urges a more clean and candid discussion of this subject, which hitherto has been "jumped on" by religious prejudice. His experience in the female wards of a hospital for mental diseases leads him to the following conclusions:

1. The masturbation of young children is merely a form of specialized tickling without true or major sexual excitement, and practically without morbid results. The habit being most readily acquired by previously neurotic children, cause is often mistaken for effect.

2. The same practice in the adult female partakes usually somewhat of the nature of that of children, as the deeper sexual emotions do not seem to be enlisted in the act. In some women, however, masturbation is a deeply sexual affair. In instances of excessive indulgence certain alterations in the effective character are observed, such as aversion toward the male sex, inability to experience natural libido, morbid fondness for solitude, sensitiveness about matters of sex, and a tendency to attach a sexual significance to irrelevant things, loss of countenance, etc. Sometimes a neurasthenic state with irritable heart and a fear of dying is observed as a consequence of this habit in women.

3. In the male normal sexual indulgence as well as masturbation implies a higher pitch of erethism and a greater expenditure of nervous energy. The climax of excitation in masturbation is higher than in the normal intercourse, and for this reason more of an insult to the cerebrospinal centers. Excessive venery is harmful to nervous health and incompatible with a high order of mental capacity. Masturbators suffer like consequences to a greater extent. Again, psychoneurotic subjects are the only ones likely to carry this vice to such excess as to excite a distinct nervous syndrome. Often in the early stages of a psychosis the subject is observed to take up masturbation, but Hummel is inclined to look on this rather as a symptom. A temperamentally nervous patient can reduce himself to a lower depth of nervous inefficiency by the vice or induce a state of mild dementia.

4. Masturbation, then, may most properly be assigned as a sole exciting cause of some neurasthenic states, certain perversions of normal sexual inclination with more or less functional impotence, and reductions in character tone. The most profound nervous or mental result ever observed by the author as a consequence of masturbation was a profoundly neurasthenic and psychasthenic state with light dementia, in which the patient was so debilitated that he easily succumbed to a trifling intercurrent malady.

55. **Blood Culture and Agglutination Test.**—Lyons, in a preliminary report, details the results of experiments in the Laboratory of Clinical Medicine, Tulane University Medical Department, which lead him to the following conclusions:

1. The work on blood cultures done in this laboratory and the results of others show that the blood culture is the most reliable means of making an early diagnosis in typhoid.

2. If, for some reason, it is impracticable to take a blood culture an ear culture should be done, as its value has been well proved, and it unquestionably comes next to the blood culture in importance.

3. If the above methods are not possible, as when blood is sent into a laboratory for the agglutination test, it is highly advisable, after using the serum for the Widal test, and especially if it be negative, to try Fornet's clot culture, as the chances of making a diagnosis will be considerably increased; and since an early diagnosis in this disease is so important, no methods that appear to be of value should be left untried.

59. **Polynuclear Neutrophiles.**—Dural quotes Arneth's division of polynuclear neutrophiles into 5 classes and describes observations of his own which lead him to suggest the further investigation of this method of blood examination. If in the future it can be shown conclusively that in the normal healthy subject the blood picture shows a greater percentage of two- and three-nuclei cells, and that in the tuberculous the one- and two-nuclei cells predominate, then we shall have a valuable method added to our armamentarium, in the diagnosis, prognosis and treatment of tuberculosis. If in that blood picture we find a shifting from an abnormal to a normal blood picture after the administration of tuberculin, we shall have a valuable guide for the administration of tuberculin, and in this way we shall feel more certain and at ease while administering this valuable product, thus opening for it a broader usage.

Dominion Medical Monthly, Toronto, Canada

April

- 64 Kraurosis Vulvae. F. W. Marlow, Toronto.
- 65 Treatment of Acute Lobar Pneumonia. G. Chambers, Toronto.

Long Island Medical Journal, Brooklyn

April

- 66 Early Diagnosis of Pulmonary Tuberculosis. S. R. Blatteis, Brooklyn.
- 67 Tuberculosis of the Brain and Its Coverings in Children; Pathology and Diagnosis. L. C. Ager, Brooklyn.
- 68 *Bacteriologic Diagnosis of Diphtheria. J. E. Blake, Brooklyn.
- 69 Etiology of Cancer. G. L. Buist, Brooklyn.
- 70 Cancer of the Uterus. W. B. Chase, Brooklyn.
- 71 Radical Abdominal Operation for Cancer of the Uterus. C. Jewett, Brooklyn.

68. **Bacteriologic Diagnosis of Diphtheria.**—Blake points out that we have become accustomed to depend on health departments for a bacteriologic diagnosis of diphtheria, and asks whether the report is not often enough incorrect to make us doubtful of its accuracy in any particular case. He reports ten cases in which negative reports were given, and yet the bacillus was subsequently found. He discusses the various possibilities—incompetence, carelessness, absence of bacilli in particular tubes, too few bacilli present to be found, especially in the presence of mixed infection—and discards them all. He concludes that the only explanation lies in a difference of methods of culture. He describes the methods used by the health department and by himself, respectively, and believes that if a double cultural system were adopted, a negative report from a positive case of diphtheria would become an extreme rarity.

Maryland Medical Journal, Baltimore

April

- 72 *The Present Status of Tuberculosis Work Among the Poor. M. E. Lent and E. N. LaMotte, Baltimore.
- 73 How the Public Can Help the Medical Profession to Fight Disease (continued). G. M. Linthicum, Baltimore.

72. **Tuberculosis Work Among the Poor.**—Lent and LaMotte describe the nature and purpose of the exhibit offered by them at the International Congress on Tuberculosis. The Instructive Visiting Nurse Association of Baltimore was the first district nursing association to place a special tuberculosis nurse in the field, in March, 1904. The general plan of the association's work was as follows:

1. Instruction of the patient in regard to the nature of the disease, the value of food, rest and air, the use and disposal of sputum cups, fillers, handkerchiefs, pockets, disinfectants and the like, supplied by the nurse. Milk and eggs, warm clothing, beds and coverings and such things as may be necessary for carrying out the open-air treatment, provided through charitable agencies.
2. Instruction of the patient's family in regard to the nature of the disease: the necessity for isolating the patient by giving him a separate room, or, if this is impossible, a separate bed; the care of the utensils and clothing used by the patient, and all other necessary points which concern either the comfort and well-being of the patient or the prophylaxis of the disease.
3. Registration with the state board of health of all cases diagnosed; report made to the city health department of all houses or rooms in which tuberculous patients have died, or from which they have been removed, in order that these places may be fumigated.

In the campaign against tuberculosis, as in any other effort to deal with the evils besetting society, the two primary factors to be dealt with are humanity and environment—humanity that creates environment and environment that distorts humanity. It is the inseparability of these factors as they appear in the concrete facts of existence that renders the educational method futile in the conduct of the tuberculosis campaign among the poor. Their mentality, their attitude toward life, their manner of living, their surroundings, all of which are inextricably associated either as cause or effect, or as both, with the very fact of their poverty, absolutely preclude the possibility of their making any effective use of the instruction given them, however nicely this may be adapted to its end or however skillfully and perseveringly followed up. Tuberculosis is primarily a disease of the poor. It is among them that the issue must be fought out. The solution lies in arousing that part of the community of financial standing and intelligence to the necessity for the provision of hospitals so commodious, comfortable and easily accessible to the friends of patients, that removal will be hailed as a blessing by the classes whose poverty renders them helpless alike to save themselves and to protect the community. The article is illustrated.

• Colorado Medicine, Denver

April

- 74 Thrombosis of the Cavernous Sinus Following Mastoiditis. D. S. Neuman, Denver.
- 75 Thrombosis of the Intracranial Venous Sinuses of Otitic Origin. T. J. Gallaher, Denver.

- 76 Ocular and Orbital Symptoms of Thrombosis of the Cavernous Sinus. E. Jackson, Denver.
- 77 Immunity in Tuberculosis. W. W. Williams, Colorado Springs.
- 78 Immunity in Tuberculosis. G. B. Webb and W. W. Williams, Colorado Springs.
- 79 Causes of Death in the Registration Area of the United States. E. Lawney, Denver.

Buffalo Medical Journal

April

- 80 From the Patient's Point of View. G. M. Gould, Ithaca, N. Y.
- 81 Diagnosis of Pancreatic Affections. J. Burke, Buffalo.
- 82 The Citizen Doctor. E. Munson, Medina, N. Y.
- 83 *Endothelioma of the Bone Following Injury. G. W. Cottis, Batavia, N. Y.

83. **Endothelioma of Bone.**—Cottis discusses a case, the twenty-fifth on record, in order that this condition may be recognized before it has advanced beyond the operable stage; he emphasizes certain conclusions whose importance is demonstrated by his case and by those previously recorded. These conclusions apply also to the sarcomata.

Malignant changes in the bone marrow or in the periosteum may result immediately from trauma, either slight or severe.

Pain is present early if the neoplasm originates centrally, *i. e.*, in the marrow, or if it begins in the periosteum and early involves a nerve trunk. On the other hand, pain may be entirely lacking and the first symptoms may be spontaneous fracture.

There may or may not be palpable tumor formation.

Malignant disease of the bone marrow is likely to cause a pronounced eosinophilia and may cause a pernicious type of anemia.

The long bones are the ones most often primarily affected. Metastases occur in a majority of cases, their seat being most often in other bones. The next most common sites are the lungs, liver and lymphatic glands, in the order named.

In any case of injury to bone followed by an undue amount of pain, in all cases of unexplained delayed union of fractures, in all cases of palpable tumor of bone, in all cases of spontaneous fracture, a blood analysis should be made. Eosinophilia, with or without lymphocytosis, anemia or the presence of nucleated red cells, points to serious bone marrow trouble. The urine should be examined for Bence-Jones proteid, the presence of which indicates myeloma, and hence contraindicates operative procedure.

Iowa Medical Journal, Des Moines

April

- 84 Diseases of Joints Following Injuries, Especially of the Hip and Knee. W. Woodbridge, Central City, Ia.
- 85 Multiple Abscess of the Liver Following Appendicitis. A. G. Burge, Iowa City, Ia.
- 86 *Choice of Operation for Chronic Inguinal Hernia. W. H. Allport, Chicago.
- 87 Surgical Preparation. B. L. Eiker, Leon, Ia.
- 88 Diagnostic Value of the Cystoscope. H. G. Welpton, Des Moines.

86. **Inguinal Hernia.**—Allport endeavors to show where each of the many and diversified operations for chronic hernias of the inguinal region may find special application. He reviews the history of the development of the radical operation for hernia from Czerny's time and tabulates the types of herniotomy and the etiologic classification of hernia. He bases his considerations of treatment on the method of handling (1) the sac; (2) the internal ring; (3) the cord; and (4) the canal and muscle. It is evident that we can hold no single operation as the key to salvation for all hernias.

Texas State Journal of Medicine, Fort Worth

April

- 89 Sixty Cases of Pus-Tube Operations Without a Death. W. W. Samuell, Dallas.
- 90 Ophthalmia Neonatorum. J. O. McReynolds, Dallas.
- 91 Bronchopneumonia. L. L. Harris, Cuba.
- 92 Dislocation of the Spine. C. A. Gray, Bonham.
- 93 Postoperative Dilatation of the Stomach. B. C. Eskridge, Houston.
- 94 Important Details in Laboratory Work. W. F. Thomson, Beaumont.
- 95 Personal Observations in Latent Malaria. J. W. McLaughlin, Austin.
- 96 *Chorioepithelioma. A. L. Blesh and C. E. Lee, Oklahoma City.
- 97 Laparotomy in Tuberculous Peritonitis. W. M. Yater, Cleburne.

96. Abstracted in THE JOURNAL, Nov. 14, 1908, p. 1727.

Interstate Medical Journal, St. Louis

April

- 98 *Theory of the "Complex." W. A. White, Washington, D. C.
- 99 Congenital Syphilis in Infants. I. A. Abt, Chicago.
- 100 *Lupus Erythematosus. M. F. Engman, and W. H. Mook, St. Louis.
- 101 Primary Abscesses of the Abdominal Wall. M. W. Myer, St. Louis.

98. **The Complex.**—White points out that the term, as used in his article, while comparatively new, does not correspond

to an altogether new idea. It is but the recent German clothing that has hitherto found expression in the term "dissociated state." With the advent of the theory of the complex, however, the study of conditions formerly described as the dissociated states, has led to a considerably broader connotation for the term complex as used to-day than for dissociation. He discusses mind as an adaptive mechanism and its various modes of reaction. He defines the term complex as a constellation of ideas associated together, grouped about a certain event, which event conditions a highly painful emotional state. He describes types of defense reactions of the mind against such complexes by (a) forgetting; (b) the theory of compensation; (c) changes in mental moods, attitudes, character, etc. He discusses various modes of the complex, and finally says:

The main conclusions to which his paper tends are that the operations of the mind are never fortuitous—if we ever see mental events that have no efficient cause it is only because we are not in possession of all the facts. Ideas neither arise spontaneously nor do they exist without having established relations with other ideas—again because of a good and sufficient reason. The relationships thus established are brought about and cemented by the emotional content of the event which brings them together, and they bear thus a relation of interdependence as among themselves—they are constellated. These constellations exist as the mental counterparts of events and correspond to experiences which have emotional content. Thus do our sorrows and our pains, our longings and our desires, in fact, all of the springs for action, exist as organized though submerged groups of ideas which, from behind the scenes, as it were, direct our conduct.

100. Lupus Erythematosus.—Engman and Mook report six cases of lupus erythematosus, to illustrate some of the many unique phases of the disease. It expresses, if any disease of the skin does so, some constitutional derangements, most marked and spectacular, in the acute, fulminating, disseminated types of the disease which show coincidentally signs of visceral involvement. Lupus erythematosus remains a mystery in its etiology and disappointing in therapy. Modern study points to some constitutional derangement or to toxemia as cause. This, however, may be only predisposing, and the fixing of a chronic inflammatory process called lupus erythematosus may necessitate an external or exciting factor like an erysipelas, burn, trauma, frostbite, exposure to heat, sun, wind; or an inflammatory disease, of which eczema may be taken as a type.

Kansas City Medical Index-Lancet

April

- 102 Diagnosis of Friedreich's Disease. F. C. Neff, Kansas City.
- 103 Cutaneous Tenderness in Appendicitis. J. G. Sheldon, Kansas City.
- 104 Chronic Desquamative Nephritis. W. C. Abbott, Chicago.

Albany Medical Annals

April

- 105 *Psychotherapy. H. Hun, Albany.
- 106 *The Paravertebral Triangular Area of Dulness in Pleural Effusions (Korányi-Grocco Sign). H. C. Gordinier, Albany.
- 107 State Ownership of the Head Waters. C. G. Rossman, Hudson, N. Y.

105. Psychotherapy.—Hun discusses the subject historically and at large, and devotes particular attention to Eddyism and the Emmanuel movement. His explanation of the acceptance of the basic statements of Mrs. Eddy's book by persons of good education and more than ordinary intelligence in other matters, is that our religious leaders and guides have for so many centuries forbidden us to use our reason in such matters, and have accustomed, and even compelled us, to accept incredible things by faith, that they have prepared a favorable soil for Mrs. Eddy's doctrines. The wonderful cures reported under both Eddyism and Emmanuel movement and other forms of mental healing, he says, are not strange to a physician. Such rapid and complete cures are constantly occurring in ordinary medical practice. He has himself seen paralysees of long standing disappear under a treatment sometimes of five minutes' duration, sometimes of five days'.

106. The Paravertebral Triangle.—Gordinier cites Korányi's works to show that he anticipated Grocco in calling attention to what is now known as "Grocco sign," by some five years, though he sees no reason to doubt the absolute independence of Grocco's discovery. He proposes that it be called the

Korányi-Grocco sign. * He reviews the literature of the subject and reports a case with autopsy findings. He holds that in view of the autopsy findings this case proves that the presence of a typical paravertebral triangular area of dulness may, as has been shown by Smithies and Ewart, be due to extrathoracic disease. It also shows that while the Korányi-Grocco sign is of greater diagnostic value in the recognition of pleural effusion, it is by no means pathognomonic. He draws attention to the fact, repeatedly verified by him, that in massive pneumonias a dulness over the lower spine exists, producing an area of dulness parallel to the spine, but not of a triangular shape. Korányi, in a recent article on this subject, also refers to this fact, and emphasizes the distinction between it and the triangular area of dulness so characteristic of pleurisy with effusion.

Journal South Carolina Medical Association, Greenville

April

- 108 The Religious Press and Quackery. R. E. Hughes, Laurens.
- 109 Cases Illustrating the Diagnostic Value of X-Rays. R. W. Gibbes, Columbia.
- 110 Medical Ethics. F. L. Potts, Spartanburg.
- 111 Advantages of Organization. W. H. Dial, Laurens.
- 112 Acute Otitis Media. E. W. Carpenter, Greenville.
- 113 The Great White Plague. O. B. Meyer, Newberry.

Cleveland Medical Journal

April

- 114 *Modes and Sources of Infection in Tuberculosis. M. P. Ravenel, Madison, Wis.
- 115 The Medical Expert. T. A. Burke, Cleveland.
- 116 Eclampsia. E. O. Houck, Cleveland.
- 117 Bismuth Injections for Treatment of Old and Secreting Fistulas. W. G. Stern, Cleveland.
- 118 Medical Cleveland in the Nineteenth Century (continued). H. E. Handerson, Cleveland.

114. Infection in Tuberculosis.—Ravenel divides his subject into two main propositions: (1) The modes of infection, and (2) the sources of infection. He details experiments to show that tubercle bacilli not only penetrate the intestine, but reach the lung within the period of digestion. He discusses the statistics from various parts of the world with reference to intestinal primary tuberculosis, and concludes therefrom that it can not be upheld that primary intestinal disease is a rare or negligible quantity, as Koch asserts. A consideration of the statistics forces one of two conclusions on us: First, that pathologists find primary intestinal tuberculosis when their attention is directed to a careful examination for it; or else that the weight of Koch's authority, when he said in 1901 that there was no danger of transmission from cattle to man, led to carelessness in the use of milk, and that the death rate from this form of tuberculosis has consequently increased. With our present knowledge, however, Ravenel does not think that we can deny that respiratory infection is responsible for the greater number of cases of tuberculosis. We must admit that man is the greatest danger to man, but the danger to man from the milk of tuberculous cattle must also be considered. He discusses the transmission of bovine tuberculosis to man, and while the proportion of cases due to the bovine germ can not be fixed, it is certainly far from insignificant. It is almost certain that the bovine tubercle bacillus changes in the human body, so that its characteristics can not be recognized. It has been definitely proved that the mammalian bacillus can be changed into the avian bacillus, the differences between which are much greater than those between the human and the bovine. He believes that the evidence proves conclusively that the digestive tract, as a portal of entry for the tubercle bacillus, is much more important than has been heretofore supposed, even though, for the present, we must acknowledge that the respiratory tract is the chief avenue of invasion.

Northwest Medicine, Seattle, Wash.

April

- 119 Surgical Complications of Typhoid. S. W. Mowers, Tacoma, Wash.
- 120 Senile Cataract. R. L. Nourse, Boise, Idaho.
- 121 Lymphoid Tissue. F. J. Van Kirk, Bellingham, Wash.
- 122 *Relation of the Pathologist to the Clinician. W. S. Griswold, Seattle.

122. Discussed editorially in this issue.

Journal of Ophthalmology and Otolaryngology, Chicago

April

- 123 Postgraduate Medical Instruction in Vienna. A. E. Davis, New York.
124 Physiology of the Cochlea in Relation to Tone Perception. G. E. Shambagh, Chicago.
125 Spontaneous Recovery from Apparent Lateral Sinus Infection. E. C. Ellett, Memphis, Tenn.

Journal of the Medical Society of New Jersey, Orange

April

- 126 *Resuscitation of Persons Shocked by Electricity. E. A. Spitzka, Philadelphia.
127 The Uterine Curette: Its Uses and Dangers. C. L. DeMerritt, West Hoboken.
128 Penetrating Wounds of the Abdomen. W. P. Glendon, Cedarville.
129 Psychoneuroses of the Motor Car. W. Dodge, Orange.
130 Importance of Studying the Conditions of the Heart Muscle in Various Diseases. H. A. Hare, Philadelphia.
131 Value of the X-Rays in Chest Diagnosis. A. L. Gray, Richmond, Va.

126. **Treatment of Shock by Electricity.**—Spitzka refers to the danger of fatal electric shock due to the increasing use of electricity as an industrial agent. He describes the mode of execution by electricity and the pathologic findings on autopsy. Death by electricity may be preponderatingly due to heart paralysis, with fibrillary contractions of this organ, or to asphyxia, or both combined. The cessation of respiration is a secondary phenomenon, though usually simultaneous with the cessation of normal heart action. In cases of good contact, however, with a high tension current, there may be no heart paralysis, but only respiratory failure, and in such cases respiration may be re-established spontaneously or artificially. The prognosis is good only in cases in which there is some heart action and respiration, the former particularly. The stricken individual must, of course, be taken out of the circuit if he be not already freed from it. Bystanders can do this with rubber gloves, or with hands wrapped with thick, dry, woolen material, by pulling at the victim's clothing, by sticks of wood, or, if in contact with a wire, this may be cut with a nipper with insulated handles. This must be done with caution, as the momentary arc formed between the separated ends may blind the rescuers.

The patient should be laid with the head a little higher than the body, and artificial respiration be begun promptly by compressing the thorax about 18 times a minute, with the hands applied flat to the sides and lower part of the chest. The tongue must be drawn forward. Massage over the heart, faradization, the electrodes applied to the neck and heart region, or adrenalin injection by Crile's method, may be used to stimulate heart action. The epiglottis may be tickled with the forefinger. Other methods that have been suggested are lumbar puncture, venesection, the application of the Leduc current and in the last resort a high tension shock of short duration.

Ophthalmology, Seattle, Wash.

April

- 132 Arteriosclerosis as a Factor in Obstruction of Central Retinal Vessels. P. Fridenberg, New York.
133 Prealbuminuric Retinitis. H. H. Martin, Savannah, Ga.
134 Intraocular Disease Brought on by Disease of Nasal Sinuses. H. Gradle, Chicago.
135 Fibroma of the Sclera. E. H. Oppenheimer, Berlin, Germany.
136 Membranous Conjunctivitis with Systemic Complications. H. F. Hansell, Philadelphia.
137 Treatment of Corneal Ulcers. J. A. Donovan, Butte, Mont.
138 Amaurotic Family Idiocy. B. E. Fryer and J. S. Lichtenberg, Kansas City, Mo.
139 Practical Relation Between Refraction, Accommodation, Age and Occupation. F. B. Eaton, Portland, Ore.
140 Dependence of Ophthalmology on Other Branches of Medicine. J. Green, St. Louis.
141 Sympathetic Cyclitis with Complete Recovery. T. H. Butler, Coventry, Eng.

Alabama Medical Journal, Birmingham

April

- 142 New Instruments of Use in Surgery of the Nose and Throat. E. Pyncheon, Chicago.
143 Spectacle Fitting in Ophthalmology. S. L. Ledbetter, Birmingham.
144 Duodenal Circle—(Arcus Duodenalis). B. Robinson, Chicago.
145 Pellagra. C. M. Rudolph, Birmingham.
146 Treatment of Pneumonia. E. P. Lacy, Bessemer.
147 Cancer of the Uterus. E. Lanphear, St. Louis.
148 Dr. Bryan Watkins Whitfield. J. D. S. Davis, Birmingham.
149 Progress in Collecting Vital Statistics. E. H. Sholl, Birmingham.

University of Pennsylvania Medical Bulletin, Philadelphia

April

- 150 *Surgical Treatment of Trifacial Neuralgia, Including a Series of 23 Intracranial and 15 Extracranial Operations with One Death. C. H. Frazier, Philadelphia.
151 Tuberculosis of the Appendix. G. P. Müller, Philadelphia.
152 Pure Adenoma of the Breast. J. Speese, Philadelphia.
153 Prevention of Postoperative Adhesions Between the Cortex and Dura. F. Prime, Philadelphia.

150. **Operation for Trifacial Neuralgia.**—Frazier says that according as we are dealing with a minor or a major neuralgia, a peripheral or central operation will be called for. The technic of these has been well-nigh perfected; the physician should no longer harbor the traditional dread and fear of operation on the Gasserian ganglion. Too often the operation is put off until the patient is addicted to the morphin habit, depleted in strength and vitality by drugs, sleepless nights and years of intense suffering. The Gasserian ganglion is easily exposed, hemorrhage and shock need no longer be considered elements of danger; death from shock or from hemorrhage does not occur in experienced hands; the risks of operation are only those associated with any other major procedure. Recovery from the effects of the operation is rapid; the patients are frequently up and about on the third or fourth day, and the ultimate results are, to say the least, most gratifying both to patient and operator. Frazier knows of no other surgical procedure which, from every point of view, offers a greater and more permanent measure of relief. He describes the operation in detail.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

April 10

- 1 *Disorders of the Cerebral Circulation and Their Clinical Manifestations. A. E. Russell.
2 Etiology of Acne Vulgaris and Its Treatment by Vaccines. A. Fleming.
3 *Physiologic and Therapeutic Properties of Serum of Milk (Lacto-Serum). R. Blondel.
4 Treatment of Exophthalmic Goiter with Milk of Thyroidless Goats. W. Edmunds.
5 Radiography as an Aid to the Diagnosis of Diseases and Injuries of Skull and Brain. R. Knox.
6 Tuberculin Therapy. A. J. Landman.
7 Cerebrospinal Fluid in General Paralysis and the Nervous Les. G. S. Williamson.

1. **Disorders of the Cerebral Circulation.**—In the second Goulstonian lecture Russell discusses the correlation between the circulatory changes postulated as the precipitating factor in the epileptic fit and the various symptoms of, and the recovery from, the attack. Under this head he discusses the aura, unconsciousness, convulsions, the physiologic mechanism from recovery underlying epileptic fits, and postepileptic phenomena. He considers vasomotor spasm in the brain as a cause of epilepsy and discusses *petit mal*, infantile convulsions, and Jacksonian convulsions. He describes the symptoms following on prolonged and cerebral anemia as well as similar symptoms resulting from prolonged chloroform syncope.

3. **Lacto-serum.**—Blondel describes experiments made with the lacto-serum of cow's milk, which possesses some very interesting properties. As regards its saline constituents it behaves like a solution in which sodium chlorid, milk sugar, and phosphates of the alkalies and alkaline earths predominate. As regards its ferments, it has a resemblance to extracts of animal organs and to animal serums; like them, it contains certain oxydases, the importance of which is only beginning to be known, and which impart to all serums several properties in common. He next discusses the ferments of milk, and says that the practical results observed in the use of sterilized milk deprived of its ferments seem to show that the latter are of only secondary importance when the milk is introduced into the digestive tract. When the milk is converted into lacto-serum, however, and this is injected into the skin, the specific action of the ferments is pronounced. He describes the effect of the injections and points out as a distinct and peculiar phenomenon belonging specially to this serum, a notable lowering (or what might be more correctly called a "regularization" of the blood pressure in the

arteries and capillaries). Therapeutically, he has used lacto-serum in puerperal infections (results variable); postoperative peritonitis (unsuccessful; there was evident prolongation of the patient's resistance, but a fatal issue was not averted); typhoid fever (one remarkable result but of doubtful interpretation; three cases no result); pneumonia (results every way remarkable and constant, defervescence always setting in after the second injection, or even after the first); arterial hypertension in arteriosclerosis. In this last condition lacto-serum has its most interesting application. A fall of blood pressure and mitigation of the general symptoms ensued. It was noted that several of the patients treated for the last-named condition had albuminuria, which was always somewhat increased during the first days of treatment. If the albuminuria depends on hypertension alone it disappears quickly and permanently in patients who persevere with the treatment, but if renal lesions are present the albuminuria, after the initial increase returns to its original amount. This supplies a convenient method of distinguishing between the albuminuria of hypertension and true organic albuminuria. Blondel describes his method of administration—a daily injection of 10 c.c., repeated in twenty-four hours if the effect has not been sufficient, until the blood pressure has fallen to normal—and also the preparation of the lacto-serum.

British Medical Journal, London

April 10

- 8 *Paralysis of the Movements of the Trunk in Hemiplegia. C. E. Beever.
- 9 *Traumatic Heart Disease and Compensation for Accidents. L. E. Shaw.
- 10 Treatment of a Case of Extensive Infantile Paralysis by Operation and Apparatus. R. P. Rowlands.
- 11 *Nerve Sheath in Causation and Treatment of Neuralgia. R. M. Simon.
- 12 Aural Vertigo. W. S. Syme.
- 13 Lead Poisoning in Childhood. A. J. Turner.
- 14 Crossed Paralysis. G. Lambert.

8. Paralysis of Trunk Movements in Hemiplegia.—Beever essays to show that in some cases of hemiplegia—let us say left—the trunk muscles of each side act weakly when they take part in left-sided movement and the same muscles act normally when they take part in right-sided movement; also that the movements of the trunk requiring bilateral action of muscles are very little or not at all affected. He discusses the question of the change in representation of one and the same group of muscles from one hemisphere to the other accordingly as they act in right-sided or left-sided movements; and also the question of movements requiring bilateral action of muscles in one or both hemispheres. He describes a case of hemiplegia in which certain movements of the trunk were defective, so that, among other defects, the patient fell toward the hemiplegic side in trying to sit up. He analyzes the muscles which take part in these defective movements and compares these voluntary movements with those produced by morbid conditions in man, or elicited by cortical electric stimulation in animals in reference to representation of the movements in one or both hemispheres, and he describes the methods of ascertaining these defective movements in man. The movements which we must ask the patient to perform must be unilateral, for the bilateral movements are less liable than the unilateral movements to be paralyzed in hemiplegia. The unilateral movements consist in abduction from the midline to the right and left, adduction from the right and left to the midline, and rotation of spine with the face turned to the right and then to the left. All these movements should be tested with and without resistance, which should be applied by the hand of the observer against the patient's shoulder, and also both in the position of lying down and in that of sitting up in bed when this is possible; and particular notice should be taken in the latter position whether or not the patient is unable to prevent himself falling to one side.

9. Traumatic Heart Disease.—Shaw points out that with the increasing tendency toward insurance against accidents, the possibility of an injury being the cause of a disease concerns the profession of to-day more than ever before. He divides traumatism of the heart into three classes: (1) Those with

obvious external injury, as in wounds, crushing of the thorax, etc.; (2) those in which there is a disruptive lesion of the heart which is certainly not due to external violence—a patient is found dead with blood in the pericardium and the heart torn, generally in such cases disease of the heart muscle may be found; (3) cases of laceration of the valve and great distention of the cavity consequent on some fierce strain, in which the patient survives the injury, thereby differing from the other two classes in which he has not survived. In this last class the heart may have been previously healthy or there may have been antecedent disease. Shaw discusses the professional difficulties connected with this increasing tendency of the community to insure against the results of accidents. To the previously existing duties of seeking out the causes of disease, inducing reluctant patients to put preventive measures into effect, and of curing the patients when sick, there has now been added a totally new duty, that of holding the balance even between conflicting pecuniary interests, the just settlement of which can be determined only by the aid of medical knowledge. He gives several illustrative cases and asks careful consideration of the question, because it seems likely that if the work of deciding these pecuniary interests continues to be carried on as at present, it must lead to a degradation of the profession in the eyes of the public. To meet the difficulty of conflicting medical opinion under such circumstances, he suggests that the profession should insist on being, and being regarded as, arbitrators and not advocates. It should not be impossible to set up a special tribunal to deal with those questions, in which independent medical men with special experience should act in a judicial capacity as arbitrators or assessors to a legal arbitrator. Another means would be to substitute an insurance against invalidity of all sorts for that against the result of accident. He points out, also, that we should now recognize that as a profession our peculiar relations are necessarily somewhat different in regard to those persons who are insured and those who are not. Formerly, incapacitation of any bread winner rendered him at once a suitable object for charity, but since insurance became common it becomes a doubtful question whether the medical profession should give their services without payment, in order to save the insurance companies from the responsibility of paying their agreed liabilities. Finally, the author makes an earnest plea for the support of medical organization.

11. The Nerve Sheath in Neuralgia.—Simon says that it is not sufficiently recognized that the pressure, which is such an important factor in neuralgia, may arise, not only from outside, but from changes within the perineurium, due first, to the extension of inflammation from surrounding tissues; second, to such toxic conditions of the blood as have a tendency to cause proliferation of the connective tissue in the immediate neighborhood of blood vessels, as in chronic alcoholism; or third, to acute congestion of blood vessels in the sheaths of the nerves, as often occurs in influenza. While morphologically it may be true that there is no such thing as a nerve sheath in the sense that there is no separate structure which can be clearly defined and exhibited, it is nevertheless the case that the connective tissue which forms a nerve sheath is continuous externally with the connective tissue outside it, and that from its inner surface fine trabeculae of connective tissue extend to form a protective covering between and round the myelin and axis cylinders of the nerve element. Blood vessels are carried on all these connective tissue structures, and it is on the congestion of these vessels that Simon believes pain to depend. He quotes two cases in which tough red adhesions were found between the sheath and nerve, and, after breaking them down, the nerve was stretched inside the sheath. The result was entirely successful.

Medical Press and Circular, London

April 7

- 15 Duodenal Ulcer: Its Diagnosis and Surgical Treatment. J. Sherren.
- 16 Three Cases of Malignant Disease of the Nasopharynx. W. Stuart-Low.
- 17 Myasthenia Gravis. W. B. Warrington.
- 18 *X-Ray Treatment of Tuberculous Glands. A. H. Pirie.

18. **Tuberculous Glands.**—Pirie says that the effect of an efficient dose of x -rays in cases of tuberculous glands may be twofold: (1) It may raise the opsonic index from below normal to normal; (2) it may kill giant cells which are forming. The first change is not sudden, like that following injection of tuberculin. With regard to the second change, he points out that those cells most easily killed in the human body are those that grow quickly, *e. g.*, the reproductive cells at the hair roots and in the testicle. It has been shown that giant cells at one period grow quickly and are therefore easily killed. He describes the method and dose of x -rays used and concludes that tuberculous glands in the neck can be successfully treated, both before and after they have broken down. The best time to begin treatment is when the glands are growing larger. On two occasions he has seen a fluid gland become absorbed without opening on the surface. Usually when a gland has become fluid it opens on the surface and heals in a month when x -ray treatment is going on. Rather than let the gland burst when it is fluid, he intends, when he finds a case, to aspirate the fluid aseptically and go on with x -ray treatment. The contents of the gland are sterile and their removal must occur before healing takes place. The cosmetic effect when x -ray treatment is begun, is excellent, as no scar is left. The glands shrink to small, hard nodules of scar tissue, which remain under the skin, do no harm, and are not visible, though they may be felt. Tuberculous glands often disappear spontaneously; and while in his cases, he says, he may have done little good, he has always been careful to do no harm.

Clinical Journal, London

April 7

- 19 Venous Thrombosis. F. de H. Hall.
20 Operation for Breast Cancer. W. S. Handley.
21 *How to Preserve the Pupil when Operating for Cataract. C. B. Taylor.

21. **Cataract.**—Taylor refers to cases of cataract which showed no trace of operative interference, in which there was no pain either during or after operation, and in which there was restoration of excellent sight in patients of very advanced age. In some cases the patients were able to read without glasses. When operating, he stands behind the patient, who is reclined, and almost invariably uses artificial light. The eyeball is fixed with a little spear-shaped instrument, the "*pique de Pamard*," which gives control with far less traumatism than that attendant on the use of ordinary fixation forceps. He then enters the point of a trowel-shaped knife in the cornea close to the sclerotic at the base of the flap, which, when completed, will comprise one-half of the cornea. The knife is then pushed quickly across the anterior chamber until it emerges at a counter puncture similarly placed, is sawed rapidly upward, and then turned forward so as to complete the section in the upper border of the cornea; the capsule is then freely lacerated through the natural pupil and the lens extruded by slight pressure at the lower border of the cornea. He denounces as mistakes the ideas that iridectomy prevents prolapse of the iris, permits of complete evacuation of the cortical debris or that a preliminary iridectomy prevents subsequent glaucoma. There are patients whom it is possible to treat effectually under the influence of subconjunctival injections of potassium iodid and judicious dilatation of the pupil.

Journal of Tropical Medicine and Hygiene, London

April 1

- 22 *The Hereditary Factor in Disease and Its Importance in the Selection of Candidates for Foreign Work. T. N. Kelynaek and G. B. Price.
23 Relapsing Fever in Tangier. G. R. Breeze.
24 Remarks on Drs. Breinl and Hindle's Paper on "A New Porocephalus." L. W. Sambon.
25 Hill Diarrhea. A. G. Newell.

22. **The Hereditary Factor in Disease.**—Kelynaek and Price undertook a collective inquiry among medical officers of missionary societies, in reference to the bearing of heredity in the selection of candidates for foreign work, and emphasize the following points as a result of the analysis:

Class 1.—Candidates whose family history should determine their refusal: (a) insanity and well-marked neuroses, including epilepsy in one or both parents, should be a bar to acceptance, even when the candidate appears physically and mentally sound; (b) family

syphilis should always be considered an adequate cause for rejection.

Class 2.—Candidates for whom a select field should be chosen: While a family history of tuberculosis may call for (a) postponement of the application of the candidate until 27 or 30 years of age, or (b) rejection, if the candidate is himself a "borderline" case, for not a few it would seem justifiable that the candidates should be allowed to work under regulated conditions of life in a carefully selected field.

Class 3.—Candidates whose unfavorable family history may not be considered as a bar to foreign service: A history of short life in the family—unless due to tuberculosis—cancer, adolescent diabetes, gout, rheumatism, fever, and deafness in several members of the family, unless the candidate is a "borderline" case. A family susceptibility to infectious disease, tuberculosis excluded.

Indian Medical Gazette, Calcutta

March

- 26 Sanatorium Treatment of Tuberculosis. T. H. Delany.
27 Tubercle of the Lungs in Bengal Jails. J. Mulvany.
28 Katatonia in India. G. F. W. Ewens.
29 Antiseptic Surgery in Frontier Warfare. A. E. Berry and R. C. MacWatters.
30 Bites of the *Echis Carinata*. W. E. Moncrieff.
31 A Year's Abdominal Surgery. W. J. Wanless.
32 An Outbreak of Mumps. J. K. Sen.
33 Occurrence of Accessory Lobules of the Spigelian Lobe of the Liver. V. E. H. Lindesay.

Annales de Gynécologie et d'Obstétrique, Paris

March, XXXVI, No. 6, pp. 129-192

- 34 Fibromas of Lower Segment of Uterus. G. Fieux.
35 Congenital Fetal Endocarditis. R. Lefour and G. Fieux.

Annales de l'Institut Pasteur, Paris

February, XXIII, No. 2, pp. 97-176

- 36 *Cutaneous Parasites—Acari—and Cancer. (Acariens et cancer.) A. Borrel, Gastinel and C. Gorescu. Id. and Leprosy. A. Borrel.
37 Protecting Properties of Serum of Animals with Chronic Trypanosomiasis. Races Resisting this Serum. F. Mesnil and E. Brimont.
38 Behavior of Precipitins of Antivenom Serum with Cobra Venom. A. Calmette and L. Massol.
39 Research on Anaphylaxis. VI. (De l'anaphylaxie lactique.) Besredka.

36. **Acari and Cancer.**—Borrel thinks that the occurrence of spontaneous cancer in certain houses, streets and cages suggests the possibility that the virus causing the malignant disease may be carried by some cutaneous or other parasite from one subject to another. He has discovered helminths, mites, especially acari, in the depths of cancers on rats and nematodes in the circulating blood of mice with lymphomas, and has recently found acari present in a number of cases of cutaneous cancers in the clinic. He gives a detailed and illustrated description of twelve patients with superficial cancer in the depths of which he found numerous acari. The almost constant presence of the parasites in the follicles just undergoing cancerous transformation is certainly suggestive, and he urges others to search for them, especially in incipient epitheliomas, to determine whether their presence is the rule or was merely a coincidence in his cases. The presence of the acari in the follicle leads to hypertrophy of the sebaceous glands and the tumors develop preferably at such points. He found acari on numbers of other inmates of the hospital, free from cancer, but never in such numbers as in the cancer cases. In the young the parasites never had invaded the sebaceous glands. He found the acari also in cases of mammary cancer, and constantly present in mouse cancers. He is convinced that the ectoparasites for the skin and endoparasites for the internal organs certainly have something to do with cancer, either by transporting the virus or by favoring infection, and advises measures to destroy acari as an important aid in the prophylaxis of both cancer and leprosy, both for the persons affected and the contacts.

Annales de Médecine et Chirurgie Infantiles, Paris

March 15, XIII, No. 6, pp. 181-216

- 40 *Tumor of Cerebellum in Girl of 10. (Nouveau cas de tumeur du cervelet chez l'enfant.) E. Gaujoux and W. Mestrezat.
41 *Cerebrospinal Meningitis of Eleven Months' Duration. Recovery. M. R. Debré.

April 1, No. 7, pp. 217-252

- 42 *Atypical Forms of Tuberculous Meningitis in Children. E. Gaujoux and A. Juséphovitch.
43 Points of Physical and Moral Hygiene for Children. Foveau de Courmelles.

40. **Cerebellar Tumor in Child.**—This is the second case of cerebellar glioma in a child reported by Gaujoux with microscopic examination. In this latter case the first symptoms were observed five years before the fatal termination. The

tumor had been diagnosed as a tuberculoma on account of existing tuberculous processes elsewhere; there was no external hydrocephalus, but the internal was sufficient to explain the vomiting, blindness, etc. Puncture relieved the headache and vision each time temporarily, but the case was too far advanced when first seen to permit of durable improvement. As the atony of the muscles increased and spread, the reflexes became exaggerated—a sign of location only observed, he thinks, with a cerebellar tumor. The cerebrospinal fluid was free from evidences of reaction on the part of the meninges. The tumor was extremely vascular, almost erectile, which explains the abrupt and considerable fluctuations in the intensity of the symptoms observed.

41. **Cerebrospinal Meningitis of Eleven Months' Duration.**—Debré's patient was a girl of 8 and afebrile periods with subsidence of symptoms occurred from time to time, sometimes lasting for three weeks, after which the symptoms flared up again. This prolonged type of meningitis is liable to be accompanied by intense emaciation, of which this case was a typical example. Complete deafness developed a few days after the first onset of the disease, as also epileptoid tremor, exaggeration of the reflexes and rigidity, with vasomotor and trophic disturbances, but all these symptoms proved to be curable in time; even the deafness showed signs of improvement by the end of the year. Lumbar puncture was done three times; the cerebrospinal fluid contained a large proportion of albumin with numerous misshapen polynuclears and a few lymphocytes, but no micro-organisms could be detected. Treatment included tepid baths, guaiacol inunctions and administration at times of pepsin and hydrochloric acid to aid digestion and Debré ascribes the final recovery partially to these measures.

42. **Atypical Forms of Tuberculous Meningitis in Children.**—Gaujoux classifies these abnormal forms as the acute, apoplectic or fulminating type, those characterized by local symptoms depending on the seat of the tuberculous neuro-meningeal process, and those characterized by the preponderance of a single symptom, such as somnolency or delirium or a cluster of symptoms apparently with no causal connection, suggesting influenza, indigestion or typhoid, or combined with some intercurrent affection. He reviews the literature on these atypical forms, citing examples of each. In Hutinel's case the syndrome at first was that of bilateral sciatica, with numbness in the limbs followed by paralytic impotence. The temperature then began to go up and the child died with symptoms of basilar meningitis. In Gaujoux's own experience a typical case of the spinal form of tuberculous meningitis was accompanied by retention of urine and abolition of the knee-jerk and ankle clonus. The principal varieties in the third group are the somnolent, the delirious and the gastrointestinal forms. The somnolent form may be observed in children of all ages and may or may not be accompanied by headache, vomiting, constipation, spasm of the larynx, hemiplegia or diarrhea. In one case the somnolency was the only symptom for a month before general rigidity was observed which proved transient; but the somnolency continued and the child died with scarcely any further characteristic symptoms. The mental form may present merely delirium or hallucinations and the typhoid form may simulate the early stages of typhoid fever. In one such case a girl of 13 died in eight days after the onset of typhoid symptoms, malaise, the typhoid expression, coated tongue, distended abdomen, temperature 104 F. and pulse of 120, with bronchitic râles and diarrhea. Autopsy revealed entire absence of typhoid lesions but unmistakable signs of typical tuberculous meningitis.

Archives de Médecine des Enfants, Paris

March, XII, No. 3, pp. 161-240

- 44 Rôle of Human Contagion in Tuberculosis in Children. J. Comby.
- 45 Influence of Health of Cows on the Food Value of Their Milk. (Influence de l'état de santé des laitières sur la valeur du lait alimentaire.) M. Moussu.
- 46 Paravertebral Triangular Area of Dulness in Serofibrinous Pleurisy in Children. (Sur le signe de Grocco-Rauchfuss-Hamburger dans la pleurésie sero-fibrineuse chez l'enfant.) J. Brudzinski.

April, No. 4, pp. 241-320

- 47 *"Crest" Kyphosis. (Cyphose à crête épineuse.) M. Nageotte-Wilbouchewitch.

47. **"Crest" Kyphosis.**—Mme. Nageotte-Wilbouchewitch calls attention to a peculiarly obstinate form of kyphosis characterized by the prominence of three or four spinal processes standing out like a small crest, generally at the sixth and seventh dorsal vertebrae, but sometimes lower down. The spine is always stiffer than usual at this point and the protruding crest can not be reduced without suspension and extension; these succeed, although the curvature returns almost as soon as the restraint is removed. The protruding crest is the keystone of an extensive curvature involving a large part of the spine, and unless corrected in time, the deformity increases with age. This "crest" may be observed as early as the third or fifth year. The "crest kyphosis" is frequently encountered in the different members of a family. It is important to recognize it early in order to institute appropriate measures at once.

Bulletin de l'Académie de Médecine, Paris

March 23, LXXIII, No. 12, pp. 347-375

- 48 Operations on the Stomach. (Chirurgie de l'estomac.) A. Poncet, X. Delore and R. Leriche.
- 49 Familial Cystic Epitheliomas on Genitalia. M. E. Kirmisson. March 30, No. 13, pp. 376-421
- 50 Aneurism of the Aorta Simulating Hypertrophy of the Heart. Boinet.
- 51 Pulsating Cancer of Sternum and Ribs Simulating Extrathoracic Aortic Aneurism. Id.

Revue de Gynécologie, Paris

XIII, No. 1, pp. 1-176. Last indexed March 20, p. 1000

- 52 Fetation in a Rudimentary Accessory Horn of the Uterus. (La grossesse dans la corne accessoire rudimentaire ou atrésique de l'utérus bicorné unicervical.) M. Cohn.
- 53 Angioma of the Spleen. (Angiome de la rate.) A. Martin.
- 54 *Spontaneous Perforation into the Bladder of Tuberculous Process in the Adnexa. (Ouverture spontanée dans la vessie des pyosalpinx tuberculeux.) H. Violet and A. Chalié.
- 55 Torsion of the Pedicle of Solid Ovarian Tumors. M. Guibé.

54. **Spontaneous Opening into Bladder of Tuberculous Processes in the Adnexa.**—In Gras' compilation of 85 cases of pus in the pelvis finding spontaneously an outlet through the bladder, none was of tuberculous origin, and Violet and Chalié can find no record of such a case in the literature. They have encountered three cases which they report in detail. The women were 27, 32, and 48 years old, and only direct inspection of the parts removed revealed the tuberculous nature of the affection in the adnexa. The perforation into the bladder did not cause acute symptoms; the presence of pus in the urine was accidentally discovered. Pressure from without on the pus pocket caused more pus to accumulate in the bladder in one case, but the opening into the bladder was not discovered before the operation on the adnexa. There were no evidences of cystitis. The symptoms were those of ordinary salpingitis. Treatment in each case was by total abdominal hysterectomy with drainage through the vagina, the abdominal wound closed completely. The bladder perforation was so small in two cases that it was left to heal spontaneously; in the other, the area of bladder wall involved was excised and sutured. The patients are in good health to date, from one to nearly four years since operation.

Revue de Médecine, Paris

March, XXIX, No. 3, pp. 161-256

- 56 Physical Development in General Paralysis. R. Mignot.
- 57 *Psychic Disturbances in Affections of the Hypophysis. (Troubles psychiques dans les syndromes hypophysaires.) M. Laignel-Lavastine. Id. of Male Genital Organs. (Id. dans les syndromes génitaux mâles.) Id.
- 58 Local Adiposis After Experimental Lesions of the Sympathetic Nerve. Rôle of Lymph Glands. L. Lortat-Jacob and G. Vitry.
- 59 *Hemiplegia from Cerebral Arteritis in Inherited Syphilis. P. Savy.

57. **Mental Disturbances in Affections of the Hypophysis and Male Genital Organs.**—Lavastine discusses the mental condition with giant growth and acromegaly and with insufficiency of the hypophysis, the evidence of defective or perverted functioning of the hypophysis being sustained in these cases by surgical findings and by the favorable results from organo-

therapy with hypophysis extract. The psychic disturbances are of the elementary form, as a rule, but he adds that the hypophysis may be responsible for even the more complex psychoses in some cases.

Psychic disturbances are comparatively frequent in affections of the male genital organs. Besides those connected with the loss of the functioning of the testicles, or their defective development, malformations or disturbances in the genitourinary apparatus are liable to entail depression, etc. The psychic reaction may range from simple apprehension to obsessions and hypochondriac delirium. These mental disturbances are most marked in gonorrheics, in whom the mental confusion, stupor and hallucinations may be pronounced. Infantile conditions in the genital organs may be paralleled by the psychoclinical syndrome of childishness in the mental makeup. The trouble is due to arrested development, free from evidences of toxic disturbances, thus differing decidedly from the disturbances resulting from ovarian insufficiency. On the other hand, proof is accumulating that certain mental disturbances may sometimes be the result of defective or perverted functioning of the prostate. Among the arguments that sustain this view are the experimental demonstration of the toxicity and blood-pressure-raising properties of the extract of the prostate from genitally active animals, the frequency of suicide after prostatectomy—three cases are on record—and the prevalence of neurasthenia among men with prostatitis—Drobný found pronounced neurasthenia in 162 out of 168 patients with a gonorrheal prostatitis, and 93 per cent. recovered from the neurasthenia as normal conditions were restored in the prostate. In contrast with these findings he encountered only 41 neurasthenics in 605 patients with chronic urethritis without involvement of the prostate.

59. Hemiplegia from Cerebral Arteritis in Inherited Syphilis.—Savy reviews the history of this subject and gives full summaries of 27 cases in which inherited syphilis manifested itself by hemiplegia generally overshadowed by other pathologic nervous manifestations and accompanied by complex anatomic lesions. In certain cases, mostly in infants, the hemiplegia comes on abruptly and subsides under the influence of specific treatment of the inherited syphilitic taint. A little impotence and atrophy may persist after the hemiplegia has subsided, or the condition may progress toward infantile spastic paralysis. The facts observed in infants and children are the same as in the syphilitic hemiplegia of adults; both are transient and both result from the specific arteritis in the brain with ischemia and possibly consecutive softening in the domain of the obliterated artery. It is a wise course to suspect a syphilitic origin in every case of hemiplegia coming on suddenly in an infant without appreciable cause, even when no signs of a syphilitic taint can be discovered. It is probable that infantile spastic paralysis is traceable to syphilis in many more cases than generally recognized.

Presse Médicale, Paris

March 31, XVII, No. 26, pp. 225-232

- 60 Infections and Suppurations of the Pancreas. J. -L. Faure. April 3, No. 27, pp. 233-248
- 61 Mechanism of Death in Ileus. (Mécanisme de la mort dans l'occlusion intestinale.) M. Guibé.
- 62 Appendicitis with Gall-Bladder Syndrome. (Appendice rétro-cæcal et syndrome cholécystique.) E. Mériel.
- 63 Clinical Examination of the Musculature of the Leg in Infantile Paralysis. C. Ducroquet.
- 64 Mechanism of Triangular Area of Dulness in Pleurisy. (Sur le triangle de Grocco.) J. de Barros.
- 65 Technic of Direct Visual Inspection of Upper Air Passages, Esophagus and Stomach. (Endoscopie directe.) F. Munch.

Semaine Médicale, Paris

April 7, XXIX, No. 14, pp. 157-168

- 66 *The Enteralgic Crises in Tabes. M. Loeper.
- 67 *Method of Reconstructing the Anal Sphincter. (Un Nouveau procédé opératoire pour la reconstitution du sphincter anal.) J. Schoemaker.

66. Intestinal Crises in Tabes.—Loeper explains the tabetic enteralgia as a lightning crisis of the posterior roots which blend into the sympathetic system innervating the intestine. It may be simple enteralgia or there may be choleriform or enteritic crises, of all of which he cites examples and reviews

the cases on record. He does not think that drugs to reduce hypertension answer the main indication, preferring morphin, belladonna and atropin on account of their action on the contraction and secretion of the bowel. Surgical treatment is rarely to be considered as the intestinal crises are less tenacious than gastric crises and recurrences are less frequent. It is important to protect the patient from the injurious action of chilling and emotions. The diet does not seem to influence these crises directly, but preceding constipation or overloading of the intestines was noticed in all his cases.

67. Operation for Incontinence of the Anus.—Schoemaker has been successful in treating incontinence by separating the gluteus maximus muscle on each side and drawing a bunch of its fibers across to the corresponding muscle on the other side, suturing it to the ischium. One strip passes above and one below the anus in opposite directions, and the two are sutured together on each side of the anus. The technic is shown in an illustration; the result has been perfect continence, the patient being able to retain even an injection of glycerin. The anal sphincter had become paralyzed after several operations for prolapse of the rectum. In detaching the strips, which are 3 or 4 cm. wide, he was careful not to molest the nerve.

Archiv für klinische Chirurgie, Berlin

LXXXVIII, No. 4, pp. 903-1127. Last indexed April 10, p. 1215

- 68 Rare Forms of Atheroma. W. Zimmermann.
- 69 *Direct Massage of the Heart in Apparent Death. (Ueber directe Massage des Herzens als Mittel zur Wiederbelebung.) M. v. Caekovic.
- 70 Hyperemic Treatment. (Ueber Behandlung mit Hyperämie nach Bier.) P. Assmy.
- 71 Retroperitoneal Lymph Cysts and Cysts in the Pancreas. R. v. Hippel.
- 72 Complete Sterilization of Catgut by Hofmeisters' Technic. (Ist das nach Hofmeister präparierte Catgut steril?) O. Haist.
- 73 Cystic Degeneration of Fungous Enlarged Papillæ of the Tongue. (Ueber die cystische Degeneration der fungiformen Zungenpapillen.) E. Rehn.
- 74 Anterior Subluxation of Wrist. (Madelung'sche Handgelenksdeformität.) Gangele.
- 75 *Possible Harm from Gymnastic Exercises in Treatment of Scoliosis. (Kann Gymnastik in der Skoliosenbehandlung schädlich wirken?) A. Schanz.
- 76 *Physiologic Extirpation of Gasserian Ganglion. J. W. Rasumowsky.
- 77 Firearm Wounds of Stomach with Retained Bullet. (Ueber Schussverletzungen des Magens mit Steckenbleiben der Kugel.) S. Softeroff.

69. Direct Massage of the Heart in Apparent Death.—Caekovic's attention was attracted to this subject by a case of what proved to be "thymus death" under chloroform. The patient was a boy of 9 being operated on for harelip. When the operation was nearly concluded, the heart stopped beating and as a last resort the heart was exposed and massaged. Caekovic has found 45 cases on record in which this was done and devotes nearly seventy pages to analysis of the details and results. The massage succeeded in resuscitating the patients in 17 cases and in 9 of these the patient completely recovered, in the others the heart action failed again after working for a longer or shorter interval. In all but 5 cases the syncope occurred under an anesthetic; in the others from embolism in the pulmonary artery or as the result of attempted suicide by hanging, asphyxia from some laryngeal or tracheal affection or in a new-born infant. The best results were obtained with massage applied from below the diaphragm; it failed in every case with the transdiaphragmatic technic. The outcome was better the earlier after the syncope the massage was undertaken; the first five minutes gave the majority of successes while the massage failed constantly if ten minutes had elapsed after the onset of the syncope before the massage was commenced. The prospects are more favorable for direct massage of the heart when the syncope is of circulatory rather than of respiratory origin. When other means of resuscitation fail to elicit the slightest response, and especially in "white" syncope, direct massage is justified; the heart is grasped through the diaphragm, the hand being inserted through an incision above the umbilicus. The ventricles are squeezed rhythmically between the fingers or the heart is pushed against the front wall of the chest. The massage must be kept up for a long time supporting the spontaneous contractions as otherwise the heart may flag again. Some-

times fully fifteen minutes elapsed before the heart responded to the effect of the massage. Artificial respiration and traction of the tongue should be kept up with possibly tracheotomy or intubation to ensure a rhythmic supply of air or oxygen to the lungs; the pelvis should be raised and the abdomen compressed to aid in increasing the blood pressure by overcoming the paralysis of the vasomotors, supplemented by saline infusion and possibly also injection of adrenalin.

75. Gymnastic Treatment of Scoliosis.—Schanz says that several years' experience has convinced him that the improvement obtained by exercises in scoliosis is only apparent in fully 99 per cent. of the cases. Exercising is important as a means of improving the general health, but its action on the scoliosis is not so beneficial as is generally assumed, and it may be directly harmful. If the scoliosis is progressing or becoming aggravated, the exercises are directly injurious. Tapping along the spine will reveal painful points in these cases, and their discovery is a contraindication to gymnastics, as also with similar findings in simple insufficiency of the spine without curvature. Every effort should be made to cure this insufficiency of the spine or to reduce it before attempting exercise treatment, and even then the latter should be cautiously applied.

46. "Physiologic Extirpation" of Gasserian Ganglion.—Rasumowsky reports a case in which he successfully isolated the Gasserian ganglion by severing the root behind it, the so-called physiologic extirpation, without removal of the ganglion. The patient was a man of 38; two operations had been performed on the trigeminus for neuralgia, but with only transient results. The isolation of the Gasserian ganglion banished the pain at once and permanently. Besides severing the root back of the ganglion Rasumowsky resected a considerable extent of the second and third branches. His patient developed an eye affection, opacity of the cornea and synechia on that side, possibly from irritation from some foreign body in the eye which he was unable to feel. Otherwise he is free from disturbances.

Beiträge zur klinischen Chirurgie, Tübingen

March, LXII, No. 1, pp. 1-384

- 78 *Isolated Incarceration of Appendix in Hernias. (Ueber isolierte Brucheingklemmung des Wurmfortsatzes.) C. Schnitzer.
- 79 *Internal and External Supravesical Hernia. (Die intra-abdominalen Hernien der Foveae supravesicales. Die äusseren Hernien der Foveae supravesicales.) A. Reich.
- 80 *Fracture of the Malleolus. Meissner.
- 81 Ramrod Shot Lengthwise through Hand and Forearm. (Eine seltene Schussverletzung mit dem Ladestock.) Id.
- 82 *Behavior of the Heart in Goiter. (Verhalten des Herzens bei Struma.) O. Müller and Schlayer.
- 83 Spiral Fracture of Metacarpal Bones. (Spiralbrüche der Metacarpalknochen.) Blauel.
- 84 Tabetic Arthropathy of Hip Joint. (Tabische Arthropathie des Hüftgelenks.) E. Schwarz.
- 85 *Traumatic Central Luxation of the Femur and its Importance in Obstetrics. (Die traumatische Luxatio centralis femoris.) K. Henschen.

78. Isolated Incarceration of Appendix in Hernia.—Schnitzer reviews 10 such cases encountered at the Tübingen surgical clinic and summarizes 22 others from the literature. He expresses surprise that the incarcerated appendix was reduced in so many cases without disturbances from it later; its removal seems urgently indicated even when it is apparently normal, as the results of the incarceration must lower its resisting power.

79. Hernia in the Space Above the Bladder.—Reich gives the particulars of 3 cases of intra-abdominal hernia in the supravesical space and reviews 9 other cases on record, with 4 others to some extent approximating them. This form of hernia has been classified as prevesical, supravesical and anterior retroperitoneal; the patients were all elderly men in the typical cases. The hernia is evidently the result of some congenital tendency; it causes no disturbance unless it becomes incarcerated, when vague and varying symptoms suggest subacute, sometimes remittent ileus. A distended loop of intestine may be seen above the symphysis, and there is also circumscribed pain, but no palpable tumor at this point. The most instructive finding is a protuberance in the bladder wall, revealed by cystoscopy. The main point in the diagnosis is

to bear in mind the predisposition of the space above the bladder to this typical internal hernia. Operative treatment is imperative if no improvement is observed within twenty-four hours. He has not been able to find any record in German literature of external hernia in this region, but has compiled from outside 26 cases.

80. Fracture of the Malleolus.—Meissner remarks that the Roentgen technic and the legislation in regard to industrial accidents have made the treatment of fractures one of the most important questions of the day. The experiences at von Bruns' clinic at Tübingen with fracture of the malleolus are then reviewed, 151 recent cases and 60 of long standing, with illustrations of 38 forms of fracture in this region. The fracture entailed fatal fat embolism in 4 instances.

82. The Heart in Goiter.—Blauel discusses the behavior of the heart in patients with goiter, summarizing the details of 95 operative cases of goiter at Bruns' clinic at Tübingen. In 68 cases the after-history of the patients is included. The mechanical influence of the goiter on the heart was evident in 65 cases; examination later showed that the heart seldom returned to normal after removal of the mechanical influences. The heart had evidently felt the effect of the toxic action of the goiter to such an extent as to be unable to recuperate after its removal. The material reviewed confirms further the frequency of transition of a "thyrotoxic heart" into the complete syndrome of exophthalmic goiter. The blood picture may decide the clinical status of the toxic "goiter heart" better, perhaps, than the single symptoms.

85. Central Dislocation of the Femur.—Henschen's patient was a young woman five months pregnant when the head of the femur was driven into the pelvis by a fall from a wagon. He discusses this form of dislocation and especially its obstetric importance, having found 31 cases on record of its occurrence in pregnant women. To these he adds a list of 64 cases of simple and compound fracture of the floor of the acetabulum and 44 others of central luxation, summarizing the details of each and emphasizing the importance of refraining from bearing weight on the limb until after reduction and retention of the femur in its normal place. He warns expressly against attempting to reduce the head of the femur by manipulations through the rectum, although this is advisable to reduce the fragments of bone after the head has been restored to place. A plaster cast extending above the costal arch is necessary to retain the parts in the desired position, the hip being flexed and in adduction, with longitudinal extension, the technic for which is described in detail. The patient must stay in bed for two or three months; premature use of the limb will annul or render impossible good results from treatment.

Berliner klinische Wochenschrift

March 22, XLVI, No. 12, pp. 529-576

- 86 *Tumor in Spinal Cord Simulating Myelitis. (Rückenmarkstumor unter dem Bilde einer Myelitis verlaufend.) C. A. Ewald and R. Winckler.
- 87 *Bronzed Diabetes and Cirrhosis with Pigmentation. (Bronzediabetes und Pigmentcirrhose.) M. Simmonds.
- 88 Location of Pyloric Outlet. (Wo ist die Portio pylorica?) J. W. T. Liechtenbelt.
- 89 Importance of Shape of Zones of Anesthesia. (Bedeutung der Gestalt der beiden anästhetischen Zonen.) G. Calligaris.
- 90 *Habitual Constipation as Cause of Death in Infants. (Habituelle Verstopfung als Todesursache im Säuglingsalter.) B. Glaserfeld.
- 91 *Serodiagnosis in Congenital Syphilis. (Die Wassermann'sche Reaktion bei kongenitaler Syphilis.) O. Thomsen and H. Boas.
- 92 Cotton Holder for Treating the Ear in Otitis. (Ohrpinzette und Watteröllchen bei Ohreiterungen.) Sprenger.
- 93 *Differentiating Stethoscope. (Verwendbarkeit des Differential-Stethoskopes nach Dr. Bock.) H. Bock.

86. Spinal Tumor Simulating Myelitis.—In the case reported by Ewald and Winckler, the patient was a motorman of 27, previously healthy until paraplegia of the legs suddenly developed with enlargement of the spleen, suggesting an infectious myelitis, although there was no fever or tenderness of the spine. The patient died with symptoms of pneumonia in two months. The case resembles one described by Nonne; in both autopsy revealed a tumor compressing the spinal cord, a sarcoma originating in the dura or epidural connective tissue.

87. Bronzed Diabetes and Cirrhosis with Pigmentation.—Simmonds reports two cases of cirrhosis of the liver with glycosuria and pronounced hemochromatosis or bronzing. In two other cases the diabetes was associated with cirrhosis of the liver, but there was very little pigmentation. In three other cases cirrhosis of the liver was accompanied by such pronounced bronzing that the cases were typical of what the French call "pigment cirrhosis," but there were no indications of diabetes. In 16 similar cases compiled by Anschütz there were no traces of glycosuria in 6, and in 2 others on record glycosuria, present for some time, subsided for longer or shorter periods. Simmonds reasons from these data that in bronzed diabetes the triad of symptoms is the result of a single injurious influence, generally abuse of alcohol. The same injurious influence is responsible for the cirrhosis of the liver, the pigmentation and the changes in the pancreas with the resulting diabetes.

90. Habitual Constipation as Cause of Death in Infants.—Glaserfeld ascribes the constipation in the case described to a congenital physiologic anomaly in the wall of the large intestine although anatomically it seemed quite normal. He does not venture to decide whether weakness in the intestinal musculature or sluggish innervation is responsible for the trouble. The constipation had existed from birth and proved fatal within six months. The case teaches the importance of energetic measures to combat constipation in infants, although in these severe cases the outlook is not promising.

91. Abstracted in THE JOURNAL, April 3, page 1152.

93. Differentiating Stethoscope.—The stethoscope described by Bock allows the strength of the different sounds to be estimated and he describes a number of important points which may be learned with it, supplementing the findings by other methods and revealing aortic insufficiency, myocarditis, etc., and discriminating between true and false gallop rhythm. He says that the percussion findings with this stethoscope are more precise than with orthodiagraphy even when the heart is entirely covered by the lungs. Enlarged bronchial glands are readily diagnosed and pleuritic effusions outlined. The principle on which the stethoscope is based is the muffling of the sound to the limit of audibility—the amount of muffling required to render the different notes inaudible is the measure of their strength.

Deutsches Archiv für klinische Medizin, Leipsic

XCV, Nos. 5-6. Last indexed March 27, p. 1070

- 94 Case of Acanthosis nigricans. H. Pribram.
- 95 Transformation of Nitrogen in Lead Poisoning. (Stickstoffumsatz bei der Bleivergiftung.) L. Pretl.
- 96 *Importance of Higher Temperature for Production of Antibodies. (Bedeutung der Temperatursteigerung für die Antikörperproduktion.) H. Lüdke.
- 97 Experimental Research on Percussion of the Thorax. (Zur Lehre von der Perkussion der Brustorgane.) F. Moritz and W. Röhl.
- 98 Elimination of Ammonia by the Mouth in Uremia. (Ueber Ammoniakausscheidung aus dem Munde von Urämikern.) Tiedemann and Keller.
- 99 Artificial Plethora and the Work of the Heart. (Künstliche Plethora und Herzarbeit.) R. Hess.
- 100 Relations between Free Hydrochloric Acid, Total Acidity, Pepsin and Dissolved Nitrogen. (Verhältnis von freier Salzsäure, Gesamtsäure, Pepsin und gelöstem Stickstoff.) C. Rose.
- 101 Comparative Research with the Salomon Test and the Grafe-Röhmmer Hemolysin Method for Testing the Functioning of the Stomach. (Vergleichend diagnostische Untersuchungen bei Magenkrankheiten.) Id.
- 102 Head Apparatus for Tests of Respiratory Interchanges, Etc. (Ein Kopffrespirationsapparat.) E. Grafe.
- 103 Gaseous Interchanges in Advanced Affections of the Lungs and Circulatory Organs. (Gaswechseluntersuchungen bei fortgeschrittenen Erkrankungen der Lungen und der Zirkulationsorgane.) Id.
- 104 Acute Benign Exfoliating Dermatitis. von Criegern.
- 105 Dry Residue and Behavior of Blood on Intake of Water by the Digestive Tract. (Experimentelle Untersuchungen über die Bestimmung der Trockenrückstände des Blutes und das Verhalten des Blutes bei Wasserzufuhr durch den Verdauungskanal.) A. Plehn. Id. R. Chiarolanza.

96. Influence of Higher Temperature on Production of Antibodies.—Lüdke reports that increased production of antibodies always accompanied the raising of the body temperature in his experiments, no matter whether the temperature was raised by heat externally applied, by stimulation of the heat center

or by injection of chemicals which increase the temperature. The higher temperature had the constant effect of stimulating, promoting and increasing the production of antibodies, and if this production had died down it aroused it again to a slight extent. It is still a question whether the increased temperature is directly the cause of the increased production of antibodies or whether the benefit is by the intermediation of the stimulation of the oxidations by the increased warmth. The theory seems plausible that the increased breaking down of albumin in febrile states allows increased production of the antibodies, that is, of the side chains which have the effectual specific action. The assumption seems logical that the fever in infections is a salutary process if the conclusions of experimental research may be applied to man. The mere increase in the amount of antibodies is not necessarily salutary unless there is increased power of combination between the antigen and the produced antibody. The beneficial effects of hot baths and sweating procedures may possibly be due to an increased production of the protecting substances under their influence. His experiments on animals confirm this assumption, as also his tests on himself, showing always increased amounts of agglutinins in the blood serum after hot baths. The normal temperature rose by one degree C. after ten minutes in a bath at 40 C., and it rose to 35 or 40 C. (104 F.) in a ten-minute bath at 45 C. (113 F.).

Deutsche medizinische Wochenschrift, Berlin

April 1, XXXV, No. 13, pp. 561-608

- 106 *Forceps Deliveries. (Ueber Indikation und Technik der Zange.) H. Sellheim.
- 107 Tests of Antityphoid Serum. (Prüfung des Meyer-Bergellschen Typhusserums.) W. Hoffmann.
- 108 Reciprocal Agglutination of Typhoid and Paratyphoid B. Bacilli. J. W. Schultz.
- 109 Sources of Error and Extent of Error in Opsonin Tests. (Fehlergrösse und die Fehlerquellen im Opsoninversuch.) W. Busse.
- 110 Origin and Importance of Antitrypsin, especially in Cancer. (Entstehung und klinische Bedeutung des Antitrypsins, insbesondere bei Krebskranken.) A. Braunstein.
- 111 Action of Suprarenal Preparation on Frogs' Eyes. (Wirkung von Adrenalin auf die Froschpupille.) S. J. Meltzer.
- 112 Simple Method for Determination of Adrenalin in Suprarenal Tissue. (Zur Bestimmung des Adrenalins im Nebennierengewebe.) G. Comessatti.
- 113 *Experiences with Prostatectomy. A. Cahn.
- 114 Radiometer. (Ein neuer Radiograph.) P. Lepper.

106. Indications and Technic for Use of Forceps in Obstetrics.—Sellheim concludes by emphasizing that the forceps may prove very useful and do no harm if the birth has progressed far enough so that no more force is required than in the natural process of expulsion. When greater force is necessary to overcome the resistance of the soft parts, it is at the expense of the mother, while if the resistance is from the bones, both mother and child suffer. Forceful measures are therefore contraindicated when the necessary maneuvers are liable to prove more dangerous than extraperitoneal Cesarean section.

113. Prostatectomy.—Cahn states that microscopic examination of the enlarged prostate after its removal by Israel in forty cases invariably revealed new growth starting in the epithelium of the gland—a papillary adenoma. In one case transition into a carcinoma was manifest. These findings suggest that hypertrophy of the prostate must be regarded as a true epithelial new growth, with nothing in common with inflammatory changes. Six of the forty patients succumbed soon after the operation, one to anuria and uremia the second day, one to diabetic coma eleven days afterward, two to embolism in the pulmonary artery, and one to postoperative pneumonia. The sixth died on the third day from peritonitis, and autopsy disclosed a small patch of gangrene in the peritoneum. The other thirty-four patients were completely cured by the operation, except that there is incontinence in two cases.

Fortschritte der Medizin, Leipsic

March 20, XXVII, No. 8, pp. 305-336

- 115 *Paraffin in Treatment of Umbilical Hernia. (Paraffinbehandlung der Nabelbrüche.) Burekhardt.

115. Paraffin in Treatment of Umbilical Hernia.—Burekhardt thinks that the anatomic conditions offer peculiar advantages for the use of paraffin in treatment of umbilical

hernias. After painstaking disinfection of the field of operation and of the hands, he lifts up the hernial sac with the left hand. The contents slide back and the tip of the syringe needle is inserted in the sac with the right hand. About 3 or 4 c.c. of paraffin, heated to 65 C. (149 F.), are injected, and the left hand releases the hernia so that it spreads out again to its original size. Ethyl chlorid is then sprayed for half a minute after withdrawal of the needle. The spot is then covered with a flat pad of medicated gauze fastened with adhesive plaster, and a strip of adhesive plaster around the abdomen completes the dressing. The injected paraffin thus spreads out over the hernia like a cap and hardens under the anesthetic, forming a broad plate extending on all sides beyond the area of the hernia, holding back the intestines and by the irritation induced causing production of adhesions. The method is applicable only to hernia not larger than 1 cm. in diameter; if larger than this several sittings are required. If too much paraffin is injected the result is cumbersome and disfiguring. The most important point in the technic is to use only hard paraffin, with a melting point at 54 C. (159 F.). He has thus treated a number of children under 12 during the last four years, and the prosthesis has persisted unmodified except for the ingrowing of connective tissue into the paraffin. The procedure requires only a minute, and he has heard no complaints from any one except at the moment the needle is first introduced.

Medizinische Klinik, Berlin

March 28, V. No. 13, pp. 457-490

- 116 *Pathogenesis and Therapeutics of Diarrhea. (Ueber Durchfall.) A. Schmidt.
- 117 Height and Weight in Determination of Condition of Nourishment. (Brauchbarkeit der "proportionellen" Körperlänge als Massstab für die Berechnung des Körpergewichts erwachsener Menschen bei normalem Ernährungszustand.) G. Oeder.
- 118 *Gastric Cancer. (Zur Diagnostik und Symptomatologie des Magenkarzinoms.) R. Latzel.
- 119 Symptoms and Diagnosis of Diverticulum in the Esophagus. S. Isaac.
- 120 Hemophilia and Accidents. (Hämophilie und Unfall.) W. Pullmann.
- 121 Retention of Consciousness under Large Amounts of Chloroform, Etc. (Ausbleiben der Wirkung auf das Bewusstsein bei ungewöhnlich grossen Mengen von Narkoseflüssigkeit.) H. Cramer.
- 122 Adsorption in Solutions. (Der heutige Stand der Lehre von der Adsorption in Lösungen.) L. Michaelis.
- 123 Vegetarian Diet in Health. (Die vegetarische Lebensweise bei Gesunden.) H. Determann.

116. **Diarrhea.**—Schmidt thinks that in many cases diarrhea is the result of abnormal secretion in the intestine of a fluid which putrefies easily. He has found hydrogen dioxid the most efficient intestinal disinfectant and the most harmless. Pure agar-agar takes up from 10 to 12 per cent. hydrogen dioxid and yields it up very slowly, so that this combination supplies nascent oxygen to the intestine.

118. **Gastric Cancer.**—Latzel states that there is no other affection which so frequently presents symptoms and course entirely opposite to the teachings of the text-books, and cites numerous cases to illustrate his assertion. In some cases the patients gained in weight; in others the palpable cancer was scarcely painful even on pressure. Colic and peristalsis are liable to be more pronounced with benign than with malignant disease, as the muscle is more atrophied with the latter.

Münchener medizinische Wochenschrift

March 30, LVI. No. 13, pp. 641-696

- 124 *Development of Coxa Vara after Reduction of Congenital Dislocation of Hip Joint. (Ueber Coxa vara-Bildung nach der Reposition der angeborenen Hüftverrenkung.) Joachimsthal.
- 125 *Bismuth Poisoning and a Non-Toxic Substitute for Bismuth in Roentgen-ray Work. (Ueber Wismutvergiftung.) L. Lewin.
- 126 Further Research on Chlamydozoa. S. v. Prowazek and H. B. Aragao.
- 127 Pains in Knee with Affections of Hip Joint. (Ueber Knie-schmerzen bei Hüfterkrankungen.) H. Heinke.
- 128 *Trauma of Skull and Injury of Brain. (Schädeltrauma und Gehirnverletzung.) Weyert.
- 129 Test for Glycuronic Acid. (Ueber den Glykuronsäurenachweis durch die B. Tollensche Reaktion mit Naphthoresorzin und Salzsäure.) C. Tollens.
- 130 Chronic Dilatation of Large Intestine in the Elderly. (Chronische Dilatation des Dickdarms im höheren Alter.) M. Versé.
- 131 Anesthetization of the Tympanum. (Zur Anästhesierung des Trommelfells und der Paukenhöhle.) G. Tiefenthal.

- 132 Sunlight Treatment of Laryngeal Tuberculosis. (Zur Technik der Sonnenlichtbehandlung der Kehlkopftuberkulose.) H. Kraus.
- 133 Recording of Lung Findings. (Die graphische Darstellung des Lungenbefundes.) O. Pischinger.
- 134 Standardization of Digitalis. (Wie können die Digitalisblätter mit gleichbleibendem Wert in das Arzneibuch eingeführt werden?) Focke.

124. **Coxa Vara After Reduction of Congenital Dislocation of Hip Joint.**—Joachimsthal describes three cases in which coxa vara developed after successful reduction of congenital dislocation. The Roentgen findings and the progressive character of the disturbance seem to show a process of local softening in the atrophic and thus less resistant bone. As these softening processes are favored by long immobilization, this tardy complication is another argument for shortening the period of immobilization after correction of congenital dislocation of the hip joint. Roentgen examination will reveal the incipient disturbance, he says, and energetic measures should be instituted at once. With massage and exercises in abduction and extension he was able to induce marked improvement in the one case in which the softening of the neck of the femur had induced functional disturbance. The patients were between 2 and 6 years old when treatment was begun.

125. **Efficient Substitute for Bismuth in Roentgen-Ray Work.**—Lewin insists that the symptoms of bismuth intoxication are due to the bismuth itself, not to production of nitrites, consequently it is useless to seek for other salts of bismuth to replace the subnitrate in Roentgen work. After long research he has found that magnetic oxid of iron—*Magneteseisenstein*—is peculiarly adapted for the purpose, as it is non-toxic, while it arrests the rays and is insoluble in the stomach and intestines. Roentgen pictures taken with this oxid far surpass in delicacy of outlines those he has ever obtained with bismuth.

128. **Cranial Trauma and Injury of the Brain.**—Weyert discusses the symptoms in three cases of injury of the brain, remarking that a sound brain may bear a severe trauma to the skull without injury, but if the resistive vitality of the brain is lowered for any reason it reacts with serious consequences to even very slight trauma. He is convinced that many cases of so-called traumatic neurosis are in reality the result of unsuspected organic injury of the brain. Patients with cranial trauma should be referred to psychiatrists earlier and more often than is generally the case.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

PURE MILK AND THE PUBLIC HEALTH. A Manual of Milk and Dairy Inspection. By Archibald Robinson Ward, B.S.A., D.V.M., Assistant Professor of Bacteriology and Director of the State Hygienic Laboratory, University of California, Berkeley, Cal. With Two Chapters by Myer Edward Jaffa, M.S., Professor of Nutrition and Director of the State Food and Drug Laboratory, University of California. Cloth. Pp. 218, with illustrations. Price \$2. Ithaca, N. Y.: Taylor & Carpenter, 1909.

DURABILITY AND ECONOMY IN PAPERS FOR PERMANENT RECORDS. Report No. 89, U. S. Dept. Agric. Submitted by H. W. Wiley, Chief Bureau of Chemistry, and C. Hart Merriam, Chief Bureau of Biological Survey, Committee on Paper for Departmental Use. Including PAPER SPECIFICATIONS, by F. P. Veitch, Chief, Leather and Paper Laboratory, Bureau of Chemistry. Paper. Pp. 51. Washington: Government Printing Office, 1909.

THE LAW IN GENERAL MEDICAL PRACTICE. By Stanley B. Atkinson, M.A., M.B., B.Sc., Justice of the Peace for the County of London. Cloth. Pp. 239. Price \$3. [NOTE: Previous announcement in this column that price was \$1.50 was not correct.] New York: Oxford University Press, 1908.

A GUIDE TO THE TWELVE TISSUE REMEDIES OF BIOCHEMISTRY. The Cell-Salts, Biochemic or Schuessler Remedies. By E. P. Anshutz. Cloth. Pp. 91. Price, 75 cts. Philadelphia: Boericke & Tafel, 1909.

PROCEEDINGS OF THE TWENTY-THIRD ANNUAL MEETING OF THE CONFERENCE OF STATE AND PROVINCIAL BOARDS OF HEALTH OF NORTH AMERICA. Washington, D. C., Sept. 25-26, 1908. Cloth. Pp. 207.

THE FAITH AND WORKS OF CHRISTIAN SCIENCE. By the Author of "Confessio Medici." Cloth. Pp. 225. Price \$1.25. New York: The Macmillan Co., 1909.

TRANSACTIONS OF THE SEVENTEENTH ANNUAL MEETING OF THE HAWAIIAN TERRITORIAL MEDICAL SOCIETY, Held in Honolulu, Nov. 21-23, 1908. Paper. Pp. 122.

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CANCER OF THE BREAST*

MAURICE H. RICHARDSON, M.D.

BOSTON

The treatment of cancer of the breast still demands the most thorough excision possible. The use, in operable cases, of *x*-rays, toxins, yeasts and ferments, radium and similar methods, is, in my opinion, wholly unjustifiable. There is little if any encouragement that methods will soon be found of sufficient merit to replace the knife. Resort to other treatment than excision takes away the only reasonable chance of permanent cure. I see an appalling number of cases of hopeless cancer, which have become inoperable under methods with some scientific basis, to be sure, but as useless as osteopathy or Christian Science. There is certainly a sufficiently wide field for the trial of non-operative methods without taking the easily operable cases. The layman, however, does not know this: many physicians do not. Between the hopeful layman and the optimistic physician, the period favorable to operation is too often passed, and the unfortunate patient comes to the surgeon too late.

Are these words too strong? Far from it. They are too weak. The injury done the sufferer from cancer by the optimistic reports of cures by such things, for example, as trypsin and amylopsin is inestimable. Moreover, the ridicule heaped on surgeons by certain lay journals, under the pretense of humor, whether in reference to appendicitis or other operations said to be performed for reasons other than for the patient's own good—cheap, ill-advised, and sinister attempts at wit—have resulted, I have no doubt, in thousands of those awful tragedies of hopelessness of which I personally have seen many.

The "fads" of an earnest and honorable profession are, in reality, its sincere desire to save humanity from an only too natural tendency to delay. The watchword of our profession of late years has been early operation, earlier operation, earliest possible operation, until perhaps the public is weary—as it often wearies of good works. But do we not see daily the evils of malignant disease in which the layman's reluctance to operation is fostered by ridicule and the attributing of unworthy motives?

My remarks are based on my own experience, which includes a large number of operations, and a still larger number of hopeless cases. An incomplete search through my records, since 1890, gives 1300 cases of breast tumor of all kinds in my own practice. There were 398 patients operated on for cancer.

The things that I am especially moved to say do not concern much the question of methods of operation,

for we have gone as far as we can in thoroughness—in breadth and depth. The glaring need in connection with breast cancer is early recognition. The most important theme for discussion at the present time, therefore, is the diagnosis of breast tumors; the most conspicuous subject for investigation and study is the cause and nature of cancer. But the latter I do not intend here to discuss. I will confine my remarks to the diagnosis, prognosis, and indications for treatment.

My earliest operation consisted in removal of the breast by an elliptical incision extending from the insertion of the pectoralis major to the ensiform cartilage. I dissected free from fascia and fat the pectoralis major, the serratus magnus, the latissimus dorsi, and the subscapularis. The axillary structures were cleaned with the care of a dissecting-room preparation. No muscles were cut or removed unless they were visibly infected.

From year to year I made my dissection more and more thorough. I removed a greater area of skin and carried the dissection of the axilla higher and deeper.

In one case, in June, 1892, I first closed the gap by shifting the skin and opposite breast toward the denuded area. This method I have followed ever since. The breast is removed by not only as much skin as in the so-called tennis-racquet incision, but by even more, for it includes a triangular area between the incisions that meet at the ensiform cartilage. The posterior flap is dissected from the muscles far behind the posterior axillary border. All tissues are removed in one piece, until the fat at the axillary apex is exposed and removed. In thoroughness and detail I have become more and more painstaking, following not so much the trend of surgical practice, perhaps, as the teachings of my own experience, stimulated by early training in the dissecting room. I have, however, nothing new or original to offer. I make my acknowledgments to Halsted, Warren, Meyer, Mixter and a host of other surgeons, especially American surgeons, whose collective experience has done so much to make the surgical treatment of breast cancer effective.

The dissection, as I make it, begins as a broad skin removal. The deeper dissections are still wider and more effective. Of late years I have made the dissections of the veins, arterics, and nerves of the axilla particularly clean and dissecting-room-like, by the use of a curette to remove particles of loose fat.

The wound which results from this operation is always closable by skin: no grafts are necessary. A vast amount of skin can be removed by this method, with a comparatively small area to be covered in by grafts.

The time of this operation is brief. Rarely over thirty minutes: often less. The time depends wholly on the amount of bleeding.

The immediate results in all the cases I have been able to collect, are good. The mortality in all my

* Read before the New York Academy of Medicine, Jan. 19, 1908.

eases is four. The total number of operations for cancer is (since 1890) 398.

The results of operations for breast cancer seem to vary considerably. Certain things must be considered in putting forth statistics, and these things are essential for an approximately just comparison of methods and results.

I do not have as yet my end-results, but I have definite propositions to make for the estimation of end-result values.

So long as cases are grouped properly, end-results may be used properly. So long as they are not thus properly grouped, so long will results be inaccurately weighed. Cases must be judged at the time of operation as favorable, unfavorable, or hopeless, and so forth. Each of these headings permits greater accuracy of subdivision: very favorable or exceedingly favorable, favorable, not positively favorable, doubtfully favorable. For example, a case in which there is a small tumor in the center of a breast with but one or two small lymph nodes involved must be regarded as an early one and especially favorable for permanent cure. A small tumor with many and large axillary lymph nodes, but easily movable and thoroughly dissected, makes a favorable case. A tumor of no matter what size, so long as it can be removed by a wide margin of safety, presents, with trivial or moderate implication of axillary lymph nodes, a favorable outlook.

Cases in which there are infiltrations, whether into the skin or parts near the breast periphery, into axilla with close shaving of axillary vessels, present an unfavorable though perhaps not a hopeless outlook.

Wide infiltrations (the least tendency to *cuirasse* appearances), involvement of ribs or intercostal spaces; implications of axillary vessels; the breaking through of cancer from the lymph nodes into the axillary cellular spaces; make the outlook practically without hope, for in all such cases there must be presumably an incomplete operation.

Every operator of wide experience can not but realize these conditions. In many cases he can not tell beforehand what he is likely to find; in many, he can be reasonably sure. In estimating prognosis, as he must himself acquire the ability fairly to gauge it, the surgeon must rely wholly on his own experience. I dare say the prognosis of no two men is exactly alike, but the general principles of prognosis must be about the same in all extensive experiences.

In presenting the practical side of a discussion of breast cancer, I am moved strongly to emphasize the importance of early diagnosis and its influence on the prognosis and the indications for treatment; for the good prognosis of even the most thorough operation is seriously compromised by delay in diagnosis.

The chief cause of delay lies in the patient herself—in her unwillingness, even with her fears strongly excited, to admit even to herself that serious trouble may be present and in her not unnatural reluctance to consult a physician. This prolific source of delay is increased by the lay press, by advertisements of cancer cures, and the like. A campaign directed to the public, such as is being conducted at the Harvard Medical School in its popular lectures, does much toward educating the laity to the importance of all tumors.

A second important cause is the too sure diagnosis of benignancy on the part of the physician of small experience in whom, I think, the wish is father of the

thought. Hence the necessity of a campaign directed to the physician, and, for that matter, to the surgeon himself.

In insisting on the education of the family physician in the diagnosis of breast cancer, I can illustrate this necessity too well by the shortcomings of myself—more or less of an expert in cancer—to be afraid of offending the susceptibilities of the physician who, no matter how wide his practice, can not in a single disease like breast cancer ever hope to become an authority on diagnosis. While this manuscript was being prepared in a remote camp on Cape Cod, a native consulted me about himself. His case is typical, not only of cancer of the breast, but of the way in which its serious nature may be treated by an intelligent physician. The patient is a man of seventy-five, a farmer, of good family descent straight through eight generations from the Puritans. More than two years ago he noticed a small lump in the right breast. He thought little of it himself, but showed it to his dentist, a young man who was studying medicine. The dentist told him that it was probably nothing, but that he had better keep watch of it. Soon after this he showed it to the local physician, as he happened to meet him on the road. The physician, a man whom I know well, a man of wide experience and common sense, told him that it was a sort of cartilage tumor and would not amount to anything. As it grew larger and larger, the physician made the same reply—"but have it taken out if you want to." It went on nine months longer, and broke. Then the physician said that it ought to be taken out. I found extensive cancer of the right breast, with implication of the axillary nodes. I was unable to close the great skin gap except by grafting. The operation was done on May 13, 1908. There is now a nodule of recurrence in the skin at the sternal end of the scar, and one in the axilla.

Experiences like this are common. My record books are filled with cases of cancer discovered too late. While in many cases no educated person is responsible for the direful error, in the majority some practicing physician is responsible. The patients are told that they have nothing but a glandular enlargement, an obstructed milk duct, or slight thickening; a little harmless swelling—when they are harboring, in a very accessible organ, and one that may easily be thoroughly removed, the worst enemy of mankind.

But it is not the family physician only who makes such mistakes. I have made the fatal error of calling a malignant breast tumor benign, and I have done it, not once, but half a dozen times, and I have seen the evil results following a wrong diagnosis until I no longer take the responsibility of permitting delay when excision is so simple, so safe, and so effective—no longer, except under certain most unusual conditions of almost incontrovertible evidence.

The evils of wrong diagnosis need not be exemplified here, but the evils of a too-positive opinion do need emphasis, especially those of opinions which, if wrong, sacrifice health, or even life itself. The lethal effects of that opinion, for example, by which a necessary operation is withheld are infinitely more important than those which attend an opinion by which an unnecessary one is imposed. We should, of course, confess to our unnecessary operations; but without fear we should publish, that all may see, the tragedies that follow delayed necessary operations. But do we publish them? I fear that we do not.

Now, whatever may be the nature of cancer, its etiology, its treatment, what—after all—can compare in importance with its early detection? Whether parasitic or not; whether hereditary or not; whether caused by this, that, or the other thing, what gives the patient the best, if not the only chance? Is it not early diagnosis?

The diagnosis of breast tumors seems easy, certain, doubtful, difficult, or impossible, with the provision that in even the plainest case there may be error. Could the diagnosis be unmistakable, the treatment would be unmistakable; but there must always be the possibility of overlooking malignancy. The treatment is clear, if the diagnosis is clear. Discrimination between the case which needs operation and the one which does not is exceedingly liable to error, and it is a differentiation which no man can make without occasional mistake.

The only safe treatment of breast tumors of all kinds, at all ages, is excision; for excision is the only treatment which will obviate the awful tragedies of overlooked malignancy.

This rule, which in my experience and belief is applicable to all tumors, admits of certain exceptions. A consideration of these exceptions requires especial emphasis of the diagnosis of breast tumors.

I do not intend at this time to discuss the diagnosis of breast tumors in general, or of cancer in particular, but rather to emphasize those symptoms and signs which lead most frequently to error, and to estimate their weight.

It is not to be expected that we shall often see cases of neoplasm of the breast in which no tumor can be felt; but such cases do come to the surgeon, because of pain or discomfort. It is evident that the prognosis will be enormously bettered if we can make the diagnosis before the tumor is palpable. As the symptoms at this stage are only pain and discomfort, what weight should be given to them? As a predominating rule, pain is not present in cancer. The great majority of patients do not complain of pain in the least. In the cases in which the patients do complain of pain, a tumor has usually been discovered. I have seen a few patients who complained of pain alone, in whom I have discovered no tumor whatsoever. Pain then as a diagnostic sign should have little weight; pain as an indication for operation should have only the weight of its own severity, and should justify operation, in the total absence of the breast signs, only for its own relief.

I have here laid down one of the rules by which I myself am guided. Has it exceptions? A few, I think. I give great weight to pain when I can eliminate positively the existence of tumor, when the breast is large, and when there is an indefinable something in it. I am strongly influenced when there is a marked family history of cancer, when a localized area is unduly tender, and always when the axillary lymph nodes are perceptible.

There is also, as a guiding influence, my experience in many cases, and my feeling of doubt and dread when, under a strong suspicion of malignancy, I do not advise operation. I once found an unmistakable nodule of cancer in a large breast in which, before operation, I could feel nothing, but which I removed on account of pain, contrary to my own opinion as to the necessity—urged to the performance by the family physician. To advise against operation in any breast case, especially in patients of cancer age, even if the only symptom is pain, has become, for some reason or other, chiefly I think distrust my own infallibility, so

great a responsibility, so full of possibilities of disaster that I am more and more averse to taking it. And this distrust of my own powers of diagnosis increases with increasing experience, until I am forced to the position that no man's experience is adequate to justify the neglect of surgical exploration when the signs point, at the earliest stages, to a possible diagnosis of cancer.

The influence of heredity on a doubtful diagnosis should be great. In a questionable tumor, with no symptoms whatever, but with a family history of two or three cases of cancer, I would not exclude the possibility of beginning cancer on no matter how experienced a touch. Nor would I regard any discomfort in the breast of a woman with such a history except as a probable indication of beginning cancer, clear enough at least to demand exploration.

A word should be said as to the significance of tumors of both breasts. As a rule, cancer in both breasts, occurring independently, is extremely rare. Nevertheless, I have seen this often enough to mar somewhat the positiveness of a diagnosis of benignancy based on the presence of double breast tumors. When one breast has a tumor which seems benign, that benignancy is rendered more probable by a similar tumor in the other breast. Similarly, when a tumor has been removed from one breast, and proved benign, the later occurrence of a similar tumor in the other breast favors very strongly a similar benignancy.

But there should be no rule guiding the surgeon in such cases, unless it be the only safe one in connection with breast tumors—that of treating them all as malignant until they have been proved benign.

The various attributes of the tumor itself—size, shape, situation, mobility, hardness, tenderness—must be given that weight, and that weight only, which the experienced observer has, through many years, been able to estimate, basing his estimation on what he feels before operation, controlled by what he feels after excision; what he sees on gross section, and what the expert reports with his microscope. In this way, the candid and careful observer will be able to make deductions of extraordinary accuracy, from the feel alone of the tumor.

The examination of the axilla is prolific in important evidence for or against cancer. There is a strange variability in the extent of axillary involvement. Sometimes the axilla is filled with masses themselves conspicuously cancerous, when perhaps the breast itself will show so little perceptible involvement that the surgeon will feel obliged to review, or even to change his opinion of a breast's malignancy. At times, as I say, there is much in the axilla and little in the breast; at times there is much in the breast and little in the axilla. As a rule, the presence of perceptible axillary lymph nodes adds an evil significance. Even more serious is the presence of supraclavicular lymph nodes. Sometimes there will be infection of lymph nodes with enlargement, but the nodes themselves will be soft and imperceptible.

The diagnosis dependent on symptoms and signs thus far considered may in a few cases be so doubtful that the surgeon will hesitate somewhat in his opinion. For the same reasons, his prognosis will be doubtful; and, while he may favor in doubtful cases the rule of universal operation, there may be conditions which will forbid, except in the presence of certain malignancy.

In all cases, and particularly in those in which the indications for operations are clear, the surgeon must examine for remote metastases, lest he subject his patient to a useless operation. The weight to be given

symptoms which may be caused by such far-away involvement as brain, liver, or spinal cord, is very great; but, great as it is, this weight must be convincing before a diagnosis of hopelessness is allowed to take away the patient's only chance.

Of all the metastases, the most malign are those of involvement of the cerebrospinal axis. I have seen many of these; and, though most of them are late, some, I have no doubt, were present at the time of operation. Any persistent cerebral or spinal symptom should excite the strongest apprehension.

This fact has recently been illustrated by the case of a young woman with an infiltrating mammary cancer that had been treated so long by osteopathy and Christian Science as to be locally almost inoperable. Spinal symptoms that were marked, though not to the neurologist absolutely significant, added enough to the contraindications to make operation unjustifiable.

But more frequently than anywhere else metastases in the abdomen lend their weight to a doubtful diagnosis. I have twice opened the abdomen in the case of doubtful abdominal tumors, without examining the breasts: in both cases there were extensive cancerous infiltrations, which were metastatic from the breasts, and for which breast cancer had never been suspected.

A persistent cough, without adequate signs in the lungs, always adds strength to the diagnosis, if it weakens the indications for operation.

With reference to the diagnosis by the use of the hollow punch, or the knife section, for the microscope, I believe that a tumor doubtful enough to justify this means of control should *per se* be immediately extirpated, for I am convinced that autoinfection is possible and probable, not only in breast cancer, but in all forms of malignancy.

I have seen a breast and axilla infected the whole length of the puncture with a Mixter punch, just as I have seen sarcoma implanted throughout a fresh area, even to the stitch-holes. I have seen not a few cases of widespread cancerous peritonitis from the fluid of a malignant ovarian cyst. I therefore now remove if possible the ovarian tumor without tapping it.

The prognosis in cancer unoperated on is, of course, as bad as it can be. But the prognosis is measured in accordance with the accuracy of the diagnosis. Every case in which there is the slightest doubt has, therefore, hope in the possibilities of error—hope in human frailty. This hope, when an experienced surgeon makes a diagnosis of cancer, is small, to be sure, but there is still a hope.

Three illustrative cases have recently come to my attention.

In the first there seemed to me an infiltrating cancer of the right breast so advanced in axillary metastasis that I fully expected to find adequate removal impossible and early recurrence certain. The operator, a man of small experience, found a simple fibroma. I have often wondered whether, had I operated in this case, I should not have discovered the nature of the growth in time to save the breast.

In a second case in which I was certain of an infiltrating cancer of the right breast I found, after the most radical operation, a tumor containing pus, without a sign, gross or microscopic, of cancer or other malignancy. I had the comfort, in the case of this woman of 65 years, of a primary union and of a safe removal of malignancy, were the laboratory search in any way inadequate or erroneous.

In a third patient, after removal of the breast, I discovered that the main tumor, which I supposed secondary to an epithelioma of the nipple, was a cyst.

I have seen too many errors of diagnosis to be absolutely sure of any case that presents features in more or less concealment. A scirrhus cancer with ulceration is about as certain as anything can be in diagnosis, is it not? And no man could easily mistake it? But it is not four weeks since I made that diagnosis in a superficial ulcer above the subclavian triangle, with a secondary mass extending into the anterior mediastinum. It was so clear a case of cancer that I had no doubt at all of my opinion. Had the situation been the breast in this patient, an old lady, I do not believe that the diagnosis would have had, in any surgeon's mind, the slightest doubt. Even in an unusual place for primary cancer, there was, as I say, no doubt in my mind or in that of any member of my private staff. I admit that I was dumbfounded and delighted, after a very difficult and exciting removal, to receive Dr. Whitney's report of tuberculosis. The operation was adequate for complete and immediate cure of tuberculosis, and a good attempt for cure of cancer, so that I had no especial regret, but it emphasized to myself my own fallibility in an apparently plain diagnosis of cancer. Even in hopeless breast tumors in which the diagnosis seems sure, we must not forget the hope that lies in error and in the confounding of benign and malignant cases. And the liability increases with the absence of signs visible to the eye. Important as is the feel alone in the diagnosis of deeply placed tumors, that diagnosis is made most certain by the visible dimpling of the skin; the discoloration of overlying tissues; the infiltrating and thickened masses perhaps too little affected to give signs to the touch.

But the prognosis of real cancer, without operation, is, of course, as bad as that of any disease can be. I do not accept any cases of cure under other than thorough excision unless the diagnosis rests on a history, a gross examination, and on microscopic findings that make the diagnosis humanly impregnable. Indeed, one case of mammary cancer cured by x-rays, radium, toxins, trypsin, amylopsin, or any method that does not remove utterly the disease, I should regard as one of the most hopeful signs of an ultimate non-operative and successful treatment.

The prognosis under the most radical methods of operating depends on the operative findings. The experienced operator can tell the cases in which the prognosis is almost surely bad as to recurrence. There are cases in which the operation seems adequate for good hope, but in which the surgeon's instinct makes the outlook decidedly bad. Perhaps his description in words would mean a favorable outlook, but he finds an indescribable something of sinister influence.

The statistics on which prognosis depends are, in my judgment, of little service when they are made up of a large number of cases from many surgeons. The statistics that are worth while in the formation of his own prognosis are those of his own experience. I have, for example, a very definite idea of the prognosis of the breast cancer as diagnosed and operated on by myself, but a very indefinite one of the same under another surgeon. For example, in my operative cases, I know those in which there is no hope of ultimate cure, and I know those in which, from the operative standpoint, there is every hope of permanent success. When there is a mass of conglomerated lymph

nodes in the axilla, even if there are no perceptible ones at the first rib, I know that my dissection, no matter how painstaking, is probably too late. When I find but one or two nodes in the center of a mass of axillary fat, easily separated on all sides by an extensive and clean dissection, I know the case belongs to a group in which the outlook is bright, in which the per cent. of cures is higher than 25 or 30 per cent. or even 50 per cent.

The prognosis in cases that are recognized early enough to permit the widest removal, is one thing; that in cases in which thorough dissection is doubtful, is another. When the margin of safety is narrow, as when the glands are dissected from the axillary vessels or nerves; or when the least trace of disease is so situated that it can not be freely and widely removed, then I know that there is no hope of permanent cure.

We probably err most frequently in giving a too favorable prognosis, but occasionally we give a prognosis that is worse than the facts justify. At times lymph nodes that we think cancerous are really inflammatory. Cancer is bad enough, but we must seek every favorable sign, and especially that of human fallibility.

The period of immunity after operation.—Is there any good reason for the three-year limit? I do not think there is any limit of years after which a patient may be said to be permanently cured; for I have seen local recurrences many years after the three-year limit—recurrences of such a nature as to show a direct connection between the original disease and the secondary growth. A sternal or rib tumor, appearing five or ten years after the removal of the breast, would seem to me clearly secondary to the breast tumor. Cancer of the remaining breast, several years after removal of the other, without any recurrence on the side first affected, would suggest very strongly, not a metastasis, but a really new and individual focus—just as when each breast contains a small, movable tumor in its center, we regard them as separate and individual foci. The really remote metastases—in time and situation—are those which affect the spine. I have seen a few examples.

The prognosis as to recurrence is influenced, in favorable cases especially, by the thoroughness of extirpation. The advanced cases, particularly the ones in the borderline of the inoperable, have really very little prospect of cure, but that depends entirely on the extent and thoroughness of extirpation. Except for pain and annoying discharges, the prognosis in advanced cases of mammary cancer is such as to forbid operation.

In considering the immediate prognosis, some of us may be unduly influenced by the mortality of preantiseptic days. I look on the most extensive operation for breast cancer—in patients of good strength, good hearts, lungs, and kidneys—as practically free from mortality.

From the views already expressed, the chief indication for operation is the presence of a tumor, whether in the male or the female breast. I have always felt the need of conservatism in advising surgical operations, and have from time to time emphasized the necessity of restraining one's hand from operating in hopeless cases. But what is the one great lesson that we learn with increasing experience? What the one great blot on surgical practice? It is failure through unjustifiable delay. That lesson we can not seem to learn.

We have learned that delay in the extirpation of breast tumors may be attended by appalling consequences. I have learned that no man can with a placid mind advise delay in the treatment of a doubtful breast tumor. Sooner or later he will be put on the defensive;

or worse, he will have to answer to an implacable if just conscience why he permitted a breast tumor to develop into hopelessness when a trivial and safe operation was possible. In considering what to advise in the case of a woman—or of a man, for that matter—what to do with even the most trivial breast tumor—the burden of proof that the disease is not malignant is on those who advise palliation.

We who say that all breast tumors should be explored present our exceptions. Those who say that only malignant tumors are to be excised must prove beyond reasonable doubt the effectiveness of their diagnostic methods.

For me, the only exceptions to the rule of universal exploration are those cases of multiple tumors affecting both breasts, which are so unmistakably retention cysts. Another exception is the breast tumor which appears after the removal of a benign growth or a simple cyst. Still another is the appearance in the other breast of a tumor like a benign one that has been removed from the first.

But, barring such contraindications as are found in heart, lungs kidneys, and other organs, and in certain constitutional diseases, a better rule—and one which I can not with contented conscience ever break—is that of removing every tumor—of whatever nature—at any age. Thus only can we avoid those errors, which, however infrequent, are nevertheless, when they do occur, so appalling and indefensible.

[TWO OTHER PAPERS IN THIS SYMPOSIUM ON CANCER OF THE BREAST, BY DRS. F. S. DENNIS, NEW YORK, AND W. L. RODMAN, PHILADELPHIA, WILL APPEAR NEXT WEEK.]

PHARMACOLOGIC FETISHISMS

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The last few years have witnessed a strong and certainly a healthy growth in the spirit of iconoclasm in medical thought. Babinski in neurology,¹ Henri in pathology,² and Cushny³ in pharmacology are notable examples of this spirit. Babinski's efforts have largely succeeded in tearing down many notions with respect to hysteria which for a generation were regarded with almost religious veneration by the apostles of Charcot. Henri has attacked the fallacious ideas from which the pragmatic German school derived its sanction for its top-heavy theories regarding blood pathology and immunity. Finally Cushny in pharmacology has thrown out the fetishes with which the temple of therapeutics was so overcrowded, and allowed room for a healthier devotion to be paid to a rational study of the physiologic action of drugs.

If it were not for these periodical intellectual reformations, the mind of the average physician would be little better equipped than that of his superstitious and empirical prototype of a thousand years ago. In pharmacology the movement appeared none too soon. Like many other reformations, it began many years before it was recognized. A whole generation ago Buchheim and Schmiedeberg began the cultivation of rational pharmacodynamics. They sought to put drug therapeutics, then in a chaotic state, on a scientific basis, and while they did not succeed in solving all of the problems with which they were confronted, they con-

1. *Rev. neurol.*, Nov. 15, 1901, ix, 1074; *Confer. Société de l'internat., Doct. Paris*, 1905 [1906].

2. *Sem. méd.*, 1907, p. 424.

3. *Pharmacology*, Philadelphia 1900.

ferred on the medical profession an inestimable blessing by showing the true way by which the application of drugs to disease could be put on a rational plan.

Rich results have already come from these efforts, but it is nevertheless truly surprising that even at the present day many medical men have not seen the light or joined the great propaganda for reform. It is not surprising to see the lay mind bewildered by the glittering shams of charlatanism, but it is difficult to understand how the shallow mockeries of pharmaceutical quackery can gain hold on the professional mind. It is by remedying to a large extent, the tendency to such puerile gullibility on the part of the medical man and by stimulating a healthy degree of scepticism to pharmacotherapy that Cushny has earned the everlasting gratitude of the physician.

The great movement for reform in drug therapy has come to stay until its end is accomplished, and the Council on Pharmacy and Chemistry of the American Medical Association,⁴ comprising as it does some of the best pharmacologic talent in the United States and even abroad, will continue its beneficent work. But each physician must clear his own intellectual atmosphere, and it is because this attempt at mental auto-detergence has destroyed so many therapeutic household gods, before which I was wont to bow in solemn veneration, that I have taken the liberty of collecting some of the pieces and labeling them "pharmacologic fetishisms."

A pharmacologic fetish is no different from any other in the influence it exerts on the mind of its possessor. He is its slave. It dominates him and only by a tremendous effort can he divest himself of its influence. The physician who believes he can supply phosphorus to the nervous system by means of the hypophosphites or phosphates, that he can increase the coagulability of the blood by the administration of calcium salts, that adrenalin hypodermically or internally given will stimulate the heart and raise the blood pressure is the possessor of a pharmacologic fetish. And it is only by a supreme mental struggle, involving almost an assault on his emotions, that he can be made to relinquish these ideas. The tenacity with which we hold to our false beliefs is a strong psychological argument in favor of inculcating sane and scientific doctrine of all sorts into the student's mind during its formative stage.

In the following account of pharmacologic fetishisms, no attempt at classification will be made, and no effort to arrange them in the order of their importance. I simply call attention to some delusions concerning the uses of familiar drugs and discuss what appears to be a rational critical analysis of the same.

I. OLIVE-OIL AND GALLSTONES

Most of us have, at some time in our medical careers, believed that olive-oil cured cholelithiasis. We do not say that we ever indulged in the lay delusion that olive-oil dissolves gallstones, because this would be to insult the intelligence even of those enthusiasts who are today pouring the oleate of glyceryl into the stomachs of their gallstone patients. But candor requires us all to acknowledge that we actually did believe in the cholagogue virtues of olive-oil. As a matter of fact experimentation has shown that olive-oil has no effect whatever on the secretion of any of the constituents of bile, or bile itself. But even the most cynical and incredulous therapist parts with hesitancy and even

with sorrow from this fancy with respect to olive oil.

I had a case of gallstones recently, which illustrates the temptation to grasp and hold to this pharmacologic delusion. The case was that of a woman who suffered from repeated attacks of typical biliary colic. The attacks became frequent and severe, and an operation was advised. This was refused, and for several months the patient was not seen by me. About this time I met the patient's husband on the street and in answer to a query as to the patient's condition, he informed me triumphantly that his wife had been cured by olive-oil which had been recommended in tumblerful doses by a lay friend. I confess to a feeling of discomfiture and to the thought that perhaps my scepticism in regard to the oil was perhaps too strong. A month after this, however, I was called to attend her in another severe attack, and this restored my scientific equanimity. The ingestion of olive-oil might fairly be asserted to have relieved the woman for a longer interval than she had previously experienced, between attacks. Olive-oil may give relief in biliary colic as it does likewise in dysentery, and spasmodic gastropyloric disorders, through its emollient properties on stomach and intestine. Its food value must also be recognized; but as to curing gallstones—never. Cholelithiasis is a surgical and not a medical affection.

II. VALERIAN AND HYSTERIA

The pervading odor of this drug, permeating the atmosphere to the utmost confines of his shop, lends to the pharmacist a mysterious and occult power in the mind of the individual whose nostrils are assailed by it as he enters the drug-store. The frequency with which we all encounter it under these circumstances is a sufficient proof of the high esteem in which it is held by the physician. We know when we smell it that some one has had an attack of nerves, and we feel that the patient's nervousness will be driven away soon after the bottle is uncorked. To what does this malodorous substance owe its vaunted efficacy? To its smell, of course, and certainly not to any effects after absorption. Kionka⁵ has informed us that it stimulates the psychic functions and the circulation, but these effects are so slight and indefinite that they fade into insignificance in comparison to the one great feature of valerian, namely, its ubiquitous, its penetrating, its disagreeable odor. Since we are limited in the treatment of hysteric states to working on the psyche of the patient, let us make use of a dignified psychotherapy and dispense with the disgusting and superfluous valerian.

III. TANNIC ACID AND INTERNAL HEMORRHOID

This delusion is not as prevalent as it used to be, but we all remember distinctly when tannic and gallic acid pills were universally given for hematuria, hemoptysis and other varieties of internal bleeding, and a glance at many works on therapeutics, even at the present day, will show that the error is sometimes though not universally perpetuated. A slight knowledge of pharmacodynamics will discover the source as well as the fallacy for this belief in tannic acid. Tannic acid acts as a local hemostatic by precipitating the proteids of the wound. Even in this respect it is inferior to the salts of the heavy metals. The earlier therapists, reasoning from analogy, weakest of logical arguments, and without investigating the changes undergone by the drug in the process of absorption, concluded that the acid would act on a bleeding part

4. New and Nonofficial Remedies, 1909, Chicago.
5. Arch. Internat. de pharmacod., xlii, 215.

situated within the body. It remained for modern pharmacologic investigation to show that tannic acid is decomposed in the intestine into gallic acid, absorbed as a non-astringent, and gallate of sodium, 99 per cent. of which is completely oxidized in the tissues. As for gallic acid, this substance is quite devoid of astringent property even when locally applied.

IV. ALCOHOL AND ETHER HYPODERMICALLY INJECTED IN SHOCK AND COLLAPSE

In considering this particular species of pharmacologic fetishism we encounter a harmful delusion. Both alcohol and ether after absorption act as cardiac and respiratory depressants. It is possible—nay, probable—that their internal administration may temporarily increase the activity of the medullary centers reflexly, but after absorption their effect is the opposite. In experimental shock alcohol has been found to increase the danger (Crile), while ether injected hypodermically, has been found without effect on the heart or blood pressure (Elfstrand). From these considerations it results that the treatment is either without value or harmful.

V. COLCHICUM AND GOUT

To state that colchicum cures gout is to utter a widely disseminated and influential belief. Let us put the matter in the form of a syllogism to see what we mean. Colchicum cures the gout. Gout is a diseased condition, the pathology of which is so obscure that no rational treatment has been found. Therefore colchicum cures a disease of which the pathology is so obscure that no rational treatment can be found. This is not a *reductio ad absurdum*, because many well-known diseases were curable before their pathology was known. But gout is a syndrome and not a disease, and its very diagnosis and description are vague and uncertain. The question to solve will be, therefore, whether colchicum cures those conditions which are known by the name of gout. Judging from the extent to which the drug is used, and to the fact that very few books fail to include it, one would naturally be inclined to answer the question in the affirmative. We have two methods of solving the problem. One is an appeal to the clinicians. The other is an investigation of the properties of the drug. The first method results, as so often it does, in chaos. Many use it. Many have abandoned it. It may be fairly stated that it is not used as extensively as it was ten or even five years ago. Something has shaken confidence in it. This something is the application of the second method above referred to, namely, an appeal to the drug itself. Colchicum contains two alkaloids which differ from the alkaloids generally in having an acid reaction. Chemically they are related to pyridin. The symptoms induced by colchicum in poisonous doses do not come on until some hours after its administration and they are the same whether the drug is given by mouth or hypodermically. The symptoms refer to the alimentary canal. In this we are somewhat reminded of phosphorus and arsenic. But here the similarity stops because colchicum possesses none of the effects on the metabolism which characterize these metalloids. The symptoms produced by colchicum are those of a gastrointestinal irritant. In medicinal doses the effects are of course much milder in degree but similar in kind. There is no effect on metabolism, circulation or central nervous system. Colchicum is therefore a gastrointestinal irritant, and on this action its therapeutic efficacy must depend.

This simple pharmacologic information robs colchicum of any mystery. It is no better nor any worse than other gastrointestinal irritants in appropriate doses. The whole class of vegetable purgatives and calomel might well enter the lists in rivalry for the exalted position held by the meadow saffron. It is useless to speculate on the influence of colchicum on uric acid excretion, because in the first place the results are inconstant or discordant and in the second place it is now recognized that gout and disordered uric acid metabolism are not synonymous terms. Colchicum may therefore be placed in that large and ever growing class of drugs of doubtful or uncertain utility.

VI. THE ANILIN DYES AS TISSUE ANTISEPTICS

The idea of administering the pyocyanins originated with the assumption that these dyes have a special affinity for the protoplasm of the microbes. The use of methylene blue in gonorrhea is the last surviving relic of what was termed chromotherapeutics. It is fast passing into oblivion and requires but a passing notice.

VII. EPINEPHRIN HYPODERMICALLY AS A HEART STIMULANT

I am aware that war will be waged on the individual who classes this among the pharmacologic delusions; for is it not written in many text-books and preached from many rostrums that adrenalin chlorid solution hypodermically injected is a sovereign method of raising the blood pressure and producing cardiac stimulation? Those who hold to this particular fetish do so with great tenacity. It may be stated at once that the only question involved is the method of administration. There is no question as to the action of adrenalin after its intravenous injection, but it seems that in order to elicit the typical vasoconstriction the drug must be introduced directly into the circulation. A very small dose is then sufficient. When given hypodermically the amino-pyrocatechine on which the action depends is oxidized in the tissues and none of it reaches the general circulation. Wiggers⁶ recently published an account of some experiments on dogs in which he asserts that the action on the blood pressure was elicited in these animals on deep intramuscular injections.

The following experiment, copied after Dixon,⁷ is one which I have performed before my students at Georgetown College. The blood pressure is taken from the right arm by means of a mercury manometer and the exact point where the pulse is no longer felt is obtained. Eight drops of a 1:1000 solution of adrenalin chlorid are injected deeply into the deltoid muscle of the left arm. Absolutely no rise of pressure is indicated in the manometer. There are some subjective symptoms, as pain at the site of injection, muscular weakness, slight abdominal pain and cephalalgia all of which are reflex or at least not due to general vasoconstriction. The consensus of opinion among pharmacologists to-day is that, in order to elicit the blood-pressure-raising effect of epinephrin the drug must be directly injected into the blood vessels.

VIII. POTASSIUM IODID IN SCLEROSES

Potassium iodid very justly deserves the high place which it occupies in pharmacology. But even the iodid is not omnipotent. The success achieved from potassium iodid in removing gumma, which action is attested by all, gave rise to the assumption that the drug pos-

6. Wiggers, Carl J.: Arch. Int. Med., March 15, 1909, iii, 139.
7. Lancet, London 1906, i, 826.

sessed mysterious powers of removing pathologic conditions of a widely different nature. Among these were serous effusion and connective tissue hypertrophy. Arteriosclerosis, being accompanied by connective tissue hypertrophy in the vessel wall, was soon included. Not all of these conditions, however, are curable by the iodid treatment. The drug has no effect on the heart, pulse or blood pressure, and there are no pharmacologic data on which to base its use in the above diseases. Finally clinicians are by no means united in its favor. The real indication for potassium iodid in sclerosis is syphilis. In the absence of this it is without value.

IX. CHLORATE OF POTASSIUM AND STOMATITIS

Here again the principal fallacy lies in the method of administration. Internally administered for its action after absorption, potassium chlorate is objectionable on two grounds: First, it is toxic; second, it is valueless. The local action of potassium chlorate in the mouth is a simple salt action and may be imitated by other salts such as the chlorids, nitrates, and bromids. Yet this delusion influences many medical men, who believe chlorate of potassium a mysterious specific for all sorts of mouth diseases attended by ulceration.

X. THE HYPOPHOSPHITES IN NEURASTHENIA

This particular delusion has made many millionaires but never effected a cure. I quote Cushny's *Pharmacology* (page 530): "The hypophosphites have been used in therapeutics in the belief that they had some special influence on nutrition. They were formerly supposed to be oxidized in the tissues, to phosphates, but this has been shown to be incorrect, as practically the whole of the hypophosphite administered can be recovered unchanged from the urine. There is no ground to suppose that they have any further action on the nutrition than other indifferent salts such as the chlorids. The chief effect of the hypophosphite of iron is due to the metallic ion." A closely related, but equally fallacious idea is that the phosphates are beneficial in neurasthenia and cachectic states. It is supposed that they supply phosphates to the tissues. Experimental investigations have shown, however, that the tissues are entirely unable to build up phosphorus compounds from the inorganic phosphates.

XI. LITHIUM SALTS AND THE URIC ACID DIATHESIS

How lithium ever obtained its tremendous vogue with medical men is one of the great mysteries of pharmacology. Now that its influence is slowly fading into well-merited oblivion, we may profit by the experience and cultivate a more critical attitude toward the subtle sophistries of the pharmaceutical chemist. Not only is the present-day physician losing faith in the drug, but he is extremely suspicious that his confidence has been betrayed with respect to the very existence of the uric acid diathesis. He has been taught to fire, as it were, with imaginary guns at an imaginary enemy. The chief effects of lithium are exercised on the alimentary tract, gastroenteritis and blood extravasations being induced in animals by its subcutaneous or intravenous injections. In this it reminds one somewhat of the heavy metals and alkaline earths. Some of the lithium is excreted by the bowel and this perhaps accounts for its effect. Lithium is used generally as carbonate, and consequently the effects of the alkalis is added to that of the lithium. At one time it was supposed that the hydrates and carbonates of the alkaline metals increased oxidation of the tissues, and therefore

affected metabolism. But this has been shown by laborious investigations to be entirely devoid of any foundation in fact. Lithium was at one time supposed to form a soluble urate with uric acid in the tissues, but apart from the fact that such a combination could be of no use in therapeutics, the lithium salts have never been shown to affect the reaction of the blood unless in toxic quantities. The opinion of pharmacologists at the present time is that the salts of lithium are entirely superfluous. I scarcely need mention piperazin, quinic acid and other so-called specifics for uric acid diathesis, as they are properly undergoing, if they have not undergone, a well-merited extinction.

XII. CALCIUM SALTS IN INTERNAL HEMORRHAGE

The salts of calcium are supposed by many physicians—perhaps a majority—to increase the coagulability of the blood. As a matter of fact, they have no influence on coagulation time (Robertson, Illman, Duncan⁸). Nor is it quite clear from a pharmacologic standpoint why they should ever have been expected to do so. Almost all of the calcium taken internally is passed through the bowel unchanged, owing to its extreme insolubility and impermeability. Then, too, it should be remembered that there is almost never any deficiency of calcium in the adult tissues. Treating with calcium internal hemorrhages in which the coagulability of blood is not reduced seems the height of folly. The calcium ion is useless in therapeutics.

The above are not the only pharmacologic delusions which deserve the name of fetish. There are others too numerous to mention in detail, such for example as the use of turpentine in phosphorus poisoning, ferric hydrate and magnesia in arsenic poisoning, alcohol in snake-bite, nitroglycerin as a heart stimulant in anesthetic accidents and shock, etc. My object is not to attempt to belittle our knowledge of pharmacotherapy, but to offer a humble plea for the application of the same critical analysis and scientific examination of the alleged facts in matters pertaining to treatment by drugs, as characterizes the physician in his attitude towards the other branches of the science of medicine.

TUBERCULOSIS OF THE KIDNEY

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In reviewing the history of the various diseases, we find that our knowledge concerning them has not always advanced in a steady progressive manner but has been marked by periods of great activity followed by longer or shorter intervals of comparative quiescence.

During the past few years our knowledge concerning the particular disease under consideration, namely, tuberculosis of the kidney, has made most remarkable advancements and the chief factors which have brought this about are two: first, the discovery and perfection of the cystoscope, which lent such an impetus to the study of the diseases of the urinary organs in general; and, second, frequent and early operations on the kidneys, which have enabled us to study the actual pathology of the living. While these factors are undoubtedly the means by which the advancement in our knowledge was attained, the real fundamental feature of the knowledge consisted in the recognition of the fact that what for years had been looked on as a truth was a fallacy.

How often it is found that the elimination of an

error contributes more to real knowledge than the discovery of a new truth! For years the profession had been taught and had believed that tuberculosis of the kidneys was secondary to tuberculosis of some portion of the lower urinary or genital tract and therefore due to an ascending infection. Guyon, one of the greatest teachers of genitourinary surgery of this period and one whose influence was felt perhaps more widely than that of any other teacher, is quoted as stating in his lectures that a primary unilateral tuberculosis of the kidney was unknown in which there did not exist at the same time a similar lesion of the bladder, seminal vesicals or other organs.

The reason for the firm and wide-spread belief in the ascending origin of kidney tuberculosis is not difficult to understand. It lies in the fact that an autopsy—practically the only opportunity afforded for inspecting the parts—always disclosed a coexisting tuberculosis of some portion of the lower genitourinary tract and owing to the order in which the symptoms usually appeared during life it was inferred that the lower lesions necessarily antedated the higher.

It is no wonder then, that during all these years, the treatment of tuberculosis of the kidney, based as it was on an erroneous theory, made little or no progress and was a sad tale to relate. But what a change came over the scene on the introduction into practice of the cystoscope! By its use, it was soon discovered that the early bladder symptoms were not due to disease of that organ; the pus and blood in the urine came not from the bladder but from the kidney; and by catheterizing the ureters or by the use of the segregator, it was further found that these pathologic products came not from both kidneys but usually from only one.

A great truth then dawned on the surgeon. He realized for the first time that tuberculosis of the kidney was not a secondary, ascending infection from the lower tract but primarily an unilateral hematogenous infection of the kidney itself; and this fact was demonstrated beyond controversy by the early removal of such infected kidneys by the surgeon, thus affording an opportunity to study the pathology of the living.

PATHOLOGY OF RENAL TUBERCULOSIS

The study of the removed kidneys, together with the experimental work on animals, have given us a very good insight into the pathogenesis and the pathologic anatomy of this condition.

It should be understood that the word "primary," in this connection, refers only to the urinary tract and not to the body as a whole, for the bacilli must be in the blood before they can lodge in the kidney; and there likewise must be an atrium in the body through which the bacilli gain entrance to the blood.

Tubercle bacilli are frequently present in the circulating blood. This is shown by the very common occurrence of tuberculous foci in the bones, in locations inaccessible to the bacilli, except through the blood current, and also by the fact that tubercle bacilli, if looked for thoroughly enough, may be found in the urine in a large percentage of, if not in all, cases of active tuberculosis of the lungs or other organs, and in the absence of demonstrable lesions of the kidneys themselves or of other portions of the urinary tract.¹ This is a fact not sufficiently appreciated.

The presence of these bacilli in the blood and their elimination by the kidneys make it possible for them to lodge and develop in these organs at any time, under certain suitable determining causes. Orth² has clearly shown the influence of trauma to the kidney in determining the localization of bacilli circulating in the blood.

Should the bacilli in the blood be quite numerous and exist comparatively singly they may be widely disseminated throughout the kidney, particularly the cortex, giving rise to the ordinary form of miliary tuberculosis; but this is not the form commonly seen nor the one here under discussion. In the usual form, the bacillary emboli are few and there may be only one.

The smaller ones lodge in the capillaries between the tubules giving rise to typical tubercles which undergo the usual caseous changes. I have seen typical giant cells developing in the walls of the smaller blood vessels and giving rise to such a proliferation of the intima as to lead to an occlusion of the vessel lumen.

Some of the larger emboli may lodge in the larger vessels of the medulla of the pyramids, producing typical ischemic infarcts which undergo disintegration with the formation of small tuberculous cavities. Two or more of these small cavities may coalesce, thus forming larger cavities which sooner or later open into the pelvis of the kidney or occasionally on the surface of the kidney, into the perirenal tissue with the formation of perirenal abscesses. These cavities are lined with the usual granulation tissue studded with tubercles and are surrounded by round-cell infiltration and beyond this by an area of interstitial nephritis.

When small emboli lodge in the vessels of the papillae near the surface, the surface epithelium is lost by disintegration, leaving behind small ulcers which always bleed slightly and at times quite profusely. The bacilli which are constantly thrown off from the surfaces of the cavities and from the ulcers mix with the urine and in descending, infect the mucosa of the pelvis, the ureter and eventually the bladder.

The process in the kidney usually progresses steadily until the secreting portion of the organ is practically destroyed, leaving a mass of irregular tuberculous abscess cavities with walls of varying thickness and all surrounded by dense hyperplastic perirenal tissues.

While the changes above described are those commonly found in tuberculosis of the kidney, we occasionally encounter cases in which the lesions differ from these sufficiently to warrant separate mention. In place of there being multiple foci scattered throughout the organ, there may be but a single focus, perhaps of considerable size, which is then commonly called a large solitary tubercle. The area involved has the appearance of an ischemic infarct and is quite sharply demarcated.

In a kidney of this kind which I removed from a young woman of about twenty-four years, the area involved occupied about one-third of the kidney substance. It was light yellowish in color, rather firm in consistence and so large that it was easily palpated through the intact abdominal wall and was diagnosed, previous to removal, as a kidney tumor on account of the absence of pus and tubercle bacilli from the urine. Microscopic examination showed that the cellular elements had undergone such complete coagulation necrosis with fragmentation of nuclei that the entire area was simply granular detritus. The most important feature of this case is that in the kidney capsule, remote from the area

1. Willson, Robert N., and Rosenberger, Randle C.: The Duration of the Actively Infective Stage of Tuberculosis, *THE JOURNAL A. M. A.*, Feb. 6, 1909, lli, 449.

2. Deutsch. med. Wchnschr., 1907, No. 48.

itself, were found characteristic microscopic tubercles, again illustrating the fact that resection of a portion of a kidney, even in the presence of a so-called solitary tubercle, is as a rule an unjustifiable operation.

Another form worthy of mention is that in which the chief changes consist in an extensive hyperplasia of the interstitial connective tissue with marked destruction of the glandular elements, so that the whole kidney becomes so atrophied as to leave but a small, practically functionless organ.

I will mention only one other form which, though rare, is of importance on account of its deceptive appearance.

The whole organ becomes infiltrated with tubercles, which are so close together and so numerous that, as they undergo caseation, practically the entire kidney becomes converted into a caseous mass with little if any change in form or size. An instructive case of this kind came under my observation a short time ago.

CASE 1.—The patient, a woman of 35, had had an abscess of the right kidney opened and drained about five years before. She recovered with closure of the wound, and, although her general health remained quite good, she continued to have a slight amount of pus in the urine and complained a great deal of pain in the left kidney. The left kidney was easily palpable, could be distinctly outlined in form and size and was freely movable to the second degree. The right kidney was also palpable and somewhat enlarged. Repeated segregations of the urine always led to the same result, namely, no urine whatever from the left kidney but all of it from the right side. This was very puzzling on account of the distinctness with which the left kidney could be felt. She repeatedly asked me to operate on her to see if she could not get relief from the almost constant and annoying pain which she had in the left kidney, but I declined on account of her crippled right kidney. Finally, I yielded to her importuning and cut down on the left kidney. The organ presented a most deceptive appearance. It was practically normal in size and shape, yet the lower pole contained a large tuberculous cyst, while the remainder of the organ consisted of a caseous mass in which, even on microscopic examination, scarcely a trace of cellular elements could be found.

Complete anuria followed the operation and death occurred on the fourth day. At the autopsy numerous tuberculous foci were found in the right kidney and on microscopic examination the secreting cells had undergone acute coagulation necrosis with beginning disintegration.

DIAGNOSIS

Before the pathology of tuberculosis of the urinary tract was understood, tuberculosis of the kidney was seldom diagnosed in the early stages. One of the principal reasons for this lies in the fact that in the majority of the cases of this affection, the earliest symptoms are referred, not to the kidney, but to the bladder; and this fact is what lent such support to the belief, formerly held, in the ascending origin of kidney tuberculosis.

The natural tendency in medicine for one to look to the organ presenting the symptoms for the seat of the disease is so strong that the fact is frequently overlooked that the real lesion may be remote from the apparent one; and in no part of the body is this fact more frequently or more forcefully illustrated than in the urinary tract. This natural tendency is, I believe, the greatest stumbling-block in the way of an early recognition of a tuberculous kidney.

Frequent and painful or harassing urination, the most common initial symptom of renal tuberculosis, immediately suggests to the average observer a cystitis or

inflammation of the bladder; yet if there is one thing more than another which the use of the cystoscope has taught us, it is that no diagnosis of an apparent affection of the bladder is complete until the interior of that organ has been thoroughly inspected and the presence or absence of actual lesions verified.

I wish it were possible for me to say something that would impress on the mind of every physician, in a manner never to be forgotten, the fact that a simple diagnosis of cystitis means little more than does a diagnosis of "fever" or of "cough." The diagnosis of cystitis is never complete until the cause of the trouble is discovered. Cystitis is practically never of spontaneous origin. It is always due to something else and it is this something else that constitutes the real trouble which is to be determined.

If there is one fact above another which I desire to emphasize here, it is that the symptoms above mentioned, coming on gradually in youth or early adult life without apparent cause, should excite in the mind of the attending physician, not only the possibility but the great probability that they are due to tuberculosis of the kidney. In the beginning, the symptoms may be slight and inconspicuous, particularly in young women in whom they are frequently referred to leucorrhea or to some uterine disturbance and little heed paid to them.

Every case of this kind demands the most careful inquiry into the history concerning the possibility of an acquired tuberculous infection and search should be made for active or latent tuberculous foci somewhere in the body.

The bladder symptoms in the early stages of such cases are the so-called irradiation symptoms of a kidney lesion and are not due to direct involvement of the bladder itself, but it should be remembered that sooner or later the tuberculous process extends to and involves the bladder, when the irradiation symptoms pass insensibly into those of a distinct bladder lesion.

From the symptoms alone, it may be impossible to decide whether they are due to a kidney lesion or to actual bladder involvement and the only way in which this point can be determined is by an inspection of the interior of the bladder.

To attempt to diagnose a case of this kind without the use of the cystoscope would be on a par with an attempt to diagnose a condition of the throat without inspecting it.

By means of the cystoscope, the location of the trouble can usually be determined at once, at least in so far as the involvement or non-involvement of the bladder is concerned.

After the seat of the disease has been located, the decision as to whether it is tuberculous or not rests chiefly on the urinary findings, the only positive evidence being the presence of the tubercle bacillus; yet the expert cystoscopist is frequently able to say with considerable precision, from the appearance of the lesions alone whether they are or are not of a tuberculous nature.

In the vast majority of the cases of tuberculosis of the kidney the urine is altered in its chemical and physical properties.

Coincidentally with the appearance of the irradiation symptoms there is usually a polyuria and whenever the process involves the pelvis of the kidney or is in communication with the pelvis directly or through the

tubules, pus and blood are to be seen with the microscope and frequently with the naked eye, while proper tests show the presence of a variable amount of albumin.

Notwithstanding the fact that the continued presence of pus with perhaps some blood in a urine which is markedly and persistently acid, is strong presumptive evidence of the tuberculous nature of the trouble, still the actual proof consists in the finding of the tubercle bacillus as previously stated. Ekehorn³ says that large masses or colonies of tubercle bacilli in urine indicate origin in the kidney, as such masses do not come from the bladder or ureter; also that a large amount of pus with a small number of tubercle bacilli speaks for an old cavity with sclerotic walls, while inconsiderable amounts of pus with numerous bacilli exclude extensive breaking-down of the kidney.

It is a common observation that the examination of the urine for the bacilli is too superficial. They may be present only in small numbers and it may be necessary to collect and centrifuge large amounts of urine and to make repeated examinations of the sediment before a single bacillus is found; but when they are present, perseverance is almost certain to be rewarded, particularly in the early stages and it is in the obscure and doubtful cases that perseverance is so necessary. The smegma bacillus is best excluded by taking the urine by catheter under proper precautions. Goldberg⁴ holds that a spontaneous severe pyuria, gonorrhea excluded, is to be considered tuberculous even when tubercle bacilli can not be found if the urine, drawn with a sterile catheter, shows no growth on gelatin or agar. Luxardo⁵ has emphasized the necessity of examining fresh urine, as in old urine the tubercle bacilli may be so overgrown with other organisms as to be less readily recognized. Next to the bladder symptoms mentioned, the most frequent initial symptom is hematuria.

The blood may be present in almost any amount, from a comparatively few red blood cells recognizable only under the microscope to enough to give the urine a distinctly bloody appearance. Occasionally the initial hemorrhage is quite severe and may appear suddenly without apparent cause and in otherwise apparently healthy individuals, as has been described by Tuffier.

When hematuria once appears, it is likely to persist in greater or lesser degree, at least during the earlier stages when it is much more common than it is during the later stages.

Pus and blood exist in the urine usually in inverse ratio; in other words, when there is a great deal of pus, there is but little blood; and when the bleeding is profuse, there is likely to be but little if any pus.

In a minority of the cases, the initial symptoms are not referred to the bladder but present themselves as an indistinct aching or an indefinite uncomfortable feeling or slight pain in the region of the kidney. These sensations continue with periods of varying intensity, occasionally interspersed with a sudden, more or less severe, acute pain shooting into the back or down along the course of the ureter.

In a majority of these cases, the urinary findings above mentioned will be present; but one occasionally meets a rare case in which the urine is apparently normal, owing to the fact that the lesion in the kidney does not in any way communicate with the pelvis. I recently saw a patient with such a lesion, from whom

the kidney was removed by my colleague, Dr. Hessert, at the Alexian Brothers' Hospital. The urine showed no abnormal constituents, yet in the kidney was a large tuberculous focus, occupying one pole of the organ but not communicating with the pelvis.

When a diagnosis of tuberculosis of the kidney has been made it becomes necessary to determine which organ is involved, for as already stated, the condition is primarily unilateral.

This is done by collecting the urines from the two kidneys separately, either by means of ureteral catheterization or by the use of the segregator. The information obtained from comparative analysis of the separated urines is of inestimable value from a prognostic as well as from a diagnostic viewpoint.

The technic of ureteral catheterization and of urine segregation, together with the inferences which may be deduced from an examination of the urines thus collected, are foreign to the subject of this paper and will therefore not be discussed here, nor will further space be taken up in detailing the symptoms of advanced cases which are so familiar to all.

TREATMENT

The hope of successful treatment depends largely on an early diagnosis, therefore it is to the early symptoms that particular attention is directed. I can not too strongly urge the necessity of investigating most carefully every case presenting any of the above mentioned symptoms until the presence of tuberculosis is either confirmed or excluded.

In considering the treatment of tuberculosis of the kidney, I wish to subdivide the cases into three groups.

1. Those in which a very early diagnosis has been made and in which the symptoms are slight.
2. Those in which the condition is well defined but the process still limited to one kidney with or without involvement of the bladder.
3. Those in which both kidneys are involved.

It will conduce somewhat to clearness to divert slightly from this order and take up the second group first.

In this class, an examination of the separated urines shows one kidney decidedly tuberculous and the other practically normal. If the condition has existed very long, the bladder may show more or less involvement about the ureteral opening; or the opening may be swollen and pouting without further lesions in the bladder.

The treatment of this group of cases has become quite definitely established and consists, when no contraindication exists, in complete nephrectomy. This operation removes at once the active tuberculous focus from the body; and it is often remarkable how quickly the general health of the patient is recovered after the removal of the infected area. Even when the bladder is distinctly involved, it is found that these lesions improve and frequently disappear entirely, as the constant reinfection through the urine ceases by reason of the removal of the diseased kidney above.

When it was recognized that a single tuberculous focus might be present in the kidney, the thought suggested itself of resecting that portion of the kidney and saving the remainder and this operation was done a few times. Experience, however, soon demonstrated that it was impossible to tell whether that portion of the kidney left did not contain other foci; and even in the

3. Arch. f. klin. Chir., 1907, lxxxiv.

4. Centralbl. f. inn. Med., 1907, No. 16.

5. Reported in Hildebrand's Jahresb. a. d. Geb. d. Chir., 1908.

presence of a so-called solitary tubercle, it was shown that small microscopic tubercles might be present, remote from the large focus, as in my own case above mentioned.

The results of resection, therefore, were not good and the operation has been practically abandoned. Delbet⁶ and De Paoli⁷ have recently again called attention to the dangers of resection in these cases.

At the present time then, we may look on complete nephrectomy as the normal treatment in this class of cases.

Returning now to the first group of cases, or those in which a very early diagnosis has been made and the symptoms are slight, the question at once presents itself whether, if nephrectomy is the proper treatment for tuberculosis of the kidney, it should be resorted to in all cases just as soon as a diagnosis is made, even though the trouble be slight. This at once raises another question, namely: Is it possible for a tuberculous lesion of the kidney to heal?

That tuberculous lesions elsewhere in the body may and very frequently do heal is of course well known; and I think I may state it as a fact without entering into a lengthy discussion of the evidence at hand, that the same thing may occur in the kidney, although it is freely admitted that it occurs very rarely here as compared to some other organs, the lungs for instance.

Clinical experience, as well as the finding of an occasional scar of a healed lesion in a kidney, I think bears out this statement.

I now have under observation a young woman in whom I diagnosed a tuberculosis of the left kidney four years ago. The symptoms were mild but under suitable climatic and general conditions, complete symptomatic recovery has taken place including a disappearance of the tubercle bacilli from the urine. She now is a strong healthy young woman.

I am of the opinion then, that in certain selected cases, a reasonable time may be spent in suitable hygienic, general and specific treatment before resorting to nephrectomy.

If the patient improves, well and good, but if after a reasonable time no improvement be noted or if the symptoms increase in spite of the treatment, no further delay should be tolerated but nephrectomy performed at once.

We now come to the third group or those cases in which both kidneys are involved.

The problem in these cases is entirely different from that in the other two groups. Both kidneys are involved, and it is of course impossible to do a double nephrectomy. These cases have been considered by most operators therefore as unsuitable for operation. I am convinced, however, that this view of the subject is, with certain restrictions, erroneous. Changes in the second kidney are of two kinds: Those due presumably to the effects of toxic agents and those due to direct tubercular infection. Albarran has classified the first variety clinically as follows:

A. Slight albuminuria which gradually diminishes and disappears after nephrectomy.

B. Albuminuria with or without polyuria and cylindruria persisting for several years even after nephrectomy.

C. Parenchymatous nephritis with slow or rapid development.

D. Hemorrhagic nephritis.

E. Simple cylindruria.

He says that nephrectomy may be done in the presence of simple albuminuria without danger but should be interdicted when the albuminuria is a forerunner of a severe nephritis.

I believe that almost every case in which one kidney has been badly affected for any length of time will show some of the clinical evidences just mentioned of injury to the opposite kidney; but I agree with Albarran that nephrectomy is not contraindicated in their presence, except when the kidney shows distinct evidences of a severe nephritis.

It is, however, particularly to the second variety or those cases in which the second kidney shows evidence of tuberculous infection that I wish to direct attention. Operation in these cases has been heretofore practically interdicted. I believe that in certain of these cases, properly selected, operation may be done not only with improvement but even recovery to the patient. We recognize that tuberculosis of the kidney is primarily a unilateral affection and that the second kidney becomes involved at some later period. There must be a time then when the second kidney is but slightly involved however badly affected the first kidney may be. If we can recognize the cases at this stage I maintain that the second kidney stands a much better chance of overcoming its slight infection and thus healing if the more extensively involved kidney be removed. In support of this statement, I wish to mention briefly the following cases:

CASE 2.—In 1901, Mrs. M., aged 37, applied to me, having suffered for more than a year. She was greatly emaciated, almost bedfast, ran a constantly high temperature; suffered severe pain in the left side of abdomen; distressing frequent micturition, etc. A large irregular tender mass was easily palpable in the region of the left kidney. A diagnosis of tuberculosis of the kidney was made without difficulty. Repeated examinations of the separated urines showed that both kidneys were affected, although there was no difficulty in recognizing that the left kidney was much the worse. On account of the bilateral involvement I declined to operate and she left me. She soon returned, however, and earnestly begged me to do something for her, as her sufferings made her life unbearable. After giving her the most unfavorable prognosis possible, I removed the left kidney. The organ was almost entirely destroyed with large tuberculous abscesses, etc. After a few days of precarious existence she began to improve. The urine from the right kidney showed the same changes as before the operation, but steadily improved so that at the end of six months it had entirely cleared up with the exception of containing albumin. The patient regained her health quite rapidly and was able to resume all her duties. She is still living, eight years after the operation. She weighs 175 pounds and is perfectly well. Her urine contains no formed elements but has now and has had all the time from 0.5 to 1 per cent. of albumin by the Esbach method.

CASE 3.—Mr. S., aged 25, tailor on the bench, applied to me in June, 1906. He had suffered many months until he was obliged to give up work; had lost much in weight and strength and had constant hectic fever, pain in the left kidney and bladder, distressing urination, etc. The diagnosis was tuberculosis of the kidney. Cystoscopic examination showed incipient involvement of bladder about left ureter. Separated urines showed pus and tubercle bacilli in both specimens, much more in the left. Analysis showed the left kidney doing the great bulk of the work. The left kidney was removed and found largely destroyed by tuberculous. Following the operation the patient received tuberculin treatment, based on opsonic index

6. Ann. d. mal. d. org. genito-urin., 1907, No. 12.

7. Report in Hildebrand's Jahresb. a. d. Geb. d. Chir., 1908.

and Rovsing's carbolic acid treatment of bladder. His general and local symptoms improved slowly and he was able to resume his work. Now, nearly three years after the operation, he is working steadily at his trade and, although he has symptomatically recovered, his urine still shows a slight amount of pus and some albumin.

CASE 4.—Mrs. B., aged 30, applied to me in August, 1906. She had been suffering for about a year with the usual symptoms. Her weight was 99 pounds, average weight for previous five years 120 pounds. The bladder showed considerable redness, swelling and pouting about right ureter; very slight changes about left ureter. Separated urines showed much pus, some blood and tubercle bacilli from right side. There was a slight amount of pus and a few tubercle bacilli from the left side. The amount of urine obtained in a given time and its analysis showed that the left kidney was doing fully 75 per cent. of the amount of work. The right kidney was distinctly enlarged and irregular. A diagnosis of tuberculosis of both kidneys was made, the left being but slightly affected. After the condition was explained to the patient and her husband, both of whom were very intelligent people, they agreed to the removal of the right kidney, which I consequently did, and found the usual changes of multiple tuberculous foci and abscesses. She recovered and returned to her home in one of the southeastern states. Reports from her as to her subsequent history show that during the first year the urine contained a small amount of pus and extra exertion always caused more or less blood to appear, but this gradually improved and after the first year disappeared. She lived out of doors a great deal and forced the nourishment so that by November, 1907, her weight was 145 pounds—many pounds more than she had ever weighed before. She lost some of this, however, but maintains her usual standard weight. Following exhaustion or cold, she has some pain in the left kidney, but this is not frequent and scarcely ever happens when she feels well. Her general health and local symptoms have so materially improved that I can account for it all only on the supposition that the tuberculous lesions of the remaining kidney have practically, if not quite, healed.

These cases, from two and one-half to eight years since the operation, are of long enough standing to show results; and when it is remembered that they were all bad cases rapidly progressing and that the patients are now well, I think we are justified in concluding that some patients, even with bilateral involvement, can be saved by operation. The cases, however, must be carefully selected. The separately collected urines must be examined sufficiently to enable one to judge of the ability of the remaining crippled kidney to sustain life. This is a difficult matter to estimate, as it is impossible to tell the recuperative power of a particular organ. A kidney which is doing insufficient work in a badly septic body may have its functional capacity increased remarkably when relieved of its burden of intoxication. One must depend, therefore, on an experienced judgment based on all the facts of the case, rather than on any particular test-tube findings. The two factors which I believe are instrumental in favoring healing in these cases are the facts, first, that by removing the badly diseased organ we relieve the system of an immense amount of toxic matter, which is constantly injuring the other organ to take care of, and second, that by removing one organ, we increase the blood supply to the other and thus induce, if not a Bier's passive hyperemia, at least an active hyperemia.

Of course all such patients after operation should receive the best hygienic, general and specific treatment possible.

In conclusion the burden of my plea is this:

First, I urge a more thorough and systematic investigation of all patients presenting urinary symptoms

in order to recognize tuberculosis of the kidney in its early stages. Second, I believe that bilateral involvement is not in itself a contraindication to operation but that in suitably selected cases, in which one organ is only slightly involved, the removal of the more extensively diseased kidney may be an aid to the recovery of the other. Third, when a diagnosis has been made early, and the lesion is presumably slight, hygienic general and specific treatment should be given a fair trial before a resort is had to nephrectomy. Fourth, when an operation is undertaken, it should be a complete nephrectomy, if possible, as incomplete operations, such as nephrotomy, partial resection, etc., have not been followed by good results.

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THE INOCULATION ACCIDENT IN MANILA IN 1906

CONTAMINATION OF CHOLERA VACCINE WITH PLAGUE
VIRUS

W. M. HAFFKINE, M.D.

CALCUTTA, INDIA

About two years ago Dr. Paul C. Freer, Director of the Bureau of Science, Manila, P. I., reported¹ an accidental contamination of Haffkine anticholera vaccine with the virus of plague, which occurred in Manila in 1906. A number of natives were inoculated with plague, and several died. It is supposed that some one placed a forty-eight hour virulent plague culture, insufficiently labeled, among the cholera cultures, and that the whole were mixed and inoculations immediately made.

CHOLERA VACCINATION IN INDIA

The study of vaccination against cholera, according to the method worked out in 1890-93, in the Paris Pasteur Institute, began in India in April, 1893; that is, about thirteen years previous to the Manila accident. The procedure which was adopted for cultivating and inoculating the vaccines was described, with great detail, in a pamphlet² by Mr. E. H. Hankin, M.A., Chemical Examiner and Bacteriologist to the government, Surgeon Lieut.-Col. C. H. Owen, I.M.S., Medical adviser to the State of Patiala, and myself. Lieut.-Col. (then Surgeon-Captain) Hare, I.M.S., the present sanitary commissioner of Eastern Bengal and Assam, published a more detailed version³ of the same technic two year later; and, somewhat later still, a description⁴ of the method of transforming cholera virus into the vaccine strain.

The extent to which the above procedure rendered the operation safe, and the facility with which it was learned by non-specialists and by subordinates, may be gauged from the following facts.

The inoculations were at first carried on by myself; and between 1893 and 1896 were introduced in over a hundred towns and villages in the Indian plains and the Himalayas. I prepared the vaccine in trains, while traveling from place to place, in the ordinary passenger carriages and at railway stations, while waiting for the arrival of trains; also in tents, in "dak-bungalows" and

1. Accidental Inoculation with the Virus of Plague, THE JOURNAL A. M. A., April 13, 1907, xlviii, 1264.

2. Technic of Haffkine's Anti-Cholera Inoculation, Lahore, Punjab, 1894. The pamphlet was reproduced in the Indian Medical Gazette, Calcutta, June, 1894.

3. Ind. Med. Gaz., June, 1896.

4. Technic of Haffkine's Method of Preparing Fixed Cholera Vaccine, Ind. Med. Gaz., November, 1896.

rest-houses; in rooms placed at my disposal for a day or two in dwelling-houses and transformed for that time into "laboratories;" and sometimes (in Calcutta and Agra) in established laboratories, in which various work was carried on at the time by other workers. Between April, 1893, and July, 1895, 42,197 people, who received in all close on 70,000 injections, were inoculated under these conditions, and in 1896, a further 30,000 were so operated on. A large proportion of the inoculated lived under medical and administrative supervision so that any unusual effect of the inoculation could not have escaped notice. Thus, those operated on of 1893-95 comprised officers, non-commissioned officers and men belonging to 64 British and Indian regiments; permanent laborers of 45 tea plantations in the Brahmaputra and Surma Valleys of Assam; inmates of 9 civil jails; children of boarding and other schools, etc.

In 1894 the municipal corporation of Calcutta voted a grant to its health office for applying these inoculations experimentally. A Hindu medical inspector, Mr. Jonomanjoy Chowdry, was put on to this duty. He was assisted, in the preparation of the vaccines, by two other Hindu officers, Messrs. Jogendranath Dutt and Sasi Bhusan Ghose, of the Calcutta health office. None of these doctors had been acquainted with bacteriologic work before. Apart from the preparation of the cholera vaccine, which, after a period of instruction, they were left to carry on independently, they became soon engaged in a variety of other kindred work, notably in connection with infectious diseases affecting the ponies, buffaloes and bullocks in the "gowkhanas" of the municipal scavenging department; with outbreaks of rinderpest and other epizootics reported from Calcutta and Howrah; and in connection with the then health officer's studies of pustules and vaccine lymph, in the municipal vaccine depot. Cholera inoculation in the bustees and suburbs of Calcutta, with cultures prepared in the health office, was carried on daily for two years, and was closely followed by various members of the municipal corporation. The number of persons inoculated was 7,690. About two-thirds of them underwent inoculation twice, at an interval of five days, so that the number of injections of vaccine performed was about 13,000.

In 1896 anticholera inoculation was started at Purulia, on the Bengal Nagpur railway. At first Surgeon-Captain (now Major) J. C. Vaughan, I.M.S., Superintendent of the Campbell Medical School, Calcutta, then Deputy Sanitary Commissioner of the Chota Nagpur circle, was in charge of the work. Two Hindu assistant-surgeons were appointed to operate under his orders. Surgeon-Captain Vaughan was after a few months, ordered away to the Tirah campaign; and from that time on, one of the assistant-surgeons, Gopal Chunder Mukerjee, was left in independent charge, the other cooperating with him. In this depot the operations were performed every day for eight and half years, till the end of 1904; in all 45,760 persons were inoculated.

The material for these inoculations was manufactured, examined and used in an improvised laboratory, by workers who had had before no bacteriologic training. The inoculated were almost exclusively coolies contracted for transport to Assam, and who were, at the time of inoculation, and during their subsequent journey and service, under the supervision of government and labor supply officials. The slightest mishap would have at once been known to the emigration authorities and reported on.

In none of the above operations has an untoward result at any time come to knowledge; and quite certainly no accident of any gravity has ever occurred. Anticholera vaccination has thus been demonstrated to be free from danger as any method ever devised by man.

NATURE OF THE ANTICHOLOERA VACCINE

Just as in vaccination against smallpox and inoculation against hydrophobia, as well as in Professor Kolle's inoculation which the Manila laboratory has applied against plague, the vaccine used in anticholera inoculation is a live virus, and is not sterilized before injection. Nevertheless, the details mentioned in the preceding paragraphs, referring to a long testing in India, indicate that the methods followed in the preparation and use of that vaccine render it, even in relatively inexperienced hands, safe from contamination, and eliminate sources of mishap.

Again, neither in the anticholera vaccine, in the emulsion of spinal cords containing live hydrophobia virus, as used for antirabic inoculation, nor in the live virus of smallpox vaccine lymph, nor in any of the serums and drugs used in hypodermic injections in man and animals can contamination with harmful germs be detected with certainty by the microscope; but obviously this does not mean that either of the methods mentioned, now so extensively practiced, is insecure. In the anticholera inoculation, the examination by the microscope is an adjunct so important that, when applied in the way in which it has always been applied in India, an accident such as occurred in Manila is impossible; and an extraneous culture like that of plague would be detected immediately. Nevertheless, entire elimination of mishap is secured, obviously, not by microscopic examination alone, but by an *ensemble* of operations of which some precede and others follow that examination, and by the general dispositions of the work.

CONDITIONS OF THE MANILA ACCIDENT

In the accident at Manila it is essential to note that the cholera vaccine did not become contaminated by plague spontaneously. Such an eventuality may be treated as outside all practical possibilities. Every bacteriologist of experience will take on himself to say that the spontaneous invasion of a bacterial culture by germs of cholera, plague, glanders, anthrax, diphtheria, tubercle and certain other specific microbes is not to be thought of any more than the spontaneous contamination of such a culture with arsenic or strychnin. There are few pathogenic species, like those causing abscesses for instance, which are, on occasions, found to contaminate cultures and other materials. In Manila a plague cultivation, presumably pure of admixtures of any kind, was put by the operator into a watery suspension of cholera cultures, the latter probably being at the time quite pure and uncontaminated also.

The accident became possible by this circumstance, among others: that the operator deviated from the following two rules prescribed in the anticholera inoculation, namely, the contents of the culture tubes should not have been mixed; and each tube, immediately before being used should have been, apart from other examination, submitted to an examination by the microscope. Under these circumstances a plague culture would have never passed for a cholera culture.

It is not stated that the material injected into the men in Manila had been examined by the microscope; but the Technical Committee of Inquiry found that when they mixed in an experiment *ad hoc*, the contents

of one cultivation tube of plague with that of a large number of cultivation tubes of cholera (as had been actually done at the time of the human inoculation) and examined a drop of the mixture, the plague bacilli were overlooked under the microscope. Such a result is, of course, only too probable.

CONDITIONS NECESSARY TO PREVENT ACCIDENT

The details of the Manila accident reported by Dr. Freer tend to show that its occurrence did not stand in connection with the degree of perfection or deficiency which belong to cholera vaccination or to any bacteriologic method as such.

In all pharmacies and shops where collections of drugs are kept, simple regulations are adopted, on the responsibility of those in charge, for making it impossible for dangerous materials to get mixed with harmless ones. Obviously these measures had, at the time of the accident, not been in force at Manila; and it must be presumed that some particular circumstances which existed at the time, did not allow them to be put in force.

It is, further, a practice with those in possession of materials of various kinds, particularly harmful ones, to differentiate these by inscriptions or marks of identification. The first action of an apothecary, when handling his phials, is to look at the label, independent of any other mode of examination, chemical, physiologic or other, which may be at his disposal for identifying the materials. The labeling of cultivation tubes is one of the articles of instruction mentioned in bacteriologic text-books and lectures. In the pamphlet on the "Technique of the Anti-Cholera Inoculation" referred to above the procedure is enjoined on page 8, paragraph 12, where it is directed: "mark the inoculation tubes unmistakably, in order that the kind of vaccine they contain, and the date of their inoculation shall be known." The operator who omits to provide his preparations with clear inscriptions, or omits to take notice of them when using the preparations, renders nugatory the whole of the safeguards, however perfect, which have been devised for preparing his materials in a pure condition.

In Manila, where the tubes of vaccine for inoculation in man had to be incubated in the same box as tubes of virulent plague, and other persons than the vaccinator had access to the same incubator and to the same batches of tubes, it is stated that the inscription on the tube was not ascertained previous to using it. The accident was, therefore, in every way of the same kind as would be incurred by a pharmacist mixing up a poisonous substance with the drug which he is preparing; and it was preventable also in the same way as such accidents are prevented in pharmacies.

TESTS APPLICABLE TO THE VACCINE

The idea that the Indian method afforded no possibility of avoiding the accident appears to have been based on the following considerations mentioned by Dr. Freer: "While the method allows of every test as regards the purity of the cultures up to twenty-four hours before their use, after this time (when many cultures are employed) no satisfactory test of their purity can be made and no test on animals can be carried on, since the cultures must be inoculated twenty-four hours after their preparation." The accident was caused by the mixing up of a plague culture with cholera vaccine at the very moment of using the latter. Obviously, no

test applicable twenty-four hours or any longer interval before that moment, nor any test applicable a shorter period, even one hour before, could have prevented the results of a confusion thus made. To avoid such a confusion—once the general regulations in force at the time permitted of its occurrence—a test or tests were required applicable at the moment of using the tubes. The most direct of such tests were those mentioned already, namely: (1) the reading of the inscriptions made for that purpose on the receptacles; and (2), the examination under the microscope of the contents, in the manner prescribed for the anticholera inoculation. There were also certain other aids, but the special object of the present article does not seem to require entering into them.

ANTICHOLERA INOCULATION AS SAFE AS OTHER VACCINE METHODS

The Manila officers have gracefully recognized as conclusive the results of the Indian cholera vaccination studies, and have themselves contributed not a little to the subsequent investigations on the matter. A few years ago, before introducing that vaccination in the Philippines, the very able director of the laboratory there made, in the Institute for Infectious Diseases in Berlin, a study of the vaccine used in these operations. The vaccine, as described in the publications already referred to, is a strain of cholera germs transformed into a virus of exalted fixed potency, by cultivating it, in accordance with certain rules, in the peritoneal cavity of the guinea-pig. The bacteriologists in Berlin compared this vaccine, from the point of view of its immunization properties, with the natural strains of cholera germs maintained by cultivation in laboratories, and convinced themselves of the significance of the transformation imparted to the vaccine. Consequently, in the Philippines, a strain has been adopted, for preventive inoculation in man, which is prepared and maintained in the way in which this is done in India; but instead of operating with that substance itself, they have adopted the plan of leaving it to digest in water and using the resulting soluble extraction, a plan to which, as Dr. Freer mentions, it was objected at the last International Medical Congress in Berlin that it might not have the protective effect which the vaccine itself had. The Manila officers are under the impression that one of the advantages of the watery extraction over the original vaccine is that it is free from the possibility of misadventure which they have had with the vaccine. The same department of the Manila Institute which prepares the extraction of the cholera vaccine prepares also soluble products of other microbes, such as the toxin of diphtheria; that of tetanus, of which the admixture of a few cubic centimeters would, of course, suffice to kill a horse; probably, solutions of snake venoms for the preparation of antivenene, and so forth. If these microbial toxins and solutions, or, for the matter of that, any alkaloids and other drugs were to be so kept as to permit of their being inadvertently mixed with one another; if, before using them under such circumstances, the inscriptions on the receptacles were not ascertained; physical differences of the contents overlooked; and the contents mixed together and used; that is, if a concurrence of circumstances took place identical on all points with that which they have had the misfortune of having at the time of the late accident the extraction of the cholera vaccine would obviously be exposed to the same possibility of misadventure as

has occurred in the use of the vaccine. Of course, it is not suggested for a moment that the above is the condition prevailing normally in the Manila Laboratory. The latter has, in a few years, and most deservedly, taken a place amongst the first-class institutions of its kind in the world. It is only unavoidable now to make clear that their accident has not been conditioned by the peculiarities of the anticholera vaccination method, as they believe it has.

It is to be hoped that the above explanations will not be viewed as implying any want of consideration for the Manila scientists whose efforts, ever since the establishment of their laboratories, have enriched science with numerous contributions of a truly remarkable character.

SUBMUCOUS PERINEORRHAPHY

A REPORT BASED ON SIX YEARS' EXPERIENCE WITH AN ORIGINAL METHOD *

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The methods of perineorrhaphy that have been chiefly employed for the past twenty-five years suggest more of a mathematical than an anatomic basis for their existence. For the most part, they have consisted of excisions of mucous membrane from the posterior vaginal wall having geometrical patterns that vary as do the fancies of different surgeons. In support of the various operations much has been written about the laceration in the muscular and fascial planes and of the effectiveness of particular operations, yet one who studies the work of various gynecologists will be impressed by the thought that usually the precise anatomic restoration of the perineum occurs only in the theory of the operator, for the operation, as a rule, consists of little more than the removal of an area of mucous membrane and the union of the wound edges. If at times the operator's needle is made to sweep in various directions with the specification that certain muscles are caught in its grasp, the precise evidence that such muscles are included and especially any evidence that the important fascial planes of the perineum are restored is rarely observed.

In the Emmet operation, which has long been praised as the best method of restoring the pelvic floor, the crest of the rectocele is caused by the crown stitch to be brought close to the posterior edge of the vaginal opening. As normally the point indicated by the crest of the rectocele occupied a position some distance above the introitus, the operation shortens the posterior vaginal wall. The lateral triangular denudations obliterate the normal lateral sulci; so that after the Emmet operation the vagina in this region loses the normal H-shaped section and becomes less dilatable. But few operators carefully investigate the muscular structures in doing an Emmet operation and fewer make an exposure of the muscle or use an accurate method for the muscular restoration, while the fascial planes of the pelvic floor are almost invariably ignored in the operation, although they may at other times be the basis of an elaborate theoretical discussion. In this type of operation the through-and-through sutures serve as setons, carrying vaginal secretion to the depths of the wound, and by irritation tending to in-

crease the amount of fibrous tissue in the perineum. The sutures in the vagina entangle secretion, interfere with proper cleanliness and at times are difficult of removal, and if overlooked or partly removed may remain in the tissues and cause abscess or sinus formation, and protracted disability. Similar serious objections may be brought against most of the conventional operations for the restoration of the perineum. In an endeavor to obviate some of the disadvantages of the older technics I devised a method of perineorrhaphy that was first put in execution in 1902. The operation proved to be satisfactory and the method has been demonstrated to students and acquaintances for the past six years, and during this time I have employed it exclusively for all secondary repairs of the perineal floor. In 1904, my colleague, Dr. A. C. Applegate, delivered without perineal laceration a patient on whom the operation had been done the previous year, of a full-term child, and the experiences of others who have tried and adopted the method and the tendency of certain other operators¹ to devise independently, methods of perineal repair based on similar principles emphasize the conclusion that this is a type of operation distinctly superior to the older operations of Emmet or Hegar. To object to the present operation because it gives a greater muscular and fascial support to the vagina than is normal is not consistent with the acceptance of modern operations of herniotomy.

The operation is based on the following principles:

First, no tissue is removed or extensive denudation made.

Second, buried, absorbable, layer sutures are used exclusively, none of which penetrates the skin or mucous membrane.

Third, the operation is done from the outside of the vagina, rendering the introduction of sutures easier and the exposure of tissues better than with those operations done from within the vagina.

Fourth, each structure is sutured with precision under the guidance of the eye; there is no blind groping with the needle for tissues not seen and perhaps not felt.

Fifth, each of the layers of the perineal floor—vaginal wall, submucosa, muscular supports, fascial planes, and skin—are united serially in layers after the plan of the better types of herniotomy.

Sixth, the vagina is not separated from the rectum and therefore there is no danger of wounding the bowel.

The operation has the following advantages:

It restores and increases the length of the vagina instead of shortening the posterior wall of the vagina as occurs with many of the older operations. Although no tissue is removed it is questionable if any other type of perineorrhaphy is capable of producing greater narrowing of the external portion of the vagina or of affording greater support to the anterior vaginal wall. As it greatly supports the anterior vaginal wall, slight or moderate degrees of cystocele may not require additional operation. I have only done the additional operation when the cystocele was marked and yet have thus far had no reason to regret the practice. The operation restores the normal H-shaped section to the vagina instead of destroying or obliterating the lower lateral sulci. There is the added advantage that no sutures require removal; that no foreign bodies in the shape of shot, suture ends, or the like are left in the vagina to promote and to hold secretion and that the

* Read before Philadelphia Obstetrical Society March 4, 1909.

1. Hill: Restoration of the Pelvic Floor. THE JOURNAL, April 4, 1908.

seton action of through and through sutures is avoided. Moreover, the proneness of knots in catgut to untie when exposed on a mucous membrane is obviated by the burial of all knots in the tissue. Despite the number of buried sutures in none of my cases has the perineum been destroyed by suppuration, and the resultant perineum is more elastic and resilient as less fibrous tissue forms than after the older operations with the use of denudation and through-and-through sutures. In one of the early cases in which the mistake was made of freely separating the vagina from the rectum, the rectum was opened with the result that the posterior portion of the wound became infected. In this case the vaginal support, however, was not destroyed. In my experience in only one case has the perineum given way and in this

In doing the operation, one should realize that the vagina runs nearly parallel with the skin perineum, and that the finger introduced to the cervix may be but half an inch distant from the finger of the external hand placed on the skin adjacent to the coccyx. Lateral to the vagina one may nearly always distinguish the thick broad bands of the levator ani muscle. In the nulliparous woman the muscle is close to the introitus, in the multiparous it is more deeply situated. By placing a finger against the anterior edge of this muscle on either side and comparing the relative depths of the muscle from the surface, one may acquire an idea as to the relative injury to the two muscles. Rarely ever will one find the muscle completely divided lateral to the vagina; but on the side of greater laceration the

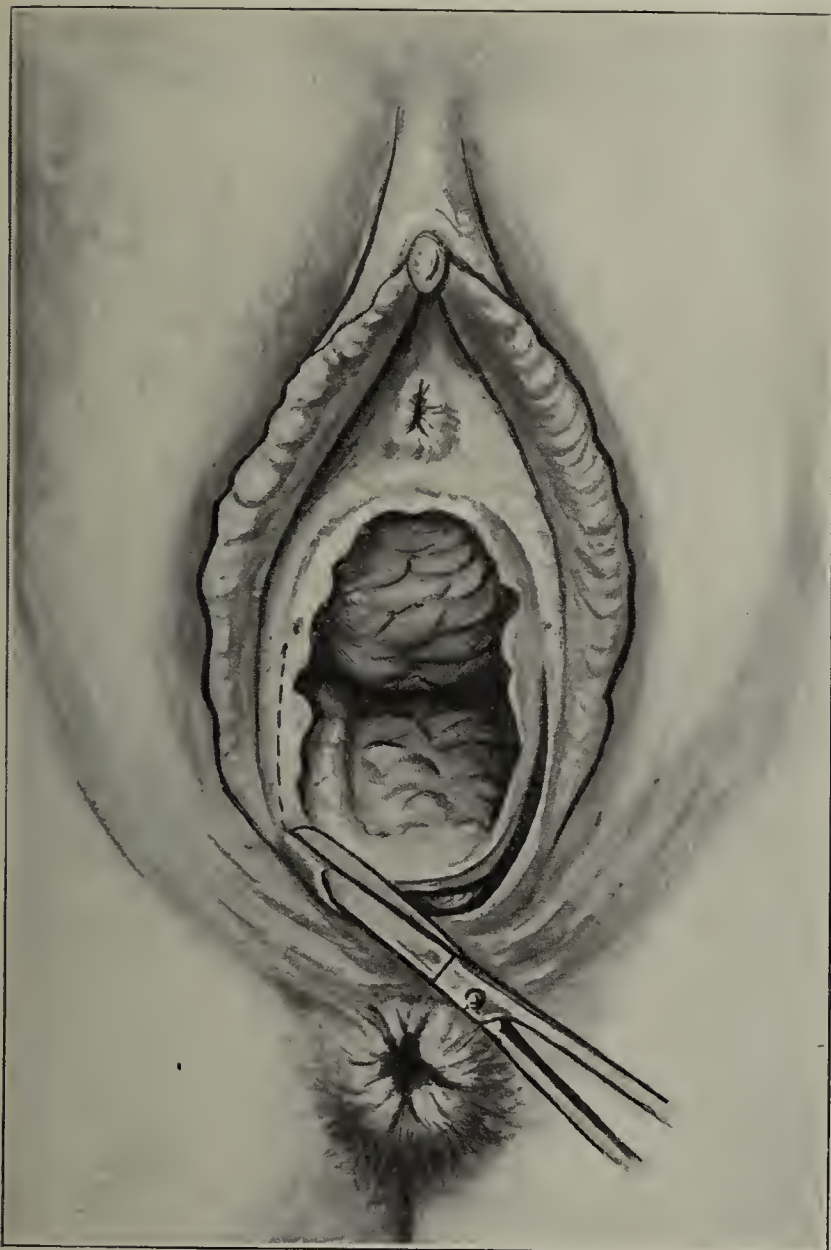


Fig. 1.—Step 1: The first incision made by scissors or knife at the base of the carunculae. The incision is U-shaped, enters the submucous areolar tissue, and is slightly external to the orifice of Bartholin's glands. According to the degree of contraction of the orifice required, the incision starts and ends anterior to, opposite to or posterior to the level of Bartholin's glands.

the healed wound was ruthlessly torn open by the husband a week or ten days after the operation.

Comparing my experience with the Emmet operation with the present one under equal aseptic precautions, the liability to suppuration seems less, the required period of disability shorter, and the inconvenience of suture removal, and the danger of non-absorbable sutures obviated in the present operation. Comparing the end-results of the two methods a more perfect perineum with a better muscular support and a closer approximation to a normal restoration is secured by the method of submucous perineorrhaphy.



Fig. 2.—Step 2: Isolation and exposure of the internal edges of the levator ani muscle. The vagina is not separated from the rectum in the median line, and therefore there is no risk of wounding the rectum. The posterior edge of the incision is retracted by a tenaculum to secure better exposure. A sharp pair of scissors is then thrust through the fascial plane, lateral to the vagina, opened and withdrawn, affording access to the levator ani. This incision is enlarged by stretching with the fingers (as indicated by the dotted lines), or, if the tissue be cicatricial, by further incision. The finger is then thrust through the incision close to the external wall of the vagina and the levator ani isolated from the vagina. The external surface of the levator ani is likewise freed and the muscular edge pulled into the wound by a hook or tenaculum forceps. The edge of the opposite half of the levator ani is similarly freed and brought into the wound.

edge of the muscle will usually be found to be from one to several centimeters deeper than that of the opposite side.

TECHNIC OF THE OPERATION

The parts are carefully asepticized in the usual manner and the anus covered by a sterile towel or gauze

pad held to the skin by appropriate clips. The labia having been separated and supported by the fingers of an assistant, the sharp point of a pair of scissors is introduced into the subcutaneous cellular tissue just external to the orifice of Bartholin's gland. The incision is carried around the posterior margin of the introitus just external to the carunculæ until a point external to the orifice of the opposite Bartholin's gland is reached. A pair of tenaculum forceps is then fastened to the outer edge of the posterior part of the incision to serve as a retractor. No separation of the vagina from the rectum is necessary except when the tissues about the posterior commissure are so cicatricial that the usual gaping of two or three centimeters of the wound edges is not obtained. If the posterior wall of the vagina is

edge of muscle, then opened and withdrawn. This penetrates the remains of fascia of Colles, the two layers of the triangular ligament and perhaps the thin and at times almost inconspicuous layer of the transversus perinei profundus which lies between. The opening is enlarged by stretching with the fingers, or if necessary, by a few touches of the knife, and the finger is passed into the opening close to the lateral vaginal wall until the edge of the levator ani is felt. The muscle is freed on its inner and outer sides by the finger, grasped with a pair of tenaculum forceps, and pulled into the wound. On the side of greater laceration the muscle will usually be found to have the deepest situation. The isolation and exposure of the muscle is usually easy and requires but a few seconds of time. Very rarely will the muscle

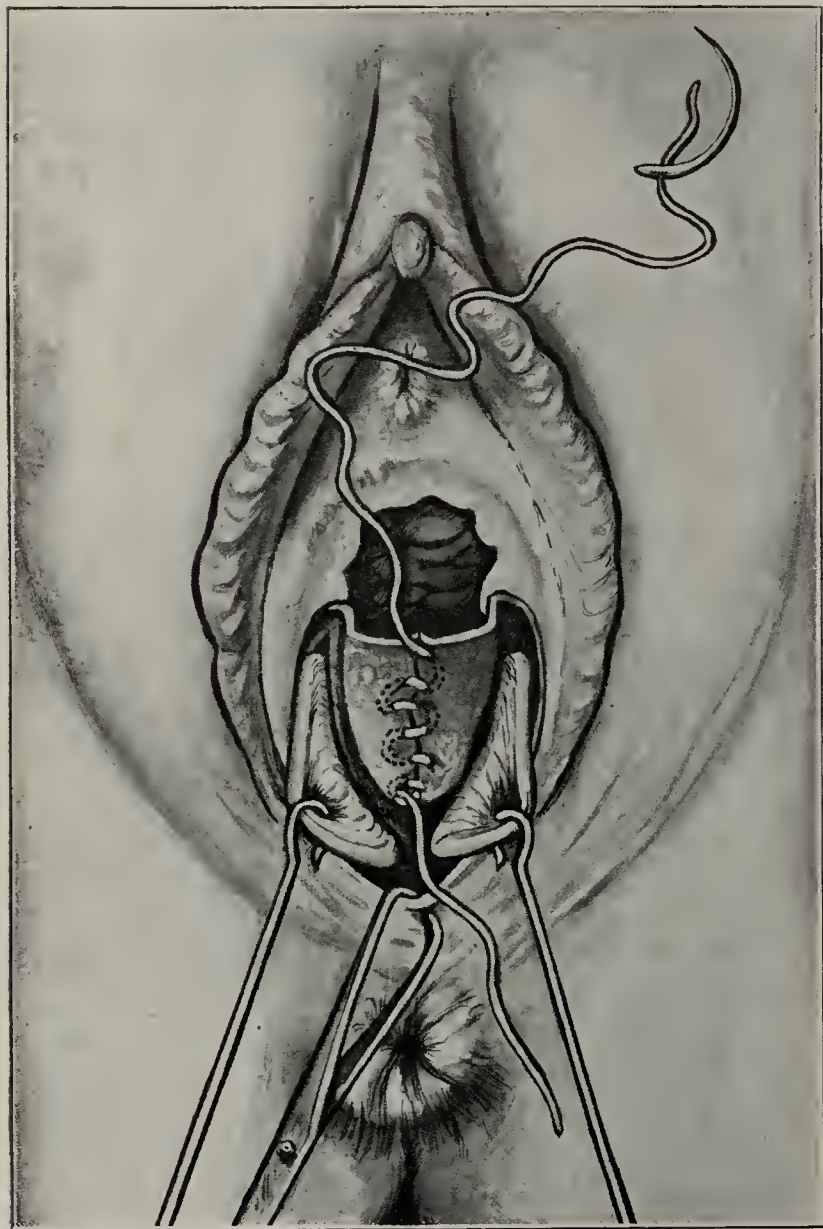


Fig. 3.—Step 3: Submucous closure of vaginal wall. With a continuous suture of plain, number one catgut, beginning below, the edges of the vaginal wound are united. This suture does not penetrate the mucous surface and serves to lengthen the vagina and to narrow the introitus. If the posterior vaginal wall be very redundant, this first suture may be buried by a second row of interrupted or continuous sutures, catching the tissues lateral to the first and so rendering the vaginal wall thicker, more rigid and more convex. When a level above that of the emergence of the muscles has been reached this suture is temporarily laid aside.

bound down and deformed by cicatricial tissue this should be loosened sufficiently to overcome the deformity (Fig. 1.)

The second step consists in the exposure of the levator ani. The edge of the muscle is located between one finger placed against the lateral wall of the vagina, and a second finger or thumb placed in one side of the wound. Having located the muscle in the wound, a pair of sharp-pointed scissors is thrust through the depths of the wound to the situation of the anterior

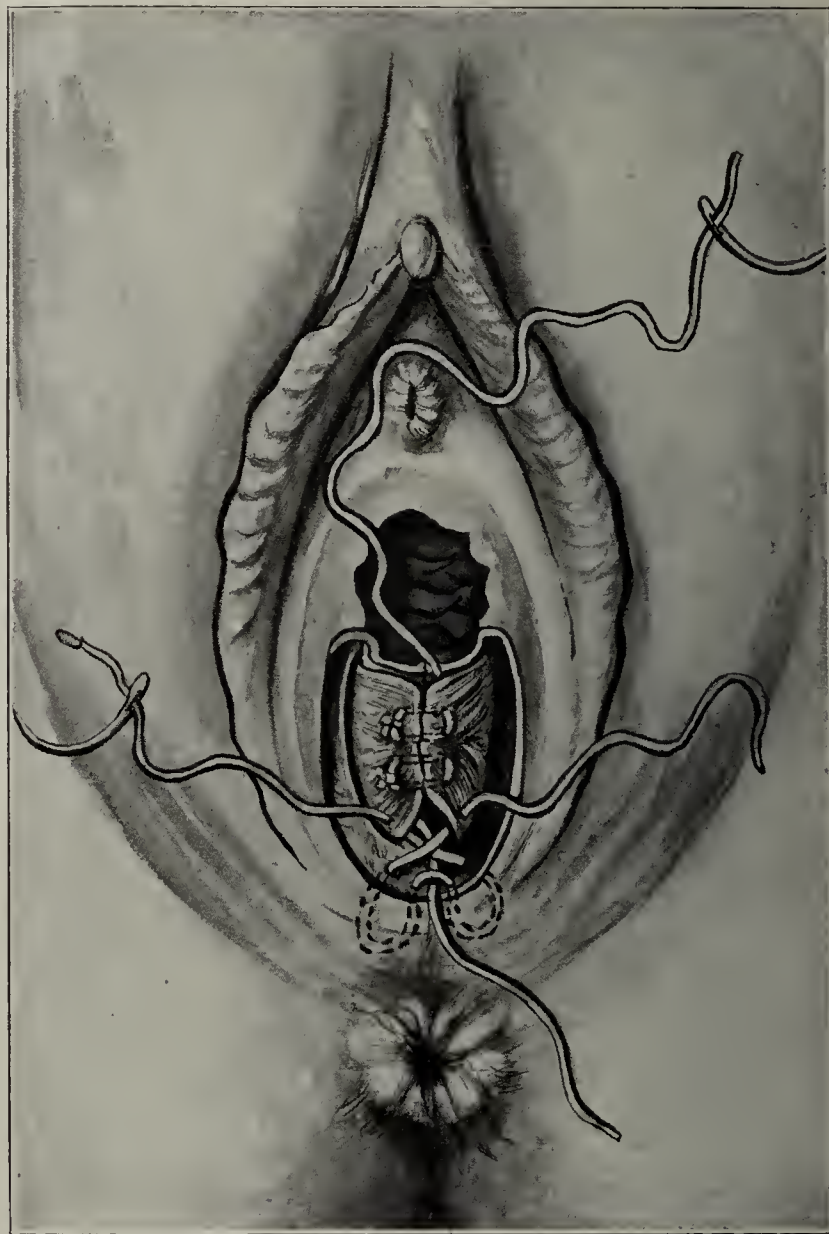


Fig. 4.—Step 4: The edges of the levator ani muscles are united in the median line under the united vaginal wall by mattress sutures. This muscular sling accentuates the lateral vaginal sulci and restores the normal H-shaped section to the vagina. In certain cases a continuous or simple interrupted suture may be substituted. Some of the sutures should catch the under surface of the vagina to prevent the formation of a dead space. Below a modified figure-of-8 suture is shown, which serves to unite the levator ani with the sphincter ani and to support the sphincter. This figure-of-8 type of suture in this situation is not usually required and frequently no support or reinforcement of the sphincter is necessary. If the sphincter be divided, however, the ends are to be isolated in the wound and united by buried sutures of chromicized catgut, and in extreme cases the sphincter may also be reinforced by slips of the levator ani split off from each internal edge, crossed and wrapped about the sphincter and sutured into place. No additional incision is required in a complete tear, but merely sufficient dissection in the wound to expose the divided ends of the sphincter, which are then united.

be found to be completely divided. The opposite edge of the levator ani is then exposed and brought into the wound in the same manner (Fig. 2).

The third step of the operation consists in the repair of the vaginal mucous membrane. With a curved needle and No. 1 plain catgut the mucous membrane is united beginning near what was the posterior commissure. A continuous suture is used engaging the submucous cellular tissue a short distance from the wound edges and uniting the upper border of what was a transverse incision in a vertical manner. In doing this, the part of the vagina that was near the posterior commissure comes to occupy a point several centimeters above the introitus and the length of the vagina is restored. If there is much redundancy a second row of sutures may be applied catching the tissue outside suture number one and so rolling the submucous tissues together that the convexity on the mucous surface of the posterior

to the sphincter ani. In certain cases, it may be desirable to reinforce the sphincter ani by splitting off strips from the anterior edges of the levator ani, wrapping these about the sphincter and fixing them in place by sutures. Rarely is a similar procedure desirable anteriorly to reinforce the vaginal support. Should the levator ani be found to be torn, which is not usual, the divided ends should be pulled well forward, carefully isolated and repaired by buried sutures. With the union of the levator ani muscles the rectum, anus and vagina will be found to ascend to a higher position in the pelvis, and to be carried forward toward the pubis (Fig. 4).

The fifth step of the operation consists in the suturing of the inferior fascial plane to reinforce the muscular support. The outer edges of the incision through which the levator ani muscles have been brought are united

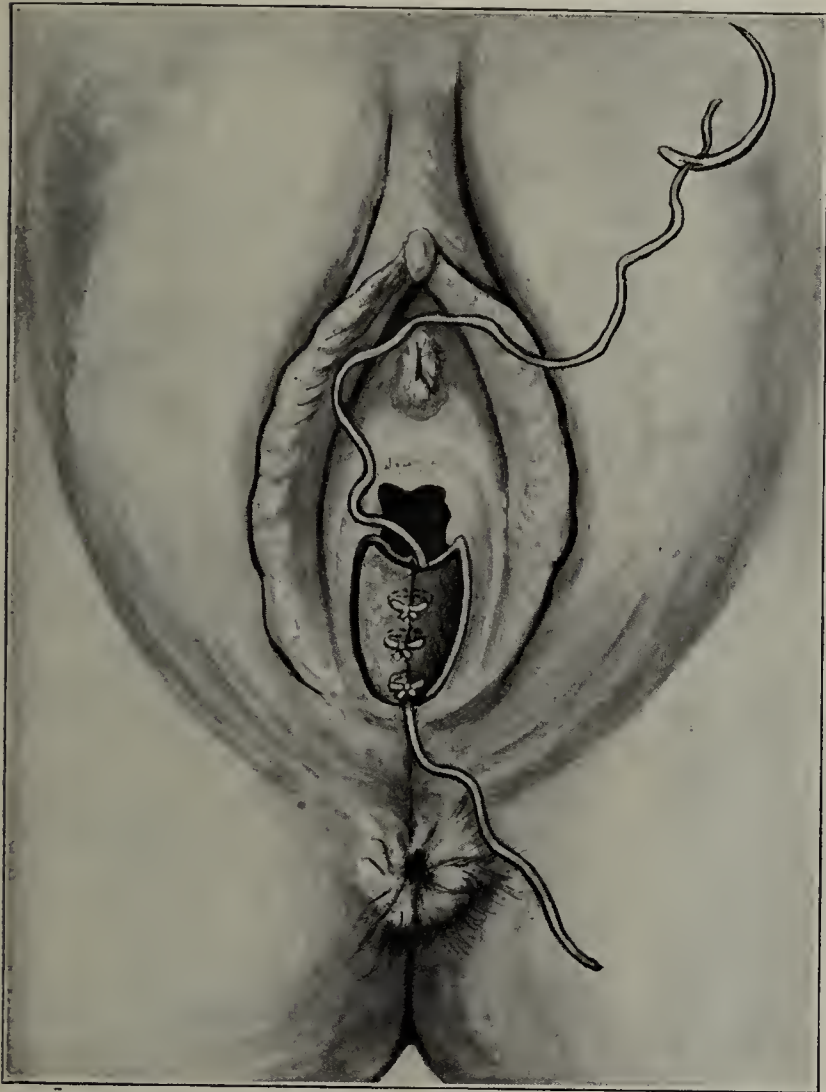


Fig. 5.—Step 5: Suture of the inferior fascial plane (urogenital trigone) over the united muscles. This supports and reinforces the united muscles, and, as the transversus perinei profundus muscle lies within this fascia, the action of this muscle is reinforced. A continuous, interrupted, mattress, or imbricating suture may be employed, depending on the strength of the suture line required in the particular case. The ends of suture one are shown emerging above and below.

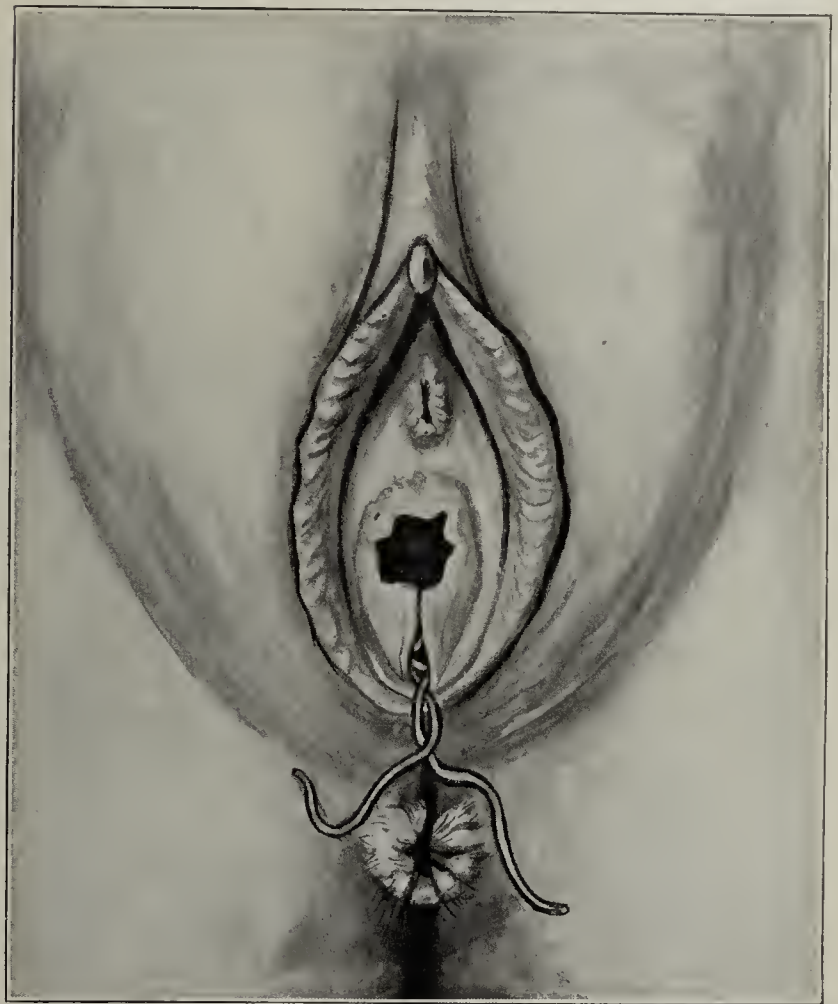


Fig. 6.—Step 6: The unfinished suture of step three is now continued under the cutaneous edges of the incision until the fourchette is reached, where the two ends of this suture are tied and the knot permitted to sink into the wound out of sight, the ends being cut short. The tying of the ends of this first suture binds the various structures—vagina, muscle, fascia and skin—together and prevents the formation of dead spaces. This elevation and reinforcement of sphincter ani is indicated.

wall of the vagina is markedly increased. Suture number one which has thus made a partial submucous closure of the vaginal wall is then temporarily laid to one side to be finished later (Fig. 3).

The fourth step of the operation consists in uniting in the median line the edges of the levator ani muscle, which are located by the attached tenaculum forceps. Interrupted, continuous or mattress sutures of chromic catgut may be employed, but the muscle must not be united so far anteriorly as unduly to constrict the orifice. Some of these sutures catch the underlying submucous tissue to prevent the formation of a dead space. Posteriorly, a simple or figure-of-eight suture is employed to bind together the various structures that meet here, and if necessary, to give support

in the median line by continuous, interrupted, mattress or imbricating sutures of No. 1 chromic catgut, as may seem necessary in the particular case. This support, which includes the posterior part of the urogenital trigone, affects the layers of the triangular ligament and the deep transversus perinei muscle, and posteriorly serves to increase the tension on the transversus perinei muscle. To obliterate any dead space some of the sutures may catch the under-lying muscle (Fig. 5).

The sixth and final step of the operation consists in completing suture number one which after completing the submucous union of the vagina is continued posteriorly under the skin uniting the subcutaneous and Colles fascia until the posterior portion of the incision is reached. The two ends of suture number one are

then tied, binding together the various structures that have been united; the knot is permitted to sink under the skin, the ends being cut short (Fig. 6).

Thus there has been built up in layers a perineum consisting of united mucosa, muscle, fascia and skin. All the sutures being buried and the layers bound together compactly there are practically no dead spaces. A small strip of iodoform gauze introduced into the vagina is permitted to hang down over the skin sufficiently to cover the skin incision. This serves as a guide to the nurse in catheterizing and protects the incision. The catheter is used for two days after which the gauze is removed and if desirable a daily douche is given. The patient may sit up on the tenth day, and cautiously resume her duties after two weeks.

2033 Walnut Street.

THE TREATMENT OF SCOLIOSIS

ARTHUR STEINDLER, M.D.

Assistant Orthopedic Surgeon to the Home for Destitute and Crippled Children
CHICAGO

In treating scoliosis by means of orthopedic corsets I think that it is difficult to meet the two most important requirements, the one of giving a reliable and uni-



Fig. 1.—Patient with scoliosis.



Fig. 2.—Same patient as in Fig. 1, with orthopedic corset.

form support to a deformed spine, the position of which has been improved by mechanic or gymnastic treatment, and the other of exerting a correcting influence on certain parts of the body by means of the orthopedic corset itself.

A number of good and practical corsets have been devised, giving satisfactory results to a considerable extent. While the Hessing corsets furnish only a thorough support to the spine, a good correcting corset has been described lately by Bradford, the correcting force being exerted by means of shoulder straps, circular transverse springs and a swinging upright for pressure on the neck. But it seems to me that in cases in which there is a considerable shifting of the body to one side, for instance, in which the lumbar part of the spine is pri-

marily involved in the curvature, not enough hold may be gained for correction and the maintenance of the corrected position of the spine.

The sideward shifting of the body will always result in a lifting of the pelvic belt of the corset from the crista ilei of the opposite side, unless its position there is otherwise secured. In order to obtain this advantage, and, on the other hand, to exert some correction on the costal prominence, I attached to the pelvic belt on the healthy side a thigh-piece connected with a hinge and embracing the leg by means of a padded ring right above the knee.

On the side of the scoliosis a pad corresponding to the costal prominence articulates by means of a hinged steel piece with the pelvic belt, a similar pad being attached on the corresponding anterior costal prominence of the opposite side.

On both pads a considerable amount of elastic pressure is secured by a couple of springs. It is easily to be seen that, if the attachment to the leg is given an outward bent and then fastened closely above the knee, an opposite movement of the pad will result in bringing the sideward shifted body over the median line to the other side.

Two uprights in the back on both sides of the spinous processes give the body rest and allow the shoulders to be pulled back by means of shoulder-straps (Figs. 1, 2, 3 and 4).

Both patients with right dorsal lateral curvature, shown in the photographs, were given a previous mechanical treatment of several months. It consisted in gymnastic exercises, manual redressment, especially directed toward the lumbar curvature and the detorsion of the scoliosis, and some massage.

After I had convinced myself that the lumbar portion of the spine had gained a sufficient amount of flexibility I had the patient wear the contrivance, as described above, while the gymnastic exercises were being continued.

The considerations which led me to pursue this mode of treatment are, briefly, the following:

I have to a great extent given up mere extension as a method of correcting curvature, because of the fact that the detorsion of the body would not keep pace with the extension of the spine thus obtained, the formation of flail intervertebral joints and increased flabbiness of the spine being the result. Most of my attention is directed toward the detorsion of the chest and the mobilization of the lumbar part of the spine, which, as a rule, is the last to maintain a certain degree of flexibility, when the dorsal part of the spine is already hopelessly fixed. Then, if the sideward displaced body is shifted to the other side by means of the apparatus and an over-correction exerted, the upper part of the spine will have to respond with a self-correcting secondary curvature to the side of the disease in order to regain the median line.

Thus a considerable improvement of the deformity is caused under the influence of weight-bearing and without causing flail joints, while other

methods try to overcome the influence of weight-bearing and result in the establishment of loose joints.

In cases treated after Schanz' method (double extension from neck and ankle and application of correcting plaster-of-Paris jacket, to be changed every four to five days under similar precautions) I have also seen the straightened spine assume the form of triple scoliosis in spite of much care in applying well-fitting casts, the deformity, however, being considerably improved. It seems that the flabby spine came to a rest in this form of deviation if it was forced by the jacket to keep as near as possible to the median line.

The discomfort of the patient when treated with high-reaching casts and corsets has sometimes proved an unsurmountable obstacle in older girls of delicate and chlorotic constitution.

The principle of using the hip joint and the motion of the leg for correction of deformities of the body might prove useful also in deformities other than lateral curvature. As far back as 1867 leg attachments have been used for corsets, first by Wales, later by Lorinser and Biondetti.

Clinical Notes

INSTRUMENT FOR APPLYING OINTMENT TO DRESSINGS AND WOUNDS

W. LAWSON THORNTON, M.D.

BALTIMORE

The accompanying illustrations show a simple contrivance for applying ointment to dressings and wounds. The instrument is contrived from an all-metal syringe.

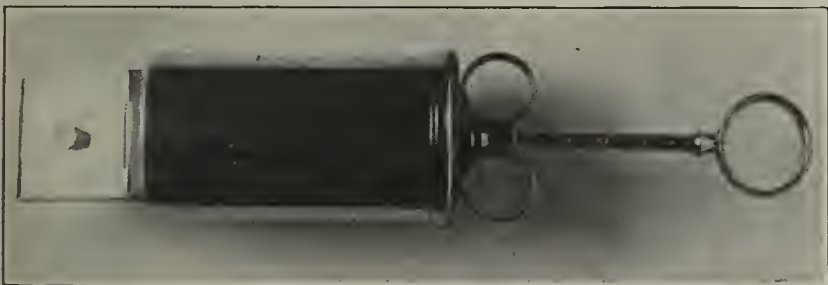


Fig. 1.—Instrument for applying ointment.

The nozzle of the syringe is replaced by a wedge-shaped opening, through which the ointment is expressed in a ribbon-like film. By adjusting the sliding-plate (Fig. 1) the film may be made as thin or as thick as is desired, or the opening may be completely closed. By inverting the sliding plate a narrow film is obtained.

The instrument may be filled after removing the metal piston or by aspirating melted ointment. When the instrument is filled it may be boiled or placed in the sterilizer.



Fig. 3.—Patient wearing scoliosis corset, with leg-brace unfastened.



Fig. 4.—Patient wearing scoliosis corset, with leg-brace fastened.

The ointment may be applied to the dressing as is shown in Figure 2, or directly to the wound. If the ointment is applied to the surface of the wound, the instrument is held above the surface and the ointment forced out in a ribbon which applies itself smoothly to the surface of the wound.



Fig. 2.—Method of applying ointment to dressings.

The instrument has the following advantages:

The ointment is applied in a smooth, even film of any desired thickness, and a neat dressing is obtained.

The ointment is kept sterile and ever ready for use.

A dressing can be made conveniently and rapidly, and the ointment is economized by this method.

The instrument is made in various sizes and can be bought for little more than the cost of a metal syringe. It is manufactured by Willms Instrument Company of Baltimore.

A CASE OF CONGENITAL FALSE DIAPHRAGMATIC HERNIA*

H. S. MARTLAND, M.D.

NEWARK, N. J.

I herewith report the clinical history and autopsy findings of a man who died as the result of a congenital deficiency in the central tendon of the diaphragm, which opening connected directly with the pericardial cavity, the heart at autopsy being surrounded by the entire transverse colon and the great omentum:

History.—The patient was 70 years of age, and was admitted to the Newark City Hospital in December, suffering from intense dyspnea, which he had had for one week. His family and personal history, except for the fact that he was never confined to his bed on account of sickness, throws no light on the condition to be described.

Examination.—On admission to the hospital the patient presented the clinical picture of an acute right heart dilatation, being markedly cyanotic and dyspneic, with a rapid, irregular and feeble pulse. Aside from these symptoms there was little in his physical examination of much interest. The apical cardiac impulse could not be seen or felt, but was heard best in the sixth intercostal space in the left mid-clavicular



Fig. 1.—Congenital false diaphragmatic hernia; view of under surface of the diaphragm with the opening.

line. The heart sounds were weak and distant, no murmurs being heard. Examination of the lungs revealed crepitant and subcrepitant râles over both bases posteriorly. The abdomen was negative. Examination of the urine showed a moderate amount of albumen, a few small hyaline and granular casts, with a specific gravity of 1.016.

The treatment consisted of the usual cardiac stimulants, but the patient's condition did not improve and he died seventeen hours after admission.

Autopsy.—When the abdomen was opened, the small intestines occupied their usual position; their serosa showed, in three places, at intervals of about 20 to 30 cm., large injected vessels and a reddened and thickened peritoneum. These areas were practically all in the jejunum, and I took them to be patches of chronic hemorrhagic peritonitis. The transverse colon and great omentum were conspicuous by their absence. The rest of the abdominal viscera were all in their normal positions. The right dome of the diaphragm reached the fourth interspace; the left was opposite the fifth rib. Just above the liver, the hand could be passed through a large, oval opening, 5 by 6 cm., in diameter, directly into the pericardial cavity, where the heart was felt surrounded by the distended transverse colon and the great omentum. Figure 1 is from a photograph taken at the

autopsy, showing the under surface of the diaphragm with the opening. On gently dragging on the splenic flexure of the colon, the hernia could be easily reduced as far as the middle of the transverse mesocolon, where there was a small area of gastrocolic omentum adherent to the right free edge of the opening. The stomach was in the abdominal cavity, somewhat turned, a portion of its posterior surface presenting, its greater curvature just entering the hernial opening.

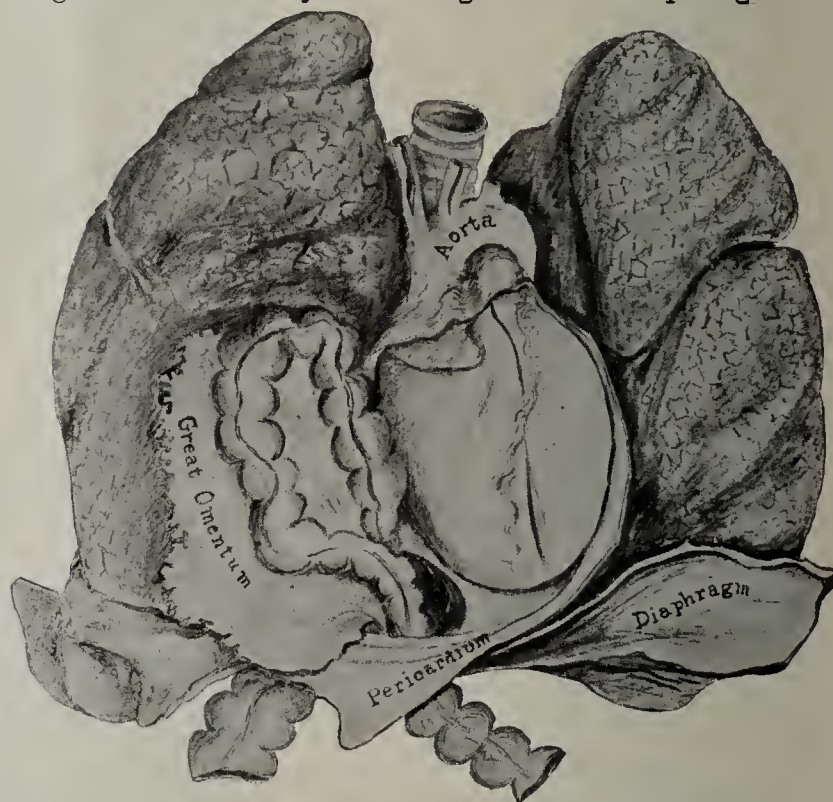


Fig. 2.—Rough drawing of thoracic viscera, showing position of colon in the pericardial cavity.

When the pericardium was opened the parietal layer was found diffusely, but only moderately, thickened. The right heart was dilated, the left ventricle firmly contracted. The hernial opening presented rounded borders, and the peritoneum of the under surface of the diaphragm was continuous with the parietal pericardium. There was no hernial sac. Nor was there evidence found either of a former suppurative pericarditis, empyema of pleural cavities, suppurative hepatitis, subphrenic abscess, ulcer of the stomach, or neoplastic growth near diaphragm.

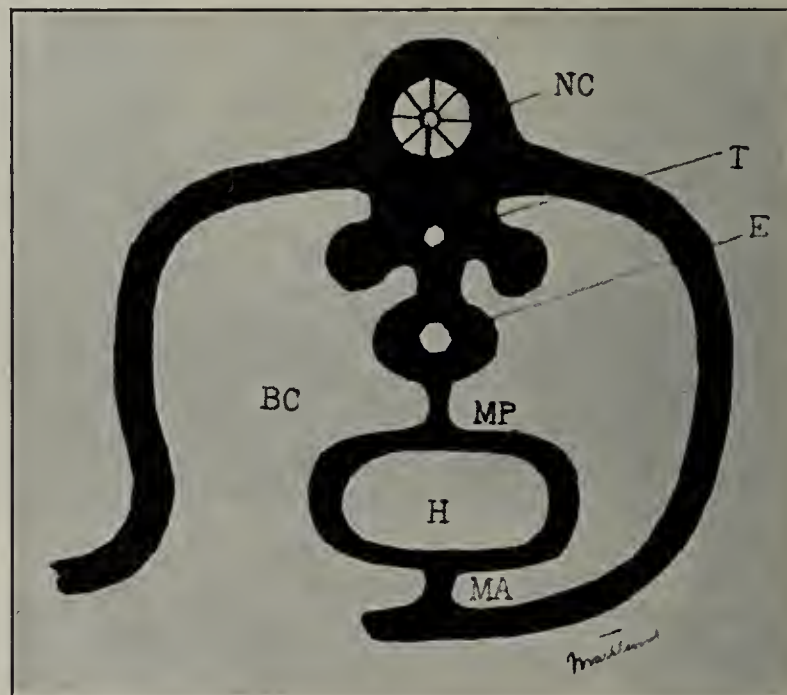


Fig. 3.—Transverse section of embryo at second week.

The remainder of the autopsy showed only the ordinary visceral changes of senility. The left adrenal, however, presented a cortical adenoma about 25 mm. in diameter.

I concluded, therefore, that death had been due to cardiac embarrassment, due either to a slipping of too large a portion

* From the Pathological Laboratory of the Newark City Hospital.

* Reported at meeting of New York Pathological Society, Jan. 13, 1909.

of intestine, or to gaseous dilatation of the same, through a congenital deficiency of the diaphragm in this position.

From the chronic inflammation seen in the small intestine, it seems probable that this portion of intestine also had at times slipped through the hernial opening.

EXPLANATION

To explain this congenital deficiency on an embryologic basis is, I fear, rather difficult, although we may include it under the theory of diaphragmatic hernia in general, namely, that the partition subdividing the primitive body cavity into pleuropericardial and peritoneal compartments is completed by fusion of segments (septum transversum, pillars of Uskow), which for a time are separate. Arrested development or delayed union therefore results in abnormal clefts, and it is evident that various degrees of developmental arrest or delayed union may produce corresponding imperfections in the future diaphragm.¹ I think that in the case in question such an arrest took place about the fifth week of embryonal life. It seems also that the case is, more strictly speaking, a teratologic rather than an embryologic fault, and one which is closely allied to a beginning subthoracic ectopia cordis.

I give a rough and brief description of the development of the diaphragm. Let Figure 3 represent a transverse section of a human embryo at about the second week. Let H represent the primitive heart formed

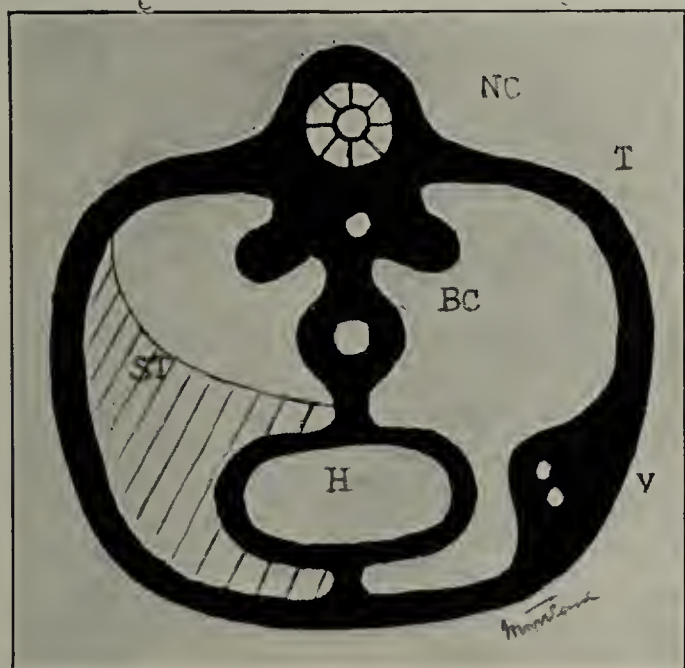


Fig. 4.—Transverse section of embryo, showing the septum transversum.

by the coalescence of two tubes produced in the splanchnic mesoderm. It will be seen that the heart in this stage lies embedded in the ventral mesenteric fold. As the anterior body wall is completed the heart becomes connected with the body wall by a portion of ventral mesentery known as the mesocardium anterius (MA), while that portion of mesentery passing from the heart to the primitive gut tube is called the mesocardium posterius (MP). The space between the heart and the body wall (BC) is the celom or body cavity.

Figure 4 represents the next steps in development, which are as follows: Lying in the ventral and lateral aspects of the body wall are the vitelline and umbilical veins (V). As these veins diverge to reach the heart, they carry with them the parietal layer of mesoderm in which they are imbedded, forming on each side a fold that projects mesally and dorsally, the two folds ap-

proaching and finally meeting with the ventral mesentery in the median line. This mass is the septum transversum (ST), and its appearance is the first indication of the separation of the body cavity into pericardiothoracic and abdominal cavities. The septum transversum is the anlage of the future diaphragm. Near the dorsal wall of the trunk, on each side of the intestine and its mesentery, the septum is wanting, and thus the two spaces communicate with each other by openings which are known as the thoracic prolongations of the abdominal cavity.

At this stage, then, the four great serous sacs of the body, the two pleural, the pericardial, and the abdominal, are indicated, but are still in free communication

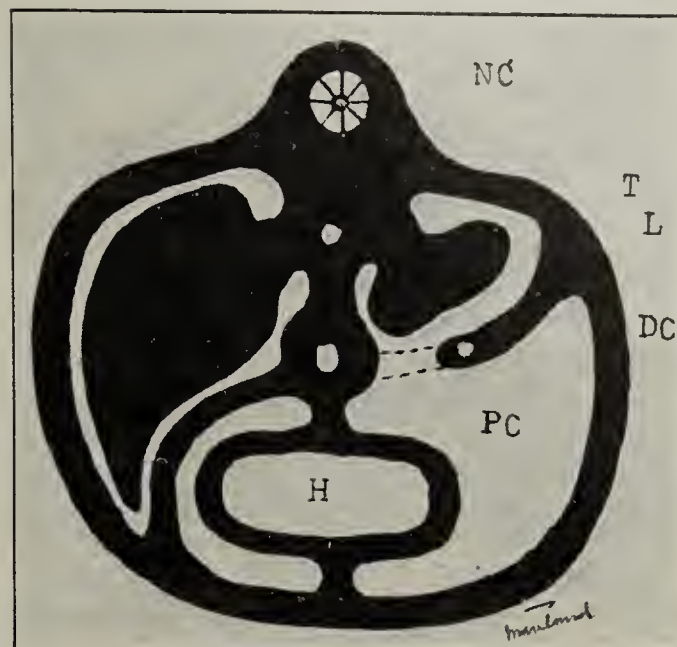


Fig. 5.—Transverse section of embryo, showing formation of pleural and pericardial cavities.

with each other. The pericardial cavity is the first one of these to be closed off, and this is due mainly to the development of a vertical septum, the appearance of which is also dependent on a large vein, namely, the duct of Cuvier, formed in the upper thorax, by the confluence of the cardinal and jugular veins.

It is this inwardly projecting vertical fold of serous membrane containing the duct of Cuvier (DC, Fig. 5), which constitutes the pleuropericardial fold and the appearance of which initiates the division of the thoracic cavity into two spaces, one for the heart and one for the lungs. This fold continues to grow toward the median line of the body until it meets the mesocardium posterius, with which it fuses, thus completing the pericardial sac and isolating it from the pleural spaces.

The lungs, which until now have occupied a very insignificant place (L), lying posterior to the heart, now develop very rapidly, pushing forward and delimiting the pleural and abdominal cavities. In the case in question, through some developmental arrest, the septum transversum has failed to close the communication between the pericardium and the peritoneal cavities. This separation should be complete about the fifth week of embryonal life.

The pleural cavities are finally separated from the abdominal cavity by the growth of two dorsolateral folds, the so-called pillars of Uskow; these pillars also projecting forward unite with the earlier formed septum transversum to complete the diaphragm at about the sixth to seventh week of embryonal life.²

1. Piersol, George A.: *Teratology, Reference Handbook of the Medical Sciences*.

2. Heisler: *Text-Book of Embryology*.

DIAPHRAGMATIC HERNIAS

There are two general types of diaphragmatic hernias, namely, the acquired and the congenital.

In a total of 276 reports of cases compiled by Lacher,³ 117 were congenital; the remaining 159 were acquired; of Leichtenstein's 252 cases,⁴ 224 were acquired, while 28 were congenital.

Acquired hernia, or rupture of the diaphragm, is therefore the more common type. The etiologic factors are trauma and pathologic perforations due to suppuration around the diaphragm.

Congenital hernia may be subdivided into false and true hernia:

1. False hernia, in which the displaced viscera are not covered by a hernial sac, is more frequent than the true form; in 117 cases, 92 were of this variety. They are more frequent on the left side, and in the muscular rather than the tendinous portions of the diaphragm. All of these were into the pleural cavities. The case which I report is a type of false hernia very rarely encountered, namely, a hernia directly into the pericardial cavity and having no communication with the pleural sacs.

2. True hernia, in which the abdominal organs are covered by a hernial sac of diaphragm, or peritoneum, or both, is quite rare.

I report this case on account of its great rarity, as I am unable in a fairly careful search of the literature to find mention of any similar case. It is also of interest because of the age the individual reached.

I thank Dr. Daniel Elliott, coroner's physician, and Dr. H. F. Cook, on whose service the patient died, for the privilege of performing autopsy and for the clinical history.

MYXEDEMA: REPORT OF A CASE

SAMUEL E. SIMMONS, A.B., M.D.

SACRAMENTO, CALIF.

Patient.—C. L. was born March, 1870, of American parents, on a Yuba county ranch. His paternal grandfather, from Yorkshire, Eng., lost his life by drowning; his paternal grandmother died at 84 of senility; his maternal grandfather and grandmother died at 84 and 89, respectively, presumably of senility. The patient's father died at 54 of "spinal paralysis" after several years' invalidism. His mother, born in Baltimore, died at 58 of sarcoma of the ileum. He has two brothers living; one is well, the other suffers occasionally from "petit mal;" one brother died at nine years of age, the result of epilepsy of traumatic origin; one sister is alive and apparently normal in every respect.

History.—The patient had measles and whooping cough in childhood. He attended school until he was 12 years of age, when he was vaccinated; the lesion caused thereby refused to heal for six months, according to the family; and they attributed his subsequent illness to this. He left school, having previously been considered a bright child; his color changed, and he lost interest in the sports of boys of an equal age. He preferred to sit quietly, and when read to would comprehend about three words in ten; he stopped growing, and, on account of the color and a peculiar puffiness, was treated for "dropsy." By his family and friends his condition was considered to be simply one of "stunted growth." His mother noted at this time that if she told him to stay in one place until her return, no matter if she stayed away the entire day, she would always find that he had remained in the place and position in which she left him.

Examination.—At office, Dec. 20, 1906: The patient's age was 36; height, 54 inches; weight, 74 pounds; pulse 50, poor volume and tension; temperature, taken with three different clinical thermometers at this visit, was 94. The hair on the



Fig. 1.—Patient at 5 years.

head was scanty and coarse; the hair on the eyebrows, hardly more than lanugo; the entire face, large and expressionless; the upper lids, swollen and baggy; the lower lids, less so, but did not pit on pressure. The skin was dry and harsh and



Fig. 2.—Patient at 10 years.

showed a color between that of jaundice and that of pernicious anemia; the sclera clear. The patient stated that he never perspired. The nose was broad and flat; the lips thick; no hair noted; the patient never shaved. The mucous membranes were pale; the tongue normal. The voice was puerile; the

3. Lacher: Ueber Zwerchfellshernien, Arch. f. klin. Med., 1880-1881, xxvii, 268.

4. Leichtenstein: Ziemssen's Cyclopedia of Medicine, vii.

thyroid gland could not be felt: the sublingual region, also the supraclavicular and infraclavicular spaces, were filled with flattened broad masses, of a consistency resembling "dairy cheese." Everywhere the skin seemed dry and adherent to the underlying tissue. The heart and lungs were normal; the abdomen negative; the pubic hair absent; the sexual organs fairly well developed. The specific gravity of the urine, 1018; no albumin or sugar. The hands were puffy and chubby. The blood was not examined at this time. The patient was not observant; answered questions slowly and with hesitation; did not care to study or to read; occupied himself with very light "chores" around a country place. He had no headaches; his appetite was variable.

Treatment.—The diagnosis was myxedema, and the treatment for this condition was at once instituted. Armour's thyroid tablets, each of which is the equivalent of two grains of the desiccated gland, or Burroughs and Wellcome's tablets, each of which is equivalent to five grains of the fresh healthy gland of the sheep, were administered throughout the course of the disease. Sometimes one preparation was used, some-



Fig. 3.—Patient at 15 years. (Note incipient myxedema.)

times the other, with no difference noted in the therapeutic potency. The treatment was begun with Armour's thyroid tablets: two a day; at the end of four weeks, the patient was taking four tablets a day.

Later History.—On Jan. 28, 1907, five weeks after beginning treatment, the patient reported again. The change in his personal appearance, physiognomy and mentality, was most striking. The pulse was 80; temperature but slightly below normal. A considerable increase of the hair on the head was noted. The voice began to "break," like that of a lad at puberty; the voice had previously been similar in pitch to that commonly found in boys 8 or 10 years old. He felt the cold much less and noticed a change of some sort himself; he said that it felt as if it all were a new world to him. Thyroid treatment was still urged and at next visit, Feb. 20, 1907, the patient had an abundant growth of hair; perspired on exertion, wanted to read and play cards, and when opportunity presented "caddied" on a neighboring golf-course. His color was greatly improved; weight was stationary. From being slothful and indolent, with his greatest usefulness put to driving cows to pasture and home again, the patient had become, in less than three months, very ambitious and worked as an errand-boy in a drug store; the manager stated he was the brightest boy he ever had.

Two years have now elapsed, and save in the initial treatment by the thyroid extract (which lasted two months in continuous dosage), the patient was never under treatment longer than four weeks at one time. The longest respite from thyroid therapy was for a period extending from May, 1907,



Fig. 4.—Patient at 36 years, just before beginning thyroid treatment.

to October of same year, a period of five months, when I was in Europe; at the end of this time some of the old symptoms were again in evidence, namely, characteristic color, loss of expression, swelling and puffiness under the eyes; the men-



Fig. 5.—Another view of patient; same time as in Figure 4.

talities, however, continued good. The patient himself wanted to be placed under treatment again. I think that in the future the patient may be reasonably left to his own discretion in regard to treatment, for he always knows when it is

indicated. An interesting feature of the case, aside from its rarity in these parts, is that if the patient takes more than three tablets a day, now that a cure is established, or continues the treatment for more than three weeks, he soon shows



Fig. 6.—Patient six months after use of thyroid.

the symptoms of exophthalmic goiter, namely, nervousness, sleeplessness, slight exophthalmos, nausea, sometimes vomiting and general weakness.

212 J Street.

A CORRECTOR FOR WEAKENED FEET FOR USE AT NIGHT

J. M. BERRY, M.D.

TROY, N. Y.

The weakness and disability of the foot which culminates in the deformity commonly known as flatfoot is progressive in character. In the earliest stage of the trouble there is present simply a weakness or strain, which causes the foot to assume a weakened position favoring additional strain. The weakened position is later present constantly during activity and soon becomes habitual, and from that it is only a short step to permanent weakness and deformity.

The various stages can be enumerated as follows: (1) weakness and strain, (2) weakened position favoring more strain, (3) weak position in use, (4) habitual weak position, (5) permanent weak and deformed position.

The characteristic position of a weakened foot is the pronated or abducted position. In this position the front part of the foot is turned outward through the midtarsal joint with consequent lowering and weakening of the inner longitudinal arch. There is an apparent rolling inward and downward of the ankle, and the line of body weight drawn through the center of the knee and ankle, when prolonged over the foot, is found to be to the inner side of its normal position. All these elements of the pronated position are increased during weight bearing and activity, and the last result

of progressive weakness is the pes valgus form of club-foot.

In the early stages of a weakened foot the weak position is assumed during weight bearing; but later the foot when at rest and relaxed, with all weight removed, falls naturally into the weak position. In later stages, the weak position becomes permanent, actual structural deformity occurs and the faulty position can be corrected only by forcible manipulation or operation.

In the treatment of weakened conditions of the feet, attention is usually directed to the use of proper braces and shoes combined with manipulation and massage. The principles of such treatment are that the brace will cause the foot to assume a proper attitude, throwing the weight of the body onto the outer side of the foot, where it belongs, while the proper shoe allows the foot to be held in a position where it is least subject to strain and can work most efficiently. Manipulation, massage, vibration, etc., limber up the foot, relieve pain and soreness and give strength.

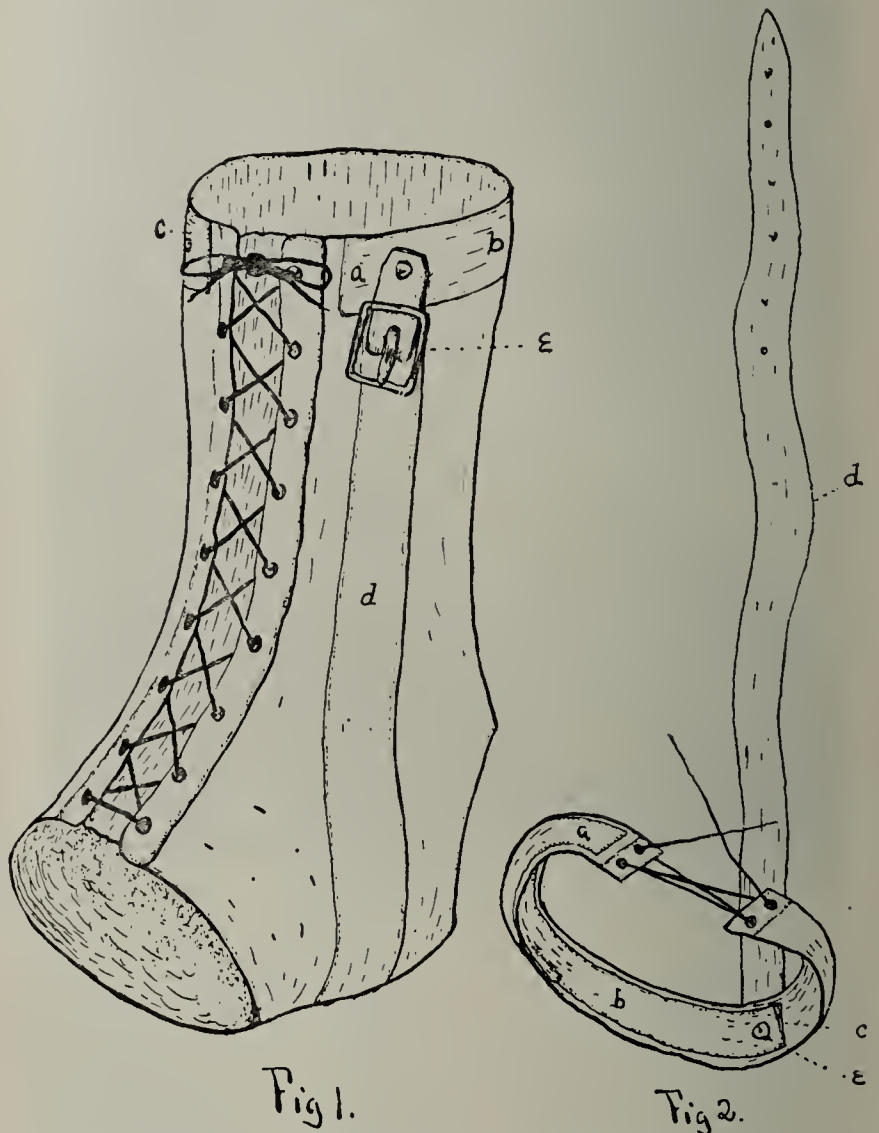


Fig. 1.—An ankle support of soft leather, cut away at the heel and laced up the front, with a band (a, b, c) of thin spring brass, leather covered, encircling the top of the support. A strip of thin spring brass (d), leather covered, is riveted to and extends from one end of the encircling band down the side of the ankle under the heel and up the other side, fastening to the other end of the encircling band. A buckle (e) is riveted through the two pieces of brass and the ankle support.

Fig. 2.—A band to encircle the waist of the foot. For the adult foot this should be 1 1/4 in. wide. It is made to lace over the top of the foot. A strap (d) is riveted to the encircling band at e, corresponding to the inner and under surface of the foot.

One factor, however, is often neglected, but is of great importance in all orthopedic work in connection with deformities. I refer to the influence of position during sleep. This is of especial importance in children in whom there is the added influence of growth.

As has been said, the abducted or pronated position of the foot is the weak position, and in practically all cases in which the individual has a weakened foot it will be found that the foot falls into a pronated position during sleep. The foot may have been kept in a correct position during the day by braces and shoes, but during sleep, which is usually about one-third of the time, the foot is allowed to assume the pronated or abducted position, and it can easily be understood what an influence this must have on treatment.

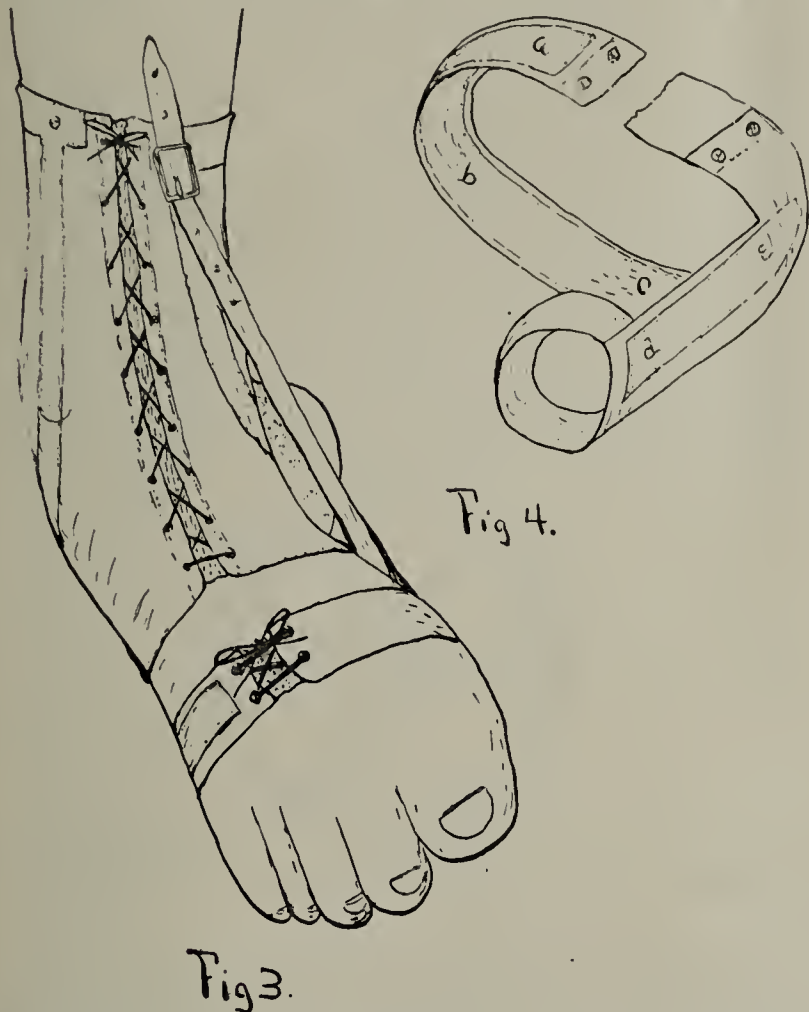


Fig. 3.—The strap (d) is to fasten into the buckle (e) of the ankle support, and, when tightened, draws the foot into a flexed and adducted position. In some cases it may be of advantage to incorporate a piece of elastic webbing into the strap. The strips of spring brass fastened to the apparatus by their leather covering serve to stiffen it and cause the pull of the apparatus to be applied at the right points.

Fig. 4.—A modification of the waist band that can be used when hallux valgus is present. The band (a, b, c) around the waist of the foot is as in Figures 1 and 2, but there is a prolongation (d, e), along the inner side of the big toe. This prolongation is strengthened by a strip of spring brass and corrective force can be brought to bear on the toe by bending this strip.

In order to overcome this faulty position during sleep and to aid the process of growth, the apparatus, outline drawings of which are here shown, has been devised.

By a slight change in the apparatus it can be used to great advantage as a night support for clubfeet. This is done by simply changing the strap and buckle to the outer side. Tightening the strap will now tend to hold the foot in a flexed, pronated or abducted position, just the reverse of the position in ordinary equinovarus.

Hair Dye Poisoning.—Dr. J. H. Mackay, Norfolk, Neb., reports a case in which the eruption extended beyond the scalp to the face, shoulders and arms, with itching, burning, redness and puffing. The eruption was similar to ivy poisoning, but with larger individual pimples. There were constitutional symptoms suggestive of arsenic poisoning. The diagnosis was confirmed by three attacks during a period of six months, concurrent with the application to the hair of "Mrs. Potter's Pure Walnut Juice."

TWO CASES OF SUBPHRENIC ABSCESS

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GREELEY, COLO.

The following case is reported because we believe, that, even in the face of a rapidly increasing literature, it is appropriate to draw attention to the not infrequent condition of subphrenic abscess following appendicitis and to the condition of empyema and lung abscess following subphrenic abscess, even when an appendiceal abscess is drained and occasionally after the removal of a non-suppurating appendix.

Patient.—W. P., aged 26 (family history immaterial), was operated on at Omaha for appendicitis, two years before the date of first examination. He believed it only a drainage operation. A year and a half later an abscess opened externally in the right iliac region. The patient was shortly removed to a hospital, where two attempts were made to close the resulting fistula. At this time there was a swelling of the lower part of the chest on the right side. Later he began suddenly to cough and to expectorate large quantities (two to four pints) of very foul pus, the swelling in the liver region gradually subsiding.

Examination.—March 23, 1909: Patient admitted to the hospital, emaciated, dyspneic, with rapid breathing, no expansion of the right thorax. Temperature, 102 F.; pulse, 110; bulging of the right thorax, dullness extending up into the axillary space, area of dullness changing with posture. Amphoric breathing and other cavity signs of right lung.

Diagnosis.—In the order of occurrence: Appendicitis, subphrenic abscess, empyema, lung abscess.

Operation.—March 23, under ether, which the patient took poorly, resection of sixth rib was done, evacuating about one quart of pus; breathing was easier. By a linear incision in outer border of right rectus, we opened the subphrenic space and demonstrated a sinus leading from the appendix to the right lung, through which air escaped in breathing as it also did in the thoracic opening; drainage of openings was effected.

Postoperative History.—At no time after operation was there any drainage through the old sinuses in the appendiceal region. On the second day the drainage was removed from the subphrenic space, with closure of the wound twelve days after operation. The thoracic discharges gradually lessened until on April 7 the discharge had ceased and the wound about closed. The patient was up, gaining in weight; his cough was negligible.

The next case is reported because of the long train of symptoms, and widely separated septic conditions that may follow a seemingly mild and non-suppurative appendicitis after apparent recovery; also because of the obscure symptoms present due to the small amount of pus and its many locations; and because of the fact that the pus must have been present for a long time and the tissue reactions excellent to produce such a completely organized pus.

Patient.—W. F., male, aged 28 (family history not obtained; early history negligible), in 1904 worked in the tropics where he had a "fever" which left him with large stellate scars on the back. He complained of not having felt well for some time before the examination. He could remember no very severe pain but some colic.

Examination.—March 18, 1909: The patient was a muscular male, not markedly emaciated, with face flushed, rapid breathing, rapid pulse, temperature 102 F., an area of consolidation in the left upper lobe of lung, and no marked signs of extensive pneumonia. The sputum contained Friedlander's bacillus and numerous cocci; it was slightly blood-stained. We made a diagnosis of pneumonia.

Course of Disease.—The patient next morning was removed to the hospital, at which time his temperature was 95 F., pulse 110; the other conditions were unchanged. The patient had had no chills and gave no history of chills but had chilly sensations. During the next day he complained of severe pain in the diaphragmatic area on the left side. Next day the pa-

tient looked markedly worse; the septic appearance was increased. There was at this time (March 24) some dulness and some pain over the gall bladder, and appendix, general rigidity of the abdomen, and much tenderness over the eighth, ninth and tenth ribs left laterally. Blood count at this time gave 37,000 white blood cells and 95 per cent. polynuclears. The urine was reduced in quantity; the urea output markedly reduced; very large percentage of albumin, considerable bile. The sputum was unchanged. On more careful examination of the chest it was concluded that the left lung was collapsed; there was tympany to the third rib, dulness above, metallic tinkling and amphoric breathing over the base. The diagnosis was revised to disease of either gall bladder or appendix, subphrenic abscess and pyopneumothorax.

First Operation.—Under ether, March 22, the abdomen was opened; the gall bladder was found normal, and the appendix inflamed. There were recent and old adhesions and general peritonitis; the omentum was glued to the parietal wall. No abscess was located. There was some serosanguineous fluid in the pelvis. The appendix was removed and the wound closed. Aspiration of the thorax gave negative results, so the chest was not opened.

Second Operation.—The next day, the septic symptoms becoming worse, it was deemed proper to explore the left subphrenic space and left chest further. The patient being unfit for a general anesthetic, a diagonal incision was made beneath the eighth, ninth and tenth cartilages. The subphrenic spaces were explored but no pus cavity found. Aspiration of the chest showed a few drops of liquid pus. A rib was resected and two drams of thin, odorless pus was turned out.

The patient died next morning at 10 a. m.

Autopsy.—The left lung was collapsed; there was an area of healed tuberculosis in the left apex; no free pus in the pleura, but the lung covered with organized pus so adherent that it was with difficulty removed; the same condition existed between the lobes. There was pus of the same character in the anterior and middle mediastinal spaces; the mediastinal glands were enlarged but not suppurating. The pericardium was adherent and purulent with the same kind of pus; the right lung was about normal, but beneath it, lying on the diaphragm, was a small amount of organized pus. The left subphrenic space contained two or three drams of thick organized gelatinous pus, as did the right subphrenic space; there was no abscess cavity and no marked adhesions. The right kidney space at the upper pole contained similar pus; no stone or pus was found in the kidney; both kidneys were enlarged and bile-stained; the capsule stripped easily. The liver was enlarged, otherwise normal. The stomach was normal except some adhesions in the gastrohepatic area; on its anterior surface was an old scar of a healed ulcer; it had no adhesions about it and did not show on the outside to either inspection or palpation. The duodenum and gall bladder were normal. The pancreas was somewhat sclerotic, there was no hemorrhage or abscess. There was nothing in the lower abdomen but adhesions and seropurulent peritonitis.

From the fact that there had been an old appendicitis and that no other source of pus was found and that pus was in the subphrenic space on both sides and in the right kidney space, we are forced to conclude that there was, first an appendicitis with insignificant symptoms and without suppuration causing a subphrenic abscess, and later a general peritonitis secondary to the abscess with lymphatic infection to the lung. Eisen-drath in an article in 1908 speaks of this condition but found but six cases of left subphrenic abscess due to appendicitis.

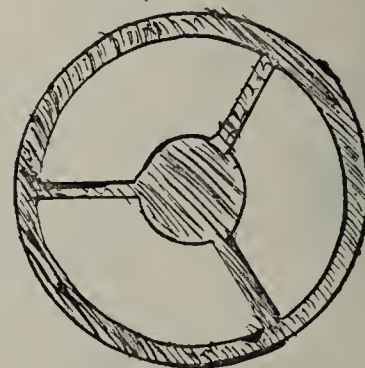
The time consumed in developing such widely disseminated foci and pus of the organized quality must have been considerable. Unfortunately no bacteriologic examination was made of the pus.

DARK-GROUND ILLUMINATION WITH ORDINARY MICROSCOPE EQUIPMENT

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CINCINNATI

The interest in the *Spirochæta pallida* has brought the methods of dark-ground illumination into prominent use for practical purposes. The following is a method of securing this form of illumination, without the aid of special apparatus. The only things needed are a microscope-stand fitted with an Abbé condenser of 1.20 N. A. or 1.40 N. A.—focusing screw for the condenser—a swing out ring below the condenser (such as is fitted to most microscopes, for holding a blue glass disc), 16-millimeter and 4-millimeter objectives, the latter preferably of low aperture (0.65 N. A.), although the one with a higher aperture will do. The illuminant may be a simple one-inch flat-wick oil lamp, although a high power single glower nerust lamp is very much better. Dark-ground illumination is easily obtained with low power objectives, therefore it is best to practice with the 16-millimeter lens before using the higher power necessary to distinguish the spirochete,



Cardboard center-stop for use in dark-ground illumination.

following the directions given below:

Using the 16-millimeter objective, take a slide of sedimented urine, or scrapings from the mouth, containing epithelial cells. First focus the object, then focus the condenser until the image of the light source (the flat side of the flame from an oil lamp, for instance) is seen in the field with the object. Provide a center-stop cut out of cardboard or heavy dark paper like the diagram—a circular disc, having a portion between the rim and the center cut out, as shown by the unshaded part. This kind of diaphragm comes with most microscopes, but can be readily made. Several such discs should be cut out, leaving central stops of different sizes. The outside diameter of the disc, of course, must fit the turn-out ring that is placed below the condenser. With the object and the light source both in focus, as stated above, put a small disc under the condenser. If that does not completely darken the field, use a larger disc, and finally alter the focus of the condenser a trifle until the field is black, and the objects stand out brilliantly. This method, with the 16-millimeter objective and high ocular facilitates the search for casts. When one is found, merely swinging out the ring carrying the center-stop brings direct illumination into use.

It should be added that when using dark-ground illumination the iris diaphragm below the condenser should be wide open to start, and then it can be partially closed, if necessary, to make the field darker. It is easy to get a dark-ground with the low-power objective, but when using the high power the difficulties increase. The best method is first to put a large drop of cedar-

oil on the condenser and put the slide in contact with the oil. This slide may have a drop of syphilitic serum, or, for learning the method of dark-ground illumination, one may take a drop of stale urine or sewage, which is loaded with bacteria. Focus the object with the low power, then focus the condenser so that the image of the light source (say the edge of the flame) is on the same plane as the object, taking care that the cedar-oil maintains the connection between the slide and condenser. If the oil will not fill the gap, use a thicker slide, or use two thin slides, with a drop of oil between them, and another drop between the lower slide and the condenser. Now put the 4-millimeter objective on the microscope, focus the object with a small iris diaphragm, then open the diaphragm and put one of the center-stops under the condenser. Now change the focus of the condenser slightly if necessary, or shift the mirror a little, until the bacteria or other objects are bright on a dark background. Of course, it may be necessary to try several sizes of center-stops below the condenser, but once a certain size is found to work right, that one can be used regularly with that objective. I have used the above described method with a Leitz No. 7 objective, as well as a Spencer 4-millimeter, and while the results are not so good as with a reflecting condenser (on account of chromatic aberration), it has the merit of requiring no extra apparatus. My own preference, in searching for spirochetes, is to use an apochromatic dry objective and an achromatic oil-immersion condenser of English make, but an ordinary outfit will do the work fairly well.

To get the best results from any apparatus, one should know the principles underlying its use, and to get a good exposition of the general principles of dark-ground illumination, the books by Spitta and by Wright on microscopy are very valuable. But it is well to mention here that several amateur microscopists (that is, not medical men) of England, than whom there are no more skilful manipulators, have emphasized the danger of spurious images from dark-ground illumination. This does not apply to the spirochete, so much as to the other objects that may be viewed by this method.

1209 Walnut Street.

ACUTE CHOLECYSTITIS COMPLICATING TYPHOID FEVER

REPORT OF THREE CASES, WITH OPERATIONS

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The infrequency of reported cases in which cholecystitis has been observed as a complication of typhoid fever would lead one to believe this condition extremely rare, or that it might not have been looked for with the same vigilance as other complications. The post-typhoid cholecystitis, with at times calculus formation, has for some time been recognized as a frequent sequel of typhoid fever. Many of the cases must have been the result of an acute cholecystitis occurring during the attack of typhoid, the acute symptoms subsiding, leaving a chronic cholecystitis present. These patients with chronic cholecystitis are often operated on and the presence of the *Bacillus typhosus* demonstrated months or years after the attack of the fever. Then, if many sur-

vive the acute cholecystitis, which very likely resulted from the typhoid attack, it is quite reasonable to think that there are many who die from this cause during the course of the fever.

I believe that acute cholecystitis, of sufficient severity to demand operative procedure, is of far more common occurrence than has heretofore been supposed, and the following cases may, therefore, be found of interest:

CASE 1.—History.—The patient, Mrs. S. B., aged 38, had had the usual diseases of childhood; otherwise she had always been healthy except for some stomach trouble during the previous six or eight years. She was taken ill on May 31, 1908, with pain in the abdomen, diarrhea and headache. She had complained of headache for the previous ten days, and had had some pain and tenderness in the abdomen, no appetite, and slight diarrhea.

Examination.—The tongue was red; the lungs normal; the abdomen slightly distended and tender. The spleen was enlarged; the temperature 100; the pulse 90. Blood examination: white blood count, 3,800; red blood count, 4,500,000; Widal negative; hemoglobin 95 (Tallquist). The urine was negative. Diagnosis, typhoid fever.

Course of Disease.—June 8: Spleen very much enlarged; white blood count 4,200; Widal positive. Temperature had continued to rise until at this time it was 103 to 104 in afternoon. Rose spots were very abundant. This case ran a course typical of typhoid fever for five weeks. The temperature and pulse became normal, remaining so for several days, when the patient again had a rise for several days. At this time the leucocyte count was 4,000. The relapse lasted for several weeks and had about reached the normal on July 31; then the patient had a severe pain over the region of the gall bladder; the temperature rose to 105, the pulse 170 to 180. There was vomiting; the facial expression became very anxious; there was considerable tenderness over the region of the stomach and gall bladder. The blood showed at this time 11,000 leucocytes. (No differential count was made.) Diagnosis of a cholecystitis with perhaps perforation was made. I called in Dr. Lull, who concurred in this, and while the chances from operation did not look very encouraging we earnestly insisted on this and gained the patient's consent after a few hours' wait. At this time (five hours later) the leucocyte count had risen to 15,000, which was about 11,000 increase from a few days previous.

Operation.—The patient was placed on the operating table about ten hours after the first pain was felt. I made an incision over the gall bladder, and found this organ very much distended. On the fundus was a small necrotic area through which the very thick, dark-looking bile was being discharged. This bile was of the consistency of jelly, which accounts for the gall bladder not entirely emptying itself into the peritoneal cavity. Cholecystotomy was performed, using a rubber tube covered with a cigarette drain. I closed the gall bladder around this with a purse-string suture. The entire operation was completed and abdomen closed in eighteen minutes. The patient's condition seemed no worse than when the operation was commenced (which was bad enough). The patient was given hypodermoclysis on the table, and after the operation saline enemas, strychnin and spartein sulphate were given every three hours. In eighteen hours the temperature was 98.6, pulse 100, and the patient made a rapid and uninterrupted recovery. The gall bladder discharged no bile until after the fourth day, when bile was freely discharged.

CASE 2.—History.—J. D. Almond, aged 23, was brought into the hospital on Sept. 1, 1908, the sixteenth day of typhoid fever. His previous history was good until the development of the present attack. When admitted to hospital the patient was suffering with severe pain over the gall bladder region, but had not complained of this until put on train to be brought into hospital.

Examination.—The eyes were normal; the tongue red and very dry; the heart and lungs normal; the spleen very much enlarged. There was tenderness over the gall bladder. The temperature was 103; the pulse 128. The abdomen was distended and rigid. The patient was nauseated and had vomited

a few times before admission. The Widal test was positive; white blood count 16,000. Diagnosis was made of cholecystitis complicating typhoid fever.

Operation.—The patient was carried to the operating room and an incision made over the gall bladder. This organ was found very much enlarged and distended. I opened the gall bladder, which was found to contain thick, dark bile. No stones were found. A rubber tube wrapped with cigarette drain was inserted, the edges of the gall bladder turned in and the tube retained by a purse-string suture. No bile was discharged for two days; then it began to discharge freely through the draining-tube. In twelve hours the temperature had dropped to 99.4; the pulse was 84. The patient made a nice recovery. Culture from the bile was examined and a motile bacillus found.

CASE 3.—History.—Mrs. S. D., aged 15, was admitted to the hospital on Sept. 10, 1908, with diagnosis of typhoid fever. Her condition mentally was very bad and the history had to be obtained from her husband and the doctor bringing the case into the hospital. The past history could not be secured beyond the present illness. The patient had been ill one month; had been constantly in bed only for the previous five days, but had been having fever for two weeks past; the physician stated that the temperature ran up to 104 to 105 each afternoon and about 102 in the forenoon (when he had seen her). The patient was four months pregnant. She was vomiting about once or twice each hour.

Examination.—The patient had a very anxious facial expression. The tongue was very red around the edges, with a dark coat, and trembled very markedly when protruded; it was hard to get the patient to protrude the tongue on account of her bad mental condition. The chest seemed normal. The spleen could not be felt on account of the distended abdomen and extreme tenderness. There was much tenderness over the gall bladder and some tenderness over the appendix and uterus. The patient seemed in great pain. The blood examination showed white blood count 4,000, hemoglobin 40 per cent., Widal very positive. The pulse was 140, the temperature 103.4. The urine showed albumin present; there were abundant hyaline and granular casts. The diagnosis was made of typhoid fever complicated by suppurative cholecystitis.

Operation was advised, but the husband was unwilling to have the patient operated on until her mother could be consulted. We offered no encouragement and did not insist on operating. The mother did not arrive until the day following, and gave her consent to operation. At this time the patient's condition did not seem much changed for the worse, as it had been about as bad as possible on the day of admission. According to the nurse's notes, between 7 p. m., September 10 and 7 a. m., September 11, the patient was delirious, suffering great pain in the abdomen. She had five liquid movements during this period. Three-quarters of a grain of morphin sulphate was given by hypodermic injection during the night. It will be seen that we did not have a good subject for a surgical operation. The temperature at this time was 104.6, pulse 132, white blood count 10,000.

Operation.—An incision was made over the gall bladder, exposing the firmly adherent omentum covering the organ. The omentum was dissected away, exposing a very much distended gall bladder. The liver was speckled or nutmeg in appearance. The gall bladder, on being opened, was found to contain a thick, tarry bile mixed with a yellowish discharge, which proved to be pus. The gall bladder was drained after a culture was taken for bacteriologic examination. On account of pain in the lower abdominal region we considered it best to explore this region. An incision was made in median line; the uterus, being brought into view, presented a very unhealthy appearance. The question of a living or dead fetus was undecided, and considering that we had perhaps a toxemia of pregnancy, a dead fetus and a very unhealthy uterus, we decided to remove it. The appendix was normal. The time consumed in removing the uterus, draining the gall bladder and closing both incisions was eighteen minutes. The patient left the table in about as good condition as when she came on.

Postoperative History.—On the third day there was a normal movement from the bowels; the temperature and pulse

began to fall until on the eighth day after the operation the pulse had reached 100 and the temperature 100.8 by rectum. The bowels were acting nicely and the prospects for continued improvement seemed bright, when the patient's condition became suddenly worse. The temperature per rectum was 98, the pulse 144, and there was great pain in the right iliac region. Drs. Johnson and Whelan were called in and the diagnosis of perforation was made, but on account of the desperate condition of the patient operation was not advised. The diagnosis was found correct at autopsy, the perforation being about four inches from the ileocecal junction. The report on the gall-bladder findings was a mixed infection of a motile bacillus and streptococcus.

109½ North Twentieth Street.

Therapeutics

INFANT FEEDING

In this age of bottle-fed infants, milk foods, substitute foods, pasteurized milk, and modified milk, it may be well to ponder some on the facts presented in a paper by Dr. Joseph E. Winters, of New York, Professor of Diseases of Children at the Cornell University Medical College. It may be well to present his findings in the form of aphorisms.

1. Infant mortality has only lately decreased, while the mortality of older individuals has been continuously decreasing.

2. A breast-fed child in the worst surroundings has an immunity from disease never found under any condition of substitute feeding.

3. The mother's milk is very rich in fat, containing 5 per cent. (together with 7 per cent. of milk sugar, and 1.25 per cent. of proteid) and, other things being equal, the fatter the child, the healthier it is.

4. The extra amount of fat which the child receives from its mother's milk over and above that from artificially prepared foods is absolutely necessary for the maintenance of its requisite heat, and when it is remembered that heat is largely lost by radiation and evaporation from the surface of the body, and the child having relatively three times as much surface for radiation and evaporation as the adult, the importance of maintaining the fat content of its food is at once seen.

5. The extra amount of fat is also needed for the child's nutrition on account of the rapid growth of brain, nerves, and bone marrow, all of which tissues contain large amounts of fat.

6. Separator (or centrifugal) cream is prepared from whole milk by rapid revolutions of the separator, and is consequently lower than gravity cream in all of its constituents except fat, and would be more correctly named if called centrifugal or separator butter fats instead of cream. Also, by the excessive pressure the fat globules are no longer free, but are so crushed together that when added to modified milk they form masses of fat that can not be well digested by the child. Such conglomerate fat which must reach the intestine for digestion, "does not readily pass through the narrow pylorus of the infant. Such fat is, then, as indigestible as cheese."

7. "Centrifugal cream is almost proteid-free and nearly destitute of growth constituents, hence the only food value it can have is as an addition of fat to other milk."

8. The upper half-ounce of *gravity* cream contains 3 per cent. of proteid, and gives fat globules so loosely

coherent as to be readily emulsified, and hence it does not form a tough curd in the child's stomach as does separator cream. Therefore, the upper half ounce of gravity cream from milk of cows "other than Jerseys and Guernseys," whose milk is too rich in fat, makes the best basis for an artificial food for the infant.

9. "There is a definite and unfailing relationship between growth and the percentage of proteid in milk. The calf doubles its weight in forty-seven days with 4 per cent. of proteid in milk; the lamb in ten days with 7 per cent.; the puppy in eight days with 8.25 per cent.; the kitten in five days with 9.33 per cent.; while a child grows most rapidly during its first week of life, at about which period the secretion of the mother's breasts contains 8.5 per cent. of albumin. The high protein, non-coagulable, absorbable without digestive effort of mother's milk is impossible of duplication."

10. "The mortality of infants under one year is so great that an equally high death rate is not again recorded until the age of eighty years, and 75 per cent. of these deaths occur in the first six months. Such a mortality would not occur were all infants breast-fed, and maternal nursing even shows a lower mortality than with wet nursing, showing that the mother's milk is peculiarly adapted to her own infant."

11. "Calcium phosphate, magnesia, sodium and potassium chlorid in greater quantity in colostrum than in milk of later period is peculiarly adapted for cleansing the child's intestines of the perilous meconium."

12. As the child's stomach rapidly enlarges and the pylorus increases in size, after from six weeks to two months, the child can better digest properly modified cows' milk.

13. At the end of this period, six weeks to two months, it is possible to modify cows' milk to simulate mother's milk, but before this six weeks' period it is almost impossible to produce a food that can at all equal, in its gradual modification, Nature's own method of feeding and nourishing the young infant.

14. While it is necessary for the welfare of the infant that it receive its mother's milk, it is also for the best health of the mother that the child should nurse. In about six weeks after delivery the large, heavy uterus should have involuted to the normal size of the non-pregnant uterus. A powerful aid to such proper involution is the reflex contraction which takes place in the uterus when the infant grasps the nipple. If the uterus receives this reflex stimulation to contraction from eight to ten times every twenty-four hours, and such reflex stimulation lasts from fifteen to twenty minutes, and such functions and stimulations are normal, it may be easily seen how one set of generative organs may not return to perfect health if the other set is not properly utilized.

15. If it is thoroughly explained to the mother that during her normal period of rest after confinement, viz., six weeks, that the child *extra utero* is just as much a part of her as the child *intra utero*, and that after these six weeks, if it seems advisable, the child may be weaned and artificial food given, she will certainly co-operate for her own and the child's health, and will nurse her own baby.

16. "The milk of every healthy mother agrees with her child." The child should nurse slowly if it will, and should obtain its food with some effort on its own part, as vigorous nursing stimulates the child's secretions and hence is much better than for the milk to flow readily, as from a bottle.

17. "Never give water from a bottle to a new-born child—refusal to nurse is certain to ensue. Water may be given from a spoon twice the first day. It must not be given the second. Much water, even from a spoon, prevents vigorous nursing."

18. The green stools due to the meconium are often incorrectly believed to be because the milk disagrees, and calomel or castor oil are needlessly given, or the child is needlessly weaned. Also, "officious discussions, before the mother, that her milk probably disagrees with her own child on account of some apparent colic, sleeplessness, or a little vomiting, or a little mucus in the stools, has caused the loss of many lives by making the inexperienced mother needlessly wean her child."

19. After the child has nursed to its fill, it should be placed in a quiet, darkened room, where it may uninterruptedly sleep until it is again ready to nurse. Too much handling of the young infant interferes with its digestion and its nutrition.

20. Winters believes that, as the maximum gain in breast-fed children is during the second month, and, as (he thinks) the proteid and minerals in the mother's milk are inadequate for the proper growth of the child after the second month, that Nature did not intend the prolongation of lactation to eight or ten months.

21. After the first month Winters would give the breast-fed child two bottles of modified cows' milk every twenty-four hours, at such times as to allow the mother uninterrupted rest at night, and an occasional freedom during the day. Such a method makes weaning easy, at any period.

22. "Pasteurization dissolves the organic union of mineral and proteid in milk, and thus fails to present the baby with normally constituted organic food. It is a recourse to palm on a credulous public milk unfit for food."

23. "An infant is not endowed with the ability to digest vegetable foods; hence foods from barley or any other grain are not adapted to the infant's needs. Of 1,000 children fed on various infant foods, 780 more died in the first year than of 1,000 breast-fed children. Infant physiology, physiologic chemistry, and experimentation demonstrate that the giving of any food other than modified raw milk to an infant under six months is perfidious. In Germany, when an infant under one year dies the law requires the mode of feeding to be stated on the certificate of death. Barley, dextrinized cereal, malt soup, all adventitious and foreign accessions to modified milk, enhance mortality."

"When the order of nature changes; when the functions of heat, respiration and nervous energy in the new-born can be accomplished without fat as a source of heat; when the blood-forming, heat-producing and force-producing structures contain no fat; when women's breasts secrete barley gruel, dextrinized cereal, malt soup, wheat flour, sour milk, and fat-free milk, these anomalous and strange feeding whims will be founded on some bottom of reason."

ASTRINGENT MOUTH WASH

The following is a suggestion in the *Druggists Circular*, January, 1909:

R.	gm. or c.c.	
Tincturæ myrrhæ	75	fl.ʒiiss
Tincturæ cardamomi compositæ	20	fl.ʒi
Tincturæ cinchonæ compositæ	75	or fl.ʒiiss
Spiritus caryophylli	15	fl.ʒss
Eau de Cologne, ad.	200	ad, fl.ʒvii

M. et Sig.: Add a teaspoonful to a glass of warm water, and use as a mouth wash.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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[For other information see second page following reading matter]

SATURDAY, MAY 15, 1909

THE PANCREAS AND THE LIVER IN DIABETES

Although it is now nine years since Opie first described the occurrence of definite lesions in the islands of Langerhans in diabetes, we are still uncertain as to just what relation these structures and their pathologic alterations may have to diabetes. While there are those who have gone as far as Dale and denied the very existence of the Langerhans islands as independent structures, and others have disputed their relation to carbohydrate metabolism, the balance of evidence and the weight of opinion are now altogether in favor of considering them as specific organs of internal secretion which are concerned in carbohydrate metabolism. Just what part they play in this process, or how they do it, are admitted to be unsettled problems. Granting the fundamental importance of these structures in the utilization of sugar by the body, their connection with diabetes is to be assumed, and the finding of lesions in them in diabetes would settle the matter were these lesions more constant. However, the results obtained by different observers have been so much at variance that it has been extremely difficult to draw satisfactory conclusions, and therefore some pathologists are more than a little skeptical as to the importance of the lesions that have been described.

When we find that in the pancreas of a person dead of diabetes practically all the islands of Langerhans have been replaced by a hyaline substance or by scar tissue, without other lesions of the pancreas being present, we have every reason to suspect these lesions of responsibility for the defective carbohydrate metabolism. But when we find such distinct changes present in but a small proportion of all cases of fatal diabetes, and find in a very considerable proportion only slight or no distinct pathologic alterations whatever in the pancreas, the question of the exact significance of the observed lesions becomes a matter of doubt. And when we observe that in still other cases the islands of Langerhans, instead of evidencing impairment of function are distinctly hypertrophied and apparently over-functioning, the situation becomes almost hopelessly confused.

These being the facts at present, it is evident that we need to have a careful correlation by unprejudiced observers, of the conditions present in the patient during life and the changes present, not only in the pancreas, but in the other tissues after death.

Statistical studies are here of importance, and one of the most extensive collections of cases yet made has been recently published by Dr. R. L. Cecil.¹ In 1902 Sauerbeck collected from various sources reports of 176 cases of diabetes in which the condition of the islands had been noted, in 62 per cent. of which lesions of one kind or another were observed. Cecil's report on 90 cases has much more value, however, for these cases have all been studied by one observer and are therefore better correlated and more uniformly analyzed. Of the 90 cases the pancreas was found normal in but 11, although it must be admitted that in many of the 88 per cent. of abnormal pancreases the lesions were not very extensive; and the evidence in favor of the causal relationship of the islands of Langerhans seems to be made stronger by this paper. Nevertheless the occurrence of so many cases in which the changes in the pancreas are but slight or entirely absent leaves open the question as to whether the pancreatic lesions may not be the result rather than the cause of the diabetes. Cecil believes that the variety of lesions found in the pancreas is against the view that they are all the results of a common cause, diabetes. But in the cases in which no pancreatic lesions are present, it must be admitted that here, at least, the diabetes is not of pancreatic origin, and presumably the same is true in many of the cases in which pancreatic lesions are present but of slight degree. Indeed it seems probable that the discrepancies in the findings in the pancreas in diabetes will serve to bring out the fact that diabetes may often have other than a pancreatic origin, and should stimulate the search for pathological conditions elsewhere in the body.

So strongly has our attention been focused on the pancreas lesions that it is possible that we have overlooked other equally important changes. Indeed, Rösle² believes that a diagnosis of diabetes can be made with more certainty in the autopsy room on the basis of the hepatic than on the pancreatic changes. The liver of diabetes is enlarged, of a rosy color, and with a transparent or homogeneous appearing parenchyma. While the liver normally represents from 2.3 to 2.75 per cent. of the body weight, in diabetes it is from 2.9 to 4.1 per cent., averaging 3.54 per cent. Pflüger has also observed that in dogs with experimental pancreatic diabetes the liver is enlarged, although with a corresponding degree of emaciation from other causes the liver is much atrophied. Microscopically, the diabetic liver shows interesting changes, including constant fatty changes in the stellate cells of Kupffer, and the nearly constant presence of peculiar, homogeneous refractile bands along the capillaries. The latter appearance seems to be specific for and characteristic of diabetes.

In view of the essential importance of the liver in sugar metabolism the hepatic changes of diabetes would seem to be fully as significant as the pancreatic lesions,

1. Jour. Exper. Med., March, 1909, 266.

2. Verh. deut. pathol. Gesellsch., 1907, xi, 334.

and worthy of the same careful study. It may be that a comparative study of the changes in these two organs, correlated with the clinical and chemical manifestations of selected cases, will be able to throw new light in some of the obscure places.

SCHOOL HYGIENE

The remarkable wave of interest in preventive medicine and sanitation which is making itself felt in many ways among the laity can assuredly find no better outlet than when directed into the channels of school hygiene. Such questionings of heart and rattling of dry bones as are now taking place in the whole field of education from the college to the kindergarten has not been witnessed for at least a generation. It is well that it is so. To take children from their homes and set them tasks which may injure irreparably their eyesight or their capacity of spontaneous interest, while placing them under conditions in which various infectious diseases may be more readily contracted at the same time that general bodily resistance is decreased by overheated rooms, rebreathed air, mental fatigue and cramped attitudes does not seem to constitute the last word of civilized man on the proper rearing of his offspring. The hygienic dangers involved in bringing up children *en masse* need to be all the more carefully scrutinized when we find that not a few modern writers are expressing grave doubts about the real value of much of our present educational "system" and are boldly suggesting that the whole outfit might be demolished with advantage.

In any case every sane parent will welcome the assistance and counsel of the numerous agencies now at work to improve the physical condition of American school children. The work of the strong and enthusiastic American School Hygiene Association now in its third year, the newly organized special society for the study of the long unguided—some would say misguided—development of athletics, the astonishingly effective and popular work represented by the Playground Association of America are some of the overt manifestations of this deepened interest. New journals are being started, medical school inspection is being greatly extended and elaborated, and conferences, such as the recent Massachusetts Dental Hygiene Conference, are being held on special topics. Is it too much to hope that out of all this whirr of committee meetings, sound of many voices and tons of printed paper some good will come? We are at all events gradually acquiring that precise definite information about the mental and physical qualities of school children and the necessities of the common school life without which all agitation for social betterment is mere beating of the air.

To illustrate with a concrete example the sort of inquiry now being undertaken by competent hands: A thorough judicial survey has recently been made by

Professor Burnham¹ of the scanty evidence concerning the best division of the working day for school children. He points out that just as we do not know whether our usual custom of taking our sleep in one dose and our food in three doses is hygienically the best, so we do not know whether the most effective daily work can be done by confining it all to one period or dividing it into several.

Individual habits and social customs usually settle these matters for the adult, but what habit is it best to develop in the child? The general results obtained in Professor Burnham's study of the question, although admittedly based on very insufficient data, point to the conclusion that in spite of the fact that in the afternoon there is usually decreased ability to work and a general confusion and dulling of the powers, a single long session, at least for children in the grammar grades, is but driving out the devil by Beelzebub. There will, we think, be general agreement among physicians that the one session plan is almost sure to be detrimental to the health of a large number of children. The whole question illustrates the complexity of the school problem on its hygienic as well as on its pedagogic side, and emphasizes the importance of genuine investigation in this field.

THE PROBLEM OF THE HABITUAL DRUNKARD

To the courts and the public, the drunkard is not so much a problem as a wearisome and never-ending nuisance, forever being shuffled hastily out of the way, and perennially cropping up anew. Thus, in our large cities, thousands are arrested, only to be immediately discharged; and neither the mechanical process of arrest and discharge, nor the equally mechanical infliction of a fine or a workhouse sentence, has any result other than to prepare the "rounder" to go through the mill once more. This view is well brought out in a recent number of the *Survey*.²

"It has been demonstrated after years of experience in this country and abroad," says the *Survey*, "that petty fines and short sentences do not reform the drunkard or protect society." Inebriety, like insanity, can not be perfunctorily suppressed; but systematic treatment has been even more tardily provided for the drunkard than for the lunatic.

Great Britain has tried thoroughly the policy of segregation of inebriates in separate institutions. The Habitual Drunkards Act of 1879 permitted the commitment of inebriates to private institutions on their own application; the Inebriates Act of 1898 provided for the commitment to private or public institutions of persons who repeatedly appear before the courts for drunkenness or for crimes in which drunkenness is a contributing cause. In Massachusetts, Minnesota, Iowa, Con-

1. Hygiene and Physical Education, March, 1909, p. 1.
2. April 10, 1909, xxii, 84.

necticut, Nebraska and Pennsylvania, the habitual drunkard may be committed to an institution for care and treatment on his own application or on that of friends or relatives, much as an insane person may be committed to a hospital; but the three states first named are the only ones which have separate public institutions for the treatment of inebriety.

A bill recently introduced in the New York legislature contains the most comprehensive scheme of treatment for inebriety yet devised—one based on studies of methods in use elsewhere and of conditions existing in New York City, to which the bill applies. A city board of inebriety, complete records, making possible accurate discrimination between different classes of drunkards, and a hospital and medical colony under medical direction, are important features of the plan. First offenders are to be released on probation. Commitment of an inebriate requiring systematic treatment may be made on request of the patient himself or on that of relatives or friends, without appearance in court.

If the New York bill becomes a law, its operation will doubtless furnish much instruction and its success great encouragement to those in other states who may desire to deal more thoroughly with the problem of inebriety.

THE MICRO-ORGANISM OF WHOOPING COUGH

The etiology of whooping cough has long been an unsolved problem. Many attempts have been made to discover some micro-organism in association with it, but hitherto the results have been very contradictory. In 1906, however, Bordet and Gengou¹ described an organism which they obtained in pure culture and offered considerable evidence to show that it was the organism causing the disease. Their results have recently been confirmed by Klimenko.²

The organism they describe is a small, short bacillus, with rounded ends. It stains feebly and shows polar granules with carbol methylene blue. It decolorizes by Gram's method. It is non-motile, aerobic, and grows very slowly and feebly when first isolated, and only on a special medium they devised, composed of glycerin, potato, gelatin and blood. But after several generations it will grow fairly well on other media, and does not require hemoglobin, unlike the influenza bacillus, which it somewhat resembles.

It occurs in the sputum in large numbers, and almost unmixed with other organisms at the onset of the disease, during the catarrhal stage and for a few days after the whoop appears. It is only at this stage that it can be obtained in pure culture. As the disease progresses, other organisms appear, especially the influenza bacillus, which outgrow it, and eventually it becomes difficult to find it, even in stained preparations. It has been cultivated from the blood and lungs of fatal cases

in man. The blood in convalescent cases agglutinates the organism, but rather feebly. Using a culture of the organism as an antigen, specific antibodies have been demonstrated in the blood serum of patients by the complement-fixation test.

In monkeys and young dogs by intratracheal injection a disease has been produced similar to the human type, except in the absence of the whoop; normal animals, by simple exposure in a cage to an infected animal would readily contract the disease. The organism was always recovered from the nasal discharge of these animals, and in some cases from the lungs or blood at autopsy.

Out of 76 human cases the organism was cultivated only in the 5 early cases. But it was demonstrated by stained preparations in 64, or 80 per cent. of all the cases. It was never found in 50 normal children, nor in 31 cases of other acute respiratory infections.

On the whole, the evidence in favor of this organism as the etiologic factor in whooping cough seems rather convincing. It would seem to be of considerable practical importance as well in the early diagnosis and prophylaxis of the disease, for, although it is only at the onset of the disease that the organism can be readily demonstrated, it is just at this time that the diagnosis is most important and most often in doubt.

THE NEW MARYLAND LIBRARY BUILDING

At the annual meeting of the Medical and Chirurgical Faculty of Maryland, held in Baltimore this week, occurred the formal dedication of the new library building which is to form its permanent home. The *Maryland Medical Journal* for May contains an historical article of interest by Dr. A. K. Bond of Baltimore, in which the origin and growth of the society is outlined. Chartered in 1799 for the purpose of protecting the public from quackery and incompetence and of promoting medical culture among regular physicians, the society within thirty years after its organization, in 1830, comprised in its membership every one of the 600 physicians of the state. At this time a library committee was appointed and the beginning of the present collection was made. For a time the library was housed in the office of the member who was appointed librarian. For a number of years the surplus from fees for examinations for licenses afforded the means for increasing the library. Financial difficulties arose, however, and in 1838 the state legislature, at the urgent petition of the "Thompsonians," a medical sect of great activity at that time, passed a law permitting any one who so desired to practice medicine. License fees at once fell off and the library declined with lack of financial support. With the organization of the American Medical Association, however, medical organization in Maryland was

1. Ann. de l'Inst. Pasteur., xx and xxv.

2. Centralbl. f. Bakt., etc., I Abt. Orig., xlviii.

stimulated, and in 1848 a catalogue of the medical library, which was then lodged with the Mercantile Library, was printed and life memberships were established. In 1857 a building was purchased and the library installed therein. The Civil War, however, put a stop to further growth, and until 1870 but little progress was made, although the library continued to exist. In 1870 it was reorganized and has since occupied successively four different locations, each being larger and better than the former one. In 1900 the society considered itself strong enough to undertake the erection of a new fireproof building with accommodations for the library and with a large hall for assembly purposes. After careful consideration, a committee was appointed in 1905. In 1907 a lot was purchased. Ground was broken for the building in August, 1908. The new structure is fireproof, the library containing stacks for 60,000 volumes. There are also three communicating halls for meetings, the largest seating five hundred. The erection and dedication of this splendid new building, which will form a permanent home for the state society, will be a source of great and deserved satisfaction to all its members and can well serve as an object-lesson to other state associations.

THE TRANSMISSION OF GERMS IN MAILS

The postal authorities have sent out a warning to local postmasters in regard to the reception of improperly packed parcels containing dangerous substances, such as disease germs. It is worth while for all who may have occasion to submit diseased tissues or culture specimens for laboratory examination to note that liquid cultures, or cultures of micro-organisms in media that are fluid at the ordinary temperature, may not be sent through the United States mails at all; that solid specimens of diseased tissues, whether moist or dry, may be mailed only to United States, state or municipal laboratories; and that such specimens are admitted to the mails only when packed and indorsed as provided in the regulations of the Postoffice Department.¹ If the postoffice instructions are carefully observed there can be little danger of infection of postoffice employés from this source. It might be desirable to exclude the germs of some diseases from the mails entirely—for example, glanders and anthrax—although it is probably most rare for the mails to be used for the transmission of these organisms. In case of breakage it would be impossible, in a postoffice or mail car, to insure the complete and immediate sterilization advisable. If the pre-

scribed precautions are followed, however, breakage and infection need not be feared. The action of the Postoffice Department is commendable; it is the ounce of prevention against a possible, though not probable, danger.

Medical News

CALIFORNIA

Personal.—Dr. Warren N. Horton has resigned as city bacteriologist of Los Angeles.—J. C. Thomas has been re-elected president, and Dr. George B. Worthington, secretary, of the Marysville Board of Health.

License Revoked.—At a recent meeting of the State Board of Medical Examiners, the license of Dr. F. Grosshauser, formerly of Lodi, but now a resident of Texas, is said to have been revoked on the ground that his license had been obtained by fraud. The authorities of Texas were notified of the findings.

Antituberculosis Work.—A meeting was held April 27, in the Agnew Sanatorium, for the reorganization of the San Diego Society for the Study and Prevention of Tuberculosis. After the adoption of a new constitution and by-laws, officers were elected. The medical representatives are as follows: President, Dr. Joseph A. Parks; first vice-president, Dr. Fred R. Burnham; treasurer, Dr. Thomas S. Whitelock; directors, Drs. Henry P. Newman, Francis H. Mead and I. Daniel Webster, and advisory board, Drs. Homer C. Oatman, Harry N. Goff, Fred Baker, Harold A. Thompson, D. P. Northrup, R. S. Cummings, Berte V. Franklin, Joseph C. Hearne, Edward Grove, Charles C. Valle and Edward M. Fly.—The California Association for the Study and Prevention of Tuberculosis, at its annual meeting, held in San Jose, elected the following officers: Dr. George H. Evans, San Francisco; vice-presidents, Drs. Edward von Adelung, Oakland, and Fitch C. E. Mattison, Pasadena; secretary, Dr. George H. Kress, Los Angeles, and treasurer, Dr. C. H. Toll, Los Angeles.

State Society Meeting.—The thirty-ninth annual meeting of the Medical Society of the State of California was held in San Jose April 20-22. The attendance was excellent, and general interest was shown in the report to the society of the various matters presented to the last legislature, and the outcome of the much-proposed legislation. A considerable number of bills radically changing the medical laws were introduced in the legislature, but all were defeated. An amendment licensing a limited number of persons to practice "naturopathy" was passed as a compromise measure, and in the future all followers of that cult will be obliged to pass an examination before the board of medical examiners. The eye, ear, nose and throat section of the society devoted almost its entire program to the consideration of otitis media in all its aspects, complications and the means for its relief and cure. A special feature of the meeting was a large pathologic exhibit and the many demonstrations, including rat plague with specimens, and tubercular infection of guinea pigs after injection with milk taken from a milk wagon of the streets of Berkeley. The afternoon of the second and morning of the third day were devoted entirely to lectures on the specimens and demonstrations of "Filaria" by Dr. Herbert Gunn, San Francisco; "Arterial Suturing," by Dr. Henry A. L. Ryfkogel, San Francisco; "Spirochete and the Wassermann Reaction," by Dr. Harry R. Oliver, San Francisco, and "Sporothrix Schenckii," by Dr. Jesse M. Burrell, Santa Ana. In addition to the list of officers which appeared in THE JOURNAL of May 8, page 1503, Drs. H. Bert Ellis and Granville McGowan, Los Angeles, were elected delegates to the American Medical Association.

CONNECTICUT

Good Work Appreciated.—At the annual banquet of the American Therapeutic Society, held in New Haven, May 9, a silver loving-cup was presented to Dr. Oliver T. Osborne, New Haven, by the non-resident members of the society, in appreciation of the faithful work done by Dr. Osborne, and the excellent arrangements made by him, for the meeting of the society.

DISTRICT OF COLUMBIA

Personal.—Dr. Milton J. Rosenau, P. H. and M.-H. Service, was recently operated on for appendicitis.

Election of Officers.—At the annual meeting of the Medical Society of the District of Columbia, April 27, Dr. Thomas N.

1. The rules were printed in full in THE JOURNAL, March 6, 1909, p. 791.

McLaughlin was elected president; Dr. James A. Watson, vice-president; Dr. Luther H. Reichelderfer, secretary; and Dr. Frank Leech, treasurer.

Health Office Promotions.—Under the district appropriation bill, passed by congress, several higher salaries were granted to officials of the health department, and a number of promotions recommended. The salary of Dr. William C. Woodward, health officer, has been increased from \$3,500 to \$4,000 per annum; Dr. Henry F. Sawtelle has been promoted from chief inspector and deputy health officer with a salary of \$1,800 to assistant health officer with a salary of \$2,000 per annum, and the salaries of the chief clerk and several other employés have also been increased.

ILLINOIS

Personal.—Dr. George M. Peairs, Joliet, sailed for Europe May 4.—Dr. Vernon Holbrook, Peoria, while running to catch a car, April 28, fell and fractured his leg at the ankle.—Dr. James F. Harris, Ogden, was fired on by an unknown assailant May 31, and wounded in the leg.

Smallpox in Northern Illinois.—An epidemic of smallpox of mild type is reported in Marengo, where 14 cases have been found, necessitating a strict quarantine, closing of the public schools, and prohibition of church services and other public gatherings.

Dinner for Women Physicians at Quincy.—The members of the Women's Medical Society of the State of Illinois will hold their annual dinner at the Newcomb Hotel, Quincy, May 19, at 5 p. m. All women physicians in attendance at the meeting of the Illinois State Medical Society are requested to be present.

Tuberculosis Bill Signed.—The governor has signed the Wright bill which allows counties to purchase and hold real estate to be used as sites for public tuberculosis sanatoria, and gives county boards power to erect and maintain such institutions at the expense of the county. The measure goes into effect July 1.

Chicago

Personal.—Dr. Arnold C. Klebs left May 11, for Geneva, Switzerland, where he expects to spend two years in study and research work—Dr. Ulysses S. Grim sailed for Europe May 4.

Abuse of Medical Charities.—The Chicago Medical Society, in cooperation with the Chicago homeopathic, eclectic and physio-medical societies, the Chicago Bureau of Charities, and the Chicago Relief and Aid Society, are contemplating a dispensary reform movement whereby the various organizations of the city will establish a central investigating bureau cooperating with the charitable organizations in discovering applicants for aid who abuse medical charities. Under the contemplated plan, there will be no delay in furnishing emergency medical service to deserving or undeserving patients, and worthy individuals will be aided as freely and as promptly as before.

INDIANA

Change in Date of Meeting.—Dr. John N. Hurty, state health commissioner, announces that the date of the meeting of the State Health Officer's School has been changed from May 14-15 to May 20-21.

Tuberculosis Notes.—Mayor Bookwalter has notified the Indianapolis Board of Health of his intention to erect a cottage at the new tuberculosis sanatorium now being constructed on the city hospital grounds in memory of his brother, Morton Bookwalter. Four cottages have been provided by the Indiana Branch of the National Red Cross, which were opened to receive patients May 3, and other cottages will be built by the Second Presbyterian Church, All Soul's Unitarian Church, St. Bridget's Church, and Mrs. M. L. Rowe.—An association has been formed in Frankfort to build a hospital for the treatment of tuberculosis. The officers of the association are Dr. Oscar W. Edmonds, president; Dr. Albert H. Coble, vice-president; W. R. Hines, secretary, and Dr. Charles Chittick, treasurer.

KANSAS

State Board Election.—At the quarterly meeting of the State Board of Health, held in Topeka March 30, the following officers were elected: President, Dr. Charles H. Lerrigo, Topeka; vice-president, Dr. Clay E. Coburn, Kansas City, and pathologist, Dr. Robert S. Magee, Topeka, Dr. Samuel J. Crumbine, Topeka, the secretary holding over for another year.

Personal.—Dr. William E. McVey has been elected dean of Kansas Medical College, Topeka, and Dr. John B. Tower has

succeeded Dr. McVey as secretary of the institution.—Dr. Henry A. Dykes, Lebanon, has been appointed a member of the State Board of Medical Examiners.—Dr. William A. Miller, New Cambria, who was stricken with apoplexy early in April, has recovered sufficiently to resume practice.

State Society Election.—The forty-third annual meeting of the Kansas Medical Society was held in Emporia, May 6-8, and the following officers were elected: President, Dr. Oliver J. Furst, Peabody; vice-presidents, Drs. Thomas F. Foncannon, Emporia; John D. Walthall, Paola, and John P. Kaster, Topeka; secretary, Dr. Charles S. Huffman, Columbus; treasurer, Dr. Lewis H. Munn, Topeka, and delegates to the American Medical Association, Drs. Clarence C. Goddard, Leavenworth; Lyman L. Uhls, Osawatomie, and Joseph E. Sawtell, Kansas City. Topeka was selected as the meeting place for 1910.

LOUISIANA

State Society Election.—At the thirtieth annual meeting of the Louisiana State Medical Society, held in New Orleans, May 4-6, the following officers were elected: President, Dr. Charles McVea, Baton Rouge; vice-presidents, Drs. John J. Archinard, New Orleans; Robert M. Littell, Opelousas, and Samuel M. D. Clark, New Orleans; secretary, Dr. Edward M. Hummel, New Orleans (re-elected); treasurer, Dr. Charles C. Bass, New Orleans (re-elected); delegates to the American Medical Association, Drs. Frederick R. Tolson, Lafayette, and E. Denegre Martin, New Orleans, and alternates, Drs. Espy M. Williams, Patterson, and G. Farrar Patton, New Orleans. The next meeting will be held in New Orleans May 3-5, 1910.

MARYLAND

Violation of Vaccination Law.—The cases against two public school teachers of Breathedsville, instituted at the instance of the State Board of Health, in which the defendants were charged with violating the act prohibiting teachers from admitting to school unvaccinated pupils, came up for trial May 1. Both teachers pleaded guilty, and sentence was suspended.

State Sanatorium Dedicated.—The State Sanatorium for Consumptives, Sabillasville, in the Blue Ridge Mountains, was formally transferred to the state May 15. United States Senator John Walter Smith, formally transferred the sanatorium to the state in the presence of the members of the Medical and Chirurgical Faculty of Maryland, who devoted the last day of their meeting to attending the exercises.

Baltimore

Hospital to Be Improved.—The Hospital for the Women of Maryland has been closed preparatory to extensive improvements, including two new operating rooms in memory of Drs. William T. Howard and H. P. C. Wilson, founders of the institution.

Tuberculosis Dispensary Opened.—The new building of the Phipps Dispensary for Tubercular Patients, Johns Hopkins Hospital, was opened May 3. The building is of brick, three stories in height; the first floor will be used as a dispensary, and the second and third floors for research work. By this addition, the capacity of the dispensary is doubled.

New Building in Use.—A purely formal meeting of the Medical and Chirurgical Faculty of Maryland was held in the new building April 27, the time appointed in the by-laws. The meeting was then adjourned until May 13, for the dedication. The library was opened April 27, but will not be completely available for members until after May 17, when the new rules go into effect. The history of the library is discussed editorially in this issue.

Personal.—Dr. Hugh A. Stewart, assistant resident physician at Johns Hopkins Hospital, has been appointed adjunct professor of pathology in the College of Physicians and Surgeons, New York City.—Dr. Eugene F. Cordell delivered addresses before the District of Columbia branch of the Alumni Association of the University of Maryland at Washington, April 29, and before the Pennsylvania branch at York, May 1.—Dr. Frank G. Moyer suffered a dislocation of his right shoulder in an automobile collision, May 4.—Dr. William Osler arrived from England May 5, and is the guest of Dr. Thomas McCrae.

MISSOURI

McCormack in Missouri.—Dr. J. N. McCormack started on a tour through the state at Maryville, May 3. He expects to visit about twenty-five cities, and will stay for three days in Jefferson City, at the time of the annual meeting of the state medical association.

Personal.—Dr. Charles E. Powell, Elsberry, has been appointed local surgeon for the Burlington System.—Dr. Charles Adkins has been appointed city physician of Kansas City.—Dr. Dennis E. Singleton, Shelbyville, has been appointed assistant physician of the staff of State Hospital No. 4, Fulton.

St. Louis

McCormack in St. Louis.—Dr. J. N. McCormack will address the medical profession of St. Louis at the hall of the St. Louis Medical Society, 3524 Pine street, May 29, at 8:30 p. m.

Graduation.—The graduation exercises of the St. Louis College of Physicians and Surgeons were held May 7, when a class of 67 was graduated. The charge to the graduating class was given by C. Porter Johnson, and the diplomas were presented by Dr. Waldo Briggs.

Special Clinics.—The Medical Department of Washington University announces that for two weeks beginning May 24, special clinics and other exercises will be furnished free of charge to alumni and all other physicians who may desire to attend. Those who wish to attend clinics are requested to register at the Dean's office, 1806 Locust street. The announcement also contains a directory showing how to reach the various hospitals in the city, a time table and list of clinics and other exercises.

Unlicensed Practitioner Convicted.—James Anstin Larson, who advertised in the daily papers that he was able to cure many diseases by what he called the "teleconi system," is said to have been convicted in the Court of Criminal Correction for practicing medicine without a license. The judge's instruction was "That holding one's self out and representing and professing to be able to heal diseases, no matter by what process, is practicing medicine within the meaning of the law." The defendant was fined \$500, but as a compromise, was permitted to pay a fine of \$150 on his promise to leave the state.

NEBRASKA

Society Election.—At the forty-first annual meeting of the Nebraska State Medical Association, held in Omaha, May 4-6, the following officers were appointed: President, Dr. P. Harold Salter, Norfolk; vice-presidents, Drs. William J. Birkofer, Gothenburg, and William H. Wilson, Lincoln; secretary, Dr. Alonzo D. Wilkinson, Lincoln; treasurer, Dr. Alexander S. Von Mansfelde, Ashland; delegates to the American Medical Association, Dr. L. Matt Shaw, Osceola, and alternate, Dr. Theodore P. Livingston, Plattsmouth; chairman of section on surgery, Dr. Arthur C. Stokes, Omaha; chairman of section on medicine, Dr. H. Winnett Orr, Lincoln; chairman of section on gynecology and obstetrics, Dr. Edwin C. Henry, Omaha; chairman of committee on public policy and legislation, Dr. Charles W. M. Poynter, Lincoln, and chairman of committee on medical defense, Dr. Alexander S. Von Mansfelde, Ashland. Drs. Ernest J. C. Sward, Lincoln, and Clifford P. Fall, Beatrice, were recommended for members of the State Board of Health.

NEW JERSEY

Personal.—Dr. R. O. Clock, Burlington, was seriously cut and bruised by being thrown from his carriage May 3.—Dr. Harry F. Bushey, Camden, is said to be critically ill with cellulitis, said to be due to an abrasion of the chin.

April Deaths.—There were 3333 deaths reported to the bureau of vital statistics during the month ended April 15, an increase of 341 over the preceding month. Of the deaths 548 were individuals under 1 year of age, 324 of children between 1 and 5, and 1,052 of individuals 60 years old and over. Among the principal death causes were pneumonia, 427; tuberculosis, 415; nervous diseases, 395; circulatory diseases, 365; nephritis, 252; cancer, 145; diphtheria, 59; scarlet fever, 45; measles, 32; whooping cough, 30, and typhoid fever, 27.

Society Meetings.—At the annual meeting of the Hudson County Medical Society, held April 6, the following officers were elected: President, Dr. August A. Strasser, Arlington; vice-president, Dr. Henry J. Bogardus, Jersey City; secretary, Dr. Arthur P. Hasking; treasurer, Dr. Henry H. Brinkerhoff; reporter, Dr. Joseph Koppel; censor, Dr. John C. Parsons; permanent delegates to the state medical society, Drs. John J. Bowman, John J. Mooney, John J. Broderick, Henry H. Brinkerhoff, Jersey City, August A. Strasser, Arlington, and Henry Spence, Jersey City; annual delegates, Drs. T. Richard Paganelli, Hoboken, Henry H. Burnette, Hoboken, William W. Brooke, Bayonne, Berthold S. Pollack, William L. Pyle, S. Her-

bert Culver and William J. Arlitz, Jersey City, and alternates, Drs. Frederick A. Finn, Jersey City, Merrill A. Swiney, Bayonne, and George D. Fyfe, Jersey City.—Hunterdon County Medical Society, at its annual meeting, held in Flemington, April 27, elected the following officers: President and delegate to the state medical society, Dr. Enoch Blackwell, Clinton; vice-presidents, Drs. George Henry, Flemington, and Isidor Topkins, Califon; secretary, Dr. Obadiah H. Sproul, Flemington; treasurer, Dr. Isaac S. Cramer, Flemington, and censors, Drs. George L. Romine, Lambertville; George N. Best, Rosemont, and Willard E. Berkaw, Annandale, whose death is announced in this issue of THE JOURNAL.—Camden County Medical Society, at its annual meeting, held April 27, elected the following officers: President, Dr. William B. Jennings, Haddonfield; vice-president, Dr. Joseph S. Baer; secretary, Dr. Daniel Strock; assistant secretary, Dr. Alexander Ross; treasurer, Dr. A. Haines Lippincott; reporter, Dr. Henry H. Sherck; historian, Dr. Alfred Cramer, Jr.; censors, Drs. William A. Davis and William H. Pratt; permanent delegates to the state society, Drs. Henry H. Davis and Howard F. Palm, and annual delegates to the state society, Dr. Marcus K. Mines, all of Camden, and Drs. William A. Westcott, Berlin, and Charles H. Jennings, Merchantsville.—At the annual meeting of Middlesex County Medical Society, held in New Brunswick, April 21, the following officers were elected: President, Dr. John C. Albright, South Amboy; vice-president, Dr. Benjamin Gutmann, New Brunswick; secretary, Dr. Howard C. Voorhees, New Brunswick; treasurer, Dr. David C. English, New Brunswick; reporter, Dr. Arthur L. Smith, New Brunswick, and delegates to the state society, Dr. William E. Ramsey, John L. MacDowall, Perth Amboy, and Dr. A. Clark Hunt, Metuchen.

NEW YORK

Build City Hospital.—More than thirty physicians of Poughkeepsie have banded together and have agreed to raise the \$30,000 necessary for the endowment of St. Barnabas Hospital in that city.

Personal.—Dr. Robert B. Lamb, superintendent of the Matteawan Hospital for the Criminal Insane, was attacked by a patient April 16, and rendered unconscious by a blow with a steel shovel. The patient afterward attempted suicide.—Dr. Louis A. Gould has been added to the medical staff of the Schenectady Day and Night Camp which was opened May 10. Drs. Charles C. Duryee, Louis P. Faust and William L. Pearson have been named as consulting staff to the camp.

State Has High Death Rate.—During the past year the death rate for the state of New York has been higher than the average for other states of the Union. Only California and Rhode Island had higher mortality. The average rate for the entire country was 16.1, while that for New York has been 17.1. The lowest rate in New York state was reported from the Adirondack regions and the highest from the manufacturing centers. The Hudson Valley has been slightly above the general average.

Tuberculosis Increasing in Rural Districts.—The bulletin of the State Department of Health shows that twenty-six cities in the state had a smaller death rate from tuberculosis in 1908 than in the previous year. Troy, Albany, Greater New York, and Cohoes showed the largest death rates from tuberculosis, and Johnstown, Hornell and Tonawanda, the smallest. Consumption is decreasing in the cities and increasing in the country districts. On the basis of the average for the five year period from 1901 to 1905, the death rate in the former dropped from 203.5 to 185 per 100,000 population, while in the latter there was an increase from 112.7 to 123 per 100,000. This is believed to be attributable to the fact that instruction and preventative measures now in force in cities as the result of the campaign the State Department of Health is carrying on in cooperation with the State Charities Aid Association, are lacking in the rural districts.

New York City

Alumni Meet.—The sixth annual meeting of the Alumni Society of St. John's Hospital, Brooklyn, was held May 2, when the following officers were elected: President, Dr. Alfred W. White; vice-presidents, Drs. Charles B. Cortright and Edward W. Hodges; recording secretary, Dr. Warren S. Simons, and corresponding secretary, Dr. Henry T. Hotchkiss.

New York Babies Healthy.—During the past two weeks the 141 nurses attached to the Bureau of Child Hygiene visited 3,000 babies and found only 19 ill. Not a case of ophthalmia was reported. Of this number 1,800 babies were nursed by their mothers. A committee has been appointed to ask the

Board of Education for the use of a public school building in each district during the summer for the purpose of holding public classes for the instruction of mothers.

Amendments to the Sanitary Code.—The Board of Health has added two amendments to the sanitary code: One demands that all cream sold in this city, sweet or sour, must contain not less than 15 per cent. butter fat. This amendment was made necessary because of the methods of adulteration used by some dealers in the poorer neighborhoods where foreigners use sour cream both as butter and as cheese. The second amendment insists that covers be kept on garbage pails.

NORTH DAKOTA

Personal.—Fire, which started in the office of Dr. Rolf H. Meidell, Aneta, entirely destroyed the building, with a total loss of \$5,000, partially covered by insurance.—Dr. Charles S. Crane, Grand Forks, who spent the winter in California on account of ill health, returned and resumed practice April 28.

OHIO

State Society Election.—At the sixty-fourth annual meeting of the Ohio State Medical Association, held in Cincinnati, May 5-7, the following officers were elected: President, Dr. Walter H. Snyder, Toledo; vice-presidents, Drs. Harry R. Geyer, Zanesville; Albert S. Rudy, Lima; Charles A. Hough, Lebanon, and Thomas M. Sabin, Warren; councilors, Dr. Robert Carothers, Cincinnati, first district, and Dr. T. Clarke Miller, Massillon, sixth district; member of the national legislative committee, Dr. Benjamin R. McClellan, Xenia, and committee on public policy and legislation, Drs. John W. Clemmer, Columbus; George H. Matson, Columbus, and Walter H. Snyder, Toledo.

Personal.—Dr. Homer H. Heath, Toledo, was thrown from an automobile in a collision with a telephone pole May 1, and sustained severe contusions of the right shoulder.—Dr. James O. Starr, Pittsburg, who underwent operation at Columbus, April 27, for a tubercular abscess, is said to be doing well.—Dr. Simon P. Wise, Millersburg, has been elected chairman of the board of trustees of the State Sanatorium for Tuberculosis, Mount Vernon.—Dr. Jacob A. Stout, Columbus, was operated on for appendicitis, April 23, at St. Anthony's Hospital.

Cincinnati

Personal.—Dr. Clayton B. Conwell has been elected superintendent of the new State Sanatorium for Tuberculosis, Mount Vernon.—Dr. Frank E. Fee has left for a six months' tour of continental hospitals.

Faculty of Merged Colleges.—At the meeting of the board of trustees of the University of Cincinnati, May 4, President Dabney announced the following faculty for the Ohio-Miami Medical College, as the merged Medical College of Ohio and Miami Medical College will hereafter be known:

Department of Medicine.—Drs. Henry W. Bettman, Mark A. Brown, Frederick Forchheimer, Oliver P. Holt, John E. Griewe, George A. Fackler, Benjamin F. Lyle, and Edwin W. Mitchell; Drs. Bettman, Brown, Forchheimer and Holt to have charge of the didactic teaching, Dr. Griewe charge of physical diagnosis, and Drs. Fackler, Lyle and Mitchell, charge of the clinical teaching.

Department of Surgery.—Dr. Charles E. Caldwell, professor of the principles of surgery, and clinical professor of orthopedics; Dr. Robert Carothers, professor of the principles of surgery, and clinical professor of surgery; Dr. Nathaniel P. Dandridge, clinical professor of surgery; Dr. John C. Oliver, professor of surgery; Dr. Joseph L. Ransohoff, professor of surgery; Dr. Edward W. Walker, clinical professor of surgery, and Dr. Horace J. Whitacre professor of the principles of surgery.

Department of Therapeutics.—Dr. Julius H. Eichberg, professor of pharmacology and materia medica, and Dr. Allyn C. Poole, professor of therapeutics.

Department of Pediatrics.—Dr. B. Knox Rachford, professor of diseases of children.

Department of Obstetrics.—Drs. William D. Porter, James Rowe, Magnus A. Tate, and E. Gustav Zinke, professors of obstetrics.

Department of Gynecology.—Drs. Charles L. Bonifield, Charles A. L. Reed, Rufus B. Hall, and John M. Withrow, professors of gynecology.

Department of Ophthalmology.—Drs. Stephen C. Ayres, Walter Forchheimer, Robert Sattler, Charles W. Tangeman, and Derrick T. Vail.

Department of Otolaryngology and Rhinology.—Drs. Samuel E. Allen and John W. Murphy, clinical professors of laryngology and otology; Dr. Christian R. Holmes, professor of otology; Drs. Samuel Iglauer and Walter E. Murphy, adjunct professors of laryngology and otology; and Dr. John A. Thompson, professor of laryngology.

Department of Dermatology and Syphilology.—Drs. Meyer L. Heidingsfeld and Edward H. Shields.

Department of Orthopedics.—Dr. Albert H. Freiberg.

Department of Nervous and Mental Diseases.—Drs. Brooks F. Beebe and F. W. Langdon, professors of psychiatry; Drs. Herman H. Hoppe and Philip Zenner, professors of neurology.

Department of Hygiene.—Drs. Alexander G. Drury and John H. Landis.

The following professors will be salaried: Dr. William E. Lewis, professor of anatomy; Dr. Edmund M. Baehr, assistant professor of physiology, and Dr. Edward B. Reemelin, assistant professor of chemistry.

The following is an incomplete list of lecturers, demonstrators and assistants, selected by the professors of the various departments:

Department of Anatomy.—Dr. Edwin M. Craig, lecturer on anatomy; Dr. Grear H. Baker, demonstrator of histology; Dr. Henry L. Woodward, demonstrator of embryology and clinical microscopy; Drs. Charles Maertz and Moses Salzer, demonstrators of anatomy.

Department of Therapeutics.—Dr. Starr Ford, lecturer on dietetics and therapeutics, and Dr. Charles S. Rockhill, assistant.

Department of Diseases of Children.—Drs. Alfred Friedlander, Franklin H. Lamb, and Albert J. Bell, adjunct clinical professors of pediatrics.

Department of Gynecology.—Drs. John P. Miller, Joseph A. Hall, and Grear H. Baker, assistants and clinicians.

Department of Otolaryngology.—Drs. Gustave A. Hinnen, Samuel Iglauer, and Walter E. Murphy, chief clinicians; Drs. William Mithofer, Robert H. Butler, and Albert E. Hunsley, assistant clinicians.

Department of Ophthalmology.—Dr. Wylie McL. Ayres, Victor Ray, and Frederick W. Lamb, clinical instructors, and Drs. John Rauly, Michael Behrman, and Frank B. Cross, assistant clinical instructors.

PENNSYLVANIA

Personal.—Dr. A. R. Atkinson has been re-elected health officer of Doylestown.—Dr. Aimé Lateve, head of the Magee Pathological Institute, Pittsburg, is reported to be in great danger on account of infection from hydrophobia.—Dr. Edgar Keeley, resident physician at Pottstown Hospital, has resigned.

Tuberculosis.—The Pennsylvania Society for the Prevention of Tuberculosis conducted a tuberculosis exhibition at Sellersville, May 4, and at Telford, May 8. In one year of active work the society has established a bureau of information, organized an employment exchange, conducted 649 formal talks and lectures, distributed 166,000 leaflets of instruction, secured the cooperative help of 159 organizations, opened two tuberculosis classes and one dispensary, gathered a tuberculosis exhibit which has been demonstrated in fourteen towns and cities and before 153,226 people, and established anti-tuberculosis societies in six cities and towns.

Bills Approved.—Governor Stuart signed the Salus cocain bill May 8. This bill provides that no person shall furnish, sell or give away cocain or allied drugs, except on prescription of an authorized practitioner of medicine. The maximum penalty for violation will be a fine of \$500 and imprisonment for two years. The act, however, does not apply to regular traffic between dealers. The mere possession of cocain by any person other than a dealer is punishable by a maximum fine of \$100 and imprisonment for six months, unless possession thereof is obtained through the medium of a prescription. Enforcement of the act rests with the State Pharmaceutical Examining Board, previous acts of this character being repealed.

—Governor Stuart has approved the Campbell pure drug bill. This is in line with the policy of the present administration, to enact laws fixing standards of food, drink and other articles taken internally. Recognized standards are fixed for drugs, and misbranding or adulteration is punishable by a fine of \$50 for the first and \$100 for each subsequent offense. District attorneys must institute proceedings on the State Pharmaceutical Examining Board reporting violations. The act will become operative October 1, and dealers may escape responsibility for stock on hand at that time by stamping each package with that date.

Philadelphia

Money for Department of Health.—At a meeting of Council's finance committee, April 6, \$40,000 was appropriated to the work of the Department of Health and Charities.

Typhus Fever.—For the first time in seventeen years, typhus fever has been discovered in Philadelphia. Two cases were reported in Russian immigrants, and both patients were taken immediately to the Municipal Hospital and isolated.

Dispensary for Tuberculosis.—The new dispensary for tuberculosis, 1731 Orthodox street, Frankford, recently equipped by the state department of health, was formally opened April 28. It is known as Dispensary No. 107, will receive patients Mondays, Wednesdays and Fridays, from 2 to 4 p. m., and will be under the general supervision of Dr. Alfred Stengel and the immediate charge of Dr. W. G. Turnbull.

Personal.—Dr. Rush Baumann has resigned from the resident staff of Frankfort Hospital.—Dr. John G. Clark was honored by the senior class of the Medical Department of the University of Pennsylvania by having the class book dedicated

to him.—Dr. Randle C. Rosenberger was given a dinner May 1 by his friends and colleagues in honor of his election as professor of hygiene and bacteriology in Jefferson Medical College.

Jefferson Alumni Day.—Plans have been completed for the entertainment of the alumni of Jefferson Medical College at the next annual commencement. June 7, commencement day, has been set aside as alumni day and reunions of several classes will be held. At 3:30 p. m. Dr. William W. Keen will hold a public clinic in the Jefferson Hospital amphitheatre. At 7 p. m. the annual business meeting of the Alumni Association will be held at the Bellevue Stratford, to be followed by the annual banquet. The subscription (\$5) to the banquet should be forwarded at once to Dr. Alfred Heineberg, 1327 Pine street, Philadelphia.

TENNESSEE

Personal.—At the May meeting of the State Board of Health, held in Nashville, Dr. Herbert Jones, Memphis, the president of the board, was appointed its delegate to the annual meeting of the Conference of State and Territorial Boards of Health with the United States Public Health and Marine-Hospital Service in Washington, D. C., June 2 and 3.—Dr. Nathaniel T. Dulaney, Jr., Bristol, has been appointed a member of the Lyon's View, Eastern Hospital for the Insane, near Knoxville.—Dr. George E. Pettey, Memphis, has closed his Denver and Atlantic City retreats and will hereafter confine his work to his Memphis institution.

Commencements.—On May 3, the Medical Department of Vanderbilt University, Nashville, held its thirty-fourth annual commencement, graduating a class of 49.—A class of 11 was graduated at the third annual commencement exercises of the College of Physicians and Surgeons, Memphis, May 1.—The Medical Department of the University of Tennessee, Nashville, graduated a class of 41, April 30.—The twenty-ninth annual commencement exercises of Memphis Hospital Medical College were held April 30, and the degree of doctor of medicine was conferred on a class of 98.—The fifty-eighth annual commencement of the Medical Department of the University of Nashville was held April 30, when a class of 61 was graduated.

GENERAL NEWS AND COMMENT

Warning Concerning Agent.—Readers are warned concerning one P. W. Corzilius, alias J. W. Holman. No money should be paid to one who gives either of these names and pretends to represent THE JOURNAL (or, in fact, to any one unless he possesses an unexpired letter of authority for making collections). When last heard of, Mr. Corzilius was in Ohio. THE JOURNAL is very anxious to find him, and will appreciate prompt information toward this end. He is about 55 or 60 years of age, 5 feet 4 inches in height, 160 pounds in weight, with gray hair and florid complexion. He dresses rather shabbily and his general appearance indicates alcoholism.

Loving Cup Presented.—Dr. James Henry Honan, on the eve of his retirement from the presidency of the Anglo-American Medical Association of Berlin, after several terms of faithful service, was presented with a loving-cup on behalf of the association. Dr. W. S. McFarland, Kentucky, presented the cup, and on the motion of Dr. W. J. Sweasey Powers, San Francisco, Dr. Honan was elected honorary president of the association.

Railway Surgeons Meeting.—At the annual meeting of the Association of the Norfolk and Western Railway Surgeons, held in Cincinnati, May 4, Dr. Stephen S. Haldemann, Portsmouth, Ohio, was elected president, and Dr. Thomas M. Baird, Crewe, Va., secretary-treasurer. It was decided to hold the next annual meeting at Norfolk, Va.

Climatologists to Meet.—The twenty-sixth annual meeting of the American Climatological Association will be held at the Chamberlain, Fortress Monroe, Va., June 4 and 5, under the presidency of Dr. Charles E. Quimby, New York City. The association will consider and discuss papers on climatology, tuberculosis, pneumonia and heart disease.

Theraputists Meet.—The tenth annual meeting of the American Therapeutic Society was held in New Haven, Conn., May 7-9, and the following officers were elected: President, Dr. James C. Wilson, Philadelphia; vice-presidents, Drs. Alexander D. Blackader, Montreal; Howard Van Rensselaer, Albany, N. Y., and Robert T. Morris, New York City; secretary, Dr. Noble P. Barnes, Washington, D. C., and treasurer, Dr. A. Ernest Gallant, New York City. At the annual banquet, Dr.

Oliver T. Osborne, New Haven, presided as toastmaster, and President Arthur P. Hadley of Yale College was the guest of honor.

The Carroll Fund.—The following subscriptions have been received since the last report:

Previously acknowledged.....	\$3668.65
Dr. A. Shimonek, St. Paul, Minn.....	2.00
Dr. E. C. Ellett, Memphis, Tenn.....	10.00
Dr. Abram T. Kerr, Ithaca, N. Y.....	5.00
Dr. R. C. Coffey, Portland, Ore.....	5.00
Anonymous, Saranac Lake, N. Y.....	10.00
Dr. D. W. Goodman of Mobile, Ala., at Port Llimon, Costa Rica	5.00
Dr. Charles Gardner Child, Jr., New York.....	5.00
Officers of the Medical Corps of the Army.....	115.00

\$ 157.00

\$3825.65

The sum of \$3,600 is still needed to raise the mortgage on this property. All remittances and pledges should be sent to Major Ireland, as previously announced.

FOREIGN

The International Medical Congress

The second pamphlet issued by the committee of organization of the Sixteenth International Medical Congress, to be held at Budapest August 29 to Sept. 4, 1909, has been received. Besides other announcements, it contains the programs for the six general assemblies and for the twenty-one sections, also for a general meeting to discuss the reports and communications on appendicitis and immunity. The reports will be in the hands of the members a month before the date of the Congress. The subscription fee of \$5 (25 korona) should be sent to the treasurer of the congress, Prof. J. Elischer, Esterhazy-utca 7, Budapest VIII, Hungary. In order to ensure accommodations, members are urged to engage lodgings in advance; the arrangements for accommodations and for numerous well planned excursions are in the hands of the Central Traveling-Ticket Office, IV, Vigado-ter I, Budapest, Hungary, which has arranged the lodgings on the hotel-conpon system, the amount to be paid at the time of the order; this amount, less \$2.50, will be refunded if coupons are returned before August 20. Further details and circulars will be mailed by the officials to those interested on request.

The addresses at the six general assemblies are to be: "The Veins Open to Heroic Medicines," by G. Baccelli, of Rome; "Cancer," Bashford, of London; "Heredity, Survival of the Fittest and Hygiene," by M. Gruber, of Munich; "System of Postgraduate Instruction," by R. Kutner, of Berlin; "Exotic Pathology," by A. Laveran, of Paris, and "Artificial Parthenogenesis," by J. Loeb, of Berkeley, Cal. E. Holländer, of Berlin, will also deliver an address on "Representations of Disease in the Pre-Columbian Epoch." Among the addresses in the section on internal medicine are those by Osborne, of New Haven, on "Disturbances of the Internal Secretions, Clinically Considered;" Brauer, of Marburg, on "Adherent Pericarditis;" Ebstein, on "Leukemias;" Inman, of London, on "Immunity in its Relation to Practical Medicine;" Kraus, of Berlin, on "Serodiagnosis;" Lenhartz, on "Appendicitis from Standpoint of the Internist;" Huchard, of Paris, on "Arteriosclerosis of the Heart," and Ketly and Müller, of Budapest, on "Arteriosclerosis in the Abdomen, Etc.;" von Noorden, of Vienna, on "Obesity;" Pel, of Amsterdam, on "Tuberculin Treatment of Tuberculosis," and Maragliano, of Genoa, on "Serotherapy of Same;" Henschen of Stockholm, on "Accidental Anemic Murmurs;" Senator, of Berlin, on "Polycythemia," and Romberg, of Tübingen, on "Rôle of the Vessels in Internal Diseases Outside of Actual Vascular Affections." The twenty-two reports in the section on surgery include those by Harvey Cushing, of Baltimore, on "Cerebral Injuries;" McArthur, of Chicago, on "Oponins," and Gerster, of New York, on "Progressive Peritonitis." In the section on obstetrics and gynecology Wertheim, of Vienna, will report on the "Ultimate Results of Abdominal Operations for Uterine Cancer," and Schauta, of Vienna, on the same by the vaginal route. The section on otology represents the Eighth International Congress of Otology, and has a long and varied list of reports, including those by Dench, of New York, on "Treatment of Acute Otitic Meningitis," and by Reik, of Baltimore, on "Mastoidectomy."

The Lenval prize for the best work on the physiology, pathology or anatomy of the organs of hearing published during the last four years is to be awarded at the closing session of the Congress.

The International Association of the Medical Press convenes just before the Congress, and a meeting will also be held open to all connected with the medical press, at which the aims and scope of the association will be described by de Jace, and the

advisability of concluding summaries for all medical articles will be presented by Blondel, of Paris. Over forty-five pages of the pamphlet are filled with the titles of the reports, addresses and communications already enrolled. A subsection for orthopedies has been arranged, as also for professional and school hygiene in the section on hygiene.

Most of the European railways allow a reduction of 50 per cent., under certain restrictions, to the congress members. The list of members of the American committee was given in *THE JOURNAL*, June 13, 1908, page 2008, with various particulars in regard to the congress. Dr. J. H. Musser, 1927 Chestnut street, Philadelphia, is chairman of the American committee for the congress, and will send, on request, the circulars, etc., already issued.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 1, 1909.

Action by a Physician Against a Hospital for Injury During an Operation

An extraordinary action has been brought against the governors of St. Bartholomew's Hospital. A physician who had returned from West Africa suffered from attacks of sciatica and was admitted March 28, 1907, in order that he might be examined under anesthesia. He alleged that he was placed on an operating table in such a position that his arms were allowed to hang over its sides, that his left arm was in contact with a hot-water bottle projecting from beneath the table, that the inner part of his right arm was bruised by the operator or some other person pressing against it during the operation, and that the result of these injuries was traumatic neuritis and paralysis of both arms which had since prevented him from following his profession. The examination was undertaken gratuitously, as he had come to the end of his resources. The defendants denied the alleged negligence and pleaded that if they owed any duty to the plaintiff it was to exercise reasonable care in the selection of the hospital staff, in which they had not failed. Dr. Risien Russell, who saw the patient soon after the examination, was called. He found him suffering from paralysis of the left arm and partial paralysis of the right arm, which was due to neuritis. He never knew of a case in which a burn caused by a hot water bottle resulted in paralysis. The plaintiff gave evidence that the day after the operation the warden and the house surgeon of the hospital told him that his arm had not been supported while he was under the anesthetic. They could not account for the burn on the arm unless it had come in contact with the hot water bottle or some hot apparatus. He admitted that when the sciatica became acute he began to inject morphin and that he took a certain amount of alcohol when in West Africa. Mr. Justice Grantham, in giving judgment, refused to allow the case to go to the jury as it was involved in doubt as to the facts; he therefore dismissed the case.

Objections to the X-Ray Treatment of Ringworm of the Scalp

The proposal of the London County Council to follow the example of Paris and provide x-ray treatment for ringworm of the scalp of school children has aroused discussion on the dangers of the method in the lay press. In accordance with the well-known selective action of the rays on rapidly growing tissues, Dr. Dawson Turner, an old worker with the rays, suggested in the *Times* that the treatment might injuriously affect the delicate cells of the growing brain of a child. The antivaccinationist, antivivisectionist, and in general anti-medical *Star* took up the cry and in an editorial entitled, "The War Against Children," described the suggestion to apply the x-rays to the delicate cells of the child's brain without the parent's consent as criminal. A representative of the *Times* discussed the subject with a number of well-known electrotherapeutic experts and all expressed the view that however harmful the x-rays might be if unskillfully managed, there is no reason to think that any injurious effects would follow their use in the treatment of ringworm, provided this is controlled by a skilled operator. The exposure is of short duration and the apparatus has been so perfected, in the light of the terrible experience of the pioneers in its use, that there is no reason to suppose that properly used the rays would do more than eradicate the ringworm. Dr. E. S. Worrall, chief of the electrotherapeutic department of University College Hospital gives three applications of short duration in one week and after three weeks the patient is absolutely bald and cured. After three months the hair begins to grow

again vigorously. He has never known of any case of injury from this treatment or even from the treatment of lupus, in which ten or twenty times the exposure is necessary. Dr. C. R. C. Lyster, chief of the electrotherapeutic department of the Middlesex Hospital has treated over 600 cases with similar results, but he takes extraordinary precautions against risks.

Ambassador Tries to Evade Paying His Physician

It has seldom happened that a doctor has had to sue an ambassador for the payment for his services. In the Marylebone county court, Dr. A. S. Currie sued Gen. E. M. Teran for \$53. When the claim was filed the defense was set up of immunity from process on the ground that the general was envoy and minister plenipotentiary to this country from the republic of Ecuador. But when the case came into court he had received letters of recall; a letter was read from the foreign office stating that after his recall he could not claim immunity from process on account of his diplomatic position. The claim was for attendance on the general's children in 1907. The physician tried to get his fees then, but the plea of immunity was set up. He therefore decided to wait for the expiry of that position. The judge gave judgment in favor of the physician with costs.

Zinc Poisoning

An unusual form of poisoning—by zinc—is reported from Newport, Wales. An inquest was held on a girl, aged 13, who became unconscious and died soon after a supper of chipped potatoes purchased at a shop in the town. Traces of zinc were found in the contents of her stomach and the metal was also found in the oil used for cooking the potatoes and in the potatoes themselves. The cooking pans were coated with an alloy of zinc. It was thought that the action of the oil, combined with the process of cleaning the pans, had enabled the zinc to become incorporated with the potatoes.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 29, 1909.

The General Association of French Physicians

The General Provident Benefit Association of Physicians of France on April 25 celebrated in the sessions hall of the Academy of Medicine the fiftieth anniversary of its foundation. The opening session was presided over by M. Viviani, minister of labor, assisted by a representative of the ministry of public instruction and by Dr. Lereboullet, member of the Academy of Medicine, and president of the association. All the provincial societies affiliated to this association sent delegates. Addresses were read by Dr. Lereboullet, who briefly related the history of the association, and detailed the different stages through which it has passed; by Dr. Lepage, agrégé at the Faculty of Paris, and general secretary of the association, who explained the moral and financial status of the work; and by Professor Livon, director of the Marseilles school of medicine, in the name of the local societies.

The association has a double aim. It assures life pensions to aged or invalid members and assists the widows and orphans of those deceased. On the other hand, it defends the professional interests of physicians whenever they are menaced or at stake. It numbers at present nearly 10,000 members, belonging to 94 local societies. It is, as a matter of fact, a federation of societies. All the local societies are autonomous and control their own membership and funds and the discussion of all questions that interest them, as well as take note of the abuses of which physicians are often victims.

In regard to this autonomy of the local societies, the general council of the association never refuses to take notice of the resolutions transmitted to it by the local societies, but it places the onus of deciding the points under consideration on the general assemblies, which take place once a year, and in which only the members of the general council and the presidents and delegates of the local societies can take part. A vigilant guardian of the statutes of the association, the general council contents itself with replying to the points submitted to it, taking care, in the words of the statutes themselves, "always to maintain the practice of the art of medicine in the paths of utility to the public good and conformable to the dignity of the profession."

The association receives important gifts and legacies. The bequest made recently by Dr. Gille of Garches, amounted to more than 400,000 francs. The entire fortune of the association, including the property of the 94 local societies, is, at the

present time, some 5,468,557 francs. This figure indicates the wisdom with which the association has been administered. It has, it is true, been sometimes accused of too strict economy, and of not relieving effectively enough the distress of the profession. But it must not be forgotten that, in its capacity as a mutual benefit society, the association can intervene in favor only of its members, their antecedent kin, widows and orphans. Restrained by its statutes it can not come to the assistance of *confrères* who have no part in it.

On the other hand, in order not to overstep the revenues of the life pension fund, the general council has fixed, as conditions of eligibility for the pension of 1,000 francs, an attained age of 70 years and a minimum membership of 35 years. But as soon as the resources of the benefit fund shall become sufficient, that is to say, in the not distant future, the council proposes to make all the pensions uniformly 1,000 francs.

School Sanitary Records

The French League for School Hygiene, of which I have had occasion to speak in a previous letter (*THE JOURNAL*, Sept. 26, 1908, page 1094) has taken a very active part in the establishment of individual school sanitary records, the purpose of which is to safeguard the health of the child throughout the entire school period. But a certain number of physicians are disturbed by this institution, fearing lest the school physician, being called on to place on the record the results of the periodical examinations that he makes, may in some way prejudice the ordinary physician of children.

For this reason, and to avoid all misunderstanding, the league has just formulated the aim and scope of the school record. The league reminds us that the school physician is to put on the record only the findings of his own examination, enabling him to determine that the general health of the child (weight, height) is or is not satisfactory; that certain symptoms or apparatus (lymphatic, teeth) are or are not normal; that certain organs (eye, ear) are functioning well or ill. Thanks to these regulations, the school physician will be able, without defining either the nature or the cause, to inform the parents that the growth of the child is not good, that its general health is poor, that the functioning of certain organs is defective. At the same time he will point out the necessity of having the child examined by the family physician, who alone can establish the diagnosis and institute the treatment. Thus the parents will be given the opportunity to submit the child to examination by their physician and entrust it to his care, which they would in all likelihood not have done, or would have done too late, if they had not been warned in time by the school physician.

The school physician has no further control to exercise, either in regard to diagnosis or treatment of the physician in charge of the case, whom he should ignore. The only justification of his warning to the parents will be to renew them at his later periodical examinations, if he finds the same conditions as on the preceding occasion.

Under these circumstances there is no reason for disquietude in the intervention of the school physician and in the institution of the individual sanitary record, either as to violation of the professional secret—since there will not be any diagnosis made or written, and the physician alone will have charge of the records established by him—or as to any antagonism between the school physician and the physician in charge; the rôle of the first being limited to pointing out to the parents the necessity of submitting the child to the physician and placing it under his care.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 21, 1909.

First Aid Service

The Berlin first aid service was established about ten years ago, and so far has been somewhat defective. The earliest arrangements for this purpose were made by the trade unions (*Berufsgenossenschaften*) in connection with the accident stations established by them in which injured persons were received, for which the *Berufsgenossenschaften* were responsible. As by means of these arrangements the material derived from these injuries was withdrawn from the Berlin hospitals and clinics, the Berlin physicians, under the leadership of Professor von Bergmann, organized a first aid association, of which every Berlin physician might be a member. A large number of Berlin hospitals became first aid stations in which injured persons were received. In addition to these two organizations, there exists still another of long standing, the so-called "sanitary

watch" (*Sanitäts-Wachen*), which is open only part of the day and part of the time only provided with an assistant, and in fact simply serves to furnish temporary aid in injuries and sudden accidents. From the similarity of the work of these three institutions there arose all sorts of difficulties from competition, especially between the Berlin first aid association, which provides a general medical institution, and the accident stations which endeavored to monopolize the first aid service. The repeated efforts to convert the entire first aid service into a city institution were not successful. An improvement was made three years ago when a central station of the Berlin first aid association was established in the city hall, at which there could be learned at any time the number of available beds in the various hospitals and ambulances could be ordered, and at the same time the city council was requested to enter into negotiations for a further transfer of the arrangements for first aid to the authority of the city. A year afterward six first aid stations were taken over by the municipality, but a municipalization of the first aid service has not yet been seenred. On the other hand, the hospitals have been taken under municipal supervision and are chiefly supported by the city. The accident stations are no longer to treat permanently as formerly the patients who are injured in the trades, but only to furnish first aid as is done by the first aid stations conducted by the first aid association. At every accident station there shall no longer be as formerly a service by a few physicians, appointed by the trades union, but at least ten physicians shall be stationed at each station who shall be selected by the association of physicians for the Berlin first aid service and shall be under the oversight of the executive committee of the medical society. In this way as many physicians as possible may participate in the first aid service and there will be a change of physicians in attendance every two hours during the day. The fee for the day service will be 1 mark an hour (25 cents) and 8 marks for the entire night (\$2.00). The city assists the first aid service with 60,000 marks (\$14,400), the accident stations with 75,000 marks (\$18,000) and the *Sanitäts-Wachen* with 36,000 marks (\$8,640). Thus at least a sufficient groundwork is made for the first aid service of the city and it may be hoped that on this basis further improvement will gradually be made.

Instruction in Hygiene in the Army

The soldiers are instructed from their entrance into service regarding the care of the body. The under officers are instructed once or twice a week by the use of a small pamphlet on hygiene for soldiers, regarding the care of the feet, cleansing the hands, care of the teeth, and these officers give lessons to recruits. A copy of the book on hygiene is placed in every barrack so that the soldiers may inform themselves in their leisure hours. The privates are especially instructed in the care of the teeth by an assistant surgeon and it is required that each man shall have a suitable tooth brush. By order of the physician of the general staff each physician who makes sanitary inspection of soldiers at certain intervals shall use this opportunity to discuss matters of hygiene with the men in a manner generally intelligible, especially regarding the character and prevention of sunstroke, regarding the dangers of excessive use of alcohol, the prevention of venereal diseases and the like. In a similar way the officers are occasionally instructed by sanitary officials.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, April 28, 1909.

The International Medical Congress at Budapest

Great interest is shown in the proceedings of the medical congress, to be held at Budapest August 29 to September 9, and great anxiety has been felt in Hungarian and Austrian medical circles about its success, for it was endangered by the threatening war. Happily this has been warded off. In Austria-Hungary, especially in Hungary, medical science is mostly in young hands, and these men are anxious to show their progress. The number of communications to the congress is already large and will no doubt increase vastly before the convention meets. As all the proceedings of the congresses appear regularly, though much belated, in our medical journals, there will be much work for the journal committee. At least 500 members are expected, not counting those from America and Africa. [See also page 1591.—Ed.]

The New Regulations Concerning Disinfection

About one year ago, new rules as regards disinfection after contagious diseases were put in force and at a meeting of the board of health, the report of the directors of the disinfection

department was read. There are two chemicals used in all disinfection, by public health authorities, for inhabited places: sprayed or, preferably, vaporized formaldehyd; if this is not possible or not effective oxycyanid of mereury is used. This is transported in a 5 per cent. solution by the disinfecting staff, who have to dilute the liquid until it is 0.25 to 0.5 per cent. strong, according to the object to be disinfected. The public lately prefers the second method because of its cheapness and absence of odor. The parties, however, who are willing to pay for the expense, may have their rooms and clothing disinfected either by carbolic, steam or formalin. There are five large steam disinfectors in the possession of the board of health, each capable of holding 25 cubic meters (about 7,000 cubic feet), and a sixth one is being constructed. A special series of regulations deals with prophylaxis against special diseases by the members of the disinfecting staff themselves, for instance, after the conclusion of his work each man must change his clothes for sterile ones, while the garments he has worn are disinfected. In the ten months ended March, 1909, 16,000 rooms in 5,000 houses and 112,000 articles belonging to 12,620 persons were disinfected, and all this work is done gratis, as the rate-payers have to find the sums necessary for the board of health. The expenditure was a little over 50,000 crowns (\$10,000).

Defects of the Public Nursing System

An unhappy incident in one of our largest institutions for the care of the insane has thrown light on a grave defect in the otherwise really enlightened and satisfactory administration of this asylum. A patient, who was somewhat troublesome during the night, was so treated by three male attendants who were trying to quiet him, that he died soon afterward. A postmortem inquest showed that death was due to fracture of the thyroid cartilage, and it appeared that the attendants had tried to overcome the maniacal patient by wrapping him in a wet sheet, contrary to the rules of the asylum. This they succeeded in doing only after a severe struggle. The lack of good nurses and attendants has been admitted by all hospitals. In fact, there are very few well-trained nurses of better classes at present available. The public here does not yet realize the necessity of fully competent persons for the care of the sick. As a rule, the social standing and the pay of nurses are very low here; and strenuous efforts are being made by private hospitals to educate and train proper nurses for their own benefit. In public hospitals things are worse, except where the members of a religious sisterhood are employed. It is now planned to induce sisters to take over the charge of wards in public hospitals to the exclusion of lay nurses. Male attendants in asylums are still less satisfactory than the lay female nurses, for the pay is so very low that any able-bodied man may earn twice as much by any work with much less toil and responsibility. The sad incident mentioned above has excited much public comment and condemns the present system of misplaced economy. Already a list of requirements has been published for male attendants in public hospitals which will enable the directors to employ none but reliable persons—if the necessary funds are provided.

Association News

THE ATLANTIC CITY SESSION

Program of Entertainments—Prospect of a Large and Successful Meeting

Word is received from Atlantic City that details are being perfected in a satisfactory manner for the Sixtieth Annual Session of the American Medical Association, to be held June 8 to 11. We print below a list of the entertainments arranged for the visitors on this occasion. This complete list was not ready in time to be included in the Atlantic City Number of THE JOURNAL, May 1.

We call attention to this Atlantic City Number. It contained many pages of details concerning the session. The programs of papers to be read in the scientific sections were given, showing the elaborate and comprehensive series of discussions which await those who will attend.

A large list of hotels was given with rates, and all were urged to secure their accommodations in advance, in order to save trouble on arrival at Atlantic City. There can never be a suggestion of inadequate hotel accommodation in this

city of hotels, but it sometimes happens that the preferred space in some particular hotel—perhaps the one most desired—is entirely filled.

A slight error occurred in the May 1 issue, in that the Hotel Ponce De Leon was located on Maryland avenue instead of Virginia avenue, and the Imperial Hotel on Virginia instead of Maryland.

Railroad tickets will be validated on Young's Old Pier, near the Commercial and Scientific Exhibits, as in previous years.

We are asked to call attention to the Informal Tea for the ladies, mentioned in the following program of entertainments. This is a new feature which deserves attention, as a special endeavor will be made to have it a most notable occasion. This function will take place at the Hotel Chalfonte, Tuesday, June 8, 4 to 5 p. m., and all ladies who attend the session are most cordially invited to be present at this, as well as at the other events arranged especially for them during the week.

PROGRAM OF ENTERTAINMENTS

(The official members' badge, or one of those provided for ladies and guests, will be required for admission.)

Tuesday, June 8

AT THE CHALFONTE HOTEL

4 to 5:30 p. m.—An informal tea will be given to the visiting ladies of the American Medical Association by the ladies' committee of Atlantic City.

AT HOTEL ROYAL PALACE

9 p. m.—Alumni reunion and smoker, Jefferson Medical College.

AT HOTEL ISLESWORTH

9 p. m.—Alumni reunion and smoker, Medico-Chirurgical College (Philadelphia).

The following medical colleges will hold alumni reunions: Dartmouth, Rush, University of Vermont, Long Island. A full list will be announced later.

Wednesday, June 9

ON THE BEACH OPPOSITE TENNESSEE AVENUE

12 noon—For visiting ladies: Exhibition of rescue by the Atlantic City Life Guards, directed by Beach Surgeon Dr. J. T. Beekwith.

FROM VENTNOR BOAT CLUB HOUSE

2:30 to 5:30 p. m.—Sailing parties for ladies will leave Ventnor Boat Club House at short intervals.

AT MUSIC HALL, STEEL PIER

8:30 to 10 p. m.—Reception to the President, Dr. William C. Gorgas.

AT MUSIC HALL, STEEL PIER

10 to 12 p. m.—Dancing.

Thursday, June 10

AT YOUNG'S MILLION-DOLLAR PIER

11:30 a. m.—Public exhibition-hauling of seine (courtesy of Mr. John L. Young).

AT THE PLAZA, MARLBOROUGH-BLENHEIM

4 to 6 p. m.—Ladies' reception.

AT MARINE HALL, STEEL PIER

8:30 to 10:30 p. m.—Musical cycle.

AT MUSIC HALL

8:30 to 10:30 p. m.—Musical (Metropolitan Orchestra, with soloists).

AT ISLESWORTH CAFÉ, VIRGINIA AVE. AND BOARDWALK

10:30 to 12 p. m.—Vaudeville and smoker.

AT NEW BERKLEY CAFÉ, KENTUCKY AVE. AND BOARDWALK

10:30 to 12 p. m.—Vaudeville and smoker.

[Vaudeville and Smokers for gentlemen and ladies.]

The Country Club House at Northfield will be open to the physicians and ladies during the entire meeting.

The Atlantic City Yacht Club extends the courtesy of its club house during the meeting.

Pharmacology

HOWELL'S MERCOL AGAIN

Another Analysis Fails to Reveal the Presence of Mercury

During the latter part of last year a physician of Hot Springs, Ark., wrote asking for information regarding a preparation known as Howell's Mercol, manufactured by H. B. Howell & Co., Ltd., New Orleans. The preparation was, and is, advertised as a 1 per cent. solution of mercuric iodid in a non-irritating neutral menstruum, recommended for hypodermic use in the treatment of syphilis. The physician above referred to expressed some doubt as to the amount of mercury the product contained, for while he admitted that it was non-irritating, he claimed to have been unable to get either the physiologic action or therapeutic results of that drug. The matter was therefore taken up and at the request of the secretary of the Council on Pharmacy and Chemistry, Drs. Reid Hunt and Atherton Seidell of the Hygienic Laboratory of the Public Health and Marine-Hospital Service undertook its examination. The result of this examination was published in THE JOURNAL, Jan. 16, 1909, page 225. As will be remembered the analysis showed that Mercol contained no mercury, or if any at all, but the merest trace. The examination, which was exceptionally exhaustive, should have revealed the presence of mercury had it been present.

After the publication of the results of this investigation on Mercol, Dr. J. M. Magruder of New Orleans wrote to THE JOURNAL protesting for Howell & Co., "that the firm has no desire to foist on the medical profession or the public a fraud." Dr. Magruder, who says he is family physician to the head of the firm, described his visit to Howell & Co.'s place of business, where he witnessed the manufacture of Mercol, weighing out the ingredients and watching the process until the finished product was bottled. With his letter to us he sent a sample of this particular batch of the product which at once was forwarded to Drs. Hunt and Seidell of the Hygienic Laboratory, with the request that they examine it. This they did and the results were the same as before; that is, mercury was not present or if so, only in an infinitesimal amount.

What do these results mean? Here we have a firm claiming that its product contains 1 per cent. of mercuric iodid and we also have a physician, whose honesty is unquestioned, asserting that he had seen this amount of mercury salt used in making the product. Yet chemical analysis demonstrates that mercuric iodid is, to all intents and purposes, absent. Evidently in subjecting the various ingredients to the "process"—the nature of which is not disclosed—necessary for the production of the finished article, instead of achieving the feat of dissolving the mercuric iodid in the non-irritating neutral menstruum, the "process" eliminates this drug altogether. Knowing nothing about the "process," it is idle even to try to guess what may have occurred to dissipate the essential, and it is claimed the only potent drug in the preparation. Hypotheses in such a case are valueless; the important fact, and the one that vitally concerns both patient and physician is that the finished product fails to contain the ingredient on which the value of the product depends. To a syphilitic relying on the well-known remedial effects of mercury supposed to be present, this fact has more than an academic interest.

It is not sufficient for a manufacturer to claim honesty and good faith. In the making of remedial agents sins of omission may be as potent for harm as sins of commission; ignorance or incapacity may be as deadly as dishonesty or fraud. It is the duty, as well as the business, of a drug manufacturer to base his claims on his finished products, rather than on the component parts used in their manufacture.

That the firm is satisfied with Dr. Magruder's proof of its own honesty is evident, for we find his letter to THE JOURNAL reproduced in the "Publisher's Notes" department of the *New Orleans Medical and Surgical Journal*, April 1909. This, too, in spite of the fact that we wrote Dr. Magruder, Feb. 6, 1909, informing him of the negative results of the analysis of the sample made under his observation. If Messrs. Howell & Co. have made an honest mistake in supposing they could produce a 1 per cent. solution of mercuric iodid in liquid

petrolatum, they will see that the mistake is corrected; if, on the other hand, they are governed by commercial considerations only, they will doubtless continue to perpetuate the same misrepresentation.

BRUSH'S REMEDY FOR SEASICKNESS

W. A. Puckner and W. S. Hilpert

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION]

As a number of inquiries have been received regarding a much advertised "Brush's Remedy for Seasickness," the preparation was subjected to analysis in the Association's laboratory. The report follows:

"Brush's Remedy for Seasickness" is sold in five-ounce bottles in which are blown the name and the use of the preparation. Besides giving the name and use of the preparation, the label contains the following statement:

"It is confidently claimed that this preparation will prevent seasickness and carsickness if used strictly in accordance with the following directions:

"A dessertspoonful in a wineglass of water every three hours commencing at least 24 hours before sailing and repeating the dose occasionally during the voyage.

"The Brush Chemical Co., New York, N. Y."

A small vivid red pamphlet that goes with the bottle more fully elaborates on the claimed virtues of the "remedy." The following are specimen statements taken at random from the pamphlet:

"The only known specific that will invariably prevent *mal de mer*."

"Seasickness positively prevented."

"... is totally harmless and has not the slightest unpleasant effect on the heart or circulation."

In addition to other equally broad statements and comments, several testimonials are given to convince the skeptical.

The "remedy" is a light yellow liquid, without odor, but with a decidedly acid taste. Qualitative tests demonstrated the presence of citric acid and sodium bromid, but the presence of other acids, metallic radicles or any alkaloids could not be demonstrated. Quantitative determinations¹ showed the presence of 14.94 gm. sodium bromid and 2.71 gm. citric acid per 100 c.c. of the preparation. A small quantity of an organic coloring matter was also found.

From the results of the chemical analysis of "Brush's Remedy for Seasickness," it is concluded that it is essentially a solution of citric acid and sodium bromid, and hence has the value only of these ingredients.

Medical Advertisements in the Lay Press

An article entitled "Protecting the Magazine Reader from Advertising Frauds," appeared recently in *Printer's Ink*, in which the struggle for a "clean-up" in advertising is recounted. Reference is made to a rule early established by the Curtis Publishing Company—whose sole publication at that time was the *Ladies' Home Journal*—that "no advertisements of a medical or curative nature" would be accepted. Justification of this rule is given on the following grounds: "It is possible that under this ruling a few—a very few—worthy remedies are excluded, but it would be practically impossible for a publisher to discriminate, with absolute justice, in this class of advertising; nor is it possible to recommend any remedy, however good, without reserve, to an army of millions of readers."

The last-mentioned objection to medical advertising applies without question to every "patent medicine" that has ever been foisted on a self-drugging public.

1. (a) The presence of citric acid and the absence of other acids having been demonstrated, the amount of citric acid was determined by titration with standard alkali 10 c.c. of the remedy required for neutralization an average of 39.16 c.c. tenth-normal alkali which is equivalent to 0.2488 gm. citric acid or 2.71 gm. per 100 c.c.

(b) The bromin was determined as silver bromid in the usual way. In this manner 10 c.c. of the remedy diluted to 100 c.c. and 10 c.c. portions used, yielded (a) 0.2724 gm. silver bromid, (b) 0.2725 gm. silver bromid averaging 0.2725 gm. which is equivalent to 1.494 gm. sodium bromid per 10 c.c. of the remedy, or 14.94 gm. per 100 c.c.

As a check, sodium determinations were made and the sodium sulphate obtained calculated to sodium bromid. It was found that in one case 10 c.c. of the preparation yielded 0.9900 gm. sodium sulphate and in another case 0.9904 gm., giving an average of 0.9902 gm. This was equivalent to 1.435 gm. sodium bromid or 14.35 gm. per 100 c.c. which agreed sufficiently with the sodium bromid calculated from the bromin determination to demonstrate that the sodium and bromin are present in molecular quantities.

Correspondence

A Disclaimer from the Mayo Brothers

To the Editor:—We have been advised not to pay any attention to the publicity given us by an article appearing in a recent issue of *Human Life*.

Inasmuch as we have on several occasions suffered public humiliation of this character, it does not seem unreasonable that we should state our position exactly, because, while we have the assurance that our friends and acquaintances fully understand our attitude as professional men toward the public, it is of course impossible that we should know personally all the practitioners of medicine in this country, and we desire the respect and esteem of all. Our endeavor is, has been, and will continue to be, in strict accord with both the letter and the spirit of the ethics of the medical profession.

In 1905 one of us was elected president of the American Medical Association, and as this was a great honor to come to a young man living in a small town, who was practically unknown outside of the medical profession, it attracted considerable attention among the laity. About this time there appeared in *McClure's Magazine* an article written by Samuel Hopkins Adams, descriptive of a number of men in the profession, ourselves among them. Mr. Adams wrote his review with true journalistic instinct and characteristic vigor. It was not so much what he said as the striking manner of saying it that called public attention to us, and since that time we have, on several occasions, been subjected to the annoyance of having our private affairs made into "news." Before then we had never been "written up," our names had never been brought prominently before the public, and we were known only through our professional work.

Shortly after the article appeared in *McClure's*, various persons came to Rochester to obtain sensational data for publication. These people talked with hack drivers, barbers, the people on the street, and took "snap shots." One of them secured old photographs, which are printed in the article in *Human Life*. With the greatest possible effort we succeeded in heading off the publication of a number of these articles.

In 1907 an article concerning us was published extensively in the Sunday supplement of a group of newspapers. We promptly wrote a letter to *THE JOURNAL* of the American Medical Association disclaiming all knowledge of it and stating that we would take legal steps for redress. *Human Life* republishes substantially the same article.

The article is filled with exaggerations and untruths, and is written in a style most offensive to any one accustomed, as we have been, to regard professional ethics carefully. It seems incredible that any fair-minded man in the medical profession could read this article and believe that we had anything to do with its production. The author states that W. W. Mayo, who is a man 90 years of age, and twenty years retired from practice, gained his diploma in the "school of experience," intimating that he was not in regular standing in the profession. As a matter of fact, W. W. Mayo graduated from the Missouri Medical College in 1854.

A large number of men in the profession received marked sample copies of this particular number of *Human Life*, and within a few days a letter calling attention to the article and soliciting subscription. Strange as it may appear, some of these men have taken the matter seriously, disregarding the facts that we have always been honorable practitioners, have had an established practice for years, and have received many honors from the medical profession, and that any such action on our part could add nothing but injury to our professional standing, and a disagreeable notoriety. We consider any such supposition in regard to our integrity not only as an insult, but as an affront to our intelligence. One can appreciate how such action might be believed of one man, but it is incomprehensible how any one could suppose that two men over 40 years of age, and one at the age of 90, would deliberately take measures to discredit the work of a lifetime.

It really seems as though the facts in the case might constitute a basis of legal action for libel. We had the matter

up two years ago with our attorneys regarding the first appearance of this article. They informed us then that it was not legally a libel for the reason that newspapers had a right to comment on men, their business and their actions, and the courts held that if no injury or discredit was intended, the offense was not actionable. As one of the attorneys said: "Do you suppose for a moment that the wizards of oil and finance would allow themselves to be commented on by the press in the way they are if they could prevent it? If they with all their money and influence can not stop it, how can you expect to do so?" However, this last offense seemed on the face of it, to us and to many others, to constitute a libel, but we, find, unfortunately, that the courts have ruled otherwise.

We herewith submit an opinion from our attorneys.

WILLIAM J. MAYO,
—
CHARLES H. MAYO.

DRS. W. J. AND C. H. MAYO, Rochester, Minn.

Dear Sirs—We have carefully read the article published in the April, 1909, issue of *Human Life*, entitled, "The Mayos, Father and Sons." We note also your statement that this article was written and published without your knowledge or consent, and that thereafter copies of the publication containing it were sent to many of the medical profession, marked "sample copy," and that a few days later letters from publishers to members of the profession followed, calling attention to the article and soliciting subscriptions to the periodical containing it, all of which might inspire on the part of some the inference that you gentlemen had instigated or assented to the publication, which is the highly objectionable feature of the matter, and the cause of your complaint.

You ask our opinion as to what legal redress you have against *Human Life* on these facts. It is our opinion that you have no legal redress whatever. Two questions arise under these facts:

1. Was the article libelous?

2. If not libelous, was the act of mailing the sample copies to the profession an implied statement that it was done at your instigation, or with your consent?

While the article is an exaggeration, and in many respects untrue, in our opinion it is not libelous.

To constitute a libel the printed publication must either falsely charge a person with the commission of a crime or by false statements hold him up to ridicule or contempt of his fellowmen. The article in question does neither in a legal sense.

Whether or not the mailing of the marked sample copies constitutes an implied suggestion that it was done at your instigation or with your consent, admits of some doubt, but we are of the opinion that it does not. Whatever the real motive may have been in mailing these copies in this particular instance, the courts will take judicial notice that it is the custom of publishers to mail sample copies of their periodicals as a means of soliciting subscriptions, and, of course, that will be the purpose asserted in this case; hence if the original publication of the article did not constitute a libel, the sending out of marked copies would not do so. If the publishers were strictly within their legal rights in the publication of the article in question, the mere fact that the certain uninformed members of your profession might infer your connection with the publication, or that certain hostile members might make it a pretext by which to slander you, does not change the legal situation.

There is no doubt that you have been injured in the premises, from an ethical standpoint at least, but your case is known to the law as one of *damnum absque injuria*, or, in other words, injury without legal damage.

BROWN, ABBOTT & SOMSEN, Winona, Minn.

School Hygiene

To the Editor:—Dr. Gulick's article in *THE JOURNAL*, Jan. 10, 1909, recalls to my mind many of my experiences in Cleveland during the nine years, 1895 to 1904, when, under one title or another, I served the superintendent of instruction

in the purely advisory position of supervisor of school hygiene. Examination of the school records would show some betterment in sanitary conditions in the Cleveland schools. The best results were attained after the appointment by the board, out of its membership, of a committee on school hygiene. Later, through the intervention of powerful enemies this movement received a setback, and for five years Cleveland has had no department of school hygiene.

Thirty-three states have legislated on different aspects of school hygiene and all these enactments together form an array of sanitary legislation. Six years ago I secured the introduction into the Ohio State Legislature of a bill regulating the sanitary supervision and construction of schools. It met with no particular opposition and had there been money in the state treasury for its effective administration by the State Board of Health, it would probably have been pushed and passed; but unfortunately it came up at a time when the governor was opposed to all bills requiring appropriation. Since then no one has had interest enough to keep after it.

As to the introduction of school hygiene departments by boards of education in cities. I fear we can not hope for anything effective until we adopt government by commission, as in the case of Galveston or Berlin. At present, on account of the innumerable school and city officials, it is difficult to get attention for matters of this sort, for they are crowded out by the hustling political interests. It is difficult to educate a school or city official to an appreciation of sanitary values, and by the time this has been accomplished in any give case, some political revolution removes this supporter and everything has to be begun over again. Members of city boards of education are paid little or nothing, so that they usually delegate such school business as there is, to the officials they find in charge, and continue to give the best of their personal efforts to their own affairs, so that specialists in their employ are not understood or appreciated. Their work is not properly classified and coordinated by boards, and more or less conflict from the clashing of interests results.

There is a place in city schools at present for a few well trained school sanitarians with school officials who appreciate the value of school hygiene, but I fear such positions are the exception.

LEIGH K. BAKER, Cleveland, O.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

BLOOD PRESSURE ESTIMATION

To the Editor:—What are the relative merits of the following forms of blood pressure apparatus: von Recklinghausen, Riva-Rocci, Stanton and Janeway? Which is the better for determining the systolic and diastolic pressure? Please give literature on blood pressure.

EDWARD P. FICK, Seattle, Wash.

To the Editor:—What sphygmomanometer is best suited for the general practitioner's use? Please give literature on the subject of arterial tension.

A. L. BRAMKAMP, Richmond, Ind.

ANSWER:—The sphygmomanometers on the market in general use are the Janeway and Stanton. The Stanton is perhaps the most durable for office and hospital work and is easily transportable without danger of breakage or escape of mercury. It has an 8 cm. armlet. The Janeway instrument has a 12 cm. armlet, is put up in more compact form and is consequently still better adapted for use in visiting practice. The Riva-Rocci instrument is liable to loss of mercury and breakage of the glass when transported. For systolic pressure any of the above instruments is quite accurate. The Riva-Rocci is somewhat less accurate than the others, as the means for producing change in pressure does not permit as accurate regulation. The von Recklinghausen instrument is undoubtedly the best for taking the diastolic pressure. The chief objections to this apparatus are its cost, difficulty of repair, and the necessity of occasionally comparing it with a mercury manometer, in order to determine its accuracy, since the mercury column is replaced by a spring.

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DETERMINATION OF TUBERCLE BACILLI IN SPUTUM AFTER METHOD OF PFEIFFER AND KITASATO

To the Editor:—1. Please describe the method of examination of sputum and determination of the type of mixed infection according to Pfeiffer and Kitasato. 2. Also tell me where in this country Spengler's P. T. and P. T. O. tuberculins can be obtained.

OSCAR H. BENKER, M.D., St. Louis.

ANSWER:—1. The method of examination of sputum according to Pfeiffer and Kitasato consists in collecting the sputum in a clean sterile vessel, and then washing a portion of the tenacious mucus through several tubes or plates containing sterile water, with a view to removing bacteria which may adhere to the surface of the mucus. By such successive washings through a sterile medium the mucus is largely freed from contaminating organisms obtained from the mouth, teeth, etc., and the organisms from the throat, trachea, and bronchial tubes are chiefly left in the mucus, which is then spread on media, or preferably plated in the ordinary way and the bacteria isolated. 2. We are unable to learn that Spengler's tuberculins have been put on the market in this country.

TREATMENT OF KELOIDS

To the Editor:—A patient of mine has a small but very unsightly keloid on his neck under the chin, which originated from a small cut while shaving. What is the best way to remove it?

H. L. HAMILTON, Money, Miss.

ANSWER.—The only satisfactory way to treat a keloid is by exposure to x-ray. Excision is not successful because it is followed by larger growth than before and all other destructive measures meet the same difficulty. Treatment by thiosinamin has been recommended. Injections of this drug along with massage will cause temporary improvement, but the condition returns on the cessation of the treatment. By exposure to x-rays just short of producing a moderate reaction, or by the production of a moderate x-ray reaction, great shrinking can generally be produced in a keloid. Usually by treatment in this way it can be converted into a smooth flat scar.

FORMULA OF HARRINGTON'S SOLUTION

To the Editor:—Please give the formula of Harrington's solution.

SUBSCRIBER.

ANSWER.—Harrington's solution consists of commercial alcohol (94 per cent.), 640 c.c.; hydrochloric acid, 60 c.c.; water, 300 c.c.; corrosive sublimate, 0.8 gm. It is intended for hand disinfection. The hands and arms should first be thoroughly washed with sterile soap and hot water and then bathed in the solution for half a minute or longer.

The Public Service

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended May 8, 1909:

Murphy, J. A., surgeon, detached from the Naval Medical School Hospital, Washington, D. C., and ordered to the *Olympia*.
Hart, S. D., appointed acting asst.-surgeon, from April 27.

Army Changes

Memorandum of changes of stations and duties of medical officers for the week ended May 8, 1909:

Quinton, W. W., capt., Rockhill, E. P., capt., having been found physically disqualified for the duties of a major in the Medical Corps, are placed on the retired list as majors, to date from Feb. 26.
Bourke, James, capt., granted leave of absence for 3 months, 19 days.

Humphreys, H. G., capt., relieved from duty at Fort Terry, N. Y., and ordered to Fort Wadsworth, N. Y., for duty.

Appel, D. M., colonel, granted an extension of 1 month to his leave of absence.

Stephenson, Wm., lieutenant-col., granted leave of absence for four months.

Marrow, C. E., major, granted an extension of 1 month to his leave of absence.

Page, Henry, major, granted leave of absence from June 10 to about July 21.

Kirkpatrick, T. J., major, granted leave of absence for 21 days, about June 7.

Grubbs, R. B., capt., left Fort McIntosh, Texas, on leave of absence for 10 days.

Loving, R. C., capt., left West Point, N. Y., on leave of absence for 10 days.

Persons, E. E., Bispham, W. N., majors, promoted to be majors in the Medical Corps, with rank from Jan. 1, 1909.

Farr, Chas. W., capt., granted an extension of two months to his sick leave of absence.

Wertebaker, C. I., 1st lieutenant, M. R. C., ordered from Fort Wadsworth, N. Y., to Fort Terry, N. Y., for temporary duty.

Bowman, M. H., 1st lieutenant, M. R. C., ordered to duty with troops on the transport *Sheridan* to Manila, P. I., and return to San Francisco.

Brown, I. C., 1st lieutenant, M. R. C., relieved from duty in the Philippines Division in time to sail from Manila for San Francisco, Sept. 15, 1909.

Hammond, W. H., D. S., granted leave of absence for 2 months, 19 days.

Hussey, S. W., D. S., relieved from duty in the Department of the Lakes, and ordered to his home, South Berkeley, Cal., for annulment of contract.

Gunckel, G. I., D. S., left Fort Caswell, N. C., and arrived at Fort McPherson, Ga., for duty.

Voorhies, H. G., D. S., left Fort Yellowstone, Wyo., and arrived at Fort William Henry Harrison, Mont., for duty.

Zirker, D. W., C. S., assigned to duty at Fort Baker, Cal.

Knapp, E. V., C. S., assigned to duty at Fort Miley, Cal.

Dosher, J. A., C. S., contract annulled May 3, 1909, services being no longer required.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 7, 1909:

SMALLPOX—UNITED STATES

California: Oakland, April 12-19, 2 cases; Sacramento, April 17-24, 1 case.

Georgia: Macon, April 18-25, 5 cases.

Illinois: Danville, April 18-25, 12 cases.
Indiana: South Bend, April 18-25, 1 case.
Kansas: Kansas City, April 17-24, 3 cases; Wichita, 1 case.
Kentucky: Covington, April 17-24, 1 case; Lexington, 1 case; Newport, 1 case.
Louisiana: New Orleans, April 18-24, 5 cases.
Maryland: House of Correction, Bridewell, March 18-April 27, 10 cases.
Michigan: Grand Rapids, April 18-24, 1 case; Saginaw, 1 case.
Minnesota: Duluth, April 15-22, 1 case; Minneapolis, April 10-24, 5 cases; St. Paul, Feb. 1-March 31, 68 cases.
Missouri: Kirksville, Jan. 1-April 17, 1 case; St. Louis, April 17-24, 1 case.
Montana: Butte, April 13-20, 2 cases.
Nebraska: Polk, March 20-April 26, 14 cases.
New Jersey: Camden, April 17-24, 3 cases.
New York: Little Falls, April 10-24, 2 cases.
North Carolina: Nineteen counties, Feb. 1-28, 20 cases.
Ohio: Cincinnati, April 16-24, 10 cases; Columbus, April 17-24, 2 cases; Conneaut, March and April, 2 cases.
South Carolina: Yorkville and vicinity, April 26, 8 cases; Nashville, 1 case.
Texas: San Antonio, April 17-24, 1 case.
Utah: Salt Lake City, March 1-31, 62 cases.
Virginia: Botetourt County, April 28, 100 cases; Portsmouth, April 20-27, 1 case.
Washington: Spokane, April 10-17, 3 cases; Tacoma, March 7-April 4, 9 cases.
Wisconsin: La Crosse, April 17-24, 1 case; Milwaukee, April 17-24, 9 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, March 6-13, 8 cases, 3 deaths.

SMALLPOX—FOREIGN

Algeria: Algiers, March 1-31, 17 deaths.
Austria: Trieste, March 20-27, 1 case.
Brazil: Rio de Janeiro, March 14-28, 42 cases, 16 deaths; Sao Paulo, March 1-14, 2 deaths.
Canada: Halifax, April 10-17, 1 case.
China: Amoy, April 13-20, present; Hongkong, March 6-20, 5 cases, 4 deaths.
Egypt: Cairo, March 18-25, 16 cases, 11 deaths.
Great Britain: Bristol, March 27-April 10, 7 cases, 1 death; Cardiff, March 3-10, 1 case.
India: Bombay, March 23-31, 31 cases; Calcutta, March 13-20, 305 cases; Rangoon, 9 cases.
Mexico: Guadalajara, April 8-15, 4 deaths; Monterey, April 11-18, 7 deaths; Veracruz, April 11-18, 1 case.
Russia: Odessa, March 27-April 3, 6 cases; St. Petersburg, March 20-27, 11 cases, 6 deaths; Warsaw, Jan. 30-Feb. 6, 2 deaths.
Spain: Barcelona, March 5-12, 3 deaths; Huelva, March 1-31, 2 deaths; Valencia, April 2-9, 5 cases.
Turkey: Constantinople, March 28-April 11, 1 death.

YELLOW FEVER

Barbados: April 10-17, 1 case, 1 death.
Brazil: Manaus, March 13-April 3, 5 deaths; Para, April 3-10, 3 cases, 3 deaths.
Mexico: Merida, Feb. 27-March 6, 1 case; Ticul, April 1-24, 2 cases, 1 death.

CHOLERA—INSULAR

Philippine Islands—Provinces, March 6-13, 262 cases, 113 deaths.

CHOLERA—FOREIGN

India: Bombay, March 23-30, 1 death; Calcutta, March 13-20, 101 deaths; Rangoon, 3 deaths.
Russia: General, March 6-20, 76 cases, 27 deaths.

PLAGUE

Brazil: Rio de Janeiro, March 14-28, 2 cases.
Chile: Antofagasta, April 3, 11 cases; Iquique, 17 cases.
China: Canton, March 6-20, 35 cases, 30 deaths; Hongkong, March 16-20, 5 cases, 6 deaths.
India: Bombay, March 23-30, 450 deaths; Calcutta, March 13-20, 77 deaths; Madras, March 20-26, 1 death; Rangoon, March 13-20, 16 deaths.
Japan: Formosa, March 27, present; Kobe, March 20-27, 1 case, 1 death.
Peru: General, March 27-April 10, 76 cases, 34 deaths; Callao, March 29-April 10, 5 cases, 1 death.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended May 5, 1909:

Kerr, J. W., asst. surgeon-general, directed to proceed to Cincinnati, O., on special temporary duty.

Irwin, Fairfax, surgeon, relieved from duty on the Revenue Cutter *Rush*, and directed to report to the commanding officer of the Revenue Cutter *Thetis*.

Stimpson, W. G., surgeon, granted 5 days' leave of absence from May 3, 1909.

Stimpson, W. G., surgeon, relieved from duty at Port Townsend, Wash., and directed to report to the commanding officer of the Revenue Cutter *Manning*.

Lavinder, C. H., P. A. surgeon, directed to proceed to Columbia, S. C., and vicinity on special temporary duty, May 3, 1909.

Ramus, Carl, P. A. surgeon, granted 1 day's leave of absence, April 29, 1909, on account of sickness.

Moore, Dunlop, P. A. surgeon, granted 1 month's leave of absence from May 3, 1909, on account of sickness, and 3 months' leave of absence from June 3, 1909, with permission to go beyond the sea.

Fox, Carroll, P. A. surgeon, relieved from duty at San Francisco, and directed to report to the commanding officer of the Revenue Cutter *Bear*.

Amesse, J. W., P. A. surgeon, directed to proceed to Calbarien, Cuba, on special temporary duty.

Stimson, A. M., P. A. surgeon, granted 2 days' leave of absence, May 1 and 3, 1909.

Simpson, F., asst.-surgeon, relieved from duty at Fort Stanton, N. M., and directed to report to the commanding officer of the Revenue Cutter *Perry*.

Lanza, A. J., asst.-surgeon, relieved from duty on the Revenue Cutter *McCulloch* and directed to report to the commanding officer of the Revenue Cutter *Rush*.

Bowers, Paul E., acting asst.-surgeon, granted 1 day's leave of absence in April, 1909, under paragraph 210, Service Regulations.

Delgado, J. M., acting asst.-surgeon, granted 9 days' extension of annual leave from April 15, 1909, on account of sickness.

Gregory, George A., acting asst.-surgeon, granted 7 days' leave of absence from May 4, 1909.

MacCaffry, W. B., acting asst.-surgeon, granted 2 days' leave of absence in April, 1909, under paragraph 210, Service Regulations.

Rea, Robert H., acting asst.-surgeon, granted 3 days' leave of absence from May 6, 1909.

Rea, Robert H., acting asst.-surgeon, granted 1 day's leave of absence, April 26, 1909.

Rush, John O., acting asst.-surgeon, granted 3 days' leave of absence from April 20, 1909, under paragraph 210, Service Regulations.

Wakefield, H. C., acting asst.-surgeon, granted 4 days' leave of absence from April 28, 1909, under paragraph 210, Service Regulations.

BOARDS CONVENED

Board of medical officers convened to meet at the Marine Hospital, Baltimore, May 1, 1909, for the purpose of conducting a physical examination of eight cadets of the U. S. Revenue-Cutter Service for commissions as third lieutenants. Detail for the board: Surgeon W. P. McIntosh, chairman; P. A. Surgeon M. K. Gwyn, recorder.

Board of medical officers convened to meet at the Maine General Hospital, Portland, Me., May 3, 1909, for the purpose of conducting a physical examination of a captain of engineers of the U. S. Revenue-Cutter Service. Detail for the board: Surgeon P. C. Kalloch, chairman; Acting Asst.-Surgeon A. F. Stuart, recorder.

Board of medical officers convened to meet at the Bureau, May 4, 1909, for the purpose of conducting a physical reexamination of an applicant for the position of cadet in the Revenue-Cutter Service. Detail for the board: Assistant Surgeon-General W. J. Pettus, chairman; P. A. Surgeon J. W. Trask, recorder.

Board of medical officers convened to meet at the Marine Hospital office, Philadelphia, May 4, 1909, for the purpose of conducting a physical reexamination of an applicant for the position of cadet in the Revenue-Cutter Service. Detail for the board: Surgeon J. M. Gassaway, chairman; Acting Asst.-Surgeon H. Horning, recorder.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

The Pioneer Press Helps to Suppress Quacks

In the *St. Paul Medical Journal*, May, appears an editorial announcement stating that the *St. Paul Pioneer Press* has discontinued carrying offensive medical advertisements, especially those of the Heidelberg Medical Institute and of "Dr. Charles," who, according to the *Journal*, have been notified that with the expiration of their present contracts, they can no longer advertise in the *Pioneer Press*. This step is taken at considerable financial sacrifice.

The *Journal* appeals to the profession and to the public to support the *Pioneer Press* in the effort which it is making to publish a clean newspaper, saying truly that the only way in which quacks and charlatans can flourish is through newspaper advertising, and that with these channels of publicity barred they must either move or go out of business. "The medical profession has been practically helpless in spite of all laws to accomplish anything against this form of quackery, but now that the newspapers have taken the matter up, the rest will be easy. The *St. Paul Dispatch* has also announced that it will clean up its columns, but whether or not it will go so far as the *Pioneer Press* we are unable to say. We hope it will."

In view of the fact that one of the most pernicious and long-lived "medical institutes" in the west came from St. Paul originally and resumed business in that city after having been driven out of a neighboring state, the campaign against dishonest medical advertising in St. Paul is of particular interest. Surely, the Ramsey County Medical Society, one of the strongest and most influential county organizations in the west, can furnish the editors and proprietors of the local press with enough evidence and can wield enough influence to bar

these objectionable advertisements from the local newspapers. As soon as the charlatan is compelled to cease advertising, he ceases to do a profitable business. We wish that the good example of the *Pioneer Press* might be followed by newspapers throughout the country.

Dr. McCormack in Kansas

The last two weeks of April were devoted by Dr. J. N. McCormack to a series of meetings in Kansas, comprising fourteen public meetings, two being held in each Councilor District as follows: April 14, Atchison; April 15, Hiawatha; April 16, Manhattan; April 17, Abilene; April 19, Norton; April 20, Beloit; April 22, Larned; April 23, Garden City; April 24, Newton; April 25, Wellington; April 27, Independence; April 28, Pittsburg; April 29, Leavenworth; April 30, Lawrence. The press of the state has been unanimous and outspoken in commendation of the meetings and of the efforts made for public instruction.

The Larned *Chronoscope* says: "The lecture given by Dr. McCormack at the Woodman Hall last Thursday night probably gave more enjoyment and genuine instruction than any that has ever been delivered in Larned. The large audience present listened with the closest attention for nearly two hours while Dr. McCormack expounded truths with almost startling vigor and clearness."

The Sumner County *Star*, commenting editorially on the Wellington meeting, says: "Those who attended the lecture in the Auditorium by Dr. McCormack last night heard . . . one whose teaching if carefully followed would result in inconceivable help the world over. . . . He struck fearlessly at the evils and shortcomings of society that are responsible for a large part of disease, ever keeping his audience in mind that it was not so much that he wished to criticize as to correct the existing conditions. . . . Dr. McCormack showed that while the government is spending three out of every four dollars of revenue on the Army and Navy and pensions, for the slaughter of humanity, it spends not one cent for the preservation of human life and the prevention of disease. The people should not forget his splendid advice and should assist in every way possible to bring about the needed reform."

The Pittsburg *Daily Headlight* says: "With the medical association, the ministerial association and the city Federation of Women's Clubs joining in the lead, the citizens of Pittsburg are called on to conduct a new crusade, a war on disease. Last night at a meeting of citizens which crowded the First Christian Church to the doors, the crusade was begun. . . . As a result of the meeting last night, public sentiment is to be aroused to the danger of allowing disease to have full sway and steps will be taken to conduct a warfare, systematic and well organized."

The Independence *Daily Reporter* says editorially: "The address of Dr. McCormack at the Presbyterian Church on health and prevention of disease was a discourse every grown person in the city should have heard. . . . The lecture was of vital importance to the public."

Dr. W. H. Cook, secretary of the Mitchell County Medical Society, writes regarding the Beloit meeting: "In spite of a rainy night, the opera house was crowded so that many stood during the entire two hours that Dr. McCormack was speaking. . . . The physicians of the county feel well repaid for the time we spent in getting an audience for Dr. McCormack and to my mind, great good will come to the people of Beloit on account of his visit."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR

BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month—Third Weekly Meeting

METHODS OF EXAMINATION

PHYSICAL EXAMINATION.—Light, reflection: instruments, specula. Retraction of auricle. Normal tympanic membrane;

diseased membrane. Inflation of middle ear; Valsalva method, technic of Politzerization. Catheterization of Eustachian tube.

FUNCTION OF EAR.—Watch test, voice test, tuning-fork tests.

EFFECTS OF NASOPHARYNGEAL AND NASAL AFFECTIONS ON THE EAR

Adenoids; symptoms, diagnosis. Fancial tonsils. Nasal obstructions and inflammations.

MIDDLE EAR

ACUTE MYRINGITIS.—Etiology, symptoms, diagnosis.

CHRONIC MYRINGITIS.—Symptoms, treatment.

INJURIES OF DRUM MEMBRANE.—Character, pathology, treatment.

ACUTE TUBOTYMPANIC CATARRH.—Causes, symptoms, prognosis, treatment.

ACUTE CATARRHAL OTITIS MEDIA.—Etiology, prognosis, treatment.

ACUTE SUPPURATIVE OTITIS MEDIA.—Etiology, symptoms, diagnosis, treatment. Incision of membrane, not "puncture." Local treatment, irrigation, etc., for pain.

CHRONIC PURULENT OTITIS MEDIA.—Symptoms, prognosis, treatment, medicinal and surgical.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

- DELAWARE: Dover and Wilmington, June 15-17. Sec., Dr. Henry W. Briggs, Wilmington.
- FLORIDA ECLECTIC: De Funiak Springs, June 10. Sec., Dr. Hiram J. Hampton, Tampa.
- FLORIDA: Tallahassee, May 19-20. Sec., Dr. J. D. Fernandez, Jacksonville.
- ILLINOIS: Coliseum Annex, Chicago, June 16-18. Sec., Dr. J. A. Egan, Springfield.
- IOWA: Des Moines, June 1-3 and June 22-24; Iowa City, June 8-10. Sec., Dr. Louis A. Thomas, Des Moines.
- KANSAS: Kansas City, June 10. Sec., Dr. R. A. Light, Chanute.
- MARYLAND: Baltimore, June 15-18. Sec., Dr. J. M. Scott, Hagerstown.
- MICHIGAN: Ann Arbor, June 8. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.
- MINNESOTA: Minneapolis, June 15. Sec., Dr. W. S. Fullerton, St. Paul.
- MISSOURI: Kansas City, May 17-19. Sec., Dr. J. A. B. Adcock, Warrensburg.
- NEBRASKA: State Capitol, Lincoln, May 25-27. Secretary, Dr. E. J. C. Sward, Oakland.
- NEW HAMPSHIRE: Concord, June 29-30. Regent, Mr. H. C. Morrison.
- NEW JERSEY: State House, Trenton, June 15-16. Sec., Dr. J. W. Bennett, Long Branch.
- NEW YORK: Albany, May 18-21 and June 22-25. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.
- NORTH CAROLINA: Asheville, June 9. Sec., Dr. B. K. Hays, Oxford.
- OHIO: Columbus, June 8-10. Sec., Dr. George H. Matson, State House, Columbus.
- PENNSYLVANIA: Philadelphia and Pittsburg, June 22-25. Sec., Mr. Nathan C. Schaeffer, Harrisburg.
- SOUTH CAROLINA: Columbia, June 8-10. Sec., Dr. H. H. Wyman, Aiken.
- TEXAS: Cleburne, June 22-24. Sec., Dr. M. E. Daniel, Honey Grove.
- VIRGINIA: Richmond, June 22-25. Sec., Dr. R. S. Martin, Stuart.
- WYOMING: Laramie, June 23-25. Sec., Dr. S. B. Miller.

Homeopathy at the University of Minnesota

For twenty years there has been a separate homeopathic department at the University of Minnesota teaching all the medical courses of the junior and senior years. Thus at great expense a separate department was maintained and the teaching of many courses unnecessarily duplicated. All the work of the first two years has long been taught by one department. Since the attendance had gradually dwindled until only three students remained, the Board of Regents on May 6, abolished the homeopathic department, feeling that, however worthy the cause, they were not justified in so great an expenditure to support it. Provision was made for two elective

chairs in homeopathic materia medica and in homeopathic therapeutics. It was also provided that students electing such work should be granted diplomas specifying that they were in homeopathic medicine.

University of Minnesota Appropriations

The Minnesota legislature at its last session appropriated \$440,000 for new buildings at the University of Minnesota. Of this sum \$200,000 was for a new anatomical building, \$200,000 was for a second medical laboratory building, and \$40,000 was for an addition to the Elliott Hospital bequest of \$115,000, thus making a total of \$155,000 for the hospital building. The sum of \$250,000 was also appropriated for the enlargement of the campus, \$500,000 having already been expended during the last two years. With these appropriations there is now a sum of over \$1,000,000 available for the erection of new buildings on the university campus within the next two years.

Two-Part Examinations for License

Dr. E. J. C. Sward, secretary of the State Board of Health of Nebraska, states that hereafter at all examinations, those who have completed the first two years of the medical course in any unrecognized medical college will be allowed to take examinations in the branches completed, the credits thus obtained to be accepted toward the examination for license after graduation. There are now seven states which have made this provision, the others being Colorado, Iowa, Maryland, Michigan, New York and Virginia.

Minnesota License Examinations

The following notice was received from Dr. W. S. Fullerton, secretary of the Minnesota State Board of Medical Examiners:

"The Minnesota State Board of Medical Examiners, at its regular April, 1909, meeting, adopted the following: 'All applicants for license will be required to take a practical examination in laboratory work in pathology, histology, bacteriology and urinalysis and in clinical diagnosis, and in such other branches as from time to time may be deemed advisable. Reciprocates, when coming from boards which do not require this examination, must take it before this board as a supplementary.'

"This rule goes into effect at once and will be enforced at the June, 1909, examination and subsequently.

"All applications must be on file with the secretary on or before the first of January, April, June and October for the examinations of those respective months.

"The next examination will be held at the State University, Minneapolis, beginning at 9 o'clock a. m., Tuesday, June 15. The practical examination begins at 9 o'clock a. m., Thursday, June 17."

National Meeting of Examining Boards

The National Confederation of State Medical Examining and Licensing Boards will hold its nineteenth annual meeting at Atlantic City, N. J., Monday, June 7, 1909, in the Park Avenue hall of the Hotel Marlborough. The subjects to be taken up at this meeting relate to the standing of medical colleges, and practical, oral and divided examinations before state medical examining boards. These topics at this time are urgent, practical and vital to the maintenance and development of the influence and efficiency demanded of state boards, both by the profession and by the state. Among the contributors of papers to this meeting are men of the highest standing in the medical profession, and their production will undoubtedly be of great value. An earnest and cordial invitation is extended by that body to all members of state medical examining boards, and all others who are interested in this work. The officers of the confederation are: A. Ravogli, M.D., acting president, 5 Garfield place, Cincinnati; Murray Galt Motter, M.D., secretary, 1841 Summit place, Washington, D. C.

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

Fifth Annual Conference, held at the Auditorium Hotel, Chicago, April 5 1909

(Continued from page 1523)

Character of the State License Examination

DR. FLEMING CARROW, Detroit, read the following paper:

The character of the state license examination must, of necessity, depend on, and in its scope and limitation, be regulated and controlled by, the teachings in the medical schools. When you advance the standard of your schools, our scope is broadened; if you narrow your instruction and shorten your medical course, the licensing board must necessarily conform to your teachings or refuse to examine your graduates.

The state board is not an educational institution, any more than it is a detective agency, for the apprehension of unlicensed and illegal practitioners of medicine. It is a body created by statute, operating within the state which called it into existence, and is in its character judicial, executive and advisory. Its scope and its function, therefore, can no more be governed by the ideas of individual educators than can the business of the interstate commerce commission be administered by the congress which created it.

It follows, therefore, that the function of the state licensing board must be advisory; to tell the educator what the law requires and it is the part of the educator to see that his school fulfils those requirements.

PRELIMINARY EDUCATION

If the law requires that a student beginning the study of medicine shall have had a standard high school education preparatory to that study, the board can not consistently admit to its examinations a graduate who has had less than that requirement. Less than that requirement may, in the opinion of the educator, be enough, but it does not fulfil the law governing such cases. The position I take, therefore, that the board is advisory as well as judicial and executive in character, seems to be a logical one.

The character of the state license examination: Is it good, sufficient and comprehensive? Or is it bad, inefficient and narrow? These questions all hark back to the academic one, is your medical education good? This, in turn, leads us to inquire, what of the preparatory school?

It seems to me that the senior year in the preparatory school should embrace more than the sciences. History should have a larger place in the mental preparation of the prospective medical student. The knowledge of at least the equivalent of "McLaughlin's History" should be insisted on; not alone because it is history, but because it is an eminently good training for medical study. There should be more to preparatory work than 60 counts. An elective course of study, best suited as the foundation of professional work, is of prime importance. Much more time might, with advantage, be given to the literature of at least two modern languages, some of which might be taken from physics.

MEDICAL TRAINING

As to the strictly medical training; if a man has been properly prepared in a preparatory school, four years is ample, if the medical college is a good one; if the instructors are trained teachers; if they are salaried men and can afford to give all the time necessary to teaching and do not have to shorten the lecture hour by the necessity of making a call, for a fee.

The man who comes before his class with a last year's lecture must not be surprised if his student fails when he reaches the state examining board, so, as I said, the character of the state examination depends on the character and fitness of the medical teacher.

If you think the state board is easy, may it not be because the educator has failed in his duty? One of my examinations in anatomy was pronounced too hard by one of the instructors at the University of Michigan, yet every student passed it, simply because the teacher who was then there was almost without a peer in this country. I knew that his students could pass any examination you could give them in anatomy.

The art of imparting knowledge is not possessed by every man who writes "Professor" before his name. The really good surgeon is not always he who can make the most graceful

curves in the air with a scalpel, but rather the one who, without the flourish of the studied gesture, makes his incision just where it should be.

The state examination will be comparatively simple if your school is proportionately thorough; and here the question should be considered: How shall the examination be conducted? Should it be written or oral? Should it be a laboratory or a clinical examination? Abroad, all four of these methods are in use. The written examination is, of all others, the poorest, yet it has the widest use. There are many men for whom it is easy to write a learned discourse (?) on any subject embraced in a medical course, and yet they may be totally unqualified for the practical side of medicine. It is a matter of common observation to see a man coming from a poor school, where there is but little teaching in laboratory and clinical work, stand high in a written examination.

His course has been largely a "cramming course" from quiz-compends; his written examination is quite in line with his habits of study and he passes well.

EXAMINERS TOO POORLY RECOMPENSED

As to the oral examination, the time which the average board member can give to such work, is not sufficient. Feeling that he is not recompensed by the state for his services, the first question he asks on arriving at the place of examination is, "When can I get a train home?" The remedy for this is to have a board, the members of which are not so actively engaged in practice that they can not give all the time necessary for the performance of this most important duty. The examiner should therefore be paid by the state.

The two remaining forms of test examination—in laboratory and clinical work, can not be conducted by the average state board man, because of his lack of knowledge of laboratory and clinical methods and technique. This again, could be remedied by the selection of laboratory and clinical men not connected with medical schools for the state board, these men to be under state commission and paid by the state.

THE IDEAL EXAMINATION

The ideal test examination would embrace all four of these methods, and it remains for this Council to suggest to the state board a plan whereby some such scheme may be made possible. The tests used to-day are inefficient and unsatisfactory, and it is to be hoped that in the near future, some remedy will be devised which will enable us to satisfy ourselves as to an applicant's fitness to practice medicine.

You, gentlemen, are absorbed in telling us how a man should be educated. We listen attentively and give weight to your advice. Does it not seem anomalous and out of the regular order, to expect the state examiner to do anything less than pass your student? Have you not prepared him for this very event, and has he not the right to pass successfully if you have taught him efficiently? It seems so to me. If you are building the machinery of a medical education properly it should not "slip a cog" when you pass the throttle to our hands.

The real fact is, and here lies the trouble, there are too many medical schools; and where there are so many, some are bound to be poor.

Again, teachers of medicine are not always selected for their fitness. In proprietary schools, some teach because they own stock. In the universities many other things enter into the securing of instructors besides their ability and preparedness to impart the knowledge they may have.

As an improvement along these lines I would suggest a general matriculation law for all schools; the state board to examine all who wish to matriculate in the medical colleges. Allowing students to enter on medical study with conditions in their preparatory work should be discontinued, as such a man is handicapped in his entire medical course.

In Michigan the board of registration in medicine is the supreme medical authority in the state—and if we are logical it should be given the oversight of the prospective medical student as well as of his fitness to engage in practice after he has finished his course in the medical college. With us this plan is in force, and it is as nearly perfect as can be. The manner of conducting the examinations becomes a secondary matter, therefore, if all medical colleges in the state have the same curriculum and prepare their students thoroughly.

Gentlemen, in conclusion, let me say that it is not entirely by the recommendation of higher standards of medical education that great things are to be accomplished now-a-days. There should also be more stringent laws enacted giving

greater power to the examining boards in order that schools which are not efficiently equipped to properly teach medicine can be closed and thereby prevented from graduating students solely by the cramming process.

DISCUSSION

DR. WILLIAM T. COUNCILMAN, Boston: The State Board of Medical Examiners have two distinct duties under their office. They serve in the first place to protect the public from the admission of men unfit to practice medicine. Medicine to-day calls for a different training and a somewhat different order of men from those who have served it in the past. The medical man of to-day must be trained in the methods of science because it is by the application of methods that the conditions of disease are investigated.

In the second place the examination must protect the medical profession, not in the narrow way of restricting the entrance into the medical profession as a trade union would, but by eliminating the unfit from entrance into the profession. If unfit men enter the medical profession it will gradually lose that respect and confidence of the public which it must have in order to attain its highest excellence and usefulness.

HOW EXCLUDE UNFIT MEN?

The demand for medical examining boards has come from the medical profession. Although the medical schools encouraged the movement, it came directly from the medical profession and not from the public, and to the medical profession, as I have said, the state boards have a definite duty. How shall the state examining boards exclude the unfit men? We believe that for the study of medicine a certain preliminary training is essential. This training consists chiefly in the study of the sciences, for on the ground work of science medical education depends. The state boards are within their rights in demanding that before entering on his medical education the medical student shall have had such a training. It is further true that they can exercise a certain amount of supervision over the medical schools of the state, but that, I think, is extraordinarily difficult. How can a state board of examiners know whether the methods of instruction which are adopted in any particular school are the best methods? Medical education is at the present time in such a condition of uncertainty that we do not know what are the best methods, and certainly the state boards can not decide. Moreover, how is the state board to decide whether the methods advertised by a medical school are on paper only or whether they are actually enforced. Those of us who have had much experience with catalogues of medical schools know that the imagination is not carefully restricted in the preparation of the catalogue. Nothing could be worse for the state of medical education in the country than a demand on the part of a state board of education that the instruction in the medical schools of the state should conform to a definite curriculum. The success of any order of studies will depend on the facilities which the school has and on the character of its teachers. If a medical school with very unusual methods of instruction turn out men of a high class, those men should pass the examining boards. Even if medical schools admit candidates who have had none of the preliminary education, which is generally regarded as essential, and if still by very careful methods of instruction they turn out a suitable product their product should be admitted into the medical profession. It seems to me that the amount of good which the state board of examiners can do by insisting on preliminary training and methods of teaching in the schools themselves is very limited.

CHARACTER OF EXAMINATION MOST IMPORTANT

The selection of men can be determined only by an examination and on the character of this examination everything depends. In the beginning and up to the present time the examination has been a written one. Certain formal questions are asked and the candidate writes out the answers. That this is the easiest and the quickest method of examination no one will deny. That it is an absolutely unsuitable method every one who has been engaged in teaching and examining students will recognize. In the first place there is a very great difficulty in the preparation of questions which will really test a candidate's knowledge. It is only possible to ask a certain number of questions on any subject. In the yearly preparation of examinations certain questions will recur in spite of the examiner. It is hardly possible to ask more than one hundred questions on any subject. These examinations in the beginning undoubtedly stimulated the schools but the poor schools quickly rose to the emergency and their instruc-

tion was based not on rendering a student fit for the high duties of the profession but on making him capable of passing the examination. The matter of examination passing has been rendered very much more facile by the preparation of quiz compends in which the questions of state boards are analyzed and suitable answers given. Any man of proper intelligence by the use of such a quiz compend can prepare himself in the course of a few months for such an examination without any real medical training at all.

The examination for admission to the practice of medicine should not be a written examination, to show what the candidate remembers and can write, but a practical examination to show what he really knows and can do. The real efficiency of a medical man depends largely on his knowledge of methods of diagnosis and treatment and his facility in the use of these methods, and that a candidate has this knowledge and ability can only be tested by the actual demonstration. This, I think, will be admitted on all sides.

PROVISION FOR PRACTICAL EXAMINATIONS

The objections which are urged against such methods of examination are numerous. In the first place it is said that the examiners themselves at present are incapable of conducting such examinations. If this be true, and I hardly believe it, they should give up their offices to those who are capable of conducting such examinations. In accepting the position they have assumed certain duties, and if not capable of fulfilling them they should not occupy the positions. It is also said that the state boards have not the facilities for conducting such examinations. This is not true. I feel perfectly sure that every assistance will be given to the state examining boards by the medical schools in the state. They will offer their laboratories and all their facilities. The examination should not be held in places where facilities of this sort can not be provided. The laboratory side of the practical examinations is the least. The practical examination should embrace the clinical as well as the laboratory side of medicine. There is no difficulty whatever in providing material for the clinical examination. In every city where the examination would be held there is enough ambulant dispensary material to provide for the examination. Even the facilities of a hospital would be extended to the state boards if they asked for them and used them properly. By this clinical examination the student should show that he is thoroughly trained in the methods of diagnosis by auscultation and percussion, and in all of the clinical methods; that he understands the principles of anti-septic surgery and can apply them; that he knows his regional anatomy and can apply his knowledge in the diagnosis of internal conditions. Another objection which is raised is that such an examination to be effective will occupy more time than the written examination. Undoubtedly this is true and more time must be given to the examinations. If the emoluments of the office do not justify this expenditure of time on the part of the examiner the emoluments should be increased. The state could easily meet the increased expense by exacting a higher fee for the examination. There is no reason why the fee should not be at least \$100. The cry of the poor boy will be at once raised, but if the poor boy has the proper material in him he can easily get together the money. He has gotten together much more for his medical education. It is not justifiable to make a whole system of examinations ineffective by the lack of funds.

PRACTICAL EXAMINATIONS COMMON ELSEWHERE

We as a medical profession and as a part of the public should insist on this practical examination. The best medical schools would welcome it, because they do not fear the application of any suitable test to determine the fitness of their method. It will be opposed by certain of the schools who are training men to pass examinations as at present conducted. It seems rather absurd that we should say that the practical examination can not be held here when it is held in every country in Europe and in Canada. I can not avoid speaking strongly on the matter because it is one to which I have given a great deal of thought. It seems to me that the state boards have the matter of medical education entirely in their own hands. They can demand that the medical schools shall turn out a fit product. The state examiners hold the most important medical positions in the state. They have a greater responsibility than that of a teacher in a medical school, and greater than the state health officials. I firmly believe that they will rise to this responsibility and show that this country must not stand behind other countries in the selection of the

men who are fit to enter the ranks of the profession. The practical examination will also do away with the difficulties arising from the different schools of medicine. If a man shows that he has knowledge of methods and facility in the application of these methods in the recognition and in the treatment of disease he can be trusted no matter under what medical sect he chooses to array himself.

SOME RESULTS OF HIGHER STANDARDS OF PRELIMINARY EDUCATION.

BY R. H. WHITEHEAD, UNIVERSITY OF VIRGINIA.

The revolution in medical education which has been going on in the past ten or fifteen years is characterized by four prominent features: 1. Better preparation of students before admission to the schools. 2. Thorough training in the fundamental medical sciences by laboratory methods as a means to such a good understanding of the subjects studied that the student shall be able to keep abreast of advances in medical science in after years. 3. Better training in the clinical branches by methods which permit and enforce personal study of disease and its management in living people. 4. The employment of trained teachers to whom teaching and investigation are primary, not secondary, considerations.

The first of these is the most important, since it is fundamental to the others; without suitable preparation of the student, other measures are for the most part ineffectual. Accordingly, while I have in mind in a general way all the features of the newer standards, this paper is concerned chiefly with the item of preliminary education.

As the result of conjoint action of various bodies, there are two standards of preliminary education now before us: The first demands the completion of a four-year high school course, or an equivalent amount of education. While it is the present standard of the majority, perhaps, of our medical schools, it is recognized that it is far from satisfactory, and that it is merely a temporary halting place. The other requires, in addition to the high school course, a year's work in college chemistry, physics, biology and a language, preferably German. As a matter of fact, it means, in most cases, two years of college work, as our college curricula are now constructed. In 1910 this or a higher requirement will be in force in almost all of our university medical departments.

As I am connected with a school which for the past two years has been requiring for admission the completion of a year of college work in chemistry, physics and biology, your secretary has asked me to present a statement of our experience with, and some observations on, a requirement which is quite similar to the one which is to receive such wide adoption in 1910.

We may consider the subject from two standpoints: pathologic and economical. Pedagogically speaking, the requirement has been beneficial in various ways: The great maturity and more earnest spirit of the students are, of course, decided gains; and the technical knowledge and training in the fundamental preparatory sciences possessed by them have enabled the instructors to improve the character and quality of their courses greatly. But the greatest, the almost inestimable value of the requirement, in my experience, is the fact that it constitutes a barrier between the medical school and the obviously unfit. The incapable student, the chronic idler, and the man to whom the study of natural science is distasteful, are kept out of the school. I should say, then, pedagogically speaking, that the greatest value of the requirement is its efficiency as a sifter, separating the chaff from the wheat.

I should like to digress at this point to say a few words as to the character of the courses in physics and biology, which, it seems to me, are desirable for the prospective medical student. The course in physics at the average college, so far as my experience goes, is either almost entirely theoretical with little laboratory work, or specialized and adapted more particularly to the needs of the engineering student. It is, in either case, a study of mathematics rather than of Nature, and it is often so difficult that students who are deficient in mathematical talent are almost certainly doomed to failure. Is it not possible to devise good college courses in physics designed to meet the needs of medical men, courses which shall be less mathematical and deductive, more experimental and inductive? And the courses in biology might be improved in my opinion by a fuller consideration of the great biological conceptions which have so profoundly influenced modern thought.

I come now to the economic side of our question. Ours is a small department of one of the smaller universities. The effect of the introduction of this requirement on attendance was to reduce the size of the entering class 50 per cent., and at the end of two years the total attendance has been reduced about 30 per cent., at which point, we hope, the reducing process will stop. Recently I have examined the statistics of 21 representative schools which have raised their entrance requirements within the past few years; in many cases the increase was only to a high school course. The average reduction in attendance in these schools at the expiration of two or three years was 42 per cent.; that is, these schools suffered a loss of nearly one-half of their students as compared with the enrollment before the raise in standard. It seems perfectly clear that the wide adoption of the standard which we are discussing will produce a considerable diminution in the size of the annual increment to a badly overcrowded profession, accompanied by a great improvement in the average quality of that increment. The young medical man of the early future is going to be a much more efficient practitioner, and better able to lead and direct in matters pertaining to the public health.

In this connection we must not forget our debt of gratitude to those university presidents and trustees, who, in spite of the costliness of a modern medical school, and in spite of the general indifference of the public to the ideals of medical education, have had the courage and the wisdom to devote so much of their ability to this phase of public service.

I come next to a most important consideration: What should be the attitude of the state examining and licensing boards to this standard? For a long time one of the principal functions of these bodies has been to persuade and compel medical schools to enforce a certain minimum standard of preliminary education—and doubtless there is necessity for a continuance of this function; but the situation is now, in a way, reversed, and the question is, Can and will the boards adopt the higher standard set up by many of the schools and advocated by this Council? It is clear that the boards of some localities can not do so; local conditions would not justify and sustain them. On the other hand, some boards more fortunately situated have already adopted it; and there are various other states whose boards possess the necessary authority and whose conditions fully warrant such action. The advantages of this standard to the medical profession and to the public would still be evident, no matter what action the boards may take; but it is certain that its benefit can not be reaped fully unless a considerable number of the boards approve and support it. In all probability many medical schools will continue to maintain just as low a standard as the boards will allow.

"Every situation in life has its advantages and its disadvantages." Let us glance for a moment at one of the disadvantages of the present situation. The recent inspection of medical schools, conducted by the Council, has revealed quite a number which, even under a most liberal system of grading, can not be regarded as doing acceptable work. Many of the states are protected against the graduates of such schools by the fact that their examining boards have the authority to refuse recognition to schools which fall below their standards. But there are other states whose boards are compelled by law to examine any graduate of any medical school. Accordingly, the graduates of these discredited schools, being excluded from the majority of the states, will naturally gravitate toward the places of least resistance; and numbers of them will get by the boards, if only written tests are relied on to stop them. There is in the present situation a distinct menace both to the profession and to the public of such states, which should be met promptly, either by holding practical examinations for license, or by securing the necessary changes in the medical acts.

Finally, a word as to medical education in the south and its relation to higher standards of preliminary education. Here, I regret to say, are located a considerable number of the schools which have been discredited by the Council; here almost none of the examining boards have the authority to discriminate between schools, and here it will be difficult to secure such authority from the legislatures; and here, through the operation of causes which are perfectly natural and well understood by all who are acquainted even superficially with the history of the country, popular education has lagged behind the progress made in many other sections, so that the proper educational basis for high standards in medicine has

been developed very imperfectly as yet. There are a number of old and well-established medical schools in the south to whom the proposition to adopt the Council's standard would be equivalent to a request to commit suicide. And even if the schools were to be so obliging as to accede to the request, their places would be taken immediately by others not so good. The difficulties can not be met by the adoption of standards not justified by the local conditions; but I am confident that it would be a mistake, so far as the south is concerned, for this Council to lower the standard out of consideration for southern difficulties, or for any other reason. On the contrary, the south needs that standard as a goal to be striven for; and it must not expect other sections of the country to retard their own progress. It must, in large measure, work out its own medical salvation; not in fear and trembling, however, but with courage, patience and wisdom. That it can and will do so, I have no doubt. The revival in education—primary, secondary and collegiate—now going on in many southern states is, perhaps, imperfectly understood and appreciated in the north and west. It is a movement of great extent and power, well organized, and intelligently directed towards a definite end. Just at present the bulk of this effort is being expended on the secondary schools. The public secondary schools have been strengthened greatly, and 680 new ones have come into existence in the last three years. During the same time there are few southern colleges of any standing which have not increased their requirements by amounts varying from 25 to 150 per cent. Moreover, the material wealth of the south is increasing so rapidly that it promises soon to become a most prosperous country. The spread of the idea of local taxation guarantees in the near future a system of public schools of definite and permanent importance. So that the day is not so very far off when there will exist the proper basis for high standards in medical education. Already the leaven of high ideals is working in at least three southern universities. And so, I say, do not worry about the south; it will work out its educational development in due time. In the meanwhile the Council can be of much service by stimulating, encouraging, helping—but not by lowering its standard.

Marriages

GEORGE ROGER MYERS, M.D., to Miss Edna, both of Hurlock, Md., April 28.

JESSE L. BEAUCHAMP, M.D., to Miss Clyde Brooks, both of Memphis, Tenn., April 27.

GEORGE ALLEY RENN, M.D., Norfolk, Va., to Miss Sarah E. T. Harris, at Norfolk, April 28.

ORLANDO F. SCOTT, M.D., Argo, Ill., to Miss Alma Elizabeth Ham of Frankfort, Ind., April 7.

JESSE T. LITTLE, M.D., Pittsburg, Pa., to Miss Mary Carskadon, at Keyser, W. Va., April 28.

CLARENCE LAMAR GIDDENS, M.D., Adel, Ga., to Miss Luelle Bray of Valdosta, Ga., April 25.

DANIEL PATTEE RAY, M.D., Johnstown, Pa., to Miss Mary McQuown of Clearfield, Pa., May 5.

FRANCIS BENEDICT DOYLE, M.D., to Miss Josephine Harper Dillon, both of Brooklyn, N. Y., April 28.

ORVILLE G. BROWN, M.D., U. S. Army, to Miss Clara Amsden Topping, in Sheridan, Wyo., April 21.

MARY J. DUNLAP, M.D., Vineland, N. J., and Clarence Snyder of Racine, Wis., at Trenton, N. J., May 1.

EDWARD BARNEY SMITH, M.D., Woodleigh, N. C., to Miss Alice Saunders Thomas, at Creeds, Va., April 21.

JAMES HALL MASON KNOX, JR., M.D., Baltimore, Md., to Miss Marian Gordon Bowdoin, at Baltimore, April 28.

EARL H. BRUNS, M.D., U. S. Army, to Miss Caroline K. Howard of Stamford, Conn., at Silver City, N. M., April 17.

Deaths

Melchert H. Garten, M.D. Rush Medical College, 1871; one of the most prominent and beloved practitioners of Lincoln, Neb.; died suddenly at his home in that city from angina pectoris, May 6, aged 63. He was born in Springfield, Ind., and graduated from DePauw University before taking up his medical work. For twelve years after his graduation, he practiced in

Dover, Ill., and then moved to Lincoln, Neb., where he soon attained a leading position as a specialist in diseases of the eye, ear, nose and throat. He was a member of the American Medical Association, and always an active and earnest member of the state and county societies. He was an ideal husband, father and friend, modest and retiring, unostentatiously liberal in his benefactions, especially in aiding struggling students to obtain an education. He had been in attendance at the annual meeting of the state medical society in Omaha, where he complained of indigestion, which proved to be angina pectoris.

Frederick Bailey Mandeville, M.D. New York Homeopathic Medical College and Hospital, 1863; a member of the medical staff of St. Mary's Hospital, Newark, N. J.; a member of the board of education from 1872 to 1881; a member, twice president and for five years chief health officer of the board of health of Newark; twice president of the New York Homeopathic Medical Society, and twice vice-president of the American Institute of Homeopathy; medical director, vice-president and president of the United States Industrial Insurance Company; assistant surgeon in the Army during the Civil War; died at the home of his son in Newark, April 28, from nephritis, aged 68.

Charles W. Hagen, M.D. Missouri Medical College, St. Louis, 1861; a member of the Medical Society of New Jersey; surgeon of the Fifty-fourth New York Volunteer Infantry, and later medical director of the Army of the Potomac during the Civil War; afterward aqueduct commissioner; coroner of Essex county, N. J., and a member of the board of supervisors; a member of the consulting staff of the German Hospital, Newark; died at his home in that city, April 5, from cerebral hemorrhage, aged 80.

James Presbury DeBruler, M.D. University of Pennsylvania, Philadelphia, 1899; a member of the American Medical Association; who entered the U. S. Navy Jan. 3, 1903; was commissioned passed assistant surgeon Jan. 3, 1906, and had a little more than four years' sea service, and two years' shore or other duty; died at San Juan, Porto Rico, May 7, on board the United States Gunboat *Paducah*, of which he was the medical officer, aged 32.

Phineas Phillips Nichols, M.D. Philadelphia College of Medicine and Surgery, 1856; formerly of Coldwater, Mich.; deputy register of deeds of Branch county, Mich.; from 1860 to 1864; and for the next four years register of deeds; publisher of the *Coldwater Courier* for several years; died at the home of his brother in Valley Forge, Pa., April 15, from cancer of the nose and face, aged 75.

Andrew Homer Scott, M.D. Jefferson Medical College, Philadelphia, 1868; a member of the Arkansas Medical Society; at one time president of the Pulaski County Medical Society; a Confederate veteran; and later physician to the state penitentiary; died at his home in Little Rock, from disease of the hip, due to an accident six months before, aged 68.

William Burgess Wall, M.D. Jefferson Medical College, Philadelphia, 1853; a member of the Medical Society of the State of California; president of the Pacific Coast Soda Company; the Santa Ana Commercial Company; the Santiago Orange Growers' Association, and the Santa Ana Oil Company; died at his home in Santa Ana, April 22, aged 79.

Harvey Williams, M.D. University of Michigan, Ann Arbor, 1871; a member of the American Medical Association, and a pioneer practitioner of Saginaw, Mich.; died at his home, April 22, from cardiac dropsy, aged 63. The Saginaw Medical Society, at a special meeting, held April 23, eulogized the memory of Dr. Williams in suitable resolutions.

Henry Joseph Coyle, M.D. Jefferson Medical College, Philadelphia, 1886; a member of the American Medical Association; and formerly president of the Beaver County Medical Society; a member of the staff of the Beaver Valley General Hospital; died at his home in New Brighton, Pa., January 16, aged 44.

James Clark Watson, M.D. Medical College of Virginia, Richmond, 1885; of Richmond, Va.; assistant surgeon in the Confederate Service during the Civil War; and in 1884 appointed surgeon to the Virginia Penitentiary; died in the Virginia Hospital, Richmond, April 30, aged 78.

Charles James McNamara, M.D. University of Toronto, 1889; of Barlow, N. D.; a member of the American Medical Association; for ten years a member of the Northwest Mounted Police; died at St. Mary's Hospital, Superior, Wis., from uremia, April 28, aged 43.

Solomon Jacob Best (license, Ill., years of practice, 1877); a practitioner of Freeport, Ill., for more than fifty years; said to have been the oldest member of the Stephenson County Medical Society; died suddenly from angina pectoris, at his home, April 26, aged 71.

Lemuel Cross, M.D. Albany (N. Y.) Medical College, 1856; for several terms a member of the board of education and board of U. S. pension examining surgeons of Cobleskill, N. Y.; died at his home in that place, April 26, from disease of the liver, aged 75.

Benjamin Ellsworth DuVall, M.D. Georgia College of Eclectic Medicine and Surgery, Atlanta, 1900; Chicago College of Medicine and Surgery, 1904; of Dixon, Ill.; died in the Lee County Hospital in that city, April 15, after an operation on the kidney, aged 41.

E. D. Frank, M.D. Louisville (Ky.) Medical College, 1894; of Prestonsburg, Ky.; was found dead in a cemetery near Lexington, May 1, from the effects of a gunshot wound of the head, supposed to have been self-inflicted with suicidal intent, aged 45.

John Duboise North, M.D. University of Michigan, Ann Arbor, 1859; local surgeon for the Jackson, Lansing and Saginaw and Michigan Central railroads for many years; died at his home in Jackson, April 30, from tumor of the esophagus, aged 75.

Henry Marshall Pinkard, M.D. Jefferson Medical College, Philadelphia, 1855; of Washington, D. C.; surgeon in the Confederate Service during the Civil War; died in the George Washington University Hospital, April 28, from nephritis, aged 71.

Burr L. Houghton, M.D. New York Homeopathic Medical College and Hospital, New York City, 1881; New York University, New York City, 1891; died suddenly at his home in Brooklyn, N. Y., May 1, from cerebral hemorrhage, aged 54.

Michael Riley Powers, M.D. Louisville Medical College, 1902; of Jeffersonville, Pa.; a noted professional baseball player; died at the Northwestern General Hospital, Philadelphia, from peritonitis, following an injury to the intestines, aged 38.

Norman Pitt Smith, M.D. Hahnemann Medical College, Chicago, 1881; a member of the American Medical Association, and of the International Association of Railway Surgeons; died suddenly at his home in Paris, Ill., April 29, aged 62.

William Ward, M.D. Georgetown University, Washington, D. C., 1871; a member of the Medical Association of the District of Columbia; a Confederate veteran; died at his home in Washington, April 19, from cerebral hemorrhage, aged 69.

Mark De Les Dernier Sheldon, M.D. Western Reserve University, Cleveland, 1850; for many years a practitioner of Story county, Iowa; died at the home of his daughter in St. Paul, Minn., April 11, from senile debility, aged 92.

Levin J. Woolen, M.D. University of Louisville, Ky., 1857; of Vevay, Ind.; state senator from Ohio, Ripley and Switzerland counties in 1878; for two terms auditor of Switzerland county; died at his home, April 20, aged 73.

David H. Miller, M.D. Medical College of Ohio, Cincinnati, 1867; a veteran of the Civil War; for three years a member of the school board of Franklin, Ind.; died at his home in that city, from nephritis, April 22, aged 66.

James J. Foster, M.D. Wisconsin College of Physicians and Surgeons, Milwaukee, 1903; a member of the American Medical Association; died at his home in Milwaukee, April 30, from disease of the liver, aged 40.

Horatio Gomez, M.D. College of Physicians and Surgeons, New York City, 1849; a charter member of the Medical Association of the Greater City of New York; died at his home in New York City, April 22, aged 82.

John Henry Norstrom, M.D. University of Pennsylvania, Philadelphia, 1893; a member of the American Medical Association; for many years a practitioner of Boone, Iowa; died in Austin, Texas, April 27, aged 57.

Chester M. Clark, M.D. Berkshire Medical College, Pittsfield, Mass., 1849; for several years clerk of the village board and a member of the school board of Galva, Ill.; died at his home in that city, April 25, aged 82.

John C. O'Dwyer, M.D. College of Physicians and Surgeons, Baltimore, 1900; died at the home of his mother in Ansonia, Conn., April 13, from valvular heart disease, following inflammatory rheumatism, aged 31.

Thomas William Radford, M.D. University of Louisville, Ky., 1851; three times treasurer of Jackson county, Mo.; died at the home of his daughter in Kansas City, April 10, from senile debility, aged 80.

Enos Greenamyer, M.D. Eclectic Medical Institute, Cincinnati, 1864; for many years a practitioner of Columbiana, Ohio; died at the home of his daughter in Lisbon, Ohio, May 1, from influenza, aged 77.

George Mills Boyd, M.D. Western University, London, Ont., 1905; a member of the Medical Society of the State of Pennsylvania; died suddenly from embolism, April 28, at his home in Philadelphia, aged 30.

Joseph W. Bates, M.D. Medical College of Ohio, Cincinnati, 1883; a member of the Indiana State Medical Association; died at his home in Broad Ripple, Indianapolis, May 3, from pneumonia, aged 51.

Ebenezer Everett Fisher, M.D. Homeopathic Medical College of Pennsylvania, Philadelphia, 1869; of Old Mission, Mich.; died at the home of his daughter, in Traverse City, Mich., April 27, aged 66.

Joseph H. Plunkett, M.D. Tulane University, New Orleans, 1890; a member of the Mississippi State Medical Association; died at his home in McComb City, April 29, from nephritis, aged 46.

Arthur Pearl Crafts, M.D. Long Island College Hospital, Brooklyn, N. Y., 1890; formerly of Cleveland, Ohio; died in the Michigan Asylum for the Insane, Kalamazoo, April 25, aged 42.

William L. Challiss, M.D. Jefferson Medical College, Philadelphia, 1849; of Atchison, Kan.; died at the home of his daughter in Toledo, Ohio, April 23, from senile debility, aged 84.

James Warren Freeman, M.D. Albany (N. Y.) Medical College, 1864; for many years a member of the Michigan State Medical Society; died at his home in East Saginaw, May 3, from inflammatory rheumatism, aged 80.

William L. Clagett, M.D. Medical College of Ohio, Cincinnati, 1874; a member of the Medical Society of the State of Pennsylvania; died at his home in Rummerfield, April 21, aged 88.

A. C. Vories (license, Ky., years of practice, 1894); postmaster of Boaz, Ky., for many years; and for 54 years a practitioner; died at his home May 1, from senile debility, aged 81.

Daniel S. Skinner, M.D. Detroit College of Medicine, 1899; of Saline, Mich.; died at the home of his parents in St. Mary's, Ont., from valvular heart disease, April 19, aged 51.

John A. McCreary, M.D. Tulane University, New Orleans, 1860; a member of the Medical Association of the State of Alabama; died at his home in Evergreen, April 26, aged 75.

James S. Curry, M.D. Medical College of Virginia, Richmond, 1867; of Petersburg, Va.; a Confederate veteran; died at the home of his daughter in Franklin, W. Va., April 28, aged 72.

Harry Clay McCormick, M.D. Philadelphia University of Medicine and Surgery, 1871; died at his home in Pen Argyl, Pa., March 9, from chronic interstitial nephritis, aged 65.

Willard E. Berkaw, M.D. University of Pennsylvania, Philadelphia, 1881; of Annandale, N. J.; for a time physician of Hunterdon county; died suddenly from heart disease, in the Annandale Hotel, April 29, aged 52.

William H. Griffiths, M.D. New York Homeopathic Medical College and Hospital, New York City, 1874; of Munnsville, N. Y.; died in Rome, N. Y., April 20, aged 54.

John E. Wesley (license, Utah, 1894); for more than half a century a practitioner of Salt Lake City; died at his home, April 25, from cerebral hemorrhage, aged 82.

John Blevins, M.D. American Medical College, Eclectic, St. Louis, 1881; a veteran of the Civil War; died at his home in Cove, Ore., April 19, from heart disease, aged 65.

William W. Payne, M.D. Southern Medical College, Atlanta, Ga., 1882; died at his home in Meridian, Miss., April 16, from pernicious anemia, aged 49.

Louis Edward Taubel, M.D. University of Pennsylvania, Philadelphia, 1885; died at his home in Philadelphia, April 26, from typhoid fever.

Ben McD. Trabue, M.D. Transylvania University, Lexington, Ky., 1848; died at his home in Allensville, Ky., April 15, from senile debility, aged 81.

Henry Benjamin Cragin, Jr., M.D. Rush Medical College, Chicago, 1901; of Chicago; died in a hospital in that city May 27, 1908, from cerebral meningitis, aged 33.

William Purdy, M.D. University of Louisville, Ky., 1884; a member of the Illinois State Medical Society; died at his home in Lawrenceville, April 15, aged 50.

William Wilson Coker, M.D. College of Physicians and Surgeons, Chicago, 1888; L.R.C.P., Ireland, 1872; died at his home in Chicago, May 1, from cerebral hemorrhage, aged 69.

Thomas Jefferson Denny, M.D. Cincinnati College of Medicine and Surgery, 1872; died at his home in LaFollette, Tenn., Oct. 10, 1908, from nephritis, aged 63.

Alvarado Middleditch, M.D. Albany (N. Y.) Medical College, 1856; a pioneer physician of Waterloo, Iowa; died at his home in Pasadena, Cal., April 26, aged 80.

Roloff Johnson, M.D. Northwestern Medical College, St. Joseph, Mo., 1888; died at his home in Normal, Ill., May 1, from disease of the stomach, aged 59.

Harrison A. Nichols, M.D. University of Michigan, Ann Arbor, 1868; died at his home in Plymouth, Mich., April 30, from cerebral hemorrhage, aged 63.

John Portuous Morison, M.D. University of Michigan, Ann Arbor, 1868; died at his home in Chicago, from cirrhosis of the liver, May 1, aged 66.

James G. Nellis, M.D. Hahnemann Medical College of the Pacific, San Francisco, 1888; died at his home in Irvington, Cal., April 23.

Martin S. Dowling, M.D. Eclectic Medical Institute, Cincinnati, 1873; died at his home in Leslie, Mich., April 27, aged 71.

Robert S. Albright, M.D. Rush Medical College, Chicago, 1884; died at his home in Beatrice, Neb., April 19.

Albert T. Carpenter, M.D. Detroit Medical College, 1891; died in Chicago, May 5, from paresis, aged 38.

Arthur Gamgee, M.D. Edinburgh; emeritus professor of physiology in Owen's College, Manchester; who won renown by his original research work in physiology and physiologic chemistry, and especially regarding the chemical and physical properties of hemoglobin, which were the subject of the Croonian Lectures delivered by him before the Royal Society in 1902; whose last work was inquiry undertaken for the Carnegie Institute on the "Present State of Knowledge of the Physiology of Nutrition;" a life devotee of science and an enthusiastic lover of scientific work; died in Paris, March 29, from pneumonia, following influenza, aged 67.

Manuel Amador, M.D. a native of Carthagena, Columbia; president of the State of Panama in 1869; one of the prime movers in the revolution against the United States of Colombia in 1903, which led to the independence of Panama, and first president of that republic; died in Panama, May 2, aged 75.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

American Academy of Medicine, Atlantic City, June 5-7.
Am. Assn. of Genito-Urinary Surgeons, Pocono, Pa., May 31-June 1.
Am. Climatological Association, Fortress Monroe, Va., June 4-5.
American Dermatological Association, Philadelphia, June 3-5.
Am. Gastro-Enterological Association, Atlantic City, June 7-8.
American Gynecological Society, New York, May 27-29.
American Laryngological Association, Boston, May 31-June 2.
American Laryn., Rhin. and Otol. Society, Atlantic City, June 3-5.
American Medico-Psychological Assoc., Atlantic City, June 1-4.
American Neurological Association, New York, May 27-29.
American Orthopedic Association, Hartford, Conn., June 14-16.
American Pediatric Society, Lenox, Mass., May 27-28.
American Proctologic Society, Atlantic City, June 7-8.
American Surgical Association, Philadelphia, June 3-5.
American Urological Association, Atlantic City, June 7.
Arizona, Medical Association of, Prescott, May 19-20.
Arkansas, Medical Society of, Pine Bluff, May 18-21.
Con. of State and Prov. Bds. of No. Am., Washington, June 4-5.
Connecticut State Medical Society, Hartford, May 26-27.
Illinois State Medical Society, Quincy, May 18-20.
Iowa State Medical Society, Dubuque, May 19-21.
Maine Medical Association, Portland, June 16-17.
Massachusetts Medical Society, Boston, June 15-16.
Missouri State Medical Association, Jefferson City, May 18-20.
Natl. Cou. State Med. Ex. and Licensing Bds., Atlantic City, June 7.
New Jersey Medical Society, Cape May, June 23-25.
Rhode Island Medical Society, Providence, June 1.
Wisconsin State Medical Society, Madison, June 30-July 2.

MISSISSIPPI STATE MEDICAL SOCIETY

Forty-second Annual Meeting, held at Jackson, April 13, 1909

(Continued from page 1533)

Surgical Treatment of Complete Prolapse of the Uterus

DR. J. CRISLER, Jackson, described briefly the causes of uterine prolapse and methods for its prevention. He had operated on three cases of complete prolapse, doing vaginal hysterectomy. He stitched the broad ligaments to the under surface of the bladder and to the cuff of the vagina and finally stitched the vaginal cuff transversely. The bladder and inner extremity of the vagina were thus swung high by retraction of the ligaments. Any perineal laceration was then repaired. The operation was easy on the patient, though tedious for the operator, and recovery was usually complete in two weeks.

Indigestion from a Surgical Standpoint

DR. J. DARRINGTON, Yazoo City, discussed the surgical conditions which present those symptoms that combine to show the picture called indigestion by many physicians. He advocated early exploratory operation to determine and correct the cause. Too many of these patients were treated with medicine when surgery offered the only hope of cure.

DISCUSSION

DR. BARKSDALE, Vaiden: There is no doubt that many of the ills that we attribute to little errors of secretion are due to some distinct lesion of the stomach which could and should be relieved by surgical measures, which if promptly taken can be carried through with very little danger. I should like to emphasize the importance of bringing to our aid in diagnosis early in these troubles the skill of the trained pathologist, in order that we may discover at once what the causing lesion may be.

DR. H. L. SUTHERLAND, Rosedale: Last fall a male patient was sent to me who had been having small hemorrhages from the stomach. He was sent to the hospital and had a considerable hemorrhage on the afternoon he reached there. That night he had a very violent hemorrhage and my partner was called to see him and notwithstanding that we used all the salt solution we could, the man died from the hemorrhage. Postmortem examination of the stomach showed that the lining of the stomach was normal, and evidently we had not reached the point at which the ulcer was located. The intestines could not be examined.

DR. JOHN DARRINGTON: It would have been of interest to have gone into the different diseases of the stomach and bowels, the gall bladder and ducts, and the causes of hemorrhage. I had a case not long ago of continued hemorrhage, and on operation found cirrhosis of the liver with no evidence of ulcer of the stomach. It is the family doctor who is called into these cases because the patients can not digest food, have some aene eruptions, etc. The physician does not wait for hemorrhage to diagnose rupture of the bowels any more than he would wait for jaundice to diagnose gallstones, so he should not wait for hemorrhage to diagnose ulcer of the stomach.

The Importance of Surgical Diagnosis

DR. A. G. PAYNE, Greenville, made an appeal for greater care and exactness in making diagnoses. The tendency for the surgeon and the internist to look at a case only from his own point of view had become too great. Each would do better work in proportion to the breadth and exactness of his knowledge and his ability to view a case from both sides. He cited several illustrative cases.

DISCUSSION

DR. R. WISS, Meriden: A woman was sent to me about four years ago who had been told that she had serious ovarian trouble and must have both ovaries removed. She was desirous of having a child; she had had one child, and had been ill for some years. I found an ulceration, and finally, after a test meal, I located the trouble in the stomach, and by washing the stomach she was restored

to health. Later an operation was done for the ulcer. One year later I delivered her of a twelve-pound boy. The boy is now 3 years old, and both she and the child have remained perfectly well all the time.

DR. CRISLER, Jackson: Unfortunately it has been the habit of physicians to accept as a matter of course the symptoms that patients relate, and to this degree to allow the patient to diagnose his own condition. Of course at an autopsy we find that he was wrong, but then it is too late. Sometimes he is right, but that doesn't relieve us of the responsibility. I do not think the necessity for thorough abdominal and sub-pelvic examinations can be emphasized too strongly. In addition to a thorough examination we ought to enquire carefully if the patient has noticed any enlargements. It happened to be my misfortune some time ago for a woman to come to me with typical gall-bladder symptoms, and instead of going over her carefully as I should have done, I simply took her statements and drained the gall bladder and thought I had cured her. She gained very rapidly, and apparently got well. Three or four months later she returned complaining again and I found she had cervical cancer. It would have been easy at first to remove the gall bladder and avoid a second operation, and she now refuses to go under an anesthetic a second time. In appendicitis work we are misled more often than anywhere else.

DR. H. L. SUTHERLAND, Rosedale: I wish to refer to a book or paper written in the '70's by Hilton of London, called "Rest and Pain," and although a long time has intervened, that book is becoming more and more a classic. It shows how often we can be deceived by pains remote from the real lesion. In 1903, in New Orleans, Herriek of Chicago, read a paper on "Abdominal Pain in Pleurisy and Pneumonia." I think that is one of the best books I have in my library. It relates a good many cases in which lung trouble caused the pain. We all know that pains from the chest and lesions of the lungs are often referred to the abdomen in children. Herriek cites cases of patients sent into the surgical ward for treatment in which trouble with the lungs was the cause of the pain, and they were sent back to the medical wards again. About a year after I heard that paper read a young surgeon called on me and said he would like to have my assistance in a case of gall-bladder operation. I examined the patient at his request, and while the man may have had gall-bladder trouble, I do know that he did have pneumonia. I suggested that the surgeon treat the pneumonia first and the gall bladder later. The patient died of pneumonia, and the surgeon agreed with me afterward that the gravest trouble at that time was the pneumonia.

DR. CARNES, Kosciusko: One cause which I frequently see, and which I believe is often overlooked, is nasal obstruction. This occurs frequently in any child and we should be on the lookout for it. The child passes through the day comfortably, but when it lies down at night it has night terrors, which are frequently ascribed to indigestion or worms. By passing the index finger along the palate the diagnosis is easily made.

DR. BARKSDALE, Vaiden: Some years ago I had printed a form of examination blank which is even fuller than that used by the life-insurance companies. In this I take the complete family history, so far as obtainable, and then take up each symptom in detail, noting every departure from the normal. If a man will do this he will find that he can keep up better with his own work, and come nearer making diagnoses in a number of cases than if he goes at it in a haphazard way. I recently had a case of a young man with tuberculous history in whom I had reason to suspect tuberculosis, and I found from prompt reaction to the Moro test that my suspicions were correct.

Intestinal Obstruction or Ileus: A Plea for Earlier Diagnosis and Less Radical Surgical Intervention in Late Cases

DR. D. P. STREET, Vicksburg, described the various kinds of obstruction and the symptoms accompanying each. The mortality in these cases is far too high on account of delay in operating. He described the methods of treating the different kinds of obstruction medically and surgically.

Hernia; the Abuse of the Truss

DR. S. W. JOHNSTON, Vicksburg, considered the dangers of descent and strangulation of the gut in cases of hernia protected and treated only by the application of the truss. He cited four such cases that had recently come under his observation in which strangulation had occurred and advocated early radical operation as the best means of providing comfort and protection for the patient.

Uterine Fibromyomata

DR. J. W. BARKSDALE, Vaiden, urged the immediate removal of all uterine fibroids as soon as diagnosed, quoting from Eastman, Cullen, Giles and others to emphasize his opinion that the comparatively small danger of early removal is not to be considered when contrasted with the distress, discomfort and danger that follow delay.

DISCUSSION

DR. J. D. DONALD, Hattiesburg: This subject of fibroids in the uterus is one of the utmost importance and gravity. One part of the paper that impressed me was the idea of not risking an early operation in the case of fibroids, because if there is any chance to preserve the female generative organs during the child-bearing period, it is greatly to be desired. I remember a case of labor in which this danger was very forcibly impressed on my mind. It was impossible to deliver the child without resorting to Cesarean section as the uterus was found to be surrounded by fibroid tumors. It was necessary to do a Cesarean section, and the patient died. It would have been so much more important if that woman's condition could have been recognized before this pregnancy and the uterus sacrificed while there was still opportunity to save that poor woman's life. I don't know that these tumors had ever elicited any complaint from the patient, because she was a woman who never made known her troubles, had never been examined, and consequently no one had any idea that the condition existed.

DR. S. W. JOHNSTON: We often find a sarcomatous degeneration of these fibroids, not suspected at the time of operation. I have seen several removed simply because of the pressure they exerted which interfered with urination or defecation, and have found this condition in many cases in which it was not suspected.

DR. J. W. BARKSDALE: A great many women will not have these operations performed because they desire children. With reference to sarcomatous degeneration, it has been the practice at the Johns Hopkins Hospital for years to subject these immediately to a microscopic examination. It is on account of these degenerations which are so often found that I make this plea for the removal of the fibroids. No man would think of allowing appendicitis to run on until forced to operate—then why allow these symptomless fibroids to go on until they reach the stage where operation results fatally to the patient? I don't care how small or how large the fibroid is, so long as it can be felt, some sort of operation should be resorted to. I consider that every case is an operative case, pure and simple, and hence operation should be done as soon as the diagnosis is made.

Treatment of Gonorrhea in Women

DR. G. R. LIVERMORE, Memphis, Tenn., described the treatment of urethritis, inflammations of the vulva and Bartholin's glands, vaginitis, and endometritis of gonorrheal origin. His experience with the vaccine treatment has not been satisfactory.

SYMPOSIUM ON TUBERCULOSIS

The Campaign Against Tuberculosis, or the Conflict Between Applied Science and the Tubercle Bacillus

DR. T. M. JONES, Hernando, considered the statistics of tuberculosis, reviewed the conditions under which the disease develops and described briefly the methods necessary for its prevention. It was a matter for public education, and though we failed again and again in persuading people to live properly, our war-ery should be, "Lay on, MacDuff!"

Tuberculosis

H. C. BUCK, Friars Point, traced the ancient history of the disease and contrasted our present with our former knowledge. He believed it inadvisable to send patients to the ordinary resorts on account of the dangers of infection from others. Isolation was the better plan and offered better chances of a cure.

Treatment of Tuberculosis

DR. H. CHRISTMAS, Tehula, touched on the subject of resorts for consumptives. Since the country was first settled, numbers of places had been advocated as being free from tuberculosis. These generally were free from inhabitants also, and their exploitation as health resorts was generally followed by a boom in cemetery lots. While it was universally accepted that drugs were worse than useless in tuberculosis, there were many indications for medication to promote the comfort of the patient, and there were many conditions that occurred in the course of the disease that must not be neglected.

Discussion on Tuberculosis

DR. F. J. MAYER, New Orleans: The subject of tuberculosis is so broad and has so many different phases that we can only take up a few at a time. The phase I have in mind now is the relation of beef and milk to tuberculosis. When we remember that from 5 to 50 per cent. of the cows of Mississippi are tuberculous, and that from 2 to 4 per cent. have a tuberculous lesion of the lacteal duct, and that therefore the bacilli enter directly into the milk stream, we must awaken to a realizing sense of the danger in which we stand. When there is a generalized tuberculosis there may also be a danger from the fact that the bacilli are found in the other secretions that enter indirectly into the milk, just as there is danger from milking an absolutely healthy cow in a tuberculous environment. When it comes to beef, I can only reiterate what I said before the legislature of Texas, that most of the beef of Mississippi and Texas is not fit to go into a stomach. I made the statement there that while Texas had the largest herds of any state in the Union, yet Texans ate the ribs and culls that were refused by the Federal inspectors for interstate shipment. It may be that some of these cows come to Texas and Mississippi. I know that they do to Louisiana. That statement was in a measure challenged as being so grave and serious that an authority was demanded. I gave as authority the state health officer of Texas, who, in a signed statement next day, said that in his investigations he had found conditions infinitely worse than I had painted them, but owing to the penuriousness of the legislature he was unable to prosecute his inquiries in the interest of the public health. As a delegate to the Tuberculosis Congress from the State Board of Health of Louisiana, I felt it my duty, in view of the lawsuit pending against the state health officer, to attend the section on animal diseases, and on my return I made a report which has never been published.

DR. R. M. SADLER, Okolona, presented a report of his observations at the International Tuberculosis Congress.

DR. CULLY, Jackson: In the treatment of any disease a correct and early diagnosis is of the gravest importance, and this responsibility rests largely on the general practitioner. I believe it is estimated that 80 per cent. of patients with tuberculosis will recover if treated in the primary stage. There are many things that the general practitioner can do. The education of the public is largely in his hands, and if he does not educate his clientele in the importance of measures to be taken against the ravages of this disease, we can hope to make no progress in the fight. One of the greatest menaces to the welfare of the human family is the negro servants and nurses in our homes. A large percentage of negroes are tuberculous. It is the duty of the physician that he ask his families to notify him when there is any suspicion of this disease among the servants, then he can report these cases and isolate them so far as the law will allow him to do so. I

believe we are all too lax in our endeavors to prevent the spread of the disease through food, fruit, meat, milk, etc., and from the fact that we have not enforced those laws that would protect our fruits, beef, milk, etc., from infection by flies. I know how the fruits are kept on the streets, and that meat is hauled through streets from slaughter pens to shops, unprotected from dust, and after it gets to shops, it hangs there without protection of screens. Fruits are exposed on the streets where the insects can get at them and the dust lie on them, and thereby carry infection.

DR. H. M. FOLKES, Biloxi: The weak point in the campaign against tuberculosis is the failure to make prompt diagnoses. The gentlemen who conduct tuberculosis sanitariums have testified that 68 per cent. of the patients coming to these institutions for treatment have never had any really thorough examination of the chest. Talk about educating the public to eradicate tuberculosis, when the doctors themselves don't make the diagnoses, or else fail to tell the patient what is the matter with him! If the physician fails to tell a patient for fear of scaring him to death, and then outlines a course of treatment, the patient doesn't know what to think. I think that tuberculosis should be designated as the "great spit plague" rather than the "great white plague." It seems to me that the proper place to touch public measures, and to talk against consumption, is in the advanced grades of the public schools.

DR. R. WISS, Meridian: An interesting case came under my observation a few years ago. I had been making an analysis of urine for another physician. He brought me a specimen and told me he didn't know what was the matter with the patient except that he had a pain in his back and had lost fifteen pounds. I found nothing the matter with the urine, and thought he was playing a joke on me. I began making various tests and finally got a reaction for indican, which I found might mean cancer or tuberculosis. I tested for tuberculosis and got quantities of bacilli. I then discovered that the man's sister had just died of tuberculosis a few months before. The man was promptly put on treatment for tuberculosis, gained flesh rapidly, and recovered.

DR. A. G. PAYNE, Greenville: Will the Moro test give a reaction in a healthy individual or from any other disease than tuberculosis? I recently had a case in which the Moro test gave a positive reaction, which frightened the patient a great deal, so I tried it on absolutely healthy patients and got just as prompt reactions from those.

DR. J. W. BARKSDALE, Vaiden: I have used the Moro test in several cases in which it was negative. While my experience has hardly been sufficient to justify conclusions, yet I regard this test as being as reliable as any we have. In other cases in which symptoms indicated tuberculosis I have never failed to get a positive reaction.

DR. H. CHRISTMAS, Tehula: I hope the members of the association do not think that I favor giving much medicine in tuberculosis. I value fresh air and exercise, but I think there are always other symptoms that go with all diseases. A person who is too weak to go out and get the open air would need some other treatment. I believe as strongly as any one in the value of open-air treatment, but there are other things needed in conjunction with it. There are certain conditions accompanying every disease which every practitioner of medicine is bound to acknowledge should receive attention. I do not believe in people going away from home; I favor their staying at home and treating themselves at home.

DR. P. R. BROWN, West Point: As a profession I suppose we are pretty well a unit when it comes to the management of tuberculosis. I agree with Dr. Folkles that it is a disease in which medicine has really no place as a therapeutic agency. Of course we have to treat the symptoms sometimes and stimulate the appetite. Not much stress has been placed on the rest, however, and this I consider one of the most important factors, especially when there is elevation of temperature. I have been treating these patients with some success, and the main things I use are a good thermometer and a good pair of scales. I take the temperature once or twice a day and

weigh the patient once or twice a week. I give no medicine except a little *mix vomica* or hydrochloric acid after meals. I advise raw eggs and an abundance of sweet milk, and do not allow the patient even to sit up when the temperature is up half a degree. I keep them in a tent or select a room with southern exposure, and give them plenty of fresh pure air day and night, and see that they get at least eight hours sleep at night, and about an hour at noon. In tuberculosis there is no danger of infection until the tubercles begin to break down or the patient begins to expectorate. Unless there is a decided predisposition to the disease, I think the danger is almost nothing in cases of occasional exposure.

Nervous Reflexes and Complications Due to Pregnancy

DR. I. H. C. COOK, Hattiesburg, considered the nervous reflexes of pregnancy, particularly that of nausea, which he considered due to an anemia of the sympathetic ganglia. He outlined the customary treatment for such a condition.

DISCUSSION

DR. GRAY, Clarksdale: Vomiting and nausea during pregnancy have always been bugbears to the profession. For the past five years I have been using about one quarter of a pint of salt solution, three times a day, and absolutely nothing else; it has been more satisfactory than any other remedy I have used.

DR. E. H. MARTIN, Hot Springs, Ark.: Ten years ago, I was called in consultation in such a case. The patient was suffering greatly with nausea, which nothing seemed to alleviate. The physician in the case, who knew that I had been dabbling in hypnotism, suggested that I try it on this woman, which was done; the woman was relieved and the child saved. However, although I have never seen a case that I could not control by suggestion, I would not advise physicians to try this method, as they do not always receive any thanks for their trouble. Some months after I had relieved this patient by suggestion, I saw her enter an office, just across the street. The doctor was not in, and after waiting some time, the woman came to my office and said that she was in great pain, and asked if I could not give her something to relieve her. I said that I could give her immediate relief by suggestion, but she said that she could not allow it, as her husband had made her promise never again to permit any man to hypnotize her.

A Comparison of the Physiologic Action and Therapeutics of Some Cardiac Stimulants

DR. J. T. LONGINO, Jonestown, considered the physiologic action and therapeutic uses of strychnin, nitroglycerin and digitalis.

DISCUSSION

DR. M. ALEXANDER, Tunica: Digitalis, especially in the first stages of the disease, is almost a specific in pneumonia. The effect of digitalis is to lengthen the intervals and send the blood with increased force through the lungs. There are, of course, some objections to digitalis, but the objections are not nearly so numerous as physicians have been taught. When there is a lack of compensation digitalis is certainly needed.

DR. H. CHRISTMAS, Tchula: I regard digitalis as a very valuable remedy in pneumonia. When the heart needs stimulating and there is a lack of compensation, digitalis should be given.

DR. ROSA WISS, Meridian: I am sorry that Dr. Longino deprecated the use of nitroglycerin, as I have always obtained good results from its use, and I think that the failure to get the proper results is due to the fact that enough is not given. I do not believe much in medicine, but I do believe that if it is to be given at all, enough should be given to do some good.

DR. J. T. LONGINO: I wish to emphasize only one point, and that is, that in the administration of cardiac stimulants, the physician must let the condition of the blood vessels be his guide. In pneumonia there is apt to be a weak, collapsed heart, and nitroglycerin will be depressing and in such case I certainly advise against its use.

Water

DR. S. E. FRIERSON, Lyon, described the uses of water in the human economy and the various conditions in illness in which its use, external and internal, is indicated.

DISCUSSION

DR. E. H. MARTIN, Hot Springs, Ark.: No one drinks or uses as much water as he should. If people did there would be one-half as much sickness as there is. In a case of terrific mania, the patient was controlled and finally cured by being kept in a continuous bath for eight hours.

DR. W. D. HUBBARD, West Point: Sometimes it is not desirable to drink too much water. In cases of digestive disturbances water is bad, especially in dilated stomach. In advising a patient to drink mineral water, the physician should be certain that the properties contained in the water are what the individual needs for the particular trouble. My experience with iron water is that it is not good for persons suffering with digestive disturbances, but is good for kidney disturbances. I thoroughly appreciate the value of drinking good pure water, but think it unwise to advise anyone, regardless of their particular case, to drink as much water as possible.

The Uses and Abuses of Medicine

DR. W. W. REYNOLDS, Meridian, contended for less medication. Placebos had a definite place in practice and not infrequently were absolutely necessary.

Peculiar Effects of Some Drugs

DR. L. L. MINOR, Hollywood, discussed the peculiar effects of some of our commoner remedies and related several instances of idiosyncrasy.

DISCUSSION

DR. E. J. JOHNSON, Yazoo City: A drug which I have used successfully in kidney disease is spartein. To get good results from the use of this drug, it should be given in large doses; I give from one-half to two grains at a dose.

DR. J. H. HARRISON, Tillatoba: I give in large doses, with very good results. Most physicians err in giving too much medicine, and usually give it simply because the patient or the family expects it. When a medicine is needed, it should be given fearlessly.

Conclusions Based on Experience with Veratrum

DR. G. S. BRYAN, Amory, has found veratrum exceedingly useful. It is not a dangerous drug when properly used; in fact, is freer from danger than almost any other potent drug. If the specimen is fresh and free from impurities it is reliable. It has been used in doses entirely too small to give results; full doses have different effect from small ones. It is indicated in localized inflammations and active congestions and in all sthenic fevers. Veratrum provides for its own elimination and render safe the administration of drugs that would otherwise be dangerous.

DISCUSSION

DR. C. F. CARNES, Kosciusko: I have used veratrum, with great success, in puerperal eclampsia, and never failed to give less than 10 minims.

DR. JONES: What is the dose in puerperal convulsions?

DR. WALTER H. ROWAN, Wiggins: I am of the opinion that the dose of veratrum in puerperal eclampsia is almost unlimited. I had a patient with eclampsia to whom I gave 30 drops every thirty minutes, until I had given 6 doses, making 180 minims at the end of 3 hours. I believe that treatment saved her life. I have seen, however, some bad results from the use of veratrum in pneumonia, but in puerperal eclampsia I always gave it and in large doses.

DR. M. ALEXANDER, Tunica: I consider veratrum as nearly a specific in puerperal eclampsia as any drug we have; I have never lost a case of eclampsia since I began using it. My dose is 20 drops, and in 30 minutes 10 or 15 drops, to be kept up until 2, 3 or 4 doses are given; and I have always been able to stop the convulsions. Veratrum, however, is a drug that should never be given unless the physician remains with the patient to note the effect.

DR. FRANK JONES, Memphis, Tenn.: I have never had any use for veratrum for anything or on any occasion. I think that the uterus should be emptied and the toxic condition would be relieved.

DR. T. H. HOLLOMAN, Ittabena: When veratrum is given, the physician should remain with the patient to watch the effect of the drug. In one case of puerperal eclampsia I gave veratrum, chloroform and morphin, and at the termination of the case was hard to say which drug had stopped the convulsions.

DR. PHILIPS: I agree with Dr. Bryan in regard to the use of veratrum in eclampsia. I have had many cases of puerperal eclampsia which came on after the uterus was empty; and I have never lost a case since I have been using veratrum. It must be used not for the dose, but for the effect. However, I can not agree that there is no danger in it, as I have had a personal experience with it, which proved that it is possible to take too much. I was suffering with a bad cough, and put up a cough mixture, veratrum being one of the ingredients. I kept the bottle in my pocket, and at intervals during the day took a sip. Just as I reached home I fell. When another physician arrived I could not speak, but motioned for a pencil, and when it was handed to me, wrote the word "veratrum." After repeated doses of whiskey I could speak.

DR. G. H. McNEIL, Newton: Veratrum is the remedy for puerperal eclampsia. In two cases in which I was called hurriedly, and not knowing the nature of the trouble, I failed to take veratrum with me, so resorted to morphin and other remedies, but I could not control the convulsions. I then procured veratrum and used it with happy results. I give 30 drops, in 30 minutes giving 10 drops more. I have never used veratrum in pneumonia, and am afraid of it, but should I use it I would be certain to do so only in the early stages of the disease, and would watch it very carefully.

DR. YOUNG: When I was a young man I had a case of pneumonia, and the family becoming uneasy on account of my youth, asked me to call in the old doctor of the town. I did so, and the doctor was indignant because I used veratrum, but before the evening was over he consented to the use of the drug and the patient was much benefited. Nothing will take the place of veratrum in puerperal eclampsia.

DR. G. S. BRYAN: I do not know the maximum dose of veratrum in eclampsia. A physician should begin with a small dose and give it till he gets the effect. When used properly, the results will be good. I take it for granted that the doctor who gives veratrum knows how to give it, knows the dose to give, and knows what he is combating. I do not give it in every case of pneumonia, but when I think it is needed I give it and give it for effect.

(To be continued)

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, held April 28, 1909

The President, DR. FREDERICK P. HENRY, in the Chair

SYMPOSIUM ON CANCER

Cancer Mortalities

DR. JOHN A. McGLINN: In the decade from 1890 to 1900 cancer showed an increase of 12 per 100,000 population. Statistics show that cancer has increased in the United States from 53 per 100,000 population in 1890 to 70.8 in 1906. Statistics also show increases for all countries. From 1901 to 1906 increases were shown in cancer of stomach and liver 1.8 per cent.; mouth, 0.4 per cent.; intestines, 0.6 per cent.; skin, 0.1 per cent., and decrease in female genitalia 0.4 per cent.; breast, 0.1 per cent., and other unspecified organs 2.4 per cent. In England one out of 11 and one woman out of 8 over 35 years of age die of cancer. In the same country more women at all ages die of cancer than of phthisis. In the registration area of the United States for all ages one man out of 32 and one woman out of 11 die of cancer. After the age of 35 one man out of 17 and one woman out of 9 die of cancer. During this period more women die in the United States of cancer than phthisis. The age of greatest frequency is between 50 and 54, when one man in 14, and one

woman in 5 die of cancer. If cancer had been cured in 1906 it would have shown a saving of life of 373,574 years, or a total saving of earning capacity of \$224,144,400. Out of the total population of the registration area of males and females over 35 years of age in 1906 there have died, or will die of cancer 281,909 men and 518,185 women. The combined death rate for all surgical conditions, exclusive of cancer, in 1906 was 161.5. Cancer death rate was 70.8, so that practically one-third of deaths from all surgical conditions were due to cancer. The combined death rate from all preventable diseases was but 6.4 higher than cancer. Cancer of the stomach in males occurs in 43.06 per cent. of all cases and in females in 24.47 per cent. Cancer of the uterus occurs in 27.68 per cent. of all women. Eliminating the organs peculiar to the sexes, cancer is more frequent in men than in women. The most frequent time of occurrence in males is between 50 and 75 years and in females between 45 and 70 years. The greatest factor in the consideration of age, influence of the conjugal state, occupation, race and location of the disease is the average age of the people in certain states of social life and occupation and the question of maturity in reference to various races.

Some Conditions in the Growth of Tumors

DR. LEO LOEB: The questions confronting us in the investigation of the growth of tumors are: (1) Under what conditions does a tissue assume an increased energy of growth? Cancer in the respect of growth energy differs from the energy of growth that is manifest in the healing of wounds, in that in the former the gain in energy is transmitted from generation to generation indefinitely. (2) Under what conditions does hereditary transmission of an acquired increase of growth energy to the succeeding cell generations take place? (3) Why do we find an infiltrating growth in cancer. A single factor, such as separation of a piece of tissue from its normal surroundings, is insufficient in itself to produce a tumor. The effect of external agencies in the production of tumors is best studied in certain tumors on the external surface of the body, e. g., cancer produced by arsenic or by long-continued exposure to the Roentgen rays, or possibly by light (xeroderma pigmentosum). These agencies probably act by direct stimulating action on the epithelial cells. External stimuli can also be used to increase cancer growth, e. g., mechanical irritation. Tumors may increase in virulence after transplantation due to this cause, and it is a probable factor in the increase of virulence of recurring malignant tumors over the original growth after operation, and in the occasional conversion of a benign into a malignant tumor after operation or (more frequently) spontaneously. Not all tumors, however, are equally affected by mechanical irritation. The majority of internal chemical factors are unknown. There is no doubt, however, that embryonal malformations, e. g., pigmented moles, are frequently associated with cancer, probably for the following reasons: (1) The tissue being embryonal, its proliferative power is greater, and hence it is more likely to proliferate under stimulus; (2) the exposure of such malformations, by size and position, to mechanical stimulation; (3) the fact that the cause of a tumor growth may have been present during prenatal life, affecting embryonal cells which have larger potentialities for development than the cells of a specific tissue, and which, therefore, develop at first into a teratoma, and only secondarily into a cancer. Heredity also is one of the factors in the causation of cancer. From clinical evidence it seems likely that as a result of long-continued stimulation or as a result of a strong stimulus of short duration affecting especially sensitized tissue hereditary transmission takes place. This hereditary transmission of growth energy might be explained as due to micro-organisms, the tumor cells themselves in this case carrying with them the agency which causes the stimulus to continuous proliferation. The action of micro-organisms might also explain the conversion of a carcinoma into a sarcoma through their action on the connective tissue, to which they have been transmitted. The same factor might also explain the endemic occurrence of cancer in animals and in man. Other explanations, however, might well account for the transformation of tumors, and for the endemic occurrence

of cancer in which hereditary conditions can not be excluded. If micro-organisms should be present in certain cases it is probable they act by stimulating cells similarly to other physical and chemical agents.

Early Diagnosis of Cancer of the Uterus

DR. THOMAS S. CULLEN, Baltimore: In a certain percentage of cases at the Johns Hopkins Hospital there has been the association of carcinoma and myoma. In 18 instances carcinoma of the cervix was associated with myoma of the body; in 25 instances carcinoma of the body was associated with myomatous uterus. In the early stages the only clinical symptoms of carcinoma of the uterus are hemorrhage and discharge. Hemorrhage occurs in the early stages in quite a number of instances. The discharge is usually watery in character, depending on the breaking down of the tumor. In order to make an accurate diagnosis of cancer in the early stage it is necessary to remove a piece of tissue. If there is carcinoma of the body of the uterus it is necessary to curette. The diagnosis is more accurate as a rule than we can hope for in our usual clinical work. We not infrequently make mistakes in diagnosis which is only recognized after the tissue is removed. To be absolutely sure in making a diagnosis it is necessary that we be very familiar with the normal conditions. In the cervix the tissue looks the same practically in all stages of life. In the body of the uterus there are different appearances at different periods of life.

Cancer of the Breast

DR. WILLIAM L. RODMAN read a paper on this subject and exhibited illustrative charts.

The Roentgen Diagnosis of Gastric Carcinoma

DR. GEORGE E. PFAHLER: A thorough physical and clinical examination should precede the Roentgen study, but this should not require more than days or weeks. The stomach should be empty and usually a purgative should be given. The chief objections are the danger to which the operator is exposed, the time consumed and the expense involved. Gastric carcinoma is demonstrable when it changes the course of the food through the stomach, when it decreases the volume, interferes with peristaltic action, fixes or displaces the stomach, causes an indentation in the stomach wall, or modifies the rate of evacuation of the gastric contents. Great caution and thoroughness will have to be observed or errors will be made, and this valuable method of investigation will fall into discredit.

Discussion on Cancer

DR. JAMES M. ANDERS: In every suspicious case of uterine disease a histologic examination, either of an excised portion of the growth, or of a scraping from the cavity of the organ, should be insisted on by the general practitioner. The use of the *x*-ray as a means of detecting carcinoma in the early stages marks a distinct advance in our diagnostic methods. Negative results of the *x*-ray examination, however, should not deter us from resorting to exploratory operation in an otherwise suspicious case. Dr. Rodman's view that carcinoma of the breast, as elsewhere, is for a certain length of time a local affection and curable in the majority of cases by operation, at present is entirely tenable. That the vast majority of tumors of the breast are malignant is appreciated by the general profession, but not by the laity, and I feel strongly that it is the duty of the profession to enlighten the public on these facts. I can see more reason why a woman past 30 years of age should regularly present herself to a competent surgeon for an examination of the mammary glands and of the uterus than to a dentist for an examination of the teeth. This need is emphasized by the remark of Dr. Rodman that carcinoma of the breast is for a long period entirely without pain. Hence, unless discovered accidentally by the patient, the condition is apt to be no longer a local one when discovered by the physician or patient. One aspect of this subject, which seems to me important practically, and which I have elsewhere stated, is that we should have a definite working hypothesis with reference to the nature of carcinoma—one that could be generally accepted by the profession. This would stimulate and crystallize investigation along

certain lines and give us fundamental truths not possible in the present chaotic methods of research. I believe that carcinoma is of infectious nature. If the profession can not accept the view of the infectious origin of cancer, let us adopt the hypothesis of which Dr. Loeb has given us the underlying factors. Thus would these leading theories soon be either proved or disproved, and on the whole more substantial progress be made. Mayo Robson has pointed out that probably all cases of carcinoma follow on a precancerous condition, an ulcer. If this be true and such precancerous condition, as it often can be, is promptly removed, in future we may have a reversal of the statistics, so ably and forcefully presented by Dr. McGlinn.

DR. HENRY S. WIEDER: I have been impressed with the fact that in adenocarcinoma of the uterus we do not necessarily find infiltration. This has been more particularly observed in adenocarcinoma of the rectum. I have done most of the microscopic work for Dr. Rodman's department and have faithfully followed out all his benign and suspicious cases. I believe we have succeeded, in one or two cases, in operating on absolutely non-recognizable carcinoma, had it not been for the frozen section. A study of involution mastitis is of great importance, as 25 or 30 per cent. of such cases are liable to develop into carcinoma.

DR. JUDSON DALAND: We are unable to say what the *x*-ray will ultimately do in the diagnosis of gastric carcinoma. Much progress has already been made, but the wish of Dr. Pfahler and of other men working in this line is to be able to diagnose gastric carcinoma at so early a stage that surgical intervention will give results not heretofore attained. By the use of this method we can determine certain definite points in the study of the peristaltic waves. We recognize that indentations may occur by distinct definite spasm. We also know that indentations may occur from outside influences. Furthermore, we are able to study the relation and position of the shadow in regard to the pylorus which is very important.

DR. W. L. RODMAN: I have more faith in the *x*-ray examinations made by Dr. Pfahler than in the clinical gastric findings, and depend on his work more and more all the time.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-fourth Annual Meeting, Celebrating the Centennial of McDowell's Operation, held in New York City, April 20-22, 1909

(Concluded from page 1531)

Choice of Time of Operation for Pelvic Inflammation of Tubal Origin

DR. F. F. SIMPSON, Pittsburg, Pa.: Abscesses easily accessible for evacuation without traversing the free abdominal cavity are often best treated by early drainage. In other instances delay with definite but simple treatment would probably prove the better course. Many patients will thus have the normal functions of their organs restored and avoid operation. For the remaining cases which demand operative relief I am in the habit of choosing a time, first, when the patient has recovered from her acute illness and when her margin of reserve strength has been raised to its highest point of efficiency; second, when her temperature has been normal for a minimum period of three weeks; third, when the inflammatory exudate about the diseased tube has been completely absorbed, and fourth, when a careful pelvic examination is no longer followed by a decided or persistent rise of temperature.

DISCUSSION

DR. H. J. BOLDT, New York: So far as my personal observation is concerned, it is dangerous to operate during acute suppurative salpingitis, as in 99 cases out of 100 it is possible to wait until the acuteness of the attack has subsided, which will depend entirely on the condition of the patient. We may operate in the interval, if there is sufficient indication for operation. I believe that in most instances in which women have gonorrheal infection the regaining of normal function

of the organs of the pelvis is not to be expected. Whenever the Fallopian tubes are distended with pus to such an extent that we can readily palpate them through the cul-de-sac of Douglas we have no business to wait, but should open these tubes and evacuate the pus. It is unnecessary to do a radical operation in such cases.

DR. J. WESLEY BOVÉE, Washington: I would not be so conservative as to wait three weeks without a single rise of temperature during that time before operating. My experience with such appendages has been that they have not returned to normal; that rarely do they get into a condition for functioning, and that in most cases in which vaginal incision has been done for the emptying of pus the appendages and tubes require removal subsequently, and with them the uterus in some cases.

Method of Obtaining Reliable Knowledge of Exact Areas of Pain in Patients With Visceral Disease

DR. PHILANDER A. HARRIS, Paterson, N. J.: When a patient complains of pain, she is at once asked by the nurse to indicate the exact area of pain, and also to point to the center or point of most of her pain. The nurse then marks the outer boundaries, as well as the center or centers of pain complained of, employing therefor a definite code. All markings are maintained on the body until they are transferred by the physician to the history book or sheets. The nurse in entering on her notes descriptions of pains thus avoids the necessity of reference to anatomic regions.

Further Reasons for Examining and Removing the Appendix Before Closing the Abdomen

DR. A. LAPHORN SMITH, Montreal: Abdominal section has now a very low death rate. The few deaths which do occur are due to something going wrong, the cause for which has not always been discovered, even after the abdomen has been reopened. I believe that this unknown cause is in many cases a chronic appendicitis, which either suddenly becomes acute or which causes obstruction of the disabled intestine by adhesions. The death rate from puerperal fever is now very small, and the few deaths which take place can not always be attributed to infection by the doctor, nurse, or even by the patient herself. I think that the abdomen should be opened and the appendix examined in every serious case, as I believe that many supposed deaths from puerperal fever are really due to a perforated or gangrenous appendix. The removal of this dangerous and useless organ, when it can be done without adding materially to the danger of the laparotomy, would insure the patient against the serious risk at a subsequent confinement.

DISCUSSION

DR. ANDREW F. CURRIER, New York: All will agree that, inasmuch as the appendix is such a vicious organ, it is well to look at it, and see what the trouble is. Supposing a small appendix is found without any appearance of disease, would there be justification for taking it out? It is rather straining the argument to conclude that because a patient complains of trouble in the region of the appendix it must of necessity follow that this organ is at fault. I think the principle laid down long ago, that the function of the surgeon is to remove diseased tissue or diseased organs is perfectly sound and safe, and the more we vary from that fundamental principle, the more likely are we to do harm. An operation for appendicitis is not absolutely free from danger. There are many cases in which hemorrhage has resulted and death followed. We should remove nothing but diseased tissue, and that which is not diseased should be left.

DR. REUBEN PETERSON, Ann Arbor, Mich.: Some years ago I gave the results of the removal of about 200 appendices when the abdomen was opened for the removal of other pathologic conditions. I showed then that 50 per cent. of the appendices were microscopically diseased, and presented a detailed report of my findings. At that time many members took exception to my conclusions that the appendix should be removed at the time of an abdominal operation undertaken for other conditions unless there were contraindications to it; consequently, I determined that I would only remove the appendix when it

was macroscopically diseased in the same number of operations, if possible, to prove whether my conclusions were correct or not. Since that time I have only removed the appendix when it was macroscopically diseased, and my prediction has not been fulfilled, in that I have not had a case that has given me any trouble, when I have examined the appendix and have not found it macroscopically diseased and have left it within the abdomen. My position at present is that the appendix is always looked at in every abdominal operation, and if it is diseased macroscopically to such an extent that it seems wise to remove it, it is always removed. If, however, it is apparently normal it is left.

DR. I. S. STONE, Washington: I have had the misfortune of diagnosing in a certain case salpingitis as the cause of the patient's trouble, and yet at the operation I have found very little or no evidence of disease there. The appendix was examined and it did not explain the cause of the trouble, but after investigation the gall bladder was found to be the seat of trouble. This has been found in other instances to be the cause of trouble in the large clinics of this country. There may be symptoms of one disease, but on looking elsewhere more trouble is found than was expected.

DR. J. MONTGOMERY BALDY, Philadelphia: I was one of Dr. Peterson's critics at the time he presented his paper years ago. I rarely ever open the abdomen without examining the appendix, and rarely do I find anything the matter with it, that is, an infective disease coming from the interior of the appendix.

DR. JOSEPH TABER JOHNSON, Washington: I have advocated for a long time the theory of letting a perfectly healthy appendix alone. I could never see any rule or ethical right to remove a woman's appendix when it was healthy, when engaged to do absolutely another operation.

DR. J. WESLEY BOVÉE: Until we can decide the question of whether the appendix is diseased or not from its macroscopic appearance, I do not think we can settle the other question of whether to remove it or not. We get patients who have localized symptoms, and it is decided that their cases are chronic or recurrent types of appendicitis. We operate, and have been surprised to find that their appendices were normal. I recall the case of a girl of 17, who had been in the hands of general practitioners. She had three attacks of what was called appendicitis. I operated on her, and removed what I thought was a healthy appendix. The appendix was examined by a pathologist of the hospital, who pronounced it one of the most typical cases of chronic appendicitis he had ever seen, yet the organ was perfectly normal in appearance.

Ovarian Tumors Complicating Pregnancy, Labor and the Puerperium

DR. HERBERT R. SPENCER, London, Eng., presented a table of forty-one cases. An analysis of the table shows that the youngest patient was 20, the oldest 43, the average age being thirty.

Referring to the treatment, he said: The treatment of ovarian tumors complicating pregnancy, labor and the puerperium has been considered too much from a surgical standpoint; the obstetric aspect is not less important and in some cases is the dominant factor. Among the fifteen patients whom I have treated during pregnancy, there were three cases of contracted pelvis which necessitated the induction of premature labor in two of the cases, and would have done so in the third had the patient not aborted. A contracted pelvis may profoundly modify treatment and an obstetric examination of the pelvis should be made in every case. The existence of bilateral tumors in patients who have not had children may justify the postponement of operation in the hope of obtaining a living child, and should lead us whenever possible to conserve some part of the ovary. The scheme of treatment which I offer for discussion is as follows:

(A) During the first half of pregnancy ovarian tumors should be removed wherever their situation and whatever their size. The following tumors should not usually be removed: (1) Lutein cysts complicating hydatidiform mole; (2) bilat-

eral tumors causing no symptoms, if the patient is childless, or, if operated on, part of an ovary should be left behind; (3) primary adherent malignant cysts; (4) secondary malignant cysts.

(B) During the second half of pregnancy: (a) All large ovarian tumors and ruptured, inflamed and strangulated tumors should be removed; (b) small tumors which are in the abdomen or which can be easily pushed up out of the pelvis in the knee-chest or Trendelenburg position should be watched, and if no untoward symptoms arise should be removed either at the end of pregnancy or toward the end of the first stage of labor or after delivery; (c) small tumors which are incarcerated in the pelvis and can not easily be replaced in the abdomen may be watched and removed at the end of pregnancy or, if circumstances will allow, toward the end of the first stage of labor. If the tumors are adherent or solid, Cesarean section should be done. In all ovariectomies during pregnancy the vessels of the pedicle should be separately tied; the pedicle should be ligated as far as possible from the uterus and morphin should be given for the first two or three days after the operation.

(C) During labor the best treatment is abdominal ovariectomy, immediate in the case of large tumors, at the end of the first stage or after delivery in the case of small tumors. When done at the end of the first stage a second operator may deliver the child by forceps while the tumor is being removed. If the tumor be incarcerated in the pelvis the uterus should be withdrawn from the abdomen in order that the tumor may be dealt with. For solid and adherent tumors occupying the pelvis Cesarean section may be necessary. It should not be performed for cystic non-adherent tumors. When labor is advanced and a cystic tumor is impacted in the pelvis the circumstances may render it advisable to deliver the patient by the natural passages after evacuating the contents of the tumor by incision and packing the cyst with gauze; but the tumor should, if practicable, be removed within twenty-four hours, preferably through the vagina. Vaginal ovariectomy may be performed in non-adherent cases; but, though simpler in technique, it is inferior to the abdominal operation in that there is greater danger from hemorrhage, difficulty in safely tying the pedicle, the necessity of cutting up the tumor, impossibility of examining the other ovary and the presence of the vaginal wound. Induction of premature labor, forceps, version and simple tapping of a cyst as means of overcoming the dystocia produced by ovarian tumors are contraindicated.

(D) In the puerperium, ovarian tumors should be removed as soon as practicable, when possible, within twenty-four hours of delivery. If there is doubt as to the aseptic conditions of the uterus a delay of a week or two may be advisable, unless indications of strangulations or infection of the tumor arise, when it should be immediately removed.

Ovarian Tumor with Twisted Pedicle Complicating Pregnancy

DR. EDWARD P. DAVIS, Philadelphia, reported a case of ovarian tumor with twisted pedicle, which suggested some points of interest in connection with this subject. The patient was a married Polish woman, pregnant for the third time. In the case reported, the decision to deliver by abdominal section was based on the presence of a contracted pelvis, the failure of the child to descend, and the recognition of an abdominal condition of the abdomen possibly due to pelvic contraction. It was recognized that this abnormal abdominal condition might depend on some other complication, which could only be successfully dealt with by abdominal section. Study of the subject leads to the belief that but one course of treatment is justifiable in cases of ovarian tumor with twisted pedicle complicating pregnancy, namely, removal as soon as the diagnosis of the condition can be made; or as soon as indications of this condition are present; the complications of twisted pedicle are so serious as to demand immediate operation. If an exact diagnosis before operation is impossible, the conditions which simulate twisted pedicle in themselves demand operation. In the absence of an exact diagnosis, the obstetrician should operate in the interest of the patient.

Discussion on Ovarian Tumor

DR. CHARLES M. GREEN, Boston: I recall two cases of ovarian tumors complicating pregnancy. One of the women

was four months pregnant. A diagnosis of very large cyst was made and the tumor was removed; the woman went to term, and was delivered safely. In a second case, a diagnosis of pregnancy was not made except by the history. The tumor was large. The abdomen was opened, and the tumor was found to be a multilocular cyst. A large trocar was used to withdraw the fluid, and as a result a considerable amount of the contents escaped into the abdominal cavity. This was wiped out. The uterus was found to be seven months pregnant, and was concealed behind a large tumor. The pedicle was tied as far as possible from the uterus. The woman made a pleasant convalescence, and shortly will be confined.

PROFESSOR HOFMEIER, Würzburg, Germany: I have operated for the removal of tumors during pregnancy, labor and the puerperium, in thirty or forty cases. I think it wise to operate in every case in which the tumor gives trouble. In the early stage of pregnancy with tumor, the tendency to abortion is great, and it is better to operate at this time than later. Abdominal section should always be resorted to, and not vaginal section.

DR. HENRY D. FRY, Washington: It seems to me that the pedicle becomes twisted as a complication of pregnancy more about the fourth or fifth month or in the puerperium, and my idea has been that it is due to the fundus of the uterus at that time being just about high enough for the tumor to rest on it, and then any movements or contractions of the uterus or abdominal wall twist the pedicle of the tumor. In a case which I had twisting of the pedicle occurred about the fourth month; there was complicating appendicitis, and the woman had most excruciating pain. I did not know she had this ovarian tumor with twisted pedicle until I made an incision for appendicectomy.

DR. EDWARD REYNOLDS, Boston: I recall six cases of large tumors complicating gestation and have had a number of smaller ones. In three cases of advanced labor there has been a large ovarian cyst impacted in the pelvis. In two cases I was able to raise the tumor by taxis and deliver the women by forceps. In both instances the tumor was removed later. In a third case the tumor resisted taxis, I opened the abdomen, raised the tumor by intra-abdominal taxis, removed it, and then, as the patient was advanced in labor, another operator applied forceps while I watched it from above, finally effected delivery, and closed the abdomen. In two cases I have operated at term, once removing a 28-pound ovarian tumor and a 12-pound child by Cesarean section.

DR. MATTHEW D. MANN, Buffalo: I wish to report the case of a woman with a large tumor whom I saw in consultation. She was advanced in pregnancy, and I advised that an operation be done at once, as she was uncomfortable on account of the size of the tumor. She refused operation, went through pregnancy and labor without any trouble, and had two subsequent pregnancies with the presence of this enormous tumor. She finally died after her last labor had been successfully accomplished. This case is a strong argument for the removal of large tumors complicating pregnancy.

DR. WILLIAM GARDNER, Montreal: I recall two cases of tumors complicating pregnancy that came under my observation many years ago. In one the tumor was removed without interrupting pregnancy, and the woman was subsequently delivered at term. The second patient was delivered in the eighth month successfully after the removal of a large tumor.

DR. J. WESLEY BOVÉE: In considering the removal of ovarian tumors during pregnancy, the size of the tumor has much to do with it. I have removed double pus tubes in the presence of a two months' pregnancy, and the woman has gone to term and has been delivered safely afterwards. The presence of double tumors is supposed to be a contributory cause of torsion of the pedicle.

DR. JOSEPH E. JANVRIN, New York: It seems to me that pregnancy increases the symptoms of torsion of the pedicle and makes it more apparent. Twisting of the pedicle in cases uncomplicated by pregnancy is not infrequent. I have seen fully a dozen such cases in which there was no pregnancy, and in which there were no special symptoms of twisting of the pedicle of the tumor.

President's Address: Ephraim McDowell, the Father of Ovariectomy

DR. J. RIDDLE GOFFE, New York, gave an interesting and valuable historical sketch of McDowell and ovariectomy, and closed his address in the following words: "A hundred years—a century—have rolled by since that day, and yet the luster of McDowell's achievement has grown steadily brighter to the present time. It was a fertile seed which, planted in appropriate soil, has risen to a mighty tree. It has manifold branches and has borne abundant fruit. McDowell did not live to see his operation adopted as a recognized surgical procedure, but he did have the satisfaction of knowing that Dr. Johnson, the editor of the *Medico-Chirurgical Review*, who declared in 1825 that he did not believe the operation had ever been done successfully and probably never would, the following year published in the same journal a recantation in which he said: 'A back settlement of America—Kentucky—has beaten the Mother Country, nay Europe itself, with all the boasted surgeons thereof, in the fearful and formidable operation of gastrotomy, with extraction of diseased ovaries. In the second volume of this series we adverted to the cases of McDowell of Kentucky, published by Lizars of Edinburgh, and expressed ourselves as skeptical respecting their authenticity. Dr. Coates, however, has now given us much more cause to wonder at the success of Dr. McDowell, for it appears out of five cases operated on in Kentucky by McDowell, four recovered after the operation and only one died. There were circumstances in the narrative of the first three cases that caused misgivings in our minds, for which uncharitableness we ask pardon of God and Dr. McDowell of Danville.' A broad and searching examination of all the claims put forward by aspirants, or their friends, to the honor of antedating McDowell has proved them, one and all, entirely groundless. The wide dissemination of the facts on which this decision rests, and the ripening influence of time have brought the members of the professional world into accord on this subject, so that I think I am safe in saying that in this centennial year McDowell is universally recognized throughout the world as the originator of the operation and entitled to be proclaimed the Father of Ovariectomy. McDowell was born Nov. 11, 1771, and died Jan. 25, 1830, in the fifty-ninth year of his age. Peace be to his ashes and glory be to his name."

SYMPOSIUM ON ANESTHESIA**The Nurse as an Anesthetist**

DR. J. MONTGOMERY BALDY, Philadelphia: My inclinations lie in the direction of women as anesthetists, particularly trained nurses. The education of the trained nurse lies largely on medical and surgical lines, and she has, therefore, unless we except the woman physician, a sounder basis than have other women on which to begin. I can readily see that some women physicians would and will be available for the service, but in most instances many of the most serious objections obtain in their case as do in the case of men physicians. To the nurse, anesthesia will prove a stepping-stone to something better than she has originally chosen, a higher and more dignified position, and will appeal in its own way to her ambition and pride just as does the superintendency of a training school. The field will prove interesting, and my experience has shown that it will stimulate her to an effort to improve and perfect herself, and earnestly study the whole matter in hand.

Administration of Anesthetics

DR. H. J. BOLDT, New York: The competency of the anesthetizer is frequently more important to the surgeon than the competency of the latter's first assistant. Of the anesthetics usually used, ether is the least dangerous to life, although in some cases chloroform is the safer anesthetic. The belief that ether is more injurious to the kidneys than is chloroform is erroneous. Transitory albuminuria is common from the inhaling of either anesthetic, and casts are usually found in the urine for several days subsequent to the anesthetization. No anesthetic is entirely free of danger. Nitrous oxid mixed with oxygen is the safest, and if given by a competent anesthetizer may be administered for very long operations. Preliminary narcosis with scopolamin and morphin is considered risky, and should not be used by any one except an expert anesthetizer. Patients who are nervous and apprehensive as to the outcome

of the anesthesia may be given a single preliminary dose of a narcotic twenty or thirty minutes before the inhalation anesthesia is begun. With patients who have nephritis, another method of anesthesia than that with ether or chloroform should be considered. Occasionally scopolamin-morphin narcosis answers for this purpose, and when these drugs are not followed by ether or by chloroform, the narcosis seems free from risk. Hypodermic injections of strychnin should not be indiscriminately used. Every hospital should have a person thoroughly trained in the giving of anesthetics. This duty should never be intrusted to an inexperienced person, as, for instance, a junior interne who has had perhaps only one or two practical lessons.

Anesthetics in Hospitals and Private Practice

DR. JAMES T. GWATHMEY, New York: The administration of anesthetics as a specialty is recognized in only a few of the larger cities of America to-day. In the light of recent discoveries, no surgeon is justified in adopting some one anesthetic and method of administration exclusively. There are four general anesthetics in common use, and there are three methods of administration. Nitrous oxid and oxygen is the only non-poisonous anesthetic available to-day. Unfortunately, it is considered by men of large experience adapted to only about 30 per cent. of the surgical cases, namely, weak, anemic men and middle-aged women. These patients should have the benefit of this anesthetic whenever possible. Nitrous oxid and oxygen, supplemented by ether, can be used in at least 60 per cent. of all cases. Nitrous oxid and oxygen can and should be used as a preliminary to ether in at least 80 per cent. of the surgical cases. Oxygen administered with warm chloroform, either by the closed or open method, doubles its value as regards life, and given in this way it is as safe as ether and air. Ethyl chlorid is used principally as a preliminary anesthetic or for very short operations, and while not as safe, generally speaking, as nitrous oxid, is safer than this gas in certain selected cases. The problem to-day is not the matter of life and death on the table, but what methods and combinations will give the best results and leave the patient just as we found him.

Proper and Improper Methods of Administration of General Anesthetics

DR. S. C. GORDON, Portland, Me.: The first and most important point to be observed in the administration of an anesthetic is the proper preparation of the patient, both physically and mentally. The dread of the anesthetic is often much greater than that of the operation. Much may be done to prevent this. Second, too much haste is used in administration and too large a quantity used. Inhalers are faulty in construction; the simplest is always the best. The drop method is the true one. The cover of the mask should be porous and should allow the transmission of air through it during respiration. Third, careful attention is necessary on the part of the anesthetist, who should have an acquaintance with the ordinary, normal condition of the pulse and respiration, and a medical man or a trained nurse is preferred.

Renal Excretion During the Administration of Chloroform and Ether in Gynecologic Operations

DR. J. WESLEY BOVÉE, Washington, D. C.: 1. From the study of sixteen cases it would appear that the rate of excretion of urine is markedly lessened under anesthesia produced by ether or by chloroform. 2. Such diminution is greater from chloroform than from ether. 3. While chloroform produces a diminution in urea output, this continues to maintain a nearly normal proportion to urinary excretion, while ether produces a greater proportionate lessening of urea than of the urine. 4. These two anesthetics, when carefully and skilfully administered, have little effect on the production of casts and albumin in the urine, inducing it in some, stopping it in others and in others either not producing it or not materially modifying such production. 5. The Trendelenburg position greatly retards the rapidity of urinary output.

Advisability of Making Practical Administration of Anesthetics a Required Part of the Medical Course

DR. REUBEN PETERSON, Ann Arbor, Mich.: The necessity of such instruction is shown by the experience of the past. There is inconsistency in requiring proficiency in the so-called sci-

tific branches of medicine while the student is allowed to graduate without having given an anesthetic. It is feasible to establish such a course as a part of the already overcrowded curriculum, and it can be done by the proper utilization of much time now wasted in unsystematic teaching. The whole question of the proper administration of general anesthetics in hospitals and in general practice is dependent on the scientific teaching of the subject to undergraduates.

The Trained or the Untrained Anesthetist

DR. HUNTER ROBB, Cleveland, Ohio: I would tentatively propose the following suggestions: 1. That a skilled anesthetist holding an appointment in the medical school as one of the faculty, and in the hospital as one of the staff, be appointed at a proper salary to teach and demonstrate the administration of anesthetics, and to personally administer them to the private patients, and to those in the general wards who are in a debilitated condition. 2. That in connection with a carefully prepared course of lectures on anesthetics and their physiologic action, each student be required to administer anesthetics to dogs or other animals a certain number of times. 3. That the lecturer next take the students the rounds of the operating rooms, and point out to them the details in connection with the service, and the points to observe in giving an anesthetic to the human being. 4. That each student be detailed to give the anesthetic at a certain number of operations under the guidance and criticism of the instructor, or one of his more advanced students; in this way we can be assured that all of them will have at least a fair amount of general experience. 5. That the senior, instead of the junior, interne be detailed to administer the anesthetic, as he would have had the opportunity of following and also of assisting with the administration of the anesthetic in a considerable number of cases by the time he has reached the position of senior assistant. I do not present this as a detailed plan, but in order to give an outline which can be developed according to the various conditions which exist in the different hospitals.

DR. ROBERT L. DICKINSON, Brooklyn, N. Y., detailed his experience with visiting anesthetists in some Brooklyn hospitals.

Improved Methods of Obtaining Anesthesia in Hospital Practice

DR. J. CLARENCE WEBSTER, Chicago: The routine administration of ether, as practiced in America, is to be condemned, because of unpleasant or dangerous sequelæ. My method consists in administering nitrous oxid with oxygen (2 per cent.) until the patient is unconscious, then ether until complete anesthesia is obtained. The latter is then abandoned, and the operation is performed under the influence of the nitrous oxid and oxygen mixture. This may or may not be followed by pure oxygen for twenty minutes. This method means greater safety and fewer unpleasant or serious after-results. Local anesthesia should also have a more important place in practice, and should supersede general anesthesia in certain cases.

Remote Results of Ovariectomy

PROFESSOR HOFMEIER, Würzburg, Germany: In retention cysts, fibroids, dermoids and pseudomucin cystomas, ovariectomy gives excellent results. The danger of secondary affection of the other ovary does not exist. The danger of a later spontaneous (idiopathic) affection is very slight; therefore, the removal of the one diseased ovary will be sufficient. With reference to the slight possibility of secondary implantations of the pseudomucin cystomas, special precaution during the operation is required. If there is a suspicion of carcinomatous degeneration of the removed tumor, the removal of the other ovary, which seems to be healthy, is not absolutely necessary in younger women. The resection of a beginning growth of the second ovary is only allowed in cases of retention cysts, fibroids, or dermoids. In cases of pseudomucin cystoma it is only allowed if the patient is ready to risk a second operation later; it is absolutely forbidden in carcinoma. In cases of cystoma serosum papillare, pseudomyxoma, sarcoma and teratoma, complete cure is possible, especially for papillomata and pseudomyxomata, even when bilaterally developed; also for unilateral sarcoma and teratoma. If on thorough macroscopic examination the second ovary seems to be healthy, it may be left, as the removal of both ovaries is detrimental to the gen-

eral health of young women, and as the danger of a spontaneous attack of the second ovary is not very great. The state of the ovary, however, must necessarily be watched for several years. If both ovaries are diseased they must be completely removed with the uterus.

Influence of Corsets and High-Heeled Shoes on Symptoms of Pelvic and Static Disorders

DR. EDWARD REYNOLDS and DR. ROBERT W. LOVETT, Boston, contributed a joint paper on this subject:

This is an incomplete and merely preliminary report from the clinical and gynecologic point of view only of some of the results of experimental observation which have extended over about three and a half years on the general subject of the influence of attitude and proportion on abdominal and skeletal disorders, conducted from the gynecologic and from the orthopedic points of view. There is a large portion of the clinical field in which the patients are either suffering from both static (orthopedic) and pelvic lesions due to a common cause, or present symptoms which might be due to either, and demand a differential diagnosis. The experimental investigation of balance in the erect posture is a subject exceedingly difficult of investigation. The keynote to its comprehension is to be found by studying the relation of the center of gravity to the several portions of the skeleton. Certain types of figures tend to be free from ptoses and static ailments. Certain other types are inherently liable to them. The stable types of figure are but little affected by the varying types of corsets and shoes. The unstable types are greatly affected for good or evil by these articles of dress. In corsets there are types which are always productive of evil, and types which are sometimes thoroughly desirable and productive of good. From a gynecologic point of view, the effect of shoes must be considered in connection with that of corsets.

Surgical Treatment of Dysmenorrhea and Sterility in Women

PROFESSOR SAMUEL POZZI, Paris, described with great detail an operation for the relief of dysmenorrhea and the cure of sterility in which thus far he has not experienced a single failure. After this operation cervical metritis due to stenosis rapidly disappears, including leucorrhea. As regards sterility, in more than 25 per cent. of his patients pregnancy followed the operation, the women going to term without accident, and labors being normal. Rigidity of the cervix is not to be feared, for there is no cicatricial tissue as occurs after some amputations of the cervix.

Significance of Peritoneal Adhesions Following Operations

DR. HENRY T. BYFORD, Chicago: While classifying the formation of adhesions as one of the defensive acts of the peritoneum, I call particular attention to their secondary or harmful effects. Operations which lead to their production are either imperfectly or improperly performed, and extensive adhesions following poorly performed operations sometimes cause more suffering than was felt before. This is illustrated by cases from my records showing that serious conditions are sometimes due to postoperative adhesions of limited extent, and may be relieved by their separation. The mere separation of adhesions about diseased organs may lead to a cure of the symptoms, and that when the original causes of the adhesions are removed, the secondary adhesions that follow a properly performed operation are less extensive and less permanent. When postoperative adhesions are intestinal in character, muscular exercise and intestinal activity tend to relieve them without operative aid. Omental adhesions cause less immediate trouble, but the omentum has not the power of separating itself as have the small intestines. They act by interfering with the functions of the organs to which the omentum is attached, and by dragging on the stomach and colon, causing or perpetuating gastroptosis and dilatation of the stomach. The prevention of these postoperative adhesions is not to be attained by any one procedure or remedial agent, but by a properly executed technic. My preference is for small incisions with the performance of as much as practicable of the deep work by touch, and of the remainder at the surface, and without the introduction of sponges or packs into the abdominal cavity. When septic conditions and deep suturing or other manipulations requiring the supervision of sight are present,

it is necessary to make a long incision and pack the intestines out of the way. In pelvic cases, after a digital exploration I place the patient in the Trendelenburg position and try to make the intestines sink out of the field of the operation and assume their own position. A firm, immovable barrier of gauze can then be placed against them with almost no manipulation or relative displacement. With regard to drainage in laparotomies for pelvic conditions, I have the best results with the old-fashioned glass fenestrated tube; but I only leave it in place for a few hours and then supplant it by a strip of gauze that barely penetrates between the peritoneal edges. This gauze is changed about every four hours for two or three times, and the opening is then allowed to heal by adhesion, or so-called first intention. Such slight intestinal adhesions as form are soon broken up by peristalsis. When a gauze tampon drain is required, I prefer to place it low down and bring the end out through a large opening in the posterior vaginal fornix, and thus avoid the production of intestinal adhesions.

DISCUSSION

DR. JOHN G. CLARK, Philadelphia, discussed the anatomical and pathological factors concerned in the promotion of adhesions, and described some hitherto overlooked points in the technic which lead to this sequel. He likewise spoke of the frequency of postoperative adhesions and discussed their treatment.

DR. HENRY C. COE, New York, compared the present with the former after-results of laparotomy. Of from 70 to 75 patients who recovered from the operation in preantiseptic days, many were practically invalids for life, due to imperfect technic. Complications that are now rare were then common. The reasons are unskilful manipulation, infection, use of large silk ligatures, glass drains, bad after-treatment, etc. Opposed raw surfaces are likely to adhere; gauze packing and early movement of the bowels do not prevent adhesion. There may be a localized traumatic peritonitis, as in simple cases of interval appendicitis. Medical treatment is of no avail in marked cases. It is necessary to reopen the abdomen, separate the adhesions, and cover raw surfaces in such a manner that the adhesions will not reform. Although humiliating to abdominal surgeons to admit it, there are no certain means of preventing the formation of adhesions in complicated cases. The introduction of foreign bodies, films, powders, etc., is foreign to the spirit of modern surgery. Early purgation is not always a prophylactic measure, and is often harmful. We can not obtain healthy peritoneal flaps when there are extensive raw surfaces. The future method of prevention of adhesions still remains to be devised.

DR. J. CLARENCE WEBSTER, Chicago: In dividing the tissues with a knife or scissors, the operator should take care to bury raw surfaces. The same procedure is demanded when adherent structures are separated, and, although it is impossible to carry this out perfectly in all cases, various maneuvers may be employed, in many instances calculated to improve the condition of the parts.

Acute Postoperative Dilatation of the Stomach

DR. JOHN OSBORNE POLAK, Brooklyn, N. Y.: Acute dilatation of the stomach as a postoperative complication occurred 8 times in 1,000 abdominal sections. There were 2 deaths in patients with low hemoglobin percentages and low red cell counts. All patients were operated on under general anesthesia; 6 had had septic processes before operation; 1 had previous gastropnoia. Vomiting began from 24 to 50 hours after operation. There was diffuse abdominal pain and thirst, with continuous and persistent regurgitant vomiting, without peritoneal irritation, which enabled one to make the diagnosis. The treatment consisted of lavage, starvation, the right latero-prone position, with Murphy irrigation and nutrient enemata.

Ureteral Fistulas as Sequelæ of Pelvic Operations

DR. JOHN A. SAMPSON, Albany, N. Y., discussed certain important anatomic features of the ureters from the standpoint of ureteral fistulas. In the first place, he spoke of their relation to the other pelvic structures, especially to the parietal peritoneum, and to the uterus. He referred to the pelvic con-

ditions in the operative treatment of which there is danger of injuring the ureter, as, for instance, extreme lateral displacement of the cervix; masses adherent to the parietal peritoneum covering the ureter; intraligamentary tumors; inflammatory exudates in the base of the broad ligament; tumors lateral to the ureter; cancer of the uterine cervix; injuries to the ureter which may result in fistulas, such as clamping, ligation, incision, failure of repair, and interference with blood supply. He classified ureteral fistulas, after which he discussed treatment and prophylaxis.

The Pathology of Ovarian Tumors

DR. THOMAS S. CULLEN, Baltimore, discussed under this head retention cysts, cystic ovaries, multilocular ovarian cysts, papillocoyctomas, carcinomas, dermoid tumors and teratomas.

Other Papers Read

"Indications for Cesarean Section in Placenta Prævia," by Dr. G. T. Harrison, New York; "Treatment of Extensive Cases of Uterine Prolapse and of Cystocele," by Dr. T. J. Watkins, Chicago; "Suprapubic Operation on the Pelvic Floor for Procidencia Uteri," by Dr. W. M. Polk, New York; "Conservatism in Surgery of the Pelvic Organs," by Dr. H. J. Boldt, New York; "Postoperative Peritoneal Adhesions," by Dr. George Gellhorn, St. Louis; "Mental Disturbances Following Abdominal Section," by Dr. Howard A. Kelly, Baltimore; "True Ileus," by Dr. William H. Wathen, Louisville, Ky.

The Banquet

A notable and culminating feature of this meeting, which was one of the most successful in the history of the society, was the dinner in commemoration of the first ovariectomy by Dr. Ephraim McDowell, given at the Waldorf-Astoria by the New York and Brooklyn fellows. Dr. J. Riddle Goffe acted as toastmaster. The speeches were not only instructive and scholarly, but valuable historical contributions.

The following toasts were responded to: "Ephraim McDowell, the First Ovariectomist," by Dr. Lewis S. McMurtry, Louisville, Ky.; "Mrs. Crawford: A Type of American Womanhood," by Dr. Edward P. Davis, Philadelphia; "McDowell's Successors in America," by Dr. Howard A. Kelly, Baltimore; "McDowell's Successors in the British Empire," by Dr. Herbert R. Spencer, London, England; "McDowell's Successors in France," by Prof. Samuel Pozzi, Paris, France; "McDowell's Successors in Germany," by Prof. Hofmeier, Würzburg, Germany.

DR. E. C. DUDLEY, Chicago, was one of the after-dinner speakers, and exhibited several lantern slides, one of them showing the home of McDowell, another which was supposed to represent McDowell performing the first ovariectomy; also slides of Mrs. Crawford both before and after the operation. He closed his speech with the following terse statements concerning the personality and achievements of McDowell:

We have seen him, a product of the heroic blood of Scotland, tempered by the dramatic and imaginative spirit of the Celt. Intensified by contact with the adventurous cavalier colonist in Virginia.

A son of the central figure among the hardy pioneer soldiers and statesmen of the eighteenth century on the "dark and bloody ground of Kentucky."

Reared in the historic village of Danville under the character-building influence of this wonderful people, who knew how to join to the inspiration and freedom of the frontier what was most vital in the older education and civilization of the world.

A youth whose ardent temperament, intellect, magnetism and refinement gave great promise.

A pupil of Dr. Humphreys in Virginia.

Associating with cultivated physicians and surgeons of his own and other countries in the University of Edinburgh.

Attending the lectures of John Bell, a man of high intellectual endowment, an eloquent, forceful teacher, a bold and dashing operator, then in the zenith of his power.

Drawing from this source inspiration, original thought, confidence, boldness and judgment.

Returning to Danville to practice his profession.

Marrying the daughter of the first governor of Kentucky.

The personal and intimate friend of two presidents of the Republic.

Receiving unqualified recognition as the foremost surgeon in the Mississippi Valley.

Patiently waiting fourteen years until 1809 for an opportunity to break new surgical ground by the operation which has immortalized his name.

Subsequently repeating the operation many times with results not materially surpassed by his successors, until the period of aseptic surgery, seventy years later.

Too intelligent to be unconscious of the value of his service to mankind.

Yet with singular restraint delaying publication for seven years until final results could be measured.

Indismayed by a storm of almost universal vituperation and calumny from the surgical world whose sensibilities he had shocked by being in advance of his time.

In America denounced as a cracked-brained backwoods adventurer. In England impaled on the horns of a dilemma, whether to be deemed an irresponsible fanatic or a fit subject for the executioner.

In France, with greater appearance of politeness but equal virulence, held up as the grand exponent of American audacity.

Answering a critic with the modest statement that he had tried to describe the operation so that an intelligent anatomist could understand it, and then letting time and conscience bring another critic to his knees with a prayer for "forgiveness" before "Almighty God and Dr. McDowell."

In the prime of life, at the summit of usefulness closing a mortal career which had shed luster upon his age and his country.

Classed with Jenner and Franklin, Washington and Lincoln, Marion Sims and Emmet.

The unique figure in a brilliant group of Kentuckians.

Officers Elected

The following officers were elected for the ensuing year: President, Dr. Edward P. Davis, Philadelphia; first vice-president, Dr. Seth C. Gordon, Portland, Me.; second vice-president, Dr. Edward Reynolds, Boston; secretary, Dr. LeRoy Broun, New York; treasurer, Dr. J. Wesley Bovee, Washington, D. C.

Washington, D. C., was selected as the place of next meeting, in conjunction with the Congress of American Physicians and Surgeons, 1910.

Medicolegal

What Constitutes a "Free Hospital"

The Supreme Judicial Court of Maine holds, in *Webber Hospital Association vs. McKenzie*, where provision was made in a will for the maintenance of a free hospital, that the word "free" was not used in the sense of without compensation from any one receiving its benefits. Such a hospital is practically unknown. Income may be received from such as are able to pay, and yet the hospital is free. The word was used in its equally well-known meaning as defined by Webster, "thrown open or made accessible to all." This is also a well recognized definition of the word in law: "Open to all—public." It was therefore a public hospital "where the unfortunate may receive good care and skilful treatment" that the testator had in mind. No charge should be made to those unable to pay, but this would not prohibit receiving compensation from those who were able. It was to be open to all. The rich should not be turned away because of their wealth nor the poor because of their poverty. It should be free in the broadest sense.

Again, the court says that this will, while providing that the income of the fund in question should be used for the maintenance of a hospital, did not prohibit aid from other sources, but, on the contrary, suggested such assistance. Patients might contribute from their means. The state might make generous appropriations, benevolent friends might unite in guaranteeing an endowment. All these things might be done, and they would promote rather than thwart the testator's intent. Without their aid the work of the hospital might be limited; with it might be largely extended.

Substitution of Urine and Answer as to Abortions by Applicant for Insurance

The Court of Civil Appeals of Texas says, in *Mutual Life Insurance Company vs. Crenshaw*, that there was testimony before the jury which tended to show that in the personal examination of the applicant for the policy of life insurance in question she gave to the examining physician another person's urine as her own. This would have amounted to a false representation on the part of the applicant in the procurement of the policy, and, like any other false representation, all that was necessary to constitute it a defense was that it operated materially to induce the insurance. The testimony of the physician, which constituted all the testimony on the subject, was that had he or the company known of the fact it would for that reason not have issued the policy. The evidence amounted to this: That the deception practiced on him, if there was a substitution, contributed to the issuing of the policy, because, if he had known of the substitution, that fact alone would have defeated the application. This showed the

materiality of the substitution in such a manner that it was clear the court should have assumed the fact of its materiality, and not submitted the question of its materiality to the jury.

But the question, "Have you suffered abortions or serious troubles in labor?" which was answered by applicant "No," the court holds was not shown to have been falsely answered by testimony that about thirty days before the issuance of the policy the applicant had suffered an abortion. It says that the question did not call for an answer in reference to a single abortion. The applicant, so far as the evidence showed, had not suffered abortions; hence her answer was true, considering the terms of the question. Being true, there was no issue to submit which involved the falsity of the answer. The terms of a policy which tend to forfeit it are not favored, and are strictly construed, and, if on any reasonable theory the answer may be taken as true, that construction will be placed on it.

No Allowance for Autopsies Held to Determine Diseases Causing Death

The Supreme Court of Indiana says that the case of *Sandy vs. Board of Commissioners of Morgan county* was brought by a physician to recover \$25 for holding an autopsy on the body of a child on the order of and under the direction of the coroner of Morgan county. Some of the defenses were that the child at the time of and for days before its death was under the care of physicians, and its death was not sudden or unexpected, and it was not supposed to have come to its death by violence or casualty; that at the time of the death of the child the plaintiff was one of the attending physicians and had the child under his immediate care; that its death was not supposed to have been caused by violence or casualty, but from diphtheria; that no crime was supposed to have been committed, and that the autopsy was not held for the purpose of investigating or discovering whether a crime had been committed, but for the purpose of settling a controversy between the plaintiff and another attending physician as to the nature of the disease from which the child died, and was without authority of law.

The evidence in this case showed that the child had been visited by the plaintiff on Saturday morning without a discovery of the malady with which it was afflicted, diphtheria of the larynx, a disease difficult of diagnosis; that the child had been in and out of the house during most of the day preceding, and died suddenly early Sunday morning after having taken a drink of cold water which it arose from its bed and crossed the room to obtain; that it had been under the constant attention of its parents, both of whom were present at the time of its death, and there was not the slightest suspicion of death from casualty or violence; on the other hand, a physician called immediately after death at once suspected death from the true cause from the symptoms and attending circumstances. It was simply a case of death from a natural cause, somewhat difficult of diagnosis.

The plaintiff sought to justify his claim for holding an autopsy as a legal one on the ground that physicians were required to report to the secretary of the boards of health all deaths and the causes thereof; that no undertaker should bury a human body without a certificate of a physician as to the cause of death; and that the plaintiff refused to give a certificate of the cause of death because he did not know the cause, and hence the coroner was justified in holding an autopsy in order that a death certificate might issue. It might, quite as seriously, and with as much reason, be insisted in any case of baffled medical science, that an autopsy must be held in order that a death certificate might issue.

The statute with respect to restrictions of funerals in case of death from contagious disease was also relied on. Such statutes must be read in the light of the purpose of their enactment. The statute with respect to inquests and autopsies has from the earliest times been an arm of the criminal law, both to punish those guilty and protect those who are innocent of crime. The other statutes as to the certification of causes of death, etc., are for statistical purposes, and health regulations in the interest of the public health purely police regulations.

If there were nothing here but the fact of the autopsy being ordered, this court would be bound to presume that it was under a proper case for it. But here was the evidence, and with the requirement that the coroner, in order to justify an autopsy, must have a reasonable suspicion of violence or casualty, the question became one of the weight of the evidence, and there was evidence to support a finding in favor of the defendant board.

The Indiana statute itself defines the cases in which autopsies may be legally held as cases where inquests are legally held. It restricts the right or obligation to cases where death is supposed to have come by violence or casualty, and as a part of an inquest, and, while the statute ought not to be so strictly construed as to defeat its purpose, yet it must still be remembered that it is not to be extended beyond its evident purpose, and that a coroner is not the sole arbiter of the necessity; for, if this were so, a broad field would be opened for more conjecture as to the cause of death in any case where medical science may be baffled, and there would remain no such statutory direction or authority as we have, but a general power to direct autopsies, without any opportunity for review, by the courts. The action of a coroner would foreclose the question and we have seen that he has no such power.

Being a ministerial power, it must be exercised within some reasonable presumption that the death has resulted from violence or casualty. It can not be justified in the interest of science, for no such authority is given except as to prescribed persons, and there are distinct rights as to the dead. Otherwise the sacred dead might be the subjects of the surgeon's knife in any case in which the coroner might see fit, and at the public expense. His authority must be reasonably, and not arbitrarily, exercised. Being in the exercise of a wholly ministerial duty, acting under purely statutory authority, which is in itself the interpreter, and measurer of his powers, the plaintiff was charged with notice of his limitations; for, if this were not so, a coroner might by indirection do what he could not do by direction.

The rule is not changed by the fact that coroners are by statute given the power to direct autopsies. The power itself is limited to the specified conditions which invoke it, and the conditions are open to review by the courts. A reasonable supposition that a death occurs from violence or casualty is as necessary to confer jurisdiction to hold an inquest or hold an autopsy as that the body be found in his county.

The Latest Views of Cases of Alleged Injury to Nervous System and of the Testimony of Physicians Relative to Same

The Supreme Court of Minnesota holds, in the personal injury case of *Johnson vs. Great Northern Railway Co.*, that when damages are sought to be recovered for injuries to the nervous system, alleged to have been caused by actionable negligence, the utmost circumspection must be exercised to avoid the injustice which is likely to result from the denial of substantial compensation for real injuries and in the award of damage in cases of honest mistake or of cunning fraud.

The value to be attached to the testimony of physicians concerning alleged nervous disorders is to be determined, among other things, by the extent and character of the examination actually made by the testifying physicians, generally as to the plaintiff's physiological condition, and especially as to the condition of his nervous system.

That subtle nervous disorders may exist, and that, as our civilization produces less hardy and more highly organized individuals, they tend to occur more frequently, and to result more seriously, the court says, is obviously true.

It is equally familiar that even the more highly trained specialists can not readily distinguish some forms of actual nervous derangement from analogous physiological conditions which may have been falsely described through ignorance, or which may have resulted from conscious malingering. By a stronger reason, in such cases, the testimony of even a reputable practitioner is to be weighed with especial care.

The difficulty is, of course, greater where the condition occurs without a lesion—i. e. in cases of traumatic neurosis or traumatic neurasthenia—than where external force has pro-

duced a morbid change in the functions or texture of the tissues or organs. Well-considered decisions have gone so far as to hold that no considerable verdict will be allowed to stand on proof of subjective symptoms only, not only because the existence and extent of such subjective condition depends on the veracity of the patient affected, as he must be interested in the outcome of the litigation, but also because of the frequent miracles of recovery after application of "a greenback plaster."

None the less the abnormal conditions may be real and result seriously. Much testimony must be admitted, as a matter of course, which is subject to the same objection as to interest. Many verdicts are of unquestionable validity which are subject to the same criticism of their probable substantial injustice. It is clear that wrong is likely to result from denial of substantial damages for real injury, and also from their award in cases of honest mistake or cunning fraud.

It is certain that, where nervous derangement due to an accident is alleged, courts are called on to exercise the utmost circumspection. They would pervert their functions if they undertook to prescribe how physicians should proceed, or to dogmatically determine what significance should be attached to the results of their examination. The law, which is fixed, is not authority on physiological science, which is progressive. Judges are not physicians. The courts, as Lord Bowne pointed out, are not the proper places for conducting experiments in inductive science. Indeed, the primary purpose, to subserve which expert evidence on the immediate subject is received, is to advise courts of the results of such questions asked of nature and the conclusions of scientific men prevailing at the time of the trial. Accordingly, as opinions of physicians change, the legal effect of facts testified to must also change.

A few elementary principles of diagnostic neurology are now so generally recognized by scientific authority that they should ordinarily be applied. The examination of the patient should be systematic and thorough, and extend to the anatomy of the individual to the extent circumstances demand, to the physiological conditions generally of his person, more specifically his organs likely to be affected, and especially of his deeper and superficial reflexes. The authorities insist that by such examination, an expert, qualified by learning and experience, is able to determine the true condition of the person examined beyond his power of successful simulation or misrepresentation, and to expose the ignorance, mistake or fraud of opposing experts. There may be cases so clear that conformity with so exhaustive tests may not be necessary, but doubtful instances must be scrutinized with all known care and tried by all available means.

The plaintiff in this case, by the sudden movement of a car, was thrown to the ground, and in falling struck his back and left side. He called two physicians. Both found a lameness or tenderness of the back. But neither of the plaintiff's two experts appeared to have had the necessary knowledge and experience of a specialist in nervous diseases. Indeed, one of them frankly admitted that "he did not claim to be an expert on nervous diseases," and was called as a general practitioner, who as such had attended the patient. Neither testified to have made an adequate examination on which to rest the conclusions of any serious nervous trouble. The diagnosis of neither purported to be based on investigation into the normality of the plaintiff's physical condition generally, or of his organs or of his deeper or superficial reflexes. The examination was not systematic. Indeed, it was extremely limited and cursory. It amounted at most to a partial investigation into the loss of sensation in the legs. The most significant item was that at places "the hair had turned white." It was frankly admitted, however, that this could not have been connected with the accident.

On the other hand, the two physicians called by the defendant testified that they had made a thorough and scientific examination of the plaintiff's person. They examined "his eyes, his feet, and his legs, . . . the lungs, heart, abdomen, his back, his nervous sensations, or knee jerks, and in fact everything connected with the general examination." The urine on analysis was found normal. They concluded that the

plaintiff was not and had not been suffering "from any trouble with his nervous system, or with his spinal column;" that "they could find nothing the matter with him as a result of any injury he had received" except tenderness and soreness in the muscles of the back, from which his recovery would be comparatively quick. The record itself demonstrated the competency of these physicians as experts. It is evident, the court thinks, that the expert testimony necessitated the belief that the plaintiff was not seriously injured.

The plaintiff's testimony and conduct must be considered, not so much in the light of the plaintiff's interest in the outcome of the litigation, which was naturally for a jury to weigh, as of the plaintiff's inevitable lack of technical knowledge necessary to the correct estimate of his physical condition and of the cause of any deviation from the normal.

Lastly, the court deems it impossible, under such circumstances, to sustain a verdict of over \$4,000 for the injury that was actually shown.

Current Medical Literature

AMERICAN

Titles marked with an asterisk(*) are abstracted below.

Boston Medical and Surgical Journal

April 29

- 1 Intermittent Hydronephrosis. D. F. Jones, Boston.
- 2 *Treponemata (Spirochætæ) in Syphilitic Aortitis; Five Cases, One with Aneurism. J. H. Wright and O. Richardson, Boston.
- 3 *Treatment of Obstruction of the Lachrymal Duct. J. C. Berry, Worcester, Mass.

2. **Treponema in Syphilitic Aortitis.**—Wright and Richardson give the essential points in the histories and gross anatomic appearances of the lesions in five cases. The aortitis presents certain definite characters. The regions involved are mainly those of the first portion and the arch. Beyond this area the lesions are less marked and fewer, till they become indistinguishable from those of ordinary arteriosclerosis. Microscopic examination shows that the lesions in all the cases are essentially the same, and like those characteristic of syphilitic aortitis. The most striking feature is the extensive transformation of the media and intima into fibrous tissue, and the degeneration and necrosis of this tissue. In all the cases, sections prepared by Levaditi's first published method showed treponemata, identical in morphology with *Treponema pallidum*. They were found practically only in a degenerative and necrotic area. The finding of the treponemata in an area of primary necrosis in the media, as well as in association with the necrosis in the fibrous tissue, seems to justify the belief that the micro-organisms are the cause of the necrosis by their local action on the tissue, and that they are to be regarded as the cause of the whole process, although the possibility that they are merely secondary invaders can not be denied. Their numbers and distribution in the lesions would suggest that they rapidly multiply at a given point, produce necrosis and then degenerate and disappear.

3. **Obstruction of the Lachrymal Duct.**—Berry summarizes his experience as follows:

1. IN INFANTS

1. Ordinary cases of dacryocystitis in infants require no treatment other than nasal cleanliness, boracic acid collyria and slight pressure over the sac.
2. More persistent cases may require nasal aspiration or possibly the passage of the lachrymal probe.
3. Obstruction is sometimes due to membranous closure of the nasal end of the canal.
4. Intranasal inspection is always prudent and at times necessary when probing the duct.
5. The seton is a remedial measure of great promise in certain rebellious cases.

2. IN ADULTS

1. The ideal treatment is by gradual dilatation, avoiding violence to the membrane of the canal.
2. If this proves unsuccessful, then division of the stricture with rapid and full dilatation is necessary.
3. Dilatation beyond 2 mm. (Bowman's probe No. 8) is seldom necessary. Forced dilatation to 4 mm. (Theobald No. 16) exposes the eye to nasal contamination and lessens the propulsive power of the sac.
4. The leaden style can be employed to advantage between treatments, reducing the frequency of probing and favoring absorption of hypertrophied tissue by continuous pressure.

5. Acute cases of inflammation of the sac can be aborted if seen early, the treatment being to wash out the sac, inject argyrol and follow with hot stupes of lead and laudanum, general antiphlogistic treatment being observed.

6. Following phlegmon, the passage of the probe should be delayed until swelling and induration subside.

Medical Record, New York

May 1

- 4 *A Catalytic Theory of Infection and Immunity. J. W. McLaughlin, Austin, Tex.
- 5 *Cerebral Lobules. W. Wood, New York.
- 6 *Ureteral Calculi. A. V. Moschowitz, New York.
- 7 Mastoiditis Followed by Infected Sinus Thrombosis in a Young Pregnant Patient. M. D. Lederman, New York.
- 8 Conservative Treatment of Some Traumatic Injuries of the Extremities. W. T. Dannreuther, New York.
- 9 Further Research Regarding the Phosphatic Index or the Pulse of the Nervous System. J. H. Dowd, Buffalo, N. Y.
- 10 Fluoroscopy and Radiography. A. Judd, New York.

4. **Infection and Immunity.**—McLaughlin says that it is conceded that artificial or acquired immunity resulting from an attack of the disease immunized against or from inoculations of the pathogenic agents of the disease is a condition of the organism caused by specific antibodies, or by immunizing tissue changes of the body. While a knowledge of the nature and action of pathogenic agents, the origin and nature of specific antibodies, and the character of changes produced in the body tissues by toxins is clearly necessary to a rational knowledge of pathogenesis and immunization, our present knowledge is insufficiently definite therefor. McLaughlin is forced to conclude that the "internal forces of matter" must consist of more than molecular heat energy, and that behind molecules and independent of the transformations of heat energy there are unknown forces—properties of matter, which determine mechanical combinations. He reviews the present conception of molecular structure and molecular energy, which give us the complete molecule as it is described in text-books. Taking up the study at this point, where it has been abandoned, McLaughlin says that the addition of two new features will make it apparent that molecular energy is derived from molecular structure, and that the changes of matter in chemical reactions result from the interaction of atomic and molecular forces in securing equilibrium in end products: The first is the presence of universal ether surrounding atoms in the molecules and accurately reproducing the vibrations as ether waves. The second is an adjustment of conflicting ether waves in the molecules by "interference," into waves of energy whose periods coincide in crest and trough. "The energy of a molecule is an exact reflex of its chemical and physical structure." He then discusses the conditions under which molecular energy becomes catalytic energy. A catalyst is not a definite chemical substance, but a substance possessing a definite physical structure. Toxins and pathogens are to be classed as catalytic agents, as well as ferments and enzymes are. Specificity of action and the production of specific antibodies are features which definitely characterize catalytic reactions. The specific selective action of a ferment for the substrate is coincident in crest and trough of the wave periods of the two substances. McLaughlin's argument leads him to the conclusion that "pathogenesis is a catalytic reaction in which the pathogen or toxin is the catalyst, a group of albumin molecules is the substrate, and a specific antibody the end product. In this process the albumin molecules of the substrate are dissociated and transformed into a toxalbumin, and this is the essential cause of the disease produced, the type of which is determined by the character of the toxalbumin, and the character of the toxalbumin is determined by the species of pathogen and the vulnerable substrate engaged in the reaction." An antibody—say an antigen to a pathogen or an antitoxin to a toxin—combines with, neutralizes, and thus make harmless, the pathogenic agents; but since such combinations are bodies foreign to the organism, they are soon disposed of, and the immunity produced by them is transient in character. On the other hand, immunity produced by the destruction of the substrate is lasting, and will remain until the substrate is restored.

5. **Cerebral Lobules.**—Wood says that cerebral localization properly deals with centers. If the cerebral segments are one by one examined in detail, it will be found that they lend

themselves wonderfully well to the theory of sensory and motory centers, and that these sensory and motory centers are definitely formed eminences or lobules, each with a function, and that they tend to be regular in order and to lie along definite lines. On this view he describes and figures a simple and practical method of mapping out the brain and reading these psychologic centers or mind eminences.

6. Personal Observation of Ureteral Calculi.—Moschcowitz says that in addition to the three points at which the ureter is described in the text-books as being usually narrowed, there is a fourth point, between the vesical end of the ureter and the point where it crosses the common iliac artery, perhaps a trifle nearer to the former. It is due to a dense, sharp, fascial band passing horizontally inward from the lateral pelvic wall to the median line. He discusses the symptomatology. Cystoscopic inspection of the bladder he regards as of comparatively limited value in the diagnosis, but an *x*-ray examination is an absolute necessity in every case. While every calculus remaining indefinitely in the ureter must ultimately lead to infection of the kidney, still Moschcowitz makes it a rule not to advise operation as soon as diagnosis is made, but to observe the case for a short time and give Nature a chance to propel the stone. He cites cases to prove the judiciousness of this practice. Morphine and hot applications are the measures indicated. He has no experience with the injection of lubricants into the ureter.

New York Medical Journal

May 1

- 11 The Doctor and the Nurse. C. P. Noble, Philadelphia.
- 12 The Toxic Secondaries of Chronic Tonsillar Disease. A. R. Elliott, Chicago.
- 13 *Treatment of Appendicitis. B. Robinson, New York.
- 14 Diagnosis and Differential Diagnosis of Appendicitis. H. Fischer, New York.
- 15 *Appendicitis Complicating Pregnancy. C. O. Cooke, Providence, R. I.
- 16 Extrauterine Pregnancy. J. N. Warren, Sioux City, Iowa.
- 17 *Common Errors in the Treatment of the Urethra and Bladder. J. D. Pedersen, New York.
- 18 *Bedside Clinic Summary of the Treatment of Acute Rheumatism at the Indianapolis City Hospital. S. E. Earp, Indianapolis.
- 19 Hypernephroma of the Kidney. W. L. Duffield, Brooklyn, N. Y.
- 20 *Poisons; Especially Potassium Permanganate. J. C. Attix, Philadelphia.

13. Appendicitis.—Robinson states that it is difficult at times, not to say impossible, to distinguish accurately and positively, between appendicitis and colitis. In some cases, McBurney's point, rigidity, blood count, symptomatic antecedents, are similar. When all these are identical one or other disease may exist alone. It is frequently the case here, as elsewhere, that two diseases, so far as the mere organ is concerned, may exist together just as is found elsewhere, notably, in uterus and ovaries; in larynx and trachea. Admitting the truth of the foregoing to be wise and prudent, we should treat the patient medically, in what seems the best way to accomplish a cure. This treatment should be:

1. Rest in bed, which means little or no voluntary movement while pains are acute, temperature elevated, and other general symptoms threatening or grave.
2. Ice bag, or preferably hot water bag, or poultices, or stupes with hot water and oil of turpentine and soap liniment; flannel covered, or not, with oil silk or rubber tissue.
3. Laxative enema with castor oil and oxgall, sometimes a little glycerin being added. Flaxseed tea should preferably be the menstruum of the enema.
4. A moderate amount of codein every hour or two, by mouth, if pains seem to require it, from 1/20 to 1/10 or 1/5 grain.
5. In rare instances only are hypodermic injections of morphine to be given, and then only for excessive pain.

15. Appendicitis During Pregnancy.—Cook emphasizes:

1. Appendicitis should be suspected in all cases of right-sided pain occurring during pregnancy.
2. Inasmuch as constipation is an important factor in the etiology of the disease, the physician should see that the bowels are kept free throughout the pregnant state.
3. The symptoms are often misleading.
4. The diagnosis is not easy.
5. The prognosis is good in the acute catarrhal and chronic recurrent types, but extremely grave in the gangrenous, perforative and abscess type.
6. The treatment is operation in every case as soon as the diagnosis is established. In cases of doubt operation is safer than waiting.
7. The mortality of appendicitis complicating pregnancy is the mortality of delay.
8. Appendicitis during pregnancy is more dangerous than in the non-pregnant state.

9. The true prophylaxis in a child-bearing woman who has had a well-marked attack of appendicitis is an interval operation.

10. The possibility of appendicitis after labor in predisposed patients should be borne in mind in order not to mistake such for puerperal sepsis.

11. In the perforative cases with general diffuse suppurative peritonitis, occurring at the end of pregnancy *accouchement forcé* is indicated, followed by incision and drainage of the peritoneal cavity.

17. Abstracted in THE JOURNAL, July 11, 1908, p. 160.

18. Acute Rheumatism.—Earp reports favorable results in twelve cases of acute rheumatism under the following routine treatment: The use of calomel is followed by Dorsey's magnesia mixture until the bowels are freely open, then they are kept so. The patients should drink plenty of water. Thirty grains of sodium salicylate should be given each three hours until pain is relieved or there are unpleasant head symptoms. The dose is then decreased to twenty grains, and when the joints can be used freely without pain or stiffness the dose is again decreased to fifteen grains four times a day for one week. When the patient considers himself well, ten grains are given three times a day for two weeks. Oil of wintergreen was applied to the joints twice a day, and they were dressed in cotton and oiled silk or rubber sheeting. There has been some slight deviation from this rule to meet special indications in individual cases.

20. Potassium Permanganate Poisoning.—Attix briefly discusses the subject and definition of poisons and poisoning generally and reports two cases of poisoning by potassium permanganate of which no case is yet recorded in any text-book on toxicology. Antidotes are, weak ferrous sulphate, sodium sulphite, sodium hyposulphite, oxalic acid—which should never be used unless the amount of permanganate taken is definitely known and the exact molecular proportion of the acid can be given—and sulphurous acid, which should be used if it can be obtained, because (1) potassium permanganate is alkaline—sulphurous acid is, of course, acid; (2) potassium permanganate is an oxidizing agent—sulphurous acid is a powerful reducing agent; (3) sulphurous acid is not poisonous and an excess will do no harm and it acts very rapidly.

Surgery, Gynecology and Obstetrics, Chicago

April

- 21 *Removal of the Gall Bladder. A. MacLaren and H. P. Ritchie, St. Paul.
- 22 *Operative Treatment of Simple Fractures. W. A. Lane, London, Eng.
- 23 Gunshot Wounds of the Abdomen. C. Graham, Henderson, Ky.
- 24 *Treatment of Infected and Complicated Cases of Labor by Abdominal Section. E. P. Davis, Philadelphia.
- 25 *Chromocystoscopy in Functional Renal Diagnosis Based on Employment of Indigocarmine. B. A. Thomas, Philadelphia.
- 26 Post-Traumatic Sarcoma of the Skull. J. F. Smith, Wausau, Wis.
- 27 Adenomata of Descending Colon, Sigmoid and Rectum. A. Samuels, Baltimore.
- 28 Value of Enterostomy in Intestinal Obstruction. J. P. Lord, Omaha, Neb.
- 29 Uterosacral Ligaments. D. H. Craig, Boston.
- 30 Shock, Its Relation to Operations of Emergency. W. H. Allport, Chicago.
- 31 Evolution of the Military Surgeon. N. Senn, Chicago.
- 32 Dermoid Cyst of the Kidney. W. S. Goldsmith, Atlanta, Ga.
- 33 Present Status of Ethyl Chlorid as a General Anesthetic. W. Webster, Winnipeg, Canada.
- 34 Unique Accident to a Meckel's Diverticulum. B. Van Sweringen, Fort Wayne, Ind.
- 35 Cases of Primary Tuberculosis of the Appendix. F. H. Jackson, Houlton, Me.
- 36 Two Operations for Total Destruction of the Gall Ducts. E. E. Lanphear, St. Louis.
- 37 Acetonuria, with Coma, Apparently Cured by Intravenous Transfusion of Bicarbonate of Soda Solution. B. F. Van Meter, Lexington, Ky.
- 38 Intestinal Obstruction Due to Round Worms. B. F. Van Meter, Lexington, Ky.
- 39 Simple Operation for Complete Removal of Tonsils with Notes on 800 Cases. G. E. Waugh, London.
- 40 New Instrument for Opening the Skull. J. M. Neff, Chicago.
- 41 Operative Treatment of an Irreducible Fracture of Surgical Neck of Humerus. J. H. Jacobson, Toledo, O.
- 42 The Instrument Tree. S. E. Newman, St. Louis.
- 43 *Treatment of Uterine Retrodisplacements. J. M. Baldy, Philadelphia, Pa.

21. Cholecystectomy.—MacLaren and Ritchie analyze 21 cases of cholecystectomy, with reference to diagnosis, operative measures, and results, and present the cases in tabular form. MacLaren discusses the operation. Incidentally he records an experience which leads him to the conclusion that the removal of gallstones through a stab is seldom justifiable. His principal object in writing, he states, is to impress the young man with the fact that the mortality of gall-bladder opera-

tions will not be "2 per cent." in his hands until he has done several hundred operations. He enumerates the following as conditions under which we should not perform cholecystectomy:

1. In a cystic gall bladder, when from the appearance and history it is certain that the obstruction of the cystic duct is recent, even though the gall bladder does not contain bile.
2. In calcareous disease or gangrene of a small portion of the fundus of the gall bladder.
3. In moderate sized perforations or wounds.
4. In moderately adherent and "somewhat" contracted gall bladders.
5. In the presence of pancreatitis, especially if complicated with dilatation, stone, or other disease in the common duct.

22. Fractures.—Lane repeats his conclusions of 1904, that in fractures operative measures offer the patient the following advantages:

- (a) They at once relieve the patient from the pain of any movement of the fragments on one another.
- (b) They free him from the tension and discomfort due to the extensive extravasation of blood between and into the tissues.
- (c) They shorten the duration of the period during which he is incapacitated from work, since union is practically by first intention, and, consequently, very rapid and perfect.
- (d) Last, and by far the most important, they leave his skeletal mechanics in the condition in which they were before he sustained the injury.

Lane describes the technic and discusses the apparatus used. The article is abundantly illustrated with radiographs.

24. Infected and Complicated Cases of Labor.—Davis refers to cases of labor complicated by disproportion between mother and child, and in which, through neglect or bad treatment, the patient has become infected and sustained considerable laceration. The child is dying or dead, and the indication is to deliver the mother, thus saving her life. The intravaginal treatment of these cases is successful in a certain number. When the disproportion between mother and child is slight and laceration has not opened the peritoneal cavity, embryotomy offers a favorable prognosis; but when disproportion is marked and the mother seriously injured and infected, Davis believes that delivery by abdominal section, followed by the Porro operation will give the best results. He reports ten cases, in six of which the Porro operation was performed, and all of the patients recovered. By Porro operation he means that designed and performed by Porro, in which the stump is fastened extraperitoneally to the lower end of the abdominal incision, the greater part of it subsequently separating by sloughing. From a surgical standpoint, the operation is unsatisfactory, but in the class of cases described its results justify its performance.

25. Chromocystoscopy in Functional Renal Diagnosis.—Thomas says that in 90 per cent. of cases normal kidneys excrete indigocarmin in from 7 to 14 minutes after its injection intramuscularly; in only 10 per cent. is the excretion suppressed as long as 20 minutes. If the blue coloration appears later than 20 minutes after the injection the functional sufficiency of the kidney is probably impaired. If the excretion fails to appear at all the kidney is the seat of a grave pathologic process, provided the ureter is patulous. The intensity of the excretion (light blue or dark blue) depends on the concentration of the renal secretion and the individual excretory power of the organ. A surgically diseased kidney excretes the coloring matter less intensively than its sister organ, or not at all. The test is simple and by observation of the two ureteral orifices, differences between the two kidneys are readily and speedily noted.

43. Uterine Retrodisplacements.—Baldy says that the time will come when men will be just as much ashamed to speak and write of uterine retrodisplacement as a distinct disease, as they are at present so to speak of ascites as such. Occasionally cases occur, in which it would seem as though the displacement were the only thing which would explain the symptoms from which the woman suffered, and in which a replacement of the uterus cured the patient; but the more one sees of gynecologic practice, the fewer unexplainable cases come under observation, and the closer one is able to limit this list of exceptions. Retrodisplacements of the uterus, Baldy says, are mostly coincident with other lesions, and when such is the case the symptoms almost universally come from the associated disease. The treatment of retrodisplacements is, then, a misnomer; it should be the treat-

ment of conditions in connection with which retrodisplacement of the uterus occurs as an incident. The displacement of the organ can be ignored and the result will be perfectly satisfactory. In the badly infected cases in which Ochsner uses his operation, similar to one formerly used by Baldy, of attaching the fundus to the abdominal wall, both ovaries being removed, Baldy almost without exception performs the amputation hysterectomy, and finds none of the objections or bad results which seem to worry Ochsner. He then describes his operation for use in those cases in which no disease can be found, and again in those in which the disease found has been dealt with by appropriate treatment, and it is found in addition desirable to bring a retrodisplaced fundus forward; for instance the ovaries and Fallopian tubes, or part of them, being left, the peritoneum of the pelvic walls back of the uterus and broad ligaments being denuded and bleeding, and where adhesions between them and the fundus would be apt to occur, if they were allowed again to come into contact, or when it is desirable to draw up prolapsed ovaries and Fallopian tubes. This operation has been performed by himself and his assistants between 100 and 200 times. He knows of 20 or 30 pregnancies following its performance. In no case has there been the slightest irregularity, although a number of the women had had trouble in former pregnancies. It is not so easily performed as a ventrosuspension, but it requires no more skill than is possessed by any surgeon competent to open the abdomen.

Bulletin American Academy of Medicine, Easton, Pa.

April

- 44 What Constitutes a Liberal Education in the Twentieth Century? G. B. MacLean, Iowa City.
- 45 Idem. T. McClelland, Galesburg, Ill.
- 46 Idem. C. F. Thwing, Cleveland, O.

Vermont Medical Monthly, Burlington

April

- 47 Sanatorium Treatment of Tuberculosis. H. D. Chadwick, Pittsford.
- 48 Valvular Lesions of the Heart. A. Morton, St. Albans.
- 49 Conservatism in Surgery. M. R. Crain, Rutland.

Kentucky Medical Journal, Bowling Green

April 1

- 50 Serotherapy. J. E. Wilson, Falmouth.
- 51 Best Methods for a County Society to Pursue in Order to Accomplish the Most Good. W. H. Witherspoon, Harrodsburg.
- 52 Endometritis, with Special Reference to Prophylaxis. T. C. Holloway, Lexington.
- 53 The Burro. S. Bailey, Searchlight, Nevada.
- 54 Croupous Pneumonia. J. W. Crenshaw, Versailles.
- 55 *Conservative Treatment of Chronic Middle-Ear Discharge from Standpoint of the Specialist and General Practitioner. H. Horn, Bonn, Germany.
- 56 General Therapeutics. J. A. Caldwell, Peach Grove.
- 57 Eclampsia. A. Dixon, Henderson.
- 58 Diagnosis and Treatment of Lobar Pneumonia. A. L. Thompson, Nebo.
- 59 Anatomy of the Skull. C. G. Stevenson, Becknersville.
- 60 Gross Anatomy of the Brain and Spinal Cord. E. R. Bush, Winchester.
- 61 Physiologic Action of the Brain and Spinal Cord. G. F. Clark, Winchester.
- 62 Early Symptoms and Diagnosis of Cancer of the Rectum and Sigmoid. G. S. Hanes, Louisville.
- 63 Eclampsia. J. O. Moore, Mattie, Ky.
- 64 Practical Management of a Case of Typhoid. W. A. Jenkins, Louisville.
- 65 *Hydrotherapy as an Agent for Increasing Drug Absorption. C. Pope, Louisville.
- 66 Fractures of Skull with Report of a Case. R. L. Ireland, Louisville.

55. Chronic Middle Ear Discharge.—Horn discusses the questions:

1. What forms of purulent middle ear discharge can be successfully treated by way of the external ear and Eustachian tube?
2. What are the methods to be employed with the various classes?

He adds for those who are not specialists that in ear work it is far better to know what not to do than what to do. A radical operation is usually necessary when with the chronic discharge:

1. The mastoid process is also involved in the process.
2. The overlying soft tissues are swollen.
3. A subperiosteal abscess is present.
4. A fistulous opening or the scars of one are present.
5. An acute exacerbation appears with increased discharge of pus, spontaneous ear pain, tenderness on pressure and half-sided headache.
6. In spite of conservative local treatment, a constant factor is present.

7. Epidermis masses and granular debris are continually washed out during the treatment.

8. During the course of the treatment complications appear; facial paralysis, labyrinth diseases or intracranial complications.

Horn discards the so-called dry treatment. At a recent meeting of the German Otological Society every one was in favor of a preliminary antiseptic syringing followed by careful drying and insufflation of boric acid. He insists that it is the syringe and water that must be aseptic, and that the substances blown in have no influence on the end-result, unless it be an unfavorable one due to irritation. The treatment proposed by Löwenberg in 1870 has still an important place in the methods at Bonn. It consists of the use of 95 per cent. alcohol, especially when the mucous membrane of the ear is red, swollen and thickened. The alcohol may be poured into the ear, no powder should be inflated, but a strip of gauze or a pledget of cotton may be inserted in the ear. Horn cautions against treating an operative case conservatively or a conservative case operatively, and adds: "Educate your finger and the mirror to discover the remains of the adenoid that the other fellow overlooked. Never forget that the Eustachian tube plays an important rôle in both the causation and treatment of middle-ear suppuration. A dirty syringe and a good result do not go together. Keep your powder dry—and see that it is finely powdered. If you are a general practitioner, do not touch an ear discharge coming from the attic. Do not waste time on experiments, the great triumvirate is enough—boric acid, alcohol and the intratympanic tubes."

65. **Hydrotherapy to Increase Drug Absorption.**—Pope says that, tersely stated, we may say that under hot and cold water applications, we can expect greater absorption of oxygen and elimination of carbon dioxide; increased quantity and better quality of bodily glandular juices; destruction of waste material, rendering toxins innocuous; the rejuvenation and cleansing of tissue of such a nature as, in a physiologic sense, to cause the individual within his tissues to be born again; in which the medicament used may play its integral part.

New York State Journal of Medicine, New York

April

- 67 Further Observations on Prostatectomy Based on One Hundred Cases. J. B. Squier, New York.
- 68 *Suppurative Otitis Media—Etiology and Pathology. J. E. Sheppard, Brooklyn.
- 69 *Modern Methods of Non-Operative Treatment in Suppurative Otitis Media. E. P. Fowler, New York.
- 70 *Indications for and Results of Operative Treatment, Including the Simple and Radical Mastoid Operation. W. C. Phillips, New York.
- 71 Purulent Diseases of the Middle Ear, the Treatment of Meningeal, Sinus and Labyrinthine Complications. S. M. Smith, Philadelphia.
- 72 *Meller's Operation for Removal of the Tear Sac. A. E. Davis.
- 73 Treatment of Eclampsia. W. L. Wallace, Syracuse, N. Y.
- 74 *Diagnosis of Ovarian Dermoid Cysts. J. C. MacEvitt, Brooklyn.
- 75 Unusual Cases of Venous Thrombosis. H. W. Johnson, Hudson.
- 76 Infectious Phlyctenular Kerato-Conjunctivitis. J. S. Kirkendall, Ithaca.
- 77 The Galvanocautery as a Factor in Peritonsillar Abscess. I. W. Voorhees, New York.
- 78 *Pokeberry Poisoning. F. W. Lester, Seneca Falls.

68, 69, 70. Abstracted in THE JOURNAL, Feb. 20, 1909, p. 654.

72. Abstracted in THE JOURNAL, Feb. 6, p. 496.

74. **Ovarian Dermoid Cysts.**—MacEvitt reports two cases which combat the theory of a uniform progressive development, and on the contrary, demonstrate at times a remarkably rapid growth. While this symptom has no great weight from a diagnostic standpoint, MacEvitt asks whether, when we have joined thereto fever, pain, vomiting, and free fluid, we are not justified in adding it to the symptomatology of ovarian dermoid. It is his belief that dermoid cysts have no more malignant influence on their surroundings than any other peritoneum-covered growth. He advances the theory that it is only after inflammatory degeneration of their sac, when perforation ensues, permitting the escape of their acrid irritating contents that a localized peritonitis is developed, followed by its train of symptoms. The frequently given diagnostic point of the tumor being anterior to the uterus is likewise unreliable. In his case the location was on either side. He concludes that even with the additional symptoms

which he has been able to record—(1) occasional very rapid development, (2) vomiting after the onset of pain, (3) aggravation of pain in the tumor for a few days prior to the menstrual epoch, (4) unreliability of Kuster's sign—position of the tumor anterior to uterus, (5) irregularity of outline, (6) abdominal free fluid—the diagnosis of ovarian dermoids can never be positive; at the most it is inferential.

78. **Pokeberry Poisoning.**—Lester records the case of a boy, 12 years of age, whom he found as completely relaxed in his muscular system as though under full anesthesia. One could have tied him in a knot. He was breathing very shallowly and quietly, so that one could hardly detect any respiratory sounds or motions unless one approached to within a foot of the patient. The pulse was soft, full and slow, about 60, regular and not the pulse of collapse. The boy salivated freely from his mouth, there being a constant raising of thick, frothy saliva. His reflexes were gone, the eye bearing the touch of finger without any lid contraction. In the absence of any history of poisoning, Lester administered stimulants, and with the use of warm water obtained free emesis; the vomitus determined the nature of the patient's seizure, being largely composed of the pokeberries. The use of liberal doses of castor oil at short intervals was persisted in for some hours, the patient becoming gradually better, until consciousness was regained nine and one-half hours after the initial attack. The whole picture was one of motor relaxation. There was even evidence of this in the widely open pupil, hanging jaw, tongue settled back in the pharynx, and inability to swallow, for an hour. Yawning and stretching were evident as the patient became better, but no sweating of body or tremor was present.

Illinois Medical Journal, Springfield

April

- 79 *Cutaneous Manifestations of Syphilis. J. N. Hyde, Chicago.
- 80 *Serodiagnosis of Syphilis and Its Clinical Value. W. J. Butler, Chicago.
- 81 Value of the Spirochete in Diagnosis of Syphilis, with Special Reference to the Primary Lesion. B. C. Corbus, Chicago.
- 82 *Congenital Syphilis. I. A. Abt, Chicago.
- 83 *Laws of Heredity. W. E. Castle, Cambridge, Mass.
- 84 Inheritance in the Evening Primrose. R. R. Gates, Chicago.
- 85 *Light Thrown on Eugenics by Experiences of Animal Breeding. E. Davenport, Urbana.
- 86 Reappearance of the Once Common and Fatal Milk Sickness, or "Milk-Sick," with Successful Rational Treatment Deduced from Clinical Findings. W. E. Walsh, Morris.
- 87 *The Sanatorium—Its Influence and Value. J. W. Pettit, Ottawa.
- 88 *How Shall we Apply the New Antituberculosis Law? Resources not Available. E. J. Brown, Decatur.
- 89 *The Tuberculosis Dispensary as it May be Established under the New Law. E. A. Gray, Chicago.
- 90 Physical Examination of Below-Grade Children. C. Hedger, Chicago.

79 and 82. Abstracted in THE JOURNAL, Feb. 6, 1909, p. 498.

80. Published in the *New York Medical Journal*, January 30, *Chicago Medical Recorder*, March, and *Alabama Medical Journal*, March, and abstracted in THE JOURNAL, Feb. 13, 1909, p. 588.

83. **Heredity.**—Castle discusses the material basis of heredity, Mendel's law, the production of new varieties, sex as a Mendelian character, hidden factors, atavism, and the origin of varieties by loss of factors, the law of blending inheritance, and intermediate types of inheritance. He summarizes his conclusions as follows: In all forms of inheritance alike, each parent makes, as regards every separately heritable character, a unit contribution to the offspring. Consequently, the offspring are as regards every character two-fold, or dual, organisms. When the offspring in turn reproduce, they transmit the conditions which they received from their parents; they transmit those conditions separately in alternative inheritance, blended in blending inheritance, and partially separate, partially blended in other forms of inheritance.

85. **Eugenics.**—Davenport discusses the results of mating between superior, inferior and mediocre individuals, and shows that with exceptional parents some of the offspring will be exceptional individuals, but also that, whatever the parentage, many individuals will be inferior in respect to many or even all essential characters, and these are known as degenerates. Animal breeding has two distinctly different objects, arrived

at by almost opposite methods: (1) the promotion of a few exceptional individuals, like race horses and fancy stock generally; (2) the raising of the general average of the breed. In the first case, only exceptional individuals are used for breeding purposes. Some would imitate this procedure with humans, but Davenport holds that we secure the same results in a good degree through preferential mating. It is not true, as a rule, that people choose opposites. On the contrary, tall tends to marry tall, and short, short; musical, musical, etc. To go beyond this natural result of preferential mating, we should be obliged to apply to our marriage laws of the best people, such restrictions as would dangerously interfere with the deepest human instincts, in which attempts we should either fail, or else we should blot out of the race its choicest asset and most valuable character—love. The raising of the average may be attained by breeding from the few or by excluding the lower limits of the race. We can not exclude as widely as the animal breeder does, but we can aim at the absolute exclusion of the degenerate. Davenport sums up by saying that he can not approve the oft-proposed interference with the marriage relations of normal people. Any mistakes they make will be blotted out mechanically and will not permanently weaken the race, or greatly hamper it at any given moment. But he would deal differently with the criminal class and take every opportunity to eliminate them from the possibility of reproducing their kind when they are once adjudged to be degenerates.

87, 88, 89. Abstracted in *THE JOURNAL*, June 27, 1908, p. 2153.

Pennsylvania Medical Journal, Athens

April

- 91 *Progress in Otolaryngology. F. W. Frankhauser, Reading.
- 92 *Redundant Sigmoid. J. G. Clark, Philadelphia.
- 93 *Etiology, Diagnosis and Treatment of Acute Intestinal Obstruction. L. B. Kline, Catawissa.
- 94 Intermittent Intestinal Obstruction from Kinks in the Large Bowel. J. B. Roberts, Philadelphia.
- 95 Intestinal Obstruction as a Complication of Acute Appendicitis. L. Brinkmann, Philadelphia.
- 96 *Intestinal Obstruction in Connection with Tuberculosis or Tuberculous Peritonitis. H. M. Neale, Upper Lehigh.
- 97 Treatment of Septic Cases of Appendicitis. F. A. Goeltz, Erie.
- 98 *Early Signs of Ectopic Gestation. R. R. Huggins, Pittsburg.
- 99 *Treatment of Terminated Ectopic Pregnancy. C. A. Stillwagen, Pittsburg.
- 100 *Present Day Therapy. J. P. Roebuck, Lititz.
- 101 *The Non-Medicinal Treatment of Disease. D. Riesman, Philadelphia.
- 102 Surgical Treatment of Some of Our Medical Cases. W. H. Hartzell, Allentown.
- 103 Treatment of Alcoholism. L. M. Gates, Scranton.
- 104 Chronic Diarrhea Relieved by Removal of a Chronically Inflamed Appendix. J. Sailer, Philadelphia, and J. L. Atlee, Lancaster.
- 105 Homatropin Poisoning with Complete Transient Aphasia. A. Brav, Philadelphia.
- 106 Review of Two Hundred and Fifty Cases of Pulmonary Tuberculosis. H. L. Bates, Philadelphia.
- 107 Sewage Disposal for Country Houses. H. B. Wood, Philadelphia.

91. Abstracted in *THE JOURNAL*, Oct. 3, 1908, p. 1178.

92. **Redundant Sigmoid.**—Clark arrives at the conclusion that this condition is due, not to a primary defect, but to an unequal growth of the large intestine after birth. He cites in support Piersol's "Anatomy," to the effect that the large intestine grows at the expense of the sigmoid flexure, which, at birth, forms nearly one-third of the whole, while at four months it has assumed practically its permanent proportion. He considers that the explanatory key to developmental anomalies is to be found in this statement. He reports four cases of operation for redundant sigmoid and concludes that, in exaggerated cases, nothing short of a radical resection of the redundant organ will effect a cure. But as resection of the sigmoid is a grave major operation the symptoms must be very threatening to justify it. In cases in which the redundancy has been encountered in the course of another operation, he has lightly tacked the dorsum of the sigmoid to the peritoneum of the lateral abdominal wall, on a level with the brim of the pelvis, with the intention of causing light adhesions and thus preventing the redundant loop from falling into a vicious position in the pelvis. Some of the patients have been almost or entirely relieved by this simple procedure.

93, 96, 98, 99, 101. Abstracted in *THE JOURNAL*, Nov. 7, 1908, pp. 1629, 1630.

100. **Present-Day Therapy.**—Roebuck says that present-day therapy is advanced so slightly that the question arises whether or not we have retrogressed. About 33 per cent. of all prescriptions dispensed are for non-official drugs. The lowest percentage is from Philadelphia—22 per cent. of non-official drugs—and the highest from Scranton, with a percentage of 45. While some of the liquid preparations of official drugs with non-official formulas have value, the Pharmacopeia and National Formulary will show preparations of equal value, with the advantage of a standard which should be used by professional men. To use nostrums and preparations with incomplete formulas is a disgrace to science and ethics. The remedy for the evil lies in education through the medium of the medical journals and publications which reach the every-day practitioner. Since the Council on Pharmacy and Chemistry of the American Medical Association is publishing a list of non-official drugs, if such remedies are to be used, it is at least possible to make an intelligent selection.

Journal Michigan State Medical Society, Detroit

April

- 108 Small Epidemic of Acute Anterior Poliomyelitis. J. G. R. Manwaring, Flint.
- 109 *Plea for Early Diagnosis in Carcinoma of the Uterus. J. H. Carstens, Detroit.
- 110 Appendicitis. W. K. West, Painesdale.
- 111 Anesthetics, Especially Somnoform. G. C. Hafford, Albion.
- 112 *Acute Toxemia after Chloroform Anesthesia. F. W. Heysett, Freesoil.
- 113 Rabies in Man and Animals. G. W. More, Ionia.

109, 112. Abstracted in *THE JOURNAL*, Aug. 29, 1908, pp. 785, 786.

Southern California Practitioner, Los Angeles

April

- 114 Surgical Progress of the Past Year. A. S. Lobingier, Los Angeles.
- 115 Medical Progress of the Past Year. D. J. Frick, Los Angeles.
- 116 Smallpox—Its Initial Stage. I. R. Bancroft, Los Angeles.

Western Medical Review, Omaha

April

- 117 Diet in Nephritis. T. Truelsen, Omaha.
- 118 Treatment of Pathologic Scar Tissue. C. A. Roeder, Grand Island, Neb.
- 119 Use of the X-Ray in Malignant Growths. W. H. Mick, Omaha, Neb.

Old Dominion Medical Journal, Richmond, Va.

April

- 123 Recent Studies in the Physiology and Pathology of the Parathyroid Glands. W. N. Berkeley, New York.
- 124 *Prognosis in Tabes Dorsalis. W. Sinkler, Philadelphia.
- 125 Consideration of Factors in the Mortality of Appendicitis: Based on a Consecutive Series of Five Hundred Operations, with Two Deaths. L. G. Guerry, Columbia, S. C.
- 126 Paresis of a Levator Palpebrarum Occasioned by Frontal Sinusitis. W. C. Posey, Philadelphia.
- 127 Aggressive War against Typhoid. W. D. McCaw, Washington, D. C.
- 128 Importance of the Digestive Tract in Treatment of Pulmonary Tuberculosis. I. J. Archer, Black Mountain, N. C.
- 129 Open-Air Treatment in Surgical Tuberculosis, with a Word About Sunshine. O. Smith, Asheville, N. C.

124. **Tabes Dorsalis.**—Sinkler points out that recent advances in medical science and modern methods of treatment have made a great change in the prospect of betterment or comparative cure in many cases of tabes dorsalis. He discusses the three stages of the disease and says that in the first stage good results are often obtained or the disease may be arrested; antisyphilitic remedies, massage and hydrotherapy are indicated. In the ataxic stage our efforts should be directed to the re-education of the muscles, the improvement of general health and the building up of the nervous system; potassium iodid and mercury, or, when these are not given, strychnin, glycerophosphate of lime, and arsenic should be used. Sinkler says that he is sure that he has seen benefit from the solution of arsenic, gold and mercury. The most valuable method of treatment is the so-called Fraenkel movements. Rest is an important factor. Electricity in his experience is of comparatively little value except as a mechanical method for muscular exercise. Tabetics are very susceptible to cold, so that a mild climate is desirable. In the paralytic stage there is nothing to be done but to make the patient comfortable. Aluminum chlorid in 5 grain doses has proved of advantage in his hands.

Medical Herald, St. Joseph, Mo.

April

- 130 *Diagnosis of Bright's and Allied Diseases. N. S. Davis, Chicago.
131 *Cancer of the Uterus. H. J. Boldt, New York.

130, 131. Abstracted in THE JOURNAL, May 8, 1908, p. 1535.

Therapeutic Gazette, Detroit, Mich.

April

- 132 *Intermittent Intestinal Obstruction from Kinks in the Large Bowel. J. B. Roberts, Philadelphia.
133 *Etiology, Diagnosis and Treatment of Acute Intestinal Obstruction. L. B. Kluwe, Catawissa, Pa.
134 *Intestinal Obstruction with Tuberculosis or Tuberculous Peritonitis. H. M. Neale, Upper Lehigh, Pa.
135 *Intestinal Obstruction as a Complication of Acute Appendicitis. L. Brinkmann, Philadelphia.
136 *Treatment of Septic Cases of Appendicitis. F. A. Goeltz, Erie, Pa.
137 *Redundant Sigmoid. J. G. Clark, Philadelphia.

132, 135, 136. Published also in the *Pennsylvania Medical Journal*, April, 1909.

133, 134. Abstracted in THE JOURNAL, Nov. 7, 1908, p. 1629, and also published in the *Pennsylvania Medical Journal*, April, 1909.

137. Published in the *Pennsylvania Medical Journal*, April, 1909. See abstract No. 92.

Bulletin Johns Hopkins Hospital, Baltimore

April

- 138 *Experimentally Induced Choked Disc. H. Cushing and J. Bordley, Baltimore.
139 *Excretion of Hexamethylenamin (Urotropin) in the Cerebrospinal Fluid and Its Therapeutic Value in Meningitis. S. J. Crowe, Baltimore.
140 *Is the Pituitary Gland Essential to the Maintenance of Life? L. L. Reford and H. Cushing, Baltimore.
141 *Experimental Surgery of the Mitral Valve. B. M. Bernheim, Baltimore.
142 Hydrocephalus Treated by Drainage into a Vein of the Neck. R. D. McClure, Baltimore.
143 Effort to Determine the Sensory Path from the Ocular Muscles. P. W. Harrison, Baltimore.
144 Some Methods of Anastomosing Blood Vessels. B. M. Bernheim, Baltimore.
145 *Effect of Narcosis on the Body Temperature. S. G. Davis, Baltimore.
146 Postoperative Pulmonary Complications. J. Homans, Boston.

138. **Choked Disc.**—Cushing and Bordley report experiments undertaken to establish the etiology of choked disc. The authors summarize the experiments as follows:

1. The introduction of fluid under tension into the intracranial subdural space will produce an acute edematous swelling of nerve head and retina—in other words, a choked disc—which can be observed during life with the ophthalmoscope and demonstrated by a study of the tissues after death.
2. Simple digital compression exerted against an area of the dura exposed by a trephine opening, and without the introduction of new fluid under tension, will produce similar lesions.
3. These acute edemas of the nerve head and retina are associated, under both conditions, with distention of the optic sheath, particularly of its subarachnoid spaces.
4. Venous congestion does not seem capable, without the concomitant action of the fluid under tension in the optic sheath, of producing more than the congestive features of choked disc; in other words, under the conditions of the experiments it failed to occasion any appreciable edema of the nerve head.
5. Long-continued pressure against a dural defect can lead to retinal hemorrhages and other clinical, as well as histologic features, which characterize chronic choked disc in man.
6. The introduction between the skull and dura of foreign bodies which are capable of subsequent increase in size and which possess some elasticity, will closely simulate the action of a new growth, and, placed either above or below the tentorium, will lead to the production of choked disc.

It may, therefore, be stated in conclusion, that:

1. The occurrence of the neuroretinal edema is primarily dependent on the passage of cerebrospinal fluid under tension from the subarachnoid spaces of the interpeduncular region into the vaginal sheath of the optic nerve, and that cerebral decompression often allows the process to subside, owing to a resultant diminution of tension from release of the confined fluid.
2. The experimental work corroborates many of the more recent clinical observations in showing that a choked disc, even of considerable height, may be rapid in its formation, and, provided it has not gone on to the stage of new tissue formation, may rapidly subside; and thus speaks strongly in favor of a mechanical, as opposed to a chemical or inflammatory, origin for the lesion.

139. **Hexamethylenamin in Meningitis.**—Crowe reports experiments on the excretion of hexamethylenamin in the cerebrospinal fluid and summarizes the results as follows:

1. Urotropin (hexamethylenamin), when given by mouth, invariably appears in the cerebrospinal fluid. This fact has been demonstrated by a large number of observations on man, and is also true for dogs and rabbits.
2. The largest amount of urotropin (hexamethylenamin) is present in the cerebrospinal fluid from 30 minutes to an hour after the ingestion of the drug.

3. After doses of urotropin, within therapeutic limits, a sufficient amount of the drug appears in the cerebrospinal fluid to exercise a decided inhibitory effect on the growth of organisms inoculated into this fluid after its removal from the body.

4. Following a subdural inoculation of dogs and rabbits with streptococcus, from 60 to 80 grains of urotropin a day, given under conditions which insure absorption, will markedly defer, and in some cases prevent, the onset of a fatal meningitis.

5. In view of these observations, the prompt administration of urotropin is advised in all clinical cases in which meningitis is a possible or threatened complication, or even when meningeal infection has actually occurred.

140. **The Surgery of the Pituitary Gland.**—Reford and Cushing report experiments which lead them to sustain Paulesco's contention, that a total hypophysectomy is incompatible with the continuance of life, although its average duration in their series of typical extirpations has been somewhat longer than that observed in Paulesco's cases. Consequently they infer that the surgery of the hypophysis must be limited either to the removal of tumors which may implicate the pituitary gland, or, in case of hypertrophy, to a partial hypophysectomy.

141. **Surgery of the Mitral Valve.**—Bernheim has undertaken to answer experimentally the question raised by Sir Lauder Brunton: Can a mitral stenosis be transformed by surgical measures into an insufficiency with benefit to the patient? He reports additional progress with special reference to the operative methods that have been used in the attempt to narrow the left ventricular orifice, which has been found the most difficult of all valvular lesions to reproduce. Although on numerous occasions he has been able to constrict the mitral ring by a suture, and has succeeded in some of these cases in subsequently dividing the constriction, he has not yet been able to reproduce the typical presystolic murmur or the usual symptoms characterizing the "button hole" stenosis in man. Hence the question of possible symptomatic benefit from the procedure still remains unanswered. He describes the method pursued. The procedure now used is far easier to carry out than the original stenosing operation, takes less time, the hemorrhage is easily and accurately controlled, and the operative mortality is low. These he considers points in favor of the future possible operation on man according to Brunton's suggestion.

145. **Anesthetics and Body Temperature.**—Davis reports experiments that tend to support the previous observations made by Kappeler, Allen and Mills, and to justify the following conclusions:

1. Chloroform produces a loss of body temperature approximately equal to that produced by ether.
2. Surrounding the field of operation with wet towels will greatly increase the loss of body temperature and should therefore be studiously avoided.
3. The loss of temperature produced by ether narcosis will not be greatly increased by the preliminary administration of a moderate dose of morphia.
4. The excessive application of heat to an individual while under the influence of morphia will lessen the usual loss of body temperature from this drug, and the additional administration of ether under these circumstances may lead to a rise in body temperature rather than the expected fall.
5. Warming the ether vapor before inhalation will likewise prevent the loss of body temperature, or may actually increase it in a degree proportionate to the temperature of the vapor and also to that of the operating room. An undue elevation of body temperature from this source is doubtless injurious; the object should be to maintain an even temperature.
6. In a human patient kept warm and dry during anesthesia the loss of temperature will be much less than when the body is wet and exposed; and, furthermore, the fall in temperature is less, under ordinary conditions of anesthesia, in a room with a temperature above 26.6° C. (80° F.) than in a room of a lower temperature.
7. Patients consequently should not only be kept dry and warm, but be anesthetized in a room free from draughts, and should not be transferred to a cold room, even after the anesthetic is discontinued.
8. With such profound variations in body temperature as have been observed, with many of the patients complaining of being cold even after they have returned to their beds, it perhaps is not surprising that post-anesthetic pulmonary complications are not uncommon.

Atlanta Journal-Record of Medicine

March

- 147 Pneumonia. J. B. Baird, Atlanta.
148 Blood in the Urine (continued). A. L. Fowler, Atlanta.
149 Empyema. C. P. Ward, Atlanta.
150 Gonorrheal Cases Treated with Serum. M. S. Rosenthal, Baltimore.
151 Acute Traumatic Tetanus Treated by Magnesium Sulphate (continued). A. P. Heineck, Chicago.
152 Surgery of the Appendix. R. R. Kime, Atlanta.
153 Sex Education. F. Cabot, New York.
154 Glass Drainage Tubes in Prostatic Surgery. F. Cabot, New York.

Monthly Cyclopaedia and Medical Bulletin, Philadelphia

March

- 155 Treatment of Typhoid with Solution of Calcium Creosote (concluded). L. Kollpinski, Washington, D. C.
156 Medical Treatment of Acute Appendicitis. T. G. Green, Shelbyville, Ind.
157 *Clarification of our Concepts Concerning Hysteria. T. A. Williams, Washington, D. C.
158 Practical Applications of the Newest Principles Introduced by Dr. Sajous. J. M. Taylor, Philadelphia.
159 Lupus Vulgaris. J. V. Shoemaker, Philadelphia.
160 Efficiency and Sufficiency of United States Pharmacopoeia and National Formulary Preparations for the General Practitioner. J. M. Anders, Philadelphia.
161 Uterine Moles, with Special Reference to Hydatidiform Mole. J. S. Raudenbush, Philadelphia.
162 Tuberculosis of the Breast. W. L. Rodman, Philadelphia.

157. **Hysteria.**—Williams discusses this subject in the light of the recent discussion at the Paris Neurological Society, and says that from the foregoing considerations it follows: (1) That from hysteria must be eliminated cases of trickery, simulation and mythomania; (2) that to the syndrome of hysteria do not belong modifications of reflectivity; (3) that the vasomotor and trophic neuroses have nothing to do with hysteria; and (4) that other psychoneurotic states, such as psychasthenia, neurasthenia, cenesthopathia, mental debility, and confusion, the early phases of dementia præcox, dream-like states, and emotional perversions must not be confounded with hysteria. The hit-or-miss psychotherapy of encouragement in many cases does more harm than good. It is as dangerous, therapeutically, as digitalis or the knife in hands ignorant of pathology.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

April 17

- 1 *Disorders of the Cerebral Circulation and Their Clinical Manifestations. A. E. Russell.
2 *Rôle of the Saliva in the Transmission of Tubercle. N. Neild and E. V. Dunkley.
3 Two Unusual Conditions of the Gall Bladder. H. Lett.
4 Vascular Degeneration: A Study in Cardiac Arrhythmia. A. M. Gossage.
5 *Some Applications of the Precipitin Reaction in the Diagnosis of Hydatid Disease. D. A. Welsh, H. G. Chapman and J. C. Storey.
6 Recurrent Hematoporphyria with Toxic Symptoms not Due to Sulphonal. W. L. Brown and H. O. Williams.
7 Intussusception of Sigmoid of Colon. A. Don.
8 Disease of Hip Joint Due to Streptococcal Invasion, with Secondary Manifestations in other Parts. W. O. Beddard.
9 An Interesting Case of Appendicitis: Perforation—Operation; Recovery. T. W. Parry.

1. **The Cerebral Circulation.**—Russell describes the results of experimental study of the restoration of circulation after the blood supply of the brain has been cut off. He discusses the time limit of the recovery of the brain from arrest of the circulation, the postmortem condition of the brain, reviews the symptoms, and regards the diminution in the blood flow through the brain as the result of increased intracranial tension. His observations, clinical and pathologic, lead him to the conclusion that the fundamental condition underlying the status epilepticus is cerebral anemia.

2. **Saliva and the Transmission of Tubercle.**—Neild and Dunkley have been impressed by the freedom with which the tuberculous patients use their saliva for purposes in no way connected with their digestion, and by the fact that few, if any, tuberculous patients are warned against such uses. In 50 cases of pulmonary tuberculosis, saliva from the tip of the patient's tongue showed tubercle bacilli in 29. Among the practices by which the possible transmission of tubercle bacilli was shown, were licking the finger to pick up the lead of a mechanical pencil, spitting on the hands to use a rake, tennis racket, etc., licking the finger to turn over the pages, spitting on a slate, biting the end of sewing thread. Saliva is often used as a styptic. The nipple is wetted with it to encourage

a child to take the breast. Then there are the various methods of using saliva for closing envelopes and affixing stamps. One of the authors has recently met with two cases of lupus of the face, in which there was a definite history of face cleaning with saliva by the pulmonary tuberculous.

5. **Precipitin Reaction in Hydatid Disease.**—Welsh, Chapman and Storey refer to their previous experience of precipitin reaction in hydatid disease, as reported in the *Australasian Medical Gazette*, January, 1908, and abstracted in *THE JOURNAL*, April 18, 1908, p. 1309. They make a further report, dealing mainly with the interactions of hydatid fluids (a) not derived from the patient whose serum was being tested; (b) of longer standing than those used in the first series, and (c) subjected to various methods of treatment, in order to preserve them in a sterile condition for many years. The conditions of experiment, therefore, were less favorable than in their first series. They state their conclusions as follows:

1. A precipitate was not obtained in any interaction between hydatid fluid and human serum from a patient not invaded by hydatid cysts.
2. Having regard to the long duration and probable irregularity of the interchange of protein molecules between a hydatid cyst and its human host, and having regard also to the possible unsuitability of the hydatid fluid, we must expect a certain number of precipitin tests to fail to give satisfactory precipitate, and this has been the author's experience.
3. In the conditions of a diagnostic precipitin test as above described for patients suspected to harbor hydatid cysts, a negative reaction is inconclusive, but a positive reaction is conclusive of hydatid invasion, and the latter may be obtained in circumstances of clinical importance.

British Medical Journal, London

April 17

- 10 *Dysmenorrhea. G. E. Herman.
11 Importance of Pain and Hemorrhage as Symptoms of Extra-uterine Gestation. T. W. Eden.
12 Three Recent Cases of Tubal Pregnancy. C. E. Purslow.
13 Surgical Treatment of the Umbilical Cord. J. W. Ballantyne.
14 Chronic Inversion of the Uterus. R. J. Johnstone.
15 Inguinal Hernia of Uterus. R. Parker.
16 Cesarean Section with Unusual Indications. R. C. Buist.
17 *Tetanus Occurring After Surgical Operations. W. G. Richardson.
18 Fracture of the Thigh in the New-Born. J. L. T. Isbister.

10. **Dysmenorrhea.**—Herman insists that dysmenorrhea is a disease and not a symptom. About one-third of all women menstruate without pain. They have, as a rule, good appetites, sleep soundly, and are not easily tired. They have healthy nervous systems. Before and during menstruation some increase in vascular tension and rise of temperature takes place, and, in those who are ill or weak, this reduces the nervous strength, making them more sensitive to pain, but in most women this pain is slight. In nearly every local disease that causes pain the pain is worse about the time when menstruation begins. This is so in neurasthenics, in various pelvic conditions in nervous diseases, etc. But the pain is not the acute spasm of dysmenorrhea; it is the pain of the other morbid condition rather worse than usual. Herman objects to all such terms as "neurasthenic dysmenorrhea," "menstrual epilepsy," etc., which imply the dependence of the disease on menstruation. He also objects to "obstructive dysmenorrhea," and "membranous dysmenorrhea," contending that the word dysmenorrhea should be restricted to its proper meaning, namely, to denote morbid painful uterine contractions accompanying menstruation. Patients who pass membranes suffer, not because membranes are passed, but because their nervous systems are weak. In the worst cases of dysmenorrhea the patient writhes, perspires, vomits and sometimes faints with the severity of the pain, which is not relieved when the woman lies down, whereas it is relieved when pain is due to inflammation or congestion of dependent parts of the body. Another feature of the pain is its short duration, as compared with the discomfort caused by the monthly congestion. The view that dysmenorrhea depends on a malformation, seems to Herman inconsistent with the clinical experience that in about one-third of the cases the pain begins suddenly after years of painless menstruation. In such cases, the patients often have their own explanation for it, such as mental or physical shock, or strain. In the case of a small fibroid which sets up uterine contractions, we do know the real cause of the dysmenorrhea. The pain of true dysmenorrhea reduces the pain-resisting power of the nervous system; consequently,

reflected pain is felt over the skin supplied with sensory nerves from the eleventh dorsal to the second lumbar segments of the spinal cord. A dysmenorrheic, if touched over the skin of this region when menstruating, immediately winces. Dysmenorrhea has no tendency to spontaneous cure. The only cure, other than medical treatment, is childbearing.

Herman's theory is that dysmenorrhea exists because the center in the spinal cord or in the sympathetic system which should regulate the movements of the genital canal is imperfectly developed. In dysmenorrhea the natural dilatation of the cervix is absent, consequently the contractions of the uterine body are morbidly violent and painful. Herman's experience leads him to believe that when the cervix dilates slowly and with difficulty, dilatation will cure the dysmenorrhea, but when it is easily accomplished it will not. When the pain is actually present, the local application of heat and the use of coal tar analgetics is the treatment. The unfailing cure is to stop menstruation, but this is justifiable by operative methods only in certain instances. Ten grains of guaiacum resin, three times a day, begun a week before menstruation and continued till the usual pain time is passed, will effect a cure in a certain number of cases. The next thing is dilatation of the cervix with metal bougies, with, if the os externum is very small and circular, division of the vaginal cervix. To differentiate this dysmenorrhea from cases in which some pain due to other causes occurs during or is exaggerated by menstruation, will save many fruitless operations. Before advising so grave a measure as oöphorectomy, the great thing is to be sure that the pain and the prostration spring from menstruation and nothing else.

17. Tetanus After Surgical Operation.—Richardson summarizes his observations on twenty-one cases of postoperative tetanus as follows: Hamilton pointed out that there is a group of diseases among sheep, the symptoms of which are closely allied to tetanus and the bacilli of which can not be distinguished from those of tetanus. In these diseases, the bacilli are normal inhabitants of the sheep's intestine, but at certain periods of the year they pass from the lumen of the bowel into the blood, where they become bacteriolized, and the liberated toxins give rise to the symptoms of the various diseases. During these seasons the bacilli are found in the peritoneal cavity and in no other part of the body. These diseases are endemic in certain parts of the British Isles. The twenty-one cases of postoperative tetanus have occurred only in those districts in which the tetanic group of sheep diseases is endemic. More than 90 per cent. of the cases of postoperative tetanus followed operations in which the peritoneal cavity had been opened. Bacilli resembling tetanus bacilli have been found in the remnant of catgut used for ligatures in four cases and in the ovarian pedicle in one case, but confirmation of the suspicion that they were tetanus bacilli has not been forthcoming. Richardson suggests that: 1. The disease which we call postoperative tetanus is not tetanus at all, but one of the sheep's diseases. 2. It is not introduced by the catgut. 3. The patient is, at the time of the operation, the host of the bacillus. 4. We must look on these cases of postoperative tetanus as cases of idiopathic tetanus, accepting Hamilton's suggestion that idiopathic tetanus is not true tetanus, as we ordinarily understand the disease. Richardson, however, does not assume that these patients would have developed tetanus had no operation been performed. He would rather account for the sequence of events by supposing that the disturbance aroused by the opening of the peritonum at the operation was of such a nature as to favor the activity of the bacilli, which, possibly, would have remained dormant had no operation been performed. 5. That the mere opening of the abdomen can affect the interaction of a patient and bacilli already present in the peritoneum, is frequently demonstrated in cases of tuberculous peritonitis, when a small incision without any other interference is followed by immediate improvement of a local condition and ultimate complete recovery. To the suggestion that the ligatures are infected at or before the time of operation, he adduces the fact of a large number of knee-joint operations without any mishap as pointing to the sterility of the gut.

Medical Press and Circular, London

April 14

- 19 *Duodenal Ulcer: Its Diagnosis and Surgical Treatment. J. Sherren.
- 20 Prevention of Blindness Due to Ophthalmia Neonatorum. N. B. Harman.
- 21 Treatment of Varicose Veins of the Lower Limb by Intravenous Injections of Iodin. B. Schiassi.
- 22 Streptothricosis: with Special Reference to the Etiology of Mycetoma. W. R. Musgrave and M. T. Clegg.

19. Duodenal Ulcer.—Sherren reviews his 13 cases of chronic duodenal ulcer in which he operated before perforation had occurred. He has been struck by the long period during which the patients had had symptoms and in many cases had been treated medically. Passing the symptoms in review it can be said that chronic ulcers situated in the first part of the duodenum can be accurately diagnosed in the majority of cases; that occasionally a gastric ulcer will be found where a duodenal ulcer was expected; that in all cases the principal symptom is pain, coming on a considerable time after a meal, often said to have no relation to food, at other times relieved by taking food, and often waking the patient at night. Vomiting is not a feature of the case unless the condition has led to dilatation of the stomach. It occurred in eleven out of the thirteen cases, but it was not a prominent feature except in the cases he has mentioned. Difficulties arise in the cases in which the ulcer is situated in the second part of the duodenum, or at the junction of the first and second parts. An effort should always be made to diagnose these cases early, and to investigate carefully every "dyspepsia" occurring in men of adult age, so as to avoid perforation. It appears probable that a duodenal ulcer does not heal, except as the result of operation, so that if the condition is diagnosed operation should be undertaken without delay. The prognosis after operation is extremely good. He has traced the after-history of all his patients. One patient died of bronchopneumonia 5 days after operation. At the postmortem examination the anastomosis was perfect and the abdomen normal. Of the other patients, all have lost their symptoms and in only one is there even discomfort. All surgeons report the same results, so that we have in gastroenterostomy a cure for duodenal ulcer which should not be left too long before it is applied.

Clinical Journal, London

April 14

- 23 Autoinoculation versus Heteroinoculation in Treatment of Established Infection. E. C. Hort.

Australasian Medical Gazette, Sydney

February

- 24 Midwifery, with Special Reference to Occipito-Posterior Positions, Hemorrhages, Eclampsia, and Extrauterine Pregnancy. W. H. Crago.
- 25 Axis-Traction Forceps. J. R. Purdy.
- 26 •Active Immunization Measures of Treatment in Pulmonary Tuberculosis. M. M. Sinclair.
- 27 Lupus of the Nose Successfully Treated by Injections of Tubercle Bacillus Emulsion. F. Tratman.
- 28 Pneumothorax: A Recurrent Case. J. Jamieson.
- 29 Operative Treatment of Oblique Inguinal Hernia. R. S. Bowker.
- 30 Treatment of Syphilis. W. McMurray.
- 31 Pediculosis Capitis, especially in Its Relation to Impetigo Contagiosa. A. G. Salter.
- 32 Wright's Method of Section-Fixing Applied to Central Nervous System. O. Latham.

26. Active Immunization in Pulmonary Tuberculosis.—Sinclair, from a practical study of tuberculin inoculation in a large number of cases, concludes that no process of immunization at present known can displace the rational principles of sanatorium treatment. Experimental and theoretical considerations on immunity both show that properly spaced injections of tuberculin may raise the resistance of the tissues against the disease, but can not produce an absolute immunity. Such increased resistance may be of use (a) for therapeutic purposes during the process of healing; (b) in helping to prevent a recurrence. No constitutional immunizing process is of much use in pulmonary tuberculosis unless it is accompanied by local changes in the direction of (a) absorption of recently formed tubercle wherever possible; (b) the formation of a firm cicatrix around the focus of degenerate tubercle. In the production of a cicatrix around the lesion the local hyperemia reaction produced by the injection of tuberculin is possibly of more value than any constitutional immunity

which the inoculations have as yet been able to produce. So far as can be seen, perfectly good results can be obtained in pulmonary tuberculosis without the help of the opsonic index. In regard to progressive increase of dosage versus the infinitesimal doses recommended by Wright, Sinclair has made it his practice to begin with the latter doses in all cases; but in many obstinate and difficult cases a progressive increase in dosage will still further enhance the results. The suggestions of disaster by Wright and his pupils in these cases are, so far at least as pulmonary tuberculosis is concerned, disproved by the actual results of practice in the hands of competent observers.

Intercolonial Medical Journal of Australasia, Melbourne

February

- 33 Cleft Palate. R. H. Russell.
- 34 Four Hundred and Four Cases of Diphtheria at the Infectious Diseases Hospital, Fairfield, Melbourne. C. V. Mackay and R. A. O'Brien.
- 35 Infraorbital Neuralgia Relieved by the Excision of Meckel's Ganglion. B. Kilvington.
- 36 Series of Hospital Cases. J. W. Springthorpe.
- 37 *Some Contents of Blood Plasma and Their Absorbability by Oral Exhibition. D. M. Paton.
- 38 Mastoiditis with Subdural Abscesses, Followed by Jaundice, Pericarditis and Recovery. J. M. Baxter.
- 39 Amyotrophic Lateral Sclerosis. F. A. Nyulasy.

37. Blood Plasma.—Paton summarizes his article as follows:

1. Blood plasma contains the secretions of the systemic glands.
2. These secretions are necessary to life.
3. Their active principles are extremely stable, are not affected by digestion, and are readily dialyzable.
4. In normal plasma they are present in that proportion and combination which is found necessary for the maintenance of cellular nutrition, integrity, and function, under physiologic conditions.
5. When the animal is naturally refractory, the proportion and combination of these plasma elements are of such a character that they are capable of maintaining cellular nutrition, integrity, and function, in the presence of the infections to which the animal is refractory.
6. From their character for stability, non-digestibility, and dialyzability they are readily absorbed from the digestive tract.
7. Being transferred to the patient unchanged, both in character and combination, they produce in him the same results as those for which they were originally intended in the animal supplying them.

Dublin Journal of Medical Science

April

- 40 Unusual Case of Lupus Mutilans. W. G. Smith.
- 41 *Prognosis in Valvular Disease of the Heart. Sir J. F. H. Broadbent.
- 41. Published in the *Medical Press and Circular*, March 31, 1909.

Journal of Laryngology, Rhinology and Otology, London

April

- 42 Laryngectomy: Method of Artificial Voice Production. J. W. Gelftsmann.

Annales de Dermatologie et de Syphiligraphie, Paris

March, X, No. 3, pp. 145-224

- 43 Coal Tar in Treatment of Cutaneous Lesions. (L'emploi de goudron dans les affections cutanées.) Dind.

Lyon Chirurgical, Lyons

April, I, No. 6, pp. 585-720

- 44 *Forty Cholecystostomies and Cholecystectomies. (Drainage et ablation de la vésicule biliaire.) E. Villard and Nové-Josserand.
- 45 *Bismuth Paste in Treatment of Fistulas. (Traitement des trajets fistuleux par le mélange bismuthé de E. G. Beck.) G. Nové-Josserand and A. Rendu.
- 46 *Tubal Pregnancy. (De la grossesse tubaire.) Albertin and Desgouttes. Commenced in No. 5.
- 47 Diagnosis of Wounds of the Heart and Value of Water-Wheel Sound in Stab Wounds of Chest. (Diagnostic des plaies du cœur et valeur du bruit de moulin dans les plaies pénétrantes de poitrine.) R. Leriche.
- 48 Forward Dislocation of Elbow with Fractured Inner Condyle. (Luxation du coude en avant avec fracture de l'épitrachée.) M. Patel.

44. Drainage of the Gall Bladder.—The conclusions from 40 operations on the gall bladder are summarized in the statements that cholecystostomy is an excellent operation in case of stones or infections restricted to the gall bladder. In case the biliary passages are infected it is inadequate, giving good results only in the cases of infection low down in the large bile ducts. The mortality in this group of cases was 42.8 per cent. The experiences were unfavorable with cholecystostomy as a means of draining in jaundice from retention or cirrhosis, the immediate mortality being 66 per cent., and 2 other

patients succumbed after a brief interval. Cholecystectomy in treatment of gallstone affections should be reserved for cases of obstructed gall bladder and for those whose inflamed and thickened walls are the cause of permanent irritation of the peritoneum and neighboring organs.

45. Treatment of Fistulas with Bismuth Paste.—The nine cases in which Beck's method was applied gave disappointing results in some instances, while great benefit was obtained in others. The difference in the results seems to be due to the fact that symptomatic fistulas are not amenable to this method of treatment; it is liable to induce retention and do harm. But in the idiopathic fistulas there is no such objection, and the curative action is liable to be pronounced and definitely effectual.

46. Tubal Pregnancy.—In rupture of a tubal pregnancy, Albertin and Desgouttes advise repose, the head being kept low and application of ice to the abdomen, with repeated saline infusion and possibly administration of a few grams of calcium chlorid and measures to keep the patient constantly warm, continuing all this for twenty-four hours. As a rule, the serious symptoms subside and the loss of blood is rapidly repaired. By the third up to the tenth day is the most auspicious time for operating, before the clots have become organized and tough. These principles were applied in 80 cases with 46 laparotomies and no mortality. True hemorrhage requiring immediate intervention is extremely rare, and it is more dangerous to operate during shock than to postpone surgical measures until the patient has rallied. In 34 cases colpotomy alone was applied, and 3 of the patients did not recover. Albertin reiterates that a tubal pregnancy should never be abandoned to a spontaneous course, whatever its age and clinical manifestations. The details of the 80 cases are appended.

Presse Médicale, Paris

April 7, XVII, No. 28, pp. 249-256

- 49 *Share of Nervous System in the Phenomena of Acute Anaphylaxis. C. Richet.
- 50 Treatment of Epidemic Cerebrospinal Meningitis. Chamberland.
- 51 *Treatment of Pulmonary Tuberculosis by Inhalation of Copper Subacetate. (Traitement de la tuberculose pulmonaire par les inhalations de poussières de verdet.) G. Billard.

49. The Nervous System in Acute Anaphylaxis.—Richet stated in 1902 that the rapid and extreme reduction of the arterial pressure is the main feature of anaphylaxis, but he maintained then and still declares that this is a secondary phenomenon resulting from the primary action on the nerve centers of the poisons inducing the anaphylaxis. His experiments have never shown that the coagulating power of the blood is much reduced in anaphylaxis, while they have demonstrated beyond question that fluctuations in the blood pressure alone are incapable of producing such severe disturbances as are observed in anaphylaxis.

51. Treatment of Tuberculosis by Inhalation of Copper Subacetate.—Billard noticed improvement in the condition of two consumptives after they obtained work in a factory producing copper subacetate. They were employed in packing the verdigris, and soon began to improve and had no further hemorrhages from the lungs, while they regained appetite and weight. The verdigris dust is thick in some of the rooms, but none of the employés seems to notice it, and no coughing is heard in the factory. These and other facts observed led Billard to attribute healing power to the verdigris dust inhaled and he decided to use it in treatment. He has been treating thirty patients systematically in this way since last August and with encouraging results. He orders the patient to buy about 2 pounds of pulverized copper subacetate, as chemically pure as possible. It is poured into a basin and some is taken up on a card and poured back into the basin from a height; this process is repeated again and again and the dust is inhaled as it rises. The verdigris ceases to give off dust in about two weeks, and it is ground over again. Half an hour morning and evening is the general rule for this treatment. In every case in which the patients followed it the cough and expectoration subsided or ceased, while the patients gained in weight and strength and the stethoscope showed a retrogression of

the lesions. The only exceptions to this were in the acute cases with fever; these patients did not seem to be benefited by the treatment.

Semaine Médicale, Paris

April 14, XXIX, No. 15, pp. 169-180

52 Globulin. C. Achard and M. Aynaud.

Berliner klinische Wochenschrift

March 29, XLVI, No. 13, pp. 577-624

- 53 *Statistical Study of Cancer. (Kleiner Beitrag zur Krebsstatistik.) J. Orth.
54 *Artificial Respiration in Apparent Death from Drowning. (Künstliche Atmung bei Scheintod durch Ertrinken.) E. A. Schäfer.
55 *Treatment of Bronchial Asthma of Nervous Origin. N. v. Jagie.
56 Atypical Typhoid. (Ueber einige Fälle von Typhus.) H. Rosin.
57 *Etiology and Treatment of Coxa Vara in Adolescents. G. Drehmann.
58 *Importance of Serodiagnosis of Syphilis. (Bedeutung der Wassermann'schen Reaktion für die Therapie der Syphilis.) H. Boas.
59 Serum Research in Leprosy. (Ueber Serumuntersuchungen bei Lepra.) C. Bruck and E. Gessner.
60 Origin of Central Epithelioma of Lower Jaw. (Entstehung der centralen Epithelialgeschwülste des Unterkiefers.) L. v. Bakay.
61 Production of Whey by Colloidal Precipitation of Milk. (Eine durch colloidale Ausflockung gewonnene Milchmolke.) P. Grosser.

53. **Cancer Statistics.**—Orth compares the reports of the Pathologic Institute at Berlin for the years 1875 to 1908; they show that the number of cadavers in which cancer is found has steadily increased from 4.9 per cent. in 1875 to 14 and 12.2 per cent. in 1906 to 1908. Among the 171 cancers in the last five years there were only 2 of primary cancer of the liver, that is, 0.28 of all the cancers, while the British figures show 50 times as many. He adds that during the last five years only 12 cases of cancer of the male genitalia were encountered and only 2 cases of cancer in the penis—and these in men of 65 and 77—while there were 149 cases of cancer of the uterus or vagina. Uterine cancer occurred in 38.2 per cent. of all the female cases of cancer, while cancer of the penis occurred in only 0.6 per cent. of the male cases of cancer.

54. **Artificial Respiration by the Prone Pressure Method.**—Schafer's method of artificial respiration was described in THE JOURNAL, Sept. 5, 1908, page 801. Although introduced quite recently, it has been widely adopted, and was demonstrated last year at the Chicago session of the American Medical Association.

55. **Adrenalin in Bronchial Asthma.**—Jagic reports five cases to show the remarkable benefit from adrenalin in arresting acute attacks of asthma. No harm was observed even when the adrenalin was injected a number of times. The effect is analogous to that of atropin on the vagus, although the adrenalin acts on the sympathetic.

57. **Coxa Vara.**—Drehmann presents evidence to show that unilateral coxa vara in youths is generally accompanied by abnormal conditions on the other side. He found in three cases that the upper end of the femur was twisted forward on the apparently sound side with atrophy, preparing conditions for coxa vara, although they had not yet become pronounced enough to induce the deformity. It is evident that too great a burden on any part of a skeleton which has not reached full maturity, may cause the bone to bend at the epiphysis. The special attitude assumed in certain work is liable to exaggerate the tendency. In one of his patients the sudden aggravation followed mowing, in another moving a number of heavy tub plants. The site of the bend explains the comparative failure of the ordinary osteotomies, and the benefits of permanent extension or of still more active measures. He has applied a non-operative method for correction of the deformity in two cases with most excellent results, as he describes in detail with illustrations and technic. Under chloroform, the thigh is flexed at a right angle and the adductors are stretched as for operation on a congenital dislocation of the hip; then the leg is extended, the outward rotation corrected, and the leg is immobilized in extreme abduction, extension and slight inward rotation, down to the middle of the calf. The patients are allowed to get up after a few days

and are dismissed, but should return for inspection occasionally. After two months the cast is replaced by a shorter one with less abduction, and this after two months with a removable cast reaching to the knee. He commends this treatment as bound to restore almost normal conditions when commenced early, and to induce marked functional improvement in every case.

58. **Serodiagnosis of Syphilis and Its Importance for Treatment.**—Boas has applied the Wassermann test in 1,345 cases and states that positive findings after systematic treatment of syphilis were invariably the precursor of a recurrence. The serum test applied once a month in the first years after infection and resumption of treatment in case of positive findings will certainly, he is convinced, have a marked influence in warding off recurring trouble.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

March 22, XII, No. 4, pp. 129-159

- 62 *Pathologic Anatomy and Clinical Picture of Gastric Erosions. (Magenerosionen.) C. Berger.
63 *Idiopathic Dilatation of the Colon. (Die Hirschsprung'sche Krankheit.) G. Zesas. Commenced in No. 3.

62. **Gastric Erosions.**—Berger draws the picture of this affection from nineteen articles in the literature. Pain in the stomach, weakness and emaciation are the principal disturbances accompanying the erosions in the stomach, but the pain is never boring or cramp-like as with gastric ulcer, and it seems to extend throughout the whole stomach and is not affected by pressure or change of position. The pain comes on at once after eating, persists for an hour or two and then gradually subsides, but it may persist all the time in some cases, irrespective of the intake of food. There may be intervals free from pain, during which the patient feels quite well, and the pains generally vanish after lavage of the stomach. Frequently there is no appetite and there is often lassitude after eating, gradually subsiding in an hour or two. In certain cases on record vomiting dominated the whole picture and only the microscope revealed the cause of the disturbances. The motor and secretory functions may continue unmodified or may alter with concomitant gastritis. Pariser advises control investigation of the fasting stomach to differentiate erosions from gastric ulcer or a neurosis; it is especially instructive when burning pain throughout the entire stomach, in connection with the meals, is observed with emaciation, especially when the test breakfast has shown normal or subnormal acidity with or without excess of mucus. The course is protracted, with a great tendency to recurrence and there is always danger of hemorrhage from erosion of some blood vessel. Treatment should be both local and general, lavage of the stomach with a 1 or 2 per thousand solution of silver nitrate, large doses of bismuth and the Lenhartz ulcer diet. He calls this form "Einhorn's disease." Quite opposite is the picture of simple ulceration of the stomach. It comes on abruptly, the first symptom being a serious hemorrhage in the midst of health. The lesion is superficial, but it extends over a broader area than mere erosions. In the intervals between the hemorrhages the patients feel well, with unimpaired appetite, and the stomach is not spontaneously painful or tender on pressure. Differentiation from varices of the stomach is difficult, especially when there is an associated liver affection. Only the most careful investigation and exclusion of alcoholism and syphilis with tests of the liver functioning will differentiate the trouble. Some advocate surgical treatment, but in certain cases that came to autopsy no eroded vessel could be discovered, showing that operative treatment would have had little chance of success. For this condition, also, treatment with the Lenhartz ulcer diet offers the best prospects, accompanied by bismuth, iron and arsenic. This seems to be the only means of controlling this surface bleeding, strengthening the patient and correcting the anemia.

63. **Congenital Dilatation of the Colon.**—Zesas has collected from the literature 197 articles bearing on this subject. In a few cases on record the anomaly did not prove fatal as usual, and the patients survived past 50 in tolerable condition. The best results from operative treatment were obtained in the cases in which the surgeons merely opened the abdomen and

after inspecting conditions sutured it again and applied massage, electricity, etc. It seems wisest, therefore, to commence with these measures after introducing a long tube into the bowel, although Madelung urges the exploratory laparotomy first, as the local measures can be pushed with more confidence once sure of the diagnosis. Nine different methods of surgical intervention have been attempted, resection in 29 cases, colopexy in 9, puncture alone in 10, colostomy in 23, coliplication in 1 and merely an exploratory laparotomy in 20. Good results were obtained in some cases from colopexy, enteroanastomosis or exclusion of the intestine, as also from extensive resection and amputation. Perthes operated on one boy in seven different sittings, first making an artificial anus, then operating on the intestine by suturing transversely the longitudinal incision, on the principle of pyloroplastic operations followed by enteroanastomosis and resection of part of the flexure. Treves in one case resected the entire descending colon and rectum, suturing the transverse colon in the anus.

Deutsche medizinische Wochenschrift, Berlin

April 8, XXXV, No. 14, pp. 609-656

- 64 Sluggish Metabolism. (Verlangsamung des Stoffwechsels.) R. Staehelin.
- 65 Problem of Reducing Interchanges in Obesity. (Das Problem der Herabsetzung des Umsatzes bei der Fettsucht.) V. Bergmann.
- 66 *Serum of Cantharidin Blisters for Biologic Tests. (Verwertung des Inhalts von Vesikatorblasen zu biologischen Untersuchungen.) C. Eisenberg.
- 67 *Diagnosis of Syphilis by Staining Reaction. (Luesnachweis durch Farbenreaktion.) W. Schürmann.
- 68 *Familial Jaundice. (Familiärer Ikterus.) R. Rosenfeld.
- 69 Treatment of Serious Joint Lesions. (Behandlung schwerer Arthritiden.) A. Schawlow.
- 70 *Results of Suction Apparatus in Treatment of Puerperal Mastitis. O. Jäger.
- 71 Two Cases of Esophagotomy for Extraction of Tooth Plate. (Zwei Speiseröhrenschnitte zwecks Entfernung künstlicher Gebisse.) R. Burmeister.
- 72 Devices to Shut Out Sounds and to Improve the Hearing. (Antiphon and Andiphon.) C. Friedmann.

66. **Blister Fluid for Biologic Tests.**—Eisenberg announces that bacteria do not pass into the contents of blisters induced by the aid of cantharidin, but the antibodies pass into them. It is thus possible to determine the specific phagocytic power of the serum by examining the contents of a blister, and this method seems destined to prove useful in research on the problems of passive hyperemia and the general pathology of inflammation. He describes the technic with which he prepares the specimen for microscopic examination and reports some of his more interesting findings.

67. **Staining Technic for Serodiagnosis of Syphilis.**—Schürmann has tried to simplify the serum test for syphilis, believing that the extract of the heart muscle used in the ordinary technic might be reduced to its simpler principles. The idea that lactic acid might be concerned in the test occurred to him and experiments confirmed its importance in the reaction observed with the usual technic. He first reduces the hemoglobin in the serum and then adds a solution of ferric chlorid. In the absence of syphilis the fluid remains limpid, but if the serum is from a syphilitic the fluid turns dark brown and seems to be thicker in consistency. There is always also more or less foaming with syphilitic serum. The reaction is complete in one or two minutes—what happens after that is without diagnostic importance. He has investigated 84 serums by this technic and in each of the 39 cases of certain syphilis the fluid lost its transparency and turned brown, while the fluid remained limpid in the other cases, including 2 cases of scarlet fever, and also with serum from 1 sheep, 2 guinea-pigs and 6 rabbits. The serum is diluted with salt solution, 1 part in 30 or 40, and then the blood pigment is reduced with some oxidizing substance. The reagent is then added in the proportion of 0.5 c.c. to 4 c.c. of the serum dilution. The reagent is a mixture of 0.5 parts phenol, with 0.62 parts of a 5 per cent. solution of ferric chlorid and 34.5 parts distilled water. The reagent must be made up fresh each time.

68. **Familial Jaundice.**—Rosenfeld reviews what has been written on this subject, especially on acholuric hemolytic jaundice occurring in families or inherited and jaundice from malformations of the biliary passages. He then describes in

detail a familial form of jaundice, accompanied by disturbances in the liver and spleen, but without malformations. The patients were a sister and two brothers; the father and mother were healthy. The jaundice was not of the hemolytic type, but rather a familial form of Hanot's cirrhosis of the liver of a peculiarly malignant type. There was nothing to indicate syphilis in the antecedents of the family. The jaundice came on at the ages of 8, 18 and 32, respectively, in the different patients and proved fatal in less than a year in the first and within four years in the second case—both of these patients had had scarlet fever in childhood. The sister presents a milder, more chronic type of the same disease. He has found reports of somewhat similar cases by four other writers in the literature; in one of the families described a syphilitic taint was evident.

70. **Suction Treatment of Mastitis.**—Jäger states that at Pfannenstiel's clinic at Kiel during the last four years 44 patients with acute mastitis were treated with cupping apparatus. Abscesses developed in 9 per cent.; he is inclined to attribute this complication to defective technic, the suction being applied too vigorously. Nutritional disturbances are liable to be induced by over-energetic suction, with the formation of an abscess in consequence. The experiences related confirm, he says, the benefits of Bier's suction hyperemia as superior to all other methods of treating acute mastitis if correctly applied, but the slightest excess in intensity soon avenges itself. The germs retain their vitality in the region and it is consequently necessary to keep up the suction hyperemia for a few days after the mastitis has subsided, to ward off recurrence.

Deutsche Zeitschrift für Chirurgie, Leipsic

March, XCVIII, Nos. 2-3, pp. 113-310

- 73 Indications for Resection of Esophagus. (Indikation zur Resektion des Brustabschnittes der Speiseröhre.) F. Sauerbruch.
- 74 *Experimental Pericardiectomy and its Possible Therapeutic Application. G. ParlaVecchio.
- 75 Causes of Torsion of the Appendices Epiploicæ. H. Zöppritz.
- 76 Retroperitoneal Lipoma. T. Voelckler.
- 77 Disturbances in Circulation in the Mesentery. (Zirkulationsstörungen im Mesenterialgebiet.) Niederstein.
- 78 Surgery of Liver and Bile Ducts. (Zur Chirurgie der Leber und der Gallenwege.) A. Jenckel.
- 79 Mechanism of Fracture of Skull. (Zur Mechanik der Schädelbrüche.) R. Thoma.
- 80 *Extradural Sarcoma in Cervical Spinal Canal. (Extraduraler Tumor am Halsmarke.) R. Bing and E. Bircher.
- 81 *Curvature of Spine in Animals and Fowls. (Ueber die Rückgratsverkrümmungen bei Tieren, insbesondere bei unseren Hausvögeln.) F. Härtel.
- 82 Primary Sarcoma of Ankle Capsule. E. Moser.

74. **Pericardiectomy.**—ParlaVecchio states that he has found sixteen cases on record in which autopsy revealed congenital absence of the pericardium or mere rudiments. In none of the cases had there been noticeable disturbance from the lack of the pericardium except possibly in one case with mitral stenosis. Amerio has experimented on rabbits to learn the effects of complete removal of the pericardium which he found feasible and ParlaVecchio reports a series of recent experiments on dogs, the results of which confirm the findings of Amerio with rabbits, although pericardiectomy is more dangerous for dogs than for rabbits. The functioning of the diaphragm does not seem to suffer if the phrenic nerve on one side is left intact. It is important to refrain from injuring the auricles and large vessels and even from touching the right wall of the pericardium for fear of injuring the other phrenic nerve or the other pleural cavity. The surgeon may therefore feel justified in removing almost the whole of the pericardium in malignant disease or in chronic pericarditis resisting other measures. If pleuritis results, this is much easier to cure than pericarditis.

80. **Extradural Sarcoma in the Neck.**—Bing and Bircher report the successful removal of a long tumor in the spinal canal which had sent out a large pear-shaped process through an intravertebral foramen. The patient was a banker of 37 and the tumor had caused the Brown-Séquard syndrome but no pain; the mild paresis in the left arm and spastic paresis in the left leg with disturbances in the superficial sensibility suggested a tumor in the left half of the spinal canal. The palpable tumor had at first been taken for an enlarged gland,

but the operation revealed that the tumor was not a gland but a process, protruding through the sixth foramen, from an intradural, soft fibrosarcoma which was compressing the spinal cord from the first thoracic vertebra to the fifth cervical. The intraspinal part was removed at a second operation. The absence of pain was due to the softness of the tumor and its position in the spinal canal which allowed the dural sac to interpose like a water cushion to protect the posterior roots in the region, which also explains the absence of other root symptoms.

81. Curvature of the Spine in Animals and Fowls.—Härtel gives a number of illustrations of scoliosis and other forms of emvatura in animals and poultry and describes the mechanism of their production. No evidences of trauma could be discovered, and the dorsosacral kyphoscoliosis observed in poultry corresponds in the anatomy and etiology in many respects with scoliosis in man. Curvature of the spine of congenital origin is encountered in all classes of vertebrates.

Fortschritte der Medizin, Leipzig

March 30, XXVII, No. 9, pp. 337-368

- 83 Injury of Eye by Light and its Prevention. (Die Schädigung des Auges durch Licht und ihre Verhütung.) Birch-Hirschfeld.

Medizinische Klinik, Berlin

April 4, V, No. 14, pp. 491-528

- 84 *Transient Albuminuria. (Flüchtige Albuminurien.) J. Schreiber.
85 Balneotherapy and Menstruation. S. Gottschalk.
86 Influence of Physical Measures on Antiferment Content of Blood. (Einfluss physikalischer Behandlung auf den Antifermentgehalt im menschlichen Blute.) L. Brieger.
87 *Tuberculin in Diagnosis and Treatment in General Practice. (Ueber die heutige diagnostische und therapeutische Anwendung des Tuberkulin in der Praxis.) O. Roepke.
88 Cutaneous Reaction with "Iron Tuberculin." (Kutanreaktion mit "Eisentuberkulin.") W. Ohm.
89 Serious Toxemia and Metastasis after Roentgen Treatment of a Cutaneous Sarcoma. H. Kanitz.
90 Serum Toxicity and Anaphylaxis. (Serumgiftigkeit und Anaphylaxie.) G. Salus.

84. Fleeting Albuminuria.—Schreiber discusses the puzzling fleeting albuminuria occasionally discovered at one examination and vanished by the next, even by the next day. He calls it "fugal albuminuria," by analogy with the word "centrifugal," and describes some typical examples of it to show the possible errors in diagnosis to which it may give rise. It is evidently the result of some interference with the circulation and he has encountered it a number of times as a direct consequence of palpation of the abdomen. He calls attention to this "abdominal-palpatory albuminuria," stating that it occurs only when the epigastrium and mesogastrium are palpated, thus showing that the aorta above the renal arteries feels the effect of the palpating fingers and slight transient albuminuria results.

87. Tuberculin Treatment in General Practice.—Roepke expatiates on the diagnostic and therapeutic importance of tuberculin and urges that every uncomplicated afebrile case of pulmonary tuberculosis of the first or second stage should be regarded as indicating a cautious and reactionless course of tuberculin treatment, and that the general practitioner should not hesitate to apply this treatment, not abandoning it to specialists and special institutions.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XX, No. 1, pp. 1-194. Last indexed April 10, p. 1217

- 91 *Serum Treatment of Hemophilic Hemorrhage. (Der Wert der Serumbehandlung bei Hämophilie auf Grund experimenteller und klinischer Untersuchungen.) E. W. Baum.
92 *Perforation of the Stomach. (Ueber Magenperforation.) J. Schoemaker.
93 *Lesions of the Pancreas with Gallstones. (Ueber Erkrankung des Pankreas unter besonderer Berücksichtigung der bei der Cholelithiasis vorkommenden Pankreatitis chronica.) H. Kehr.
94 *Pericollitis. A. Bittorf.
95 Treatment of Tumors with Roentgen and Radium Rays and Injection of Cholin. R. Werner.
96 Influence of Alkalies on Mouse Carcinoma. (Vergleichende Studien über den Einfluss von Alkalien auf das Mauscarcinom.) Id.

91. Serum Treatment of Hemophilia.—Baum reports extensive experimental tests of serum treatment of hemophilic hemorrhage and its application in three clinical cases. In one

case the hemorrhage was promptly arrested by the injection of serum after failure of tamponing, adrenalin and the thermoeantery. The hemorrhage had persisted for two days, but stopped in a few minutes after a tampon dipped in fresh diphtheria antitoxin had been applied twice. Examination of the blood at the time and later showed normal coagulation; the hemorrhage had evidently been the result of some transient dyscrasia. The serum treatment in the other cases was disappointing; the patients were children known to be hemophilic. The serum treatment seems destined to prove useful in surgery in the cases of sporadic rebellious hemorrhage. This form of hemophilia is of the greatest practical interest for the surgeon as it is unsuspected until the apparently healthy individual presents uncontrollable hemorrhage from some trifling injury or wound. Constitutional bleeders are generally known as such, and surgeons refrain on principle from all operations on them except for vital indications.

92. Perforation of the Stomach.—Schoemaker reports 13 cases of perforation of a gastric ulcer in which he operated in from three and one-half hours to ten days. Eleven recovered; one patient operated on after sixteen hours and 3 others after seven to ten days, died. His experience has shown that an ulcer in the stomach may exist without symptoms or with vague signs on the part of the stomach or with a marked syndrome. In all his cases the localization of the trouble depended on whether he could palpate an inflamed region and whether a solid background rendered palpation easier. The symptoms simulated appendicitis in many cases of perforation of the stomach, and if the appendix is found sound, while most of the signs of inflammation are between the ascending colon and the lateral wall of the abdomen, perforation of the stomach should be suspected even although there is nothing else to suggest it. The details of the 13 cases are given. As ulcer patients generally display hyperacidity this explains the comparatively benign course of the perforation in certain cases; the excess of acid protects against trouble to a certain extent.

93. Pancreatic Affections with Gallstones.—Kehr devotes 107 pages to reports and critical analysis of 129 cases in which he found pathologic conditions in the pancreas in the course of 520 laparotomies for assumed gallstones and chronic jaundice. In 21 cases the pancreas was the seat of a carcinoma, in 1 of cyst, in 5 of necrosis and in 102 there was chronic pancreatitis. The pancreas was thus found diseased in 24 per cent. of his 520 gallstone cases in the last five years. Examination later gave negative findings to the Cammidge test in the milder cases, showing that the drainage of the hepatic duct or removal of the gall bladder had been followed by the cure of the pancreatitis. He tabulates the findings of the Cammidge test in 40 cases both before and after the operation, urging others to similar research. The findings were positive in 82 per cent. of the cases of chronic pancreatitis. He does not believe in operating for gallstones during a latent phase unless the Cammidge test gives positive findings. As this indicates mischief in the pancreas, it turns the scale if the test still gives positive findings after four weeks of repose, thermophor and dietetic treatment. His experiences show further that the pancreas is secondarily affected in 14 per cent. of all cases of chronic cholecystitis and in 50 per cent. of the cases of stones in the common bile duct and cholangitis. He regards the pancreas as of such importance that morbid conditions here are almost more serious than the gallstone affection itself. Consequently it is wise to seek to heal the inflammatory process in the pancreas by removal of the gallstones, the source of the irritation. Hence he operates even in the mild cases of cholecystitis, in which the patient feels entirely well after it has subsided, if the Cammidge test gives positive findings. He adds in conclusion a list of a number of important works on the pathology and treatment of the pancreas that have appeared during the last five years, including several from THE JOURNAL.

94. Inflammation Around the Colon.—Bittorf reviews the history, diagnosis and treatment of pericollitis and sigmoiditis. He has witnessed many spontaneous cures, even large exudates

being sometimes reabsorbed under repose, fluid diet, the ice-bag and systematic laxatives. Absorption may be hastened by application of moist heat. He thinks that coprostasis is the principal factor in the trouble, especially when there are nervous and muscular changes in the intestines predisposing to morbid conditions. In a case described, a girl of 17 complained of abdominal pain and fever for ten days; the sixth day the pain became localized high up in the right side with fetid diarrhea and vomiting by the eighth day. The abdomen was not distended but rather taut. The ascending colon was somewhat unduly resistant, dull and tender; leucocytes 70,000; indican in the urine. Puncture revealed a streptococcus-containing exudate and the patient died on the thirteenth day from the suppurative peritonitis in the region of the ascending colon. The colon was swollen and the mucosa red, but there were no perforations or ulcerations anywhere; the appendix was normal, as also the other organs and no other source for the peritonitis could be detected.

Therapeutische Monatshefte, Berlin

April, XXIII, No. 4, pp. 185-240

- 97 Improvement of Hearing with Artificial Tympanic Membrane. (Was leistet ein künstliches Trommelfell?) Nadoleczny.
98 Neutral Temperature Point in Baths. (Zur Kenntniss des Indifferenzpunktes bei Kohlensäurebädern und einfachen Wasserbädern.) A. in der Stroth.
99 *Prognosis in Inherited Syphilis. J. Peiser.
100 Diagnosis and Treatment of Glaucoma. Pick.
101 *Diagnosis and Treatment of Tuberculosis of Urinary Passages. (Tuberkulose der Harnwege.) H. Naegeli-Akerblom and P. Vernier.
102 Formaldehyd-Gelatin Capsule. (Ueber experimentelle und Therapeutische Versuche mit Geloduratkapseln.) W. Thau.
103 *Campaign against Pellagra in Austria. (Die Pellagra in Oesterreich und ihre Bekämpfung als Volkskrankheit.) L. Sofer.

99. **The Prognosis of Inherited Syphilis.**—Peiser has been investigating the after-history of the 101 children with inherited syphilis treated at the Breslau polyclinic and children's clinic during the ten years ending in 1906. Seventy-six of the 101 survived the period of infancy and only one-third of these have developed further manifestations of the syphilis and resumption of treatment has failed of success in only 7 cases. With the exception of this small group, the children have developed on the whole as normally as other children of their social standing, so that the prognosis of inherited syphilis under appropriate treatment is by no means so unfavorable as frequently assumed, so far as the general health is concerned. The general condition is recorded as excellent for 39 per cent. of 59 of the children recently examined; fair in 37 per cent., and poor in only 24 per cent.

101. **Treatment of Tuberculosis of the Urinary Passages.**—Akerblom and Vernier state that it is important to remember that albumin up to 1 or 2 gm. is not infrequent in tuberculosis of the urinary passages, but this is not essential albuminuria; it is merely the result of destruction of leucocytes in the pus. The best method for examining the sputum and urine for occult tuberculosis is the Martin-Herman Mons technique. The Martin stain is preceded by the action of a 1 per cent. solution of ammonia carbonate in distilled water. The stain is a 3 per cent. solution of crystal violet in 95 per cent. ethyl alcohol. These fluids are mixed just before using in the proportion of three parts of the first to one part of the stain. This shows up the bacilli when they can not be seen by Ziehl's or other methods. Chemical examination is important, especially the determination of the proportion of urea and chlorids. A starch diet free from chlorids is advisable in case of impermeability of the kidneys with retention of urea. It not only counteracts the tendency to retention of urea and of chlorids, but also has a direct diuretic action. This diet is preferable to an exclusive milk diet, as it is richer in albumin than in chlorids.

103. **Pellagra in Austria and Its Prophylaxis.**—Sofer describes the various measures undertaken by the authorities to combat pellagra in its endemic foci in Austria. At Rovereto a "pellagrosarium" has been in operation since 1905 in charge of two physicians; 413 patients were received during the first three years. The patients remained in the institution on an average of 90 days, but sometimes longer. The institution is also a center for postgraduate instruction and for research

on pellagra. In Bukowina, with a population of 38,000, 2.9 per cent. have pellagra and there are 17 institutions for supplying them with proper food. Efforts are made to educate the people to substitute other grains for maize; seeds are provided and courses in cooking are given, while the official inspection of the maize is carried out with scrupulous care. The people are encouraged by prizes to raise other cereals and cattle, the aim being to wean them away by various devices from their beloved mush, "polenta." The corn is raised in many localities at an altitude where it never comes to full maturity. Another official prophylactic measure is to erect drying ovens where the corn can be thoroughly dried.

Therapie der Gegenwart, Berlin

April, L, No. 4, pp. 169-216

- 104 *Principles for Treatment of Obesity. (Grundzüge der Behandlung der Fettleibigkeit.) E. H. Kisch.
105 Tuberculous Origin of Articular Rheumatism. (Bemerkungen zur Aetiologie des tuberkulösen Gelenkrheumatismus.) E. Melchior.
106 Treatment with Portable Apparatus in Modern Orthopedics. R. Pfeiffer.
107 Operative Tendency in Obstetrics. (Ueber die modernen operativen Bestrebungen in der Geburtshilfe.) M. Neu.
108 Subcutaneous Administration of Arsenic. (Zur Methode der subkutanen Arsenotherapie.) A. Herzfeld.

104. **Principles for Treatment of Obesity.**—Among the rules for treatment of obesity followed by Kisch is one to the effect that the fatter the organism the lesser amount of albumin required in proportion. In the obesity resulting from too hearty food a man weighing 200 pounds can do well on 1,100 calories, remembering that 1 gm. of albumin, as also of carbohydrates, produces 4.1 calories and 1 gm. of fat 9.1 calories. Kisch does not believe in overloading such patients with bulky salads, apples, potatoes and the like on account of the tendency to dyspepsia. Systematic exercise is important for this form of obesity—Mastfettleibigkeit. The obesity resulting from constitutional causes, congenital or acquired in consequence of some pathologic process, requires different treatment. The aim here should be to improve the blood production and influence the cellular processes. Iron is useful and the diet must be regulated to supply plenty of albumin, while avoiding substances that produce fat. The diet for twenty-four hours should average for the ordinary patient 200 gm. albumin, 12 gm. fat and 100 gm. carbohydrates. The intake of fluid should be regulated by the amount of diuresis. Exercise should be very cautiously taken, in order not to fatigue the easily exhausted heart.

Wiener klinische Wochenschrift, Vienna

April 1, XXII, No. 13, pp. 439-476

- 109 The Electrocardiogram. C. J. Rothberger.
110 Vaccine Treatment of Acne and the Opsonic Index. G. Scherber.
111 *Experiences with Scopolamin-Morphin-Ether Anesthesia. E. Zadro.
112 Modern Views of Arteriosclerosis and Its Medicinal Treatment. (Der heutige Stand der Lehre von der Arteriosklerose (Atherosklerose) und ihre medikamentöse Behandlung.) J. Wiesel.

111. **Experiences with Scopolamin-Morphin-Ether Anesthesia.**—This communication reports the application of this combined technique in 770 cases at von Eiselsberg's clinic at Vienna, the conclusions being that the method has a number of advantages both for patient and surgeon. Chief among them are the absence of the stage of agitation and the smaller quantities of the anesthetic required. This technique also reduces the tendency to postoperative vomiting and to postoperative complications on the part of the lungs. In combination with Schleich's infiltration anesthesia, the scopolamin-morphin technique renders excellent service in operations for goiter. From forty-five minutes to an hour before the operation the scopolamin is injected into the right and the morphin into the left arm. After this interval Billroth's mixture is given until the stage of tolerance is reached, and the anesthesia is then continued with ether, or chloroform is used alone. To insure that the scopolamin solution does not resolve into its extremely toxic constituents, apoeatropin or atoszin, he has a fresh solution made every second day. Vomiting was observed in 19.2 per cent. of the patients, generally after they commenced to sip water, tea or fruit juice; if the patients could resist yielding

to thirst, vomiting would be still more infrequent. The majority did not vomit until twelve hours or more after the anesthesia, which is important in prophylaxis of postoperative pneumonia. This combined technic is certainly, Zadro remarks, an important advance in prevention of postoperative complications on the part of the respiratory apparatus. During the last eight years pneumonia occurred as a postoperative complication in 170 out of 5,031 operations at the clinic, that is, in about 3.3 per cent.—nearly three times more frequent in men than in women. In the 770 cases, however, in which this scopolamin technic was used, postoperative pneumonia occurred in only 8 cases, that is, in 0.9 per cent. Comparing 785 other cases with pure ether or chloroform anesthesia and postoperative pneumonia in 4.8 per cent., with 579 cases in which the scopolamin technic was used, with only 0.8 per cent. postoperative pneumonia, shows the improvement in this respect realized with this technic with the same operators, operative technic and during the same months, and approximately the same set of patients. No evil effects from the scopolamin technic were observed in a single instance. The pulse was accelerated, with moderate increase in temperature, lasting for three or four days, after some operations for goiter, but under no other conditions. In one case an overdose of scopolamin was given, 0.06 gm. being injected instead of the desired 0.0005 gm., and symptoms of intoxication followed, some of the symptoms persisting for three days before complete recovery. The experiences with a patient with exophthalmic goiter and another with pronounced neurasthenia confirm the assertions of others that this technic had better be avoided with persons inclined to neurasthenia, hysteria and exophthalmic goiter. In the young and robust the doses injected have merely a sedative effect, while they throw the elderly and the feeble into a deep sleep. Among the operations performed under the scopolamin-morphin and local anesthesia were 5 resections of the stomach, 4 gastroenterostomies, 2 gastrostomies and 1 colostomy. In one case the upper jaw was resected with only 5 gm. of the Billroth mixture after the scopolamin-morphin. In 2 other cases a few whiffs of ether were required to complete a resection of the stomach. All these patients bore the operation quietly, without pain, and next day had no remembrance of the intervention. The secretion-reducing property of the scopolamin is a further obvious advantage. The dose of morphin is 0.01 gm. (3/16 grain) in operations for goiter.

Zeitschrift für klinische Medizin, Berlin

LXVII, Nos. 5-6, pp. 345-526. Last indexed March 27, p. 1073

- 113 *Pathology of the Nervous System Controlling the Vegetative Functions. (Zur Pathologie des vegetativen Nervensystems.) H. Eppinger and L. Hess.
- 114 Metabolism of Chlorids and Weight in Scarlet Fever. (Chlorstoffwechsel und Körpergewicht im Scharlach.) O. Grüner and B. Schick.
- 115 Reciprocal Action of Glands with an Internal Secretion. II. (Wechselwirkung der Drüsen mit innerer Sekretion.) II. Eppinger, W. Falta and C. Rudinger.
- 116 Autolysins in Blood in Infectious Diseases. (Autolysine im Blute bei Infektionskrankheiten.) H. Frank.
- 117 Appetite and Loss of Appetite. W. Sternberg.
- 118 *Influence of Phosphorus on the Metabolism of Lime in Rachitic and Healthy Children. (Der Phosphor in der Therapie der Rachitis.) J. A. Schabad.
- 119 Pathologic-Anatomic Study of Adams-Stokes Syndrome. M. Nagayo.
- 120 Irregularity of the Heart Action in Infectious Diseases. (Atrioventrikuläre Automatie im Verlauf der Infektionskrankheiten.) A. Belski.
- 121 Chyluria and Diabetes. A. Magnus-Levy.

113. Pathology of Nervous System Controlling the Vegetative Functions.—This communication issues from von Noorden's clinic at Vienna and reports research along lines suggested by the fact that certain substances injected into a vein or under the skin induce the same effect as isolated electric excitation of the nerves involved. Among these substances are adrenalin, atropin and pilocarpin, and the fact was confirmed that the effects induced by adrenalin are the result of action on the sympathetic system, while those induced by pilocarpin are by the mediation of the vagus, and that these two nerve systems have an antagonistic action. Glycosuria, for instance, is the expression of irritation of the sympathetic and of paralysis of the vagus, as also dilatation of the pupil, stomach and cardia, while contraction of the pupil, stomach and cardia is the result of paralysis of the sympathetic and stimulation

of the vagus. When either of these nerve systems is especially sensitive, the individual reacts to the above stimuli in proportion, and those persons who react vigorously to injection of atropin and pilocarpin are not susceptible to the action of adrenalin, while those who display marked signs of irritation of the sympathetic after administration of adrenalin prove refractory to pilocarpin and atropin. The practical conclusion of the research is that atropin and pilocarpin may be expected to act with great energy, and adrenalin not at all, in cases of hyperacidity, bronchial asthma, many cases of gastric ulcer, tuberculous processes, etc. On the other hand, adrenalin induces a powerful reaction, and atropin and pilocarpin none at all, in comparison, in many cases of diabetes, nervous affections, such as tabes and multiple sclerosis, orthostatic albuminuria and carcinoma. The research is being continued to study the action of these substances on all the visceral functions, and especially to decide whether the action is diffuse throughout the nerve system involved or localized to certain parts of it.

118. Phosphorus in Rachitis.—Schabad's extensive experience and tests have shown that phosphorus does not seem to influence the lime metabolism in healthy children, but that it unmistakably promotes the absorption of lime in rachitis.

Zentralblatt für Chirurgie, Leipsic

March 27, XXXVI, No. 13, pp. 449-480

- 122 *Treatment of Habitual Dislocation of Patella. (Neues operatives Verfahren in der Behandlung der habituellen Knie-scheibenverrenkung.) R. Dalla Vedova.
- 123 *Successful Removal of Thrombus from Inferior Thyroid Vein. (Entfernung eines 8 cm. langen Geschwulstthrombus aus der Vena thyroidea inferior.) P. Meisel.

122. Treatment of Habitual Dislocation of the Patella.—Dalla Vedova's technic aims to remove the shriveled section of the lateral part of the ligamentary apparatus of the patella and remedy the insufficiency of the anterior ligament of the patella by a plastic restoration of the weak sections of the ligaments. He works through two incisions, one on each side of the patella, drawing through and fastening a strip of tendon reinforced by a strip of periosteum, the partial transplantation of the ligament of the patella forming an accessory ligament which takes the place of the insufficient anterior ligament and prevents any further displacement of the bone. He gives an illustration of the technic and reports its application in a clinical case with durable results.

123. Removal of Thrombus from Inferior Thyroid Vein.—Meisel states that he has encountered four cases of tumor in the thyroid gland which sent out several long processes between and into veins, etc., but these processes always lay free in the veins and could be easily pulled out. In a recent case, which he describes in detail, the adenocarcinoma in the thyroid was readily enucleated until it held only by a long process running down into the inferior thyroid vein. He applied a ligature to the vein which his assistant was told to draw tight at the word, and, utilizing the phase of expiration, lifting up the wall of the vein with pincers in the left hand, he cut the vein around with scissors in the right and was able to draw out a process 8 cm. long. It grew wider toward the tip where it was fully 2 cm. in diameter. There was no aspiration of air and the removal of the tumor thrombus was complete in less than a minute; the patient, a woman of 42, had been raised as erect as possible to prevent aspiration of air. In the four cases in which this tumor thrombosis was observed the growths were comparatively so benign that paralysis of the recurrent nerve had not yet developed.

Zentralblatt für Gynäkologie, Leipsic

March 27, XXXIII, No. 13, pp. 441-472

- 124 Inverted Method of Expulsion of Uterine Decidua in Tubal Pregnancy. (Ueber den invertierten Ausstossungsmodus der Decidua uterina bei Tubargravidität.) P. Buche.
- 125 *Suprarenal Treatment of Osteomalacia. (Adrenalin bei Knochenerweichung Osteomalakie.) B. Engländer.

125. Disappointing Suprarenal Treatment of Osteomalacia.—Engländer reports from Cracow six cases of osteomalacia in women between 31 and 45, following a comparatively recent pregnancy. They were given a subcutaneous injection every day or second day of 0.5 c.c. of a 1 per thousand solution, rep-

representing 0.0045 gm. of adrenalin. This treatment was kept up for from 35 to 101 days with indifferent results. Only slight improvement was manifest, the pains and tremor persisting more or less in every case. There was marked reaction to the suprarenal preparation in some cases, rapid, deep breathing, acceleration of the pulse, palpitations, sweating, tremor, headache, vertigo, weakness and dilatation of one or both pupils, showing that these injections should never be made unless there is opportunity for constant medical supervision of the patient.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 18, XXV, No. 33, pp. 345-352

126 *Biologic Research on Gastric Carcinoma. S. Livierato.

March 23, No. 35, pp. 369-376

127 Technique of Spinal Anesthesia. (Pratica della rachistova-infezzione.) G. Cocci.

126. Fixation of Complement in Gastric Cancer.—Livierato has applied the hemolytic test with extracts of sarcomas and carcinomas to the gastric secretions. The findings were positive in eight persons with certain gastric cancer, while they were invariably negative in persons free from cancer. The cancer extract supplies the antigen and the presence of cancer products in the stomach secretions entails the specific hemolysis in the biologic test.

Policlinico, Rome

March 21, XVI, Practical Section, No. 12, pp. 357-388

128 Therapeutic Action of Electric Colloidal Silver. (Osservazioni sull'azione terapeutica dell'argento colloidale elettrico.) D. Buttino.

129 Treatment of Incomplete Abortion. G. Massini. Commenced in No. 11.

March, Surgical Section, No. 3, pp. 97-144

130 Retropharyngeal Tumors. (Dei tumori parafaringei.) L. Fiori.

131 Anatomic and Histologic Changes in Deforming Arthritis of the Knee. (Artrite deformante del ginocchio.) A. Ando.

132 *Primary Tuberculosis of Abdominal Muscles. (Tuberculosis primitiva dei muscoli striati.) L. Bobbio.

133 *Sterilization of Catgut. E. Bertarelli and L. Bocchia.

132. Primary Tuberculosis of the Abdominal Muscles.—Bobbio's patient was a letter carrier of 35 who began to experience a dull pain in the right abdominal wall, which began to swell. There was no fever at any time and the general health did not seem to suffer. The tumor was removed after a few months as a cold abscess, being resected into sound tissue, with prompt recovery of the patient. Five years later the same train of symptoms and abscess formation was observed on the left side, and the lesion was likewise resected into sound tissue with prompt recovery. Not a trace of tuberculosis could be detected elsewhere, and the patient seems in robust health. Guinea-pigs inoculated with the pus developed tuberculosis in each instance, although no tubercle bacilli could be cultivated from it. Bobbio summarizes from the literature nine cases of localization of primary tuberculosis in the abdominal muscles, presenting his own case as the tenth on record. Tubercle bacilli were found in the pus in only one case. The main difficulty in diagnosing is to distinguish the tuberculous from a syphilitic gumma.

133. Sterilization of Catgut.—Bertarelli and Bocchia give the details of the seventeen different methods of sterilizing catgut most in vogue and relate comparative tests with them. The conclusions are all in favor of Claudius' iodine technique as the most effectual means of sterilization. Next to this is the alcohol at 120 C. technique and then the Van Ketel and then Lister's last method. Catgut prepared by these methods retains all its desirable properties. The catgut keeps best, they say, in an alcoholic solution of corrosive sublimate with essential oils.

Riforma Medica, Naples

March 22, XXV, No. 12, pp. 309-336

134 Tumors at Base of Brain. (I tumori della base dell'encefalo.) G. Rummo. Commenced in No. 10.

135 *Downward Displacement of the Heart. (Cardioptosi Malattia di Rummo.) N. Serio-Basile.

135. Cardioptosis.—Basile discusses the downward displacement of the heart from weakening and relaxation of its supports without changes in its size or in the pressure in chest and abdomen. In a case described the only symptoms were irregularity of the pulse and bradycardia. The patient was

a girl of seven who had entered the hospital on account of acute bronchitis. The subjective and functional disturbances differ in various cases according to the condition of the heart muscle.

Hygiea, Stockholm

February, LXXI, No. 2, pp. 99-192

136 Treatment of Syphilis with Atoxyl and Arsacetin. E. Wexlander.

137 Indications for Mastoid Operation in Acute Suppurative Otitis Media. (Om indikationerna för upprejsning af processus mastoideus vid akuta suppurationer i mellanörat.) C. B. Lagerlöf.

138 *Anastomosis of Bile Ducts with the Jejunum. (En ny operation på gallvägarna.) R. Dahl.

139 *Psychologic Expert Testimony in Trial of Witches at Stockholm, 1676. (Urban Hjärne och häxprocesserna i Stockholm, 1676.) B. Gadelius.

138. Anastomosis Between Hepatic Duct and Jejunum.—Dahl performed an operation of this kind on a woman of 61 who had been troubled for eighteen years with gallstones and had been operated on four months before with a resulting fistula which refused to heal. None of the usual techniques was applicable in this case, as the stump of the hepatic duct was too short to be implanted in the duodenum, even if it had been advisable to expose the patient to the danger of infection from this part of the intestines. The research of Jundell and others has shown that conditions are much more favorable for implantation of a bile duct in the jejunum; this stretch of bowel is comparatively sterile, as its contents are passed along quickly and it is soon left empty. This ensures an empty loop through which the bile runs in a continuous stream if the gall bladder has been removed, reducing the danger of infection of the bile to the minimum. He thinks that the jejunum would be preferable even for anastomosis with the gall bladder and for all such operations on any of the bile ducts. The results were most excellent in the case reported, the patient being free from all disturbances and attending to her household duties. He has not been able to find records of any choledcho-jejunostomy or hepatico-jejunostomy in the accessible literature, but mentions that Monprofit recently suggested the feasibility of such an operation. Even at the discussion of the subject of operations on the biliary passages at the late International Surgical Congress, none of the members reported having attempted an anastomosis with the jejunum.

139. Psychologic Expert Testimony at Trials of Alleged Witches at Stockholm in 1676.—Gadelius reviews the history of Urban Hjärne, a prominent Swedish physician of the seventeenth century, who was the first to utilize in scientific therapeutics the mineral waters of Sweden. At the age of 35 he was called on as the psychologic expert to testify in one of the most peculiar criminal suits in the history of jurisprudence in that country, the witchcraft cases at Stockholm in 1676. His full report has been preserved and is cited. Trials of witches occurred again at Stockholm in 1704, 1720 and even as late as 1763, notwithstanding Hjärne's masterly testimony in regard to the delusions causing accusations of witchcraft.

Norsk Magazin for Lægvidenskaben, Christiania

April, LXX, No. 4, pp. 297-416

140 *Tumors in Nerves and Multiple Neurofibromatosis. (v. Recklinghausen's sygdom.) F. Harbitz. Commenced in No. 2.

141 *The Cutaneous Tuberculin Reaction in Children. E. Hellesten.

142 *Idiopathic Hematuria. (Essential hæmaturi.) N. N. Paus.

140. Multiple Neurofibromatosis.—In this concluding installment of his monograph Harbitz adds other case histories and autopsy findings, bringing the list of cases to thirty-four, with his conclusions from this experience. It seems evident, he thinks, that multiple neurofibromatosis is dependent on some anomaly in development, a malformation in the peripheral nervous system. This is demonstrated by its frequent hereditary and congenital character, its development early in life, the primary multiplicity of the lesions—a sure sign of a congenital anomaly—and the frequent coincidence of other congenital anomalies, malformations or deformities. The distribution of the patches of pigment does not seem to correspond to nervous influences and is probably likewise dependent on some anomaly in development. No complete spontaneous cure of a typical case of this disease is on record,

although some of the tumors have occasionally subsided. In one of his cases the symptoms of multiple neurofibromatosis were accompanied by a carcinoma in the ovary with carcinomatosis of the pleura and sarcomatous infiltration of the root of the mesentery. The patient was a woman in the fifties. In another case, the neurofibromatosis was accompanied by a carcinoma of the larynx. In another case a man of 35, now 70, presented numerous nodules which were diagnosed as sarcomatous, but all the nodules gradually subsided in the course of two years, although patches of pigment have developed since. Harbitz is inclined to regard the case as one of mild neurofibromatosis. Ten of the thirteen personal cases reported were in males. The affection did not develop in some until late in life, showing a remarkably long latency; in others it appeared at 6, 7, 9, or at puberty, in others not until after 40. He reiterates that external influences have nothing to do with the first appearance of the affection, and but little effect on its course later, although new tumors may develop at the site of traumas. Intercurrent infections and intoxications seem to display a greater influence, as also periods of physiologic stress, as at puberty, the menopause, during pregnancy and lactation. The tumors seldom require extirpation unless they grow extremely large or ulcerate. There was no local recurrence in his cases in which some tumors were removed on this account, and there was no recurrence when the excessive growth of the elephantiasis was removed more or less completely. In one such case the growth seemed to be arrested by partial excision. The pure multiple neurofibromas without other symptoms of von Recklinghausen's disease respond variously to operative intervention: in some cases they recur again and again after extirpation and in others the affection seems to be arrested, as in two of the cases reported. In other cases the recurrence assumes a malignant character; this seems to be peculiarly liable to be the case with a plexiform neuroma. If operative intervention becomes necessary some advise resecting the nerve for a long stretch, and, if sarcoma is already apparent, to make a high amputation of the limb. The previous installments were reviewed in *THE JOURNAL*, April 17 and 24, pages 1304 and 1372.

141. Cutaneous Tuberculin Reaction in Children.—Hellesen concludes from the findings of the cutaneous tuberculin test applied to 418 children that it is an important aid in diagnosis at this age, although the fact that it does not indicate whether the tuberculous process is active or latent detracts materially from its significance. This is of less account in the younger children, as the process has scarcely had time to become latent in children under the age of 2, for example. The reaction was positive in 97 per cent. of the certain cases of tuberculosis, in 59 per cent. of the suspects, and in 23 per cent. of 301 children free from signs of the disease. Negative findings were always confirmed by negative findings at autopsy, and *vice versa*.

142. Idiopathic Hematuria.—Paus presents the history of essential hematuria and reports a case in which the kidney seemed to be entirely normal when exposed, but the danger of recurrence of the hemorrhages was considered sufficient reason for removing the kidney, which was done. Nothing was found, even under the microscope, to explain the hematuria, which must be classed as idiopathic in this case. Cases are on record in which the hematuria recurred after nephrotomy, and secondary nephrectomy became necessary. Rovsing and others regard an exploratory operation as imperatively necessary.

Ugeskrift for Læger, Copenhagen

March 11, LXXI, No. 10, pp. 247-268

143 Treatment of Tuberculous Spondylitis. (Om Behandlingen af Spondylitis tuberculosa.) E. Nyrop.

March 25, No. 12, pp. 297-334

144 *Quantitative "Tuberculin Titer" Test. (Om kvantitativ Udførelse af den kutane Tuberkulinreaktion og om Tuberkulintiterens kliniske Betydning.) V. Ellermann and A. Erlandsen.

145 Orogenous Meningitis and its Operative Treatment. H. Mygind. Commenced in No. 11.

144. Quantitative "Tuberculin Titer" Test.—The announcement of Ellermann and Erlandsen in regard to the advantages

of applying the cutaneous tuberculin test with a series of drops representing a graded concentration of the tuberculin, was mentioned in these columns, April 17, page 1300. They cleanse the skin of the thigh with ether and then scarify the skin with a vaccination lancet, each scratch about 1 or 2 cm. long and at intervals of 3 cm., striving to make the scratches as uniform as possible. The first scratch is left for the control, on the next is placed a drop of the weakest concentration of the tuberculin, and so on in turn to the strongest concentration, using a 1 per cent., 2 per cent., 5 per cent., 10, 25 and 50 per cent. solution in turn. The faintest trace of infiltration is accepted as the lowest limit of the reaction. If the zero point is with the 1 per cent. dilution, then the dilution is 1/100, and the "titer," the standard of titration, of the case in question is 100. If the zero point is with the 25 per cent. dilution, then the dilution is 25/100, and the "tuberculin titer" of the case in question is 25/100 or 1/4. Two minutes after the drops have been applied to the scratches the region is dried and the whole covered with a layer of sterile cotton, held in place with strips of adhesive plaster. The reaction visible at the end of forty-eight hours is the criterion. The findings are extremely instructive, as in the cases with active tuberculous processes even the weakest concentration causes a reaction, while in those with latent processes only the strongest concentration produces manifest results and the non-tuberculous present no reaction whatever. The results of the test reclassify the cases, many of the clinical non-tuberculous having to pass into the active group, as also some of the supposed latent cases. The "titer" method has also enabled them to standardize tuberculins, and the simple technic for this purpose will certainly prove of great benefit in the clinic. In this connection they make a strong plea in favor of international standardization of tuberculin. The findings of the test on 100 persons are tabulated under several headings, both in this article and in the German translation previously reviewed.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE PRACTICAL MEDICINE SERIES. Edited by Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Postgraduate Medical School. Vol. I. **GENERAL MEDICINE.** Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury, A.M., M.D., Professor of Medicine, Chicago Clinical School. Cloth. Pp. 403, with illustrations. Price, \$1.50. Vol. II. **GENERAL SURGERY.** Edited by John B. Murphy, A.M., M.D., LL.D., Professor of Surgery in Northwestern University, Chicago. Cloth. Pp. 617, with illustrations. Price, \$2. Series 1909. Chicago: The Year-Book Publishers.

A TEXT-BOOK OF SPECIAL PATHOLOGY. By J. Martin Beattie, M.A., M.D., Professor of Pathology and Bacteriology, University of Sheffield, and W. E. Carnegie Dickson, M.D., B.Sc., F.R.C.P., Lecturer on Pathologic Bacteriology in the University of Edinburgh. Cloth. Pp. 509, with illustrations. Price, \$5. Philadelphia: P. Blakiston's Son & Co., 1909.

CATHOLIC CHURCHMEN IN SCIENCE. Second Series. By James J. Walsh, M.D., Ph.D., LL.D., Dean and Professor of the History of Medicine at Fordham University School of Medicine. Cloth. Pp. 228, with illustrations. Price, \$1 net. Philadelphia: American Ecclesiastical Review, The Dolphin Press, 1909.

HUMAN PHYSIOLOGY. An Elementary Text-Book of Anatomy, Physiology and Hygiene. By John W. Ritchie, Professor of Biology, College of William and Mary, Virginia. Cloth. Pp. 362, with illustrations. Price, 80 cts. Yonkers-on-Hudson, New York: World Book Co., 1909.

MANUAL OF MILITARY HYGIENE for the Military Services of the United States. By Valery Havar, M.D., Colonel, Medical Corps, United States Army. Cloth. Pp. 481, with illustrations. Price, \$4. New York: William Wood & Co., 1909.

THE GENERAL CHARACTERS OF THE PROTEINS. By S. B. Schryver, Ph.D., D.Sc., Lecturer on Physiological Chemistry, University College, London. Cloth. Pp. 86. Price, 80 cts. New York: Longmans, Green & Co., 1909.

THE HOUSE-FLY AT THE BAR—INDICTMENT—GUILTY OR NOT GUILTY? Paper. Pp. 48, with illustrations. April, 1909. The Merchants' Association of New York.

THE HUMAN SPECIES. By Ludwig Hopf. Authorized English Edition. Cloth. Pp. 457, with illustrations. Price, \$3. New York: Longmans, Green & Co., 1909.

TRANSACTIONS TENNESSEE STATE MEDICAL ASSOCIATION, 1908. Cloth. Pp. 368. Nashville, Tenn.: Journal of Tennessee State Medical Association.

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AN UNUSUAL OUTBREAK OF TYPHOID FEVER

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Soon after the opening of the University of Wisconsin on Oct. 1, 1908, there occurred a localized outbreak of typhoid fever which presented such unusual features that we are making a record of it, hoping that it may prove useful to those interested in this disease, and especially to those having supervision of students at centers of education.

Very near the campus is an unusually well-kept and popular boarding-house, patronized not only by students, but also by a number of the younger members of the faculty. It has been running for some six years, and no trouble has occurred there before. As in many other such places, students are employed as waiters and helpers in the pantry.

The house opened with the beginning of the scholastic year, and soon had from ninety-five to one hundred boarders, many applicants being turned away. The working force consisted of the landlady and her two sisters, a cook, two young women who had just reached America from Norway, and thirteen student helpers, most of whom were waiters. Two or three of them assisted in scraping the used plates and in wiping and stacking the clean plates and dishes. While hot water was used, there was no attempt made at thorough sterilization of utensils.

About the middle of October about fifty or sixty of the boarders were attacked by diarrhea and nausea, some being sick for several days. The majority, however, recovered promptly without having consulted physicians. It has not been possible to determine the cause of this outbreak, but it was attributed by some to veal and by others to bananas. A number who ate of both escaped, however.

During the last week of October a number of the boarders became ill, the general symptoms being headache, lassitude, loss of appetite, and pains in the limbs. The general opinion among the sufferers seems to have been that they were suffering from grip. The first case reported to the Hygienic Laboratory was on October 29, the patient having been at that time sick for one week. Others followed in rapid succession, and by November 15 more than forty cases of illness were known to exist.

The symptoms in most cases were not well defined,

but typhoid fever was suspected in several by the physician in attendance. The first Widal examinations made in the laboratory were negative. A number of the sick students went at once to their homes without having seen physicians. Many of these were heard from later, through the sending of their blood to the laboratory for examination, a positive Widal being found in the great majority of them. Some returned to their work, but continued in poor condition, and finally reported at the laboratory for examination. In a number of cases the symptoms were so mild that the men continued at their work without medical advice; some did half work, resting part of the time.

As far as possible all such cases were investigated, those of students who went home and those of students who did half work, and in all was a positive Widal reaction found. A typical case may be given.

M., the son of a physician, was one of those affected with nausea and diarrhea. He went to his home, where his father made a diagnosis of ptomain poisoning. On his return to the university he continued in poor condition, and finally reported to us on October 30. We found him cyanotic, anemic, and with a temperature of 97.5 F. His blood gave a high positive Widal.

Among those stricken were the two Norwegian girls who worked in the kitchen and pantry. In less than one month forty-one cases of typhoid fever occurred among those boarding or working at this house, three of which terminated fatally. Only one case occurred later than November 15—that of a student waiter.

During the same time there was only one case of typhoid fever among the students not boarding at this house, and only three or four other cases in the city of Madison. Madison is free from typhoid fever at all times, the water being of unusual purity.

Every possible source of infection was studied. The water used at the boarding-house was from the city supply, which is of known excellence. Bacteriologic examinations were made, however, and no pollution detected. The ice was found to be of exceptional purity on several examinations. Furthermore, its source was traced to an inland city, the inhabitants of which were free from any outbreak, though this same supply had been used continuously all summer. It had been harvested at least six months previously, and it is known that the typhoid germ seldom survives freezing for this length of time. The milk supply was investigated, but no cause for suspicion found.

The possibility of infection through raw vegetables or oysters was excluded. Only one old privy vault existed in the neighborhood, and no infection of this could be traced. The windows of the boarding-house were screened, and flies had not been troublesome.

Attention naturally turned to the detection of a typhoid-carrier among those employed in preparing and

serving the meals. The following history was elicited: E. L., a student employed to scrape, wipe, and stack plates and dishes, had resumed his duties on the opening of the house, having served in this capacity during the previous year. Immediately on his return to work he complained of having "no taste for food," which he attributed to the change of life from the country to the city. About October 20 he gave notice to the landlady that he would probably have to give up work on account of illness, and within a day or two went to Janesville, Wis., where he consulted an optician for his intense headaches, believing that his eyes were at fault. His parents urged him to remain at home until he felt better, and observed at this time that he had fever. He returned to work, however, but on October 30 gave up his place and went home, where he died two weeks later. The death of this student made it impossible to obtain a more complete history, but there can be no question that he was in the early stages of typhoid fever when he returned to Madison from vacation. We have not been able to find out at what time his bowels became loose. His duties were such that he handled utensils after they had been washed, affording an opportunity for their infection.

The exclusion of every other possible source has forced the conviction that the outbreak was caused by this method of infection. Furthermore, the outbreak ceased shortly after this student went home, only one case having occurred after such a lapse of time as to throw any question on this source of infection. In this last case the student appeared to be ill at least two weeks before he finally succumbed on November 25. He was repeatedly questioned by one of us (Dr. R.), who believed he was ill. He was an advanced student in bacteriology, had given much assistance in studying the outbreak, and was a man of more than average ability; hence his statements were given more weight than seems to have been justified. His blood gave a high and rapid positive Widal as soon as he complained of illness, indicating an infection of some standing.

The boarding-house was closed for several days on November 6 and disinfected, after which it was allowed to open again, and no case of illness has occurred since.

One fact seems to militate against the above explanation, namely, the rapidity with which the patients came down, the great majority of them giving up between November 3 and 10, the 3d, 6th, and 7th yielding a particularly large number. This may have indicated that a large number of persons were infected at the same time. Probably suggestion had something to do with this, as on these days the house was inspected, closed, and fumigated, and there was considerable excitement over the large number of students taken ill. This, however, only explains the giving up—not the infection.

Another problem which presented itself was the possibility that the choleraic outbreak in November may have been due to a massive dose of typhoid bacilli. If such was the case the origin of the germs remains a mystery. Paratyphoid appears to follow meat poisoning, but all of our cases gave typhoid agglutination—none paratyphoid—so that paratyphoid may be excluded.

In order to gain as much light on this point as possible we have traced as many of these students as we could find and examined their blood by the Widal test. Two gave a prompt agglutination, though sick only for two days, and having no previous history of typhoid fever. All others were negative.

While every clinical type of the disease was observed

in this outbreak, certain features seemed to have been predominant. The headache was in the occiput and pain extended down the back of the neck. Constipation was more frequent than diarrhea.

Before allowing any one who had been ill to return to work in any capacity in this house the urine and feces were examined. No typhoid-carrier was found among them and no case of sickness has developed since November.

THE COMBINED COURSE FOR THE DEGREES OF A.B., OR B.S., AND M.D.

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Within the last decade there has developed a plan in several American universities under which a student takes, during the junior and senior years, those sciences which constitute the first two years of the medical curriculum. Credit for the successful completion of the work in these branches is permitted to count both toward a baccalaureate degree in the collegiate department and toward the degree of M.D. in the medical school. The student is thus able to secure the baccalaureate degree and the degree of M.D. in from six to seven years after his completion of the high school course and his matriculation in the university.

The plan has extended rapidly, it being now in operation in over thirty American universities. It is believed by many educators to be the best solution yet offered of the problem of how to provide a good many students with a fairly adequate premedical training and to induct them into the study and later the practice of medicine at a reasonably early age.

On the other hand, the custom is pronounced by one distinguished educator to be "pernicious," by another to be "a very dangerous process," that, indeed, "there is no more alarming process now going on in the United States in regard to education than this." Associations of college presidents have protested against it, and a resolution to prohibit the practice adopted a year ago, is now under reconsideration by the Board of Regents of the University of the State of New York.

The importance of the question warrants the fullest discussion by all who are interested in the subject. It is the purpose of this paper to inquire whether the combined course is a dangerous tendency which degrades the baccalaureate and medical degrees, or whether it is the logical, if not the inevitable, outcome of educational methods now all but universally adopted; whether it has not assisted markedly in elevating the standards of medical education in this country, and in improving the character of the instruction in the fundamental medical sciences.

HISTORY

The plan is the outgrowth of a custom which arose about twenty years ago of granting advanced standing on the medical course, both in time and subject, to the holders of a baccalaureate degree who had completed, in their collegiate course, some of the studies of the medical curriculum. At that time the requirement for admission to most of the American Medical Colleges comprised less than is covered in the first two years of a high school course, and no medical colleges exacted more than a diploma of a four-year high school. It was felt by the medical faculties who instituted the custom that, both because of his more adequate mental

training and greater power of accomplishment and because the college graduate had already completed some of the work of the medical curriculum, he might readily complete the three years medical course in two sessions, and this he was permitted to do; while, later, when the medical course was extended to four years, he was permitted to complete it in three years. It was believed that this concession would encourage young men who contemplated the study of medicine to take a college course before entering the medical school, and this effect it undoubtedly had with many students.

This custom continued in operation very generally among the medical schools until about four years ago, when the rulings of the boards of medical examiners in several states prohibited the practice. How illogical, unjust and unwise were these rulings of the examining boards will be discussed later on in this paper.

THE UNIVERSITY MEDICAL SCHOOL

Some medical schools were at that time departments of universities, and within a few years, by union or affiliation, a considerable number of independent medical schools became such. The application of the custom of granting advanced standing to the graduates of the collegiate departments of their own universities resulted in a combination and shortening of the collegiate and medical courses to six or seven years. Coincident with these developments, a radical change was taking place in the methods and personnel of those engaged in the teaching of the fundamental medical branches—chemistry, anatomy, histology, embryology, physiology, physiologic chemistry and pharmacology, bacteriology and pathology. The rapid progress and growing importance of these branches made it impossible for them to be taught adequately by physicians engaged in medical practice, and pursuing these subjects as an incidental avocation. Within a few years, in all of the better medical schools, they were transferred to men, each of whom devoted his time and energies exclusively to research and teaching in his chosen branch. And thus, with competent instructors and the introduction of laboratory methods with ample equipment, these medical sciences came to be, in the truest sense, branches of general science, in every way as well adapted for purposes of general culture and the development of the mental faculties as are other sciences in the college curriculum. Under the elective system, in vogue in most of the larger universities, the logical outcome was obvious. It can best be stated by the relation of a specific case.

An Illustrative Case.—A few years ago a medical school became affiliated with a neighboring university. The medical faculty had already decided to advance its admission requirements in the near future and to demand the completion of the first two years of the collegiate course in the university, or some other college of equal rank. The required course for the medical degree extended over four sessions of nine months each. In the university the curriculum for the freshmen and sophomore years was in part prescribed, in part elective. It included the courses in physics, chemistry and biology, and gave abundant opportunity to secure the courses in English, German or French, mathematics, history, etc., which the medical faculty deemed requisite for admission to the medical school. The last two years of the curriculum for the baccalaureate degree were elective, except that three months of work was specified in philosophy and psychology. (This provision has subsequently been changed so that the student may take these branches in the first two years if he prefers so to do.)

Moreover, the university possessed a department of anatomy, both gross and microscopic, of neurology and of physiology; embryology and bacteriology were taught in the department of zoology. Provision was about to be made for physiologic chemistry, and pharmacology, as, in a large sense, a branch of physiology could readily be provided for, as could fundamental pathology. Under the regulations of the university, in operation since its beginning, a student seeking the degree of bachelor of science could elect for the work of his junior and senior years courses in these departments, and when he had completed them he had completed all the work of the first two years of the medical curriculum prescribed in this as in virtually all other medical schools. The facilities for instruction in these fundamental medical sciences in the university were in every way superior to those in the medical school. The logical result of this situation was a transfer of the work of the first two years of the medical curriculum to the university, and at once it became possible for a student to secure the degree of B.S. in the university and of M.D. from the medical school in from six to six and one-half years. This arrangement involved no concession whatever on the part of the university, no departure from its long-established regulations concerning the baccalaureate degree. So far from any concession being made by the medical school, the change was a distinct gain in every way, the fundamental branches being taught under far better conditions and much more efficiently than ever before.

There was no logical escape from this deduction of the combined course from the conditions existing. No university with a medical department, offering instruction in the fundamental medical branches of the proper sort, can deny its students credit in the medical subjects on the course for a bachelor's degree, unless it either repudiates the elective system or declares these subjects not to be branches of general learning. Can the present day university adopt either of these alternatives?

THE ELECTIVE SYSTEM

Of the elective system it is hardly too much to say that its validity has passed beyond the realm of discussion. No other educational method in the last quarter century has made such rapid progress toward universal acceptance. It is in operation to-day in one form or another, more or less completely, in every university of any standing. It will be discussed more fully in a later portion of this paper.

And are not these medical subjects properly included in the university curriculum? Let us inquire.

MEDICAL SUBJECTS BRANCHES OF GENERAL LEARNING

Of chemistry, histology, embryology and bacteriology there can be no question, for they have been taught in many colleges and universities for years—long, indeed, before the question of their relation to the medical curriculum came under discussion. Human anatomy, with dissection, while taught until recent years only in the medical school, is surely a legitimate branch of vertebrate and comparative anatomy—the crowning topic indeed—quite as much as it is a medical subject. No department of anatomy in a university can be regarded as complete unless it offers its students opportunity for the study of the human body. The materials for its pursuit are not so readily procurable as are the bodies of the lower animals, but the experience of many universities, and even of smaller

colleges having no medical departments, has shown that they are not inaccessible under modern statutory provisions. That the application of human anatomy is chiefly to medicine, and that anatomic science originated and was for centuries studied and taught only in the medical schools, does not alter the fact that logically it is a great and important branch of zoology, and, as such, is entitled to a place in the university curriculum.

No science is of more universal interest and importance to all classes of students than physiology, though it is strange that this fact has been so slowly realized and that few subjects have been more inadequately taught. It has long been the custom in most colleges and high schools to offer instruction in physiology consisting of lectures, recitations from a text-book and occasional demonstrative experiments. Physiology can no more be properly taught than can any other science without laboratory experimentation by the individual student. Of late years universities are coming to realize this, and a chair of physiology, occupied by a competent investigator and teacher of this science, devoting his time and energies exclusively thereto, with adequate laboratory equipment and instructional force, is recognized as an essential department of a university. Such a department of physiology is the best possible place for the medical student to study this subject, and it matters little whether the department be called medical or otherwise.

PHARMACOLOGY AND FUNDAMENTAL PATHOLOGY AS GENERAL SCIENCE

There are but two other branches of any moment which are to-day usually included in the first two years of the medical curriculum, namely, pharmacology and pathology, and concerning these there may be more room for discussion—that is, as to their right to be regarded as branches of general learning and so entitled to inclusion in the university curriculum? Two points are to be noted in this connection: first, fundamentally considered both of these subjects are but phases or adjuncts of physiology; second, if this be not comprehended and conceded in any particular institution, they may be deferred to the junior year of the medical course, as is the custom in a number of the best medical schools. This latter alternative will become more feasible as the fifth year of clinical instruction, now contemplated by some of the better schools, and to consist, for most students, of service as an interne in a hospital, comes to be generally adopted.

To return to the first point, it is not difficult to demonstrate that, in the truest sense, pathology and pharmacology are fundamental sciences—essential phases of physiology. Pharmacology, which consists in the study of the effect of drugs on the animal organism, is an indispensable method of physiologic investigation, and its technic is wholly that of the physiologic laboratory. Indeed, while the medical student ordinarily would pursue the study of drug effects somewhat farther than would the student of pure physiology, no one can proceed very far in the latter branch without taking up the methods of pharmacology and he is constantly resorting to them throughout his further study of that science. To proceed further in the pursuit of what we call pharmacology is but to continue work in physiology.

The pathology which is had in mind in this connection is by no means the pathologic anatomy which until recently constituted practically all that was known and taught as pathology. That was, indeed, a purely tech-

nical medical subject, related almost exclusively to the curriculum of the medical college proper. It is obvious that a knowledge of the intimate nature of disease in the animal organism could never be derived from an observation, however exhaustive and microscopic, of the end-results of pathologic processes, in a word, from the study of pathologic anatomy. Such a knowledge can only come from a study of the physical and chemical forces which produce these changes. Furthermore, such a study must be largely conducted by the method of experiment, and this, too, on organisms of such simple structure and in such environment as make it possible to know and to control all of the possible factors concerned in producing the changes observed. Such pathology is simply the physiology of the abnormal, or of the normal in an abnormal environment and as such this science is indissolubly bound up with physiology proper. Indeed, pathology has contributed largely to our knowledge of physiology, and such experimental work as that of Loeb and others in the study of simple organisms in an abnormal environment which can be varied accurately and at will, is quite as truly pathology as it is physiology. It is in this kind of pathology that the hope for future progress in that science chiefly lies, and it is with this sort of pathology that the student of medicine must begin his study of the science of disease. It is rapidly coming to make up the major part of the first course in this science as it is taught in the university medical schools. Its methods, its technic, its modes of observation, experiment and deduction differ in no material respect from those of pure physiology and physiologic chemistry, of which it is an adjunct science.

Is such a science not deserving of a place in the university curriculum? If the student of pure science, who has elected physiology as his field, is led to extend his inquiries into the field of the abnormal, shall not the university provide him with a place and facilities for such study? And is the work he does along such lines not quite as potent for the training of the faculties as that he may do in any other science in the curriculum? Is it not quite as deserving of credit in the course for a baccalaureate or for a higher degree as is accomplishment in any other university department? The right of pathology to a place in the university curriculum has been adequately set forth by Prof. E. O. Jordan in a recent address.

THE METHOD OF TEACHING THE FUNDAMENTAL MEDICAL SCIENCES

It is contended by some that the method of teaching these medical sciences to medical students must be essentially different from that by which they would be studied by persons having no intention of entering into clinical or practical medicine. In my opinion this notion is fallacious. Fortunately, in the better medical schools this idea is rapidly coming to be more a matter of theory than of practice, for with the transfer of the teaching of these sciences to the hands of men who are devoting their lives to their pursuit, the method of instruction grows constantly more broad and thorough. No sharp line can be drawn between applied and pure science, and the only effective method of approach in any branch, no matter in what direction it is to be later applied, must be through a broad, comprehensive study of its principles, facts and methods. Such a knowledge is most likely to be secured when the study is at first pursued, with little reference to its later application. The student is then less likely to be distracted into the error of neglecting those phases of the subject which he

fancies are of no importance in the vocation for which he is preparing himself and of laying stress only on those things which he believes to be important. One can not study the application of any branch of learning until he has a fairly comprehensive knowledge of the branch itself. The mistake which our normal schools have made, and which has resulted in such an unsatisfactory product, has been in endeavoring to teach young women and men "how" to teach subjects of which they know little or nothing. An exactly analogous blunder has been made by the medical colleges in attempting to teach medical chemistry, for example, to young men who know no chemistry. To this faulty method is due the fact that so few physicians can read intelligently much of the present day medical literature with its constant reference to modern chemistry and its application to medicine. It is believed that the physicians of the coming generation, who have had their chemical training on the broad, thorough lines of the college or university, will experience much less difficulty in this regard. To students thus trained in chemistry and the other sciences fundamental to medicine, all clinical pathology, medicine, surgery, obstetrics, etc., are simply applied physics, chemistry, anatomy, histology, embryology, physiology, physiologic chemistry, bacteriology, pharmacology, and fundamental pathology, and they will be studying these as "applied" sciences throughout the rest of their lives. It is perhaps a matter of less importance whether these departments of anatomy, etc., be classified as in the college of science or in the college of medicine, though, to my mind, it is a distinct advantage to have them regarded, primarily, as departments of science. The important thing is that the spirit and method of instruction shall possess that breadth of view and insistence on thoroughness and exactitude which has surely, in our past experience, been more commonly found in the college of science. One of the chief fruits of the combined course, as offered in some schools, is the fact that it has resulted in securing for these sciences recognition as branches of general learning—as being "pure" quite as much as "applied" sciences.

DOES THE PLAN DEGRADE THE BACCALAUREATE DEGREE?

With the medical sciences taught along the lines which have been indicated, does their inclusion in the curriculum leading to the baccalaureate degree tend to degrade it? For those who still hold allegiance to the old rigid, classical curriculum, undoubtedly it must seem so, but for those who accept the modern idea of what the baccalaureate degree signifies—an idea all but universally accepted—it is difficult to conceive how any objection can be entertained as to the validity of these medical sciences in such a curriculum. The question of the acceptability of credits for work in these fundamental medical sciences, if we grant their right to a place in the university curriculum, must logically be determined without any reference to their subsequent acceptance in the medical school.

WHAT DOES THE BACCALAUREATE DEGREE STAND FOR?

In former years the degree of A.B. was granted by the American colleges on the completion of a classical course, rigidly prescribed for every student. There probably never was a time when the degree meant exactly the same course of study in any two colleges, but the differences were not material. The degree of B.S. was granted for the successful completion of a course differing from the arts course in the substitution of

work in science for some of the Greek, Latin, or other branches, usually in the junior and senior years of the curriculum. In the B.L. or Ph.B. degree the substitution of some modern language for Greek was the essential modification. In most of the large universities, and in many colleges under the elective system, these degrees have ceased to have any such significance. To quote from one of our greatest educators:

The general growth of knowledge, and the rise of new literatures, arts and sciences during the past two hundred and fifty years have made it necessary to define anew liberal education and hence to enlarge the significance of the degree of bachelor of arts, the customary evidence of a liberal education.

Is this traditional degree of bachelor of arts, which, for three hundred years, at least, has had a tolerably clear meaning, to be deprived of all exact significance, so that it will be impossible to tell what one who holds the degree has studied? I reply that the degree will continue to testify to the main fact to which it now bears witness, namely, that the recipient has spent eight or ten years, somewhere between the ages of twelve and twenty-three, in liberal studies.

The worthy fruit of an academic culture is an open mind trained to careful thinking, instructed in the methods of philosophic investigation, acquainted in a general way with the accumulated thought of past generations and penetrated with humility. The choice offered to the student does not lie between liberal and professional or utilitarian studies. All studies which are open to him are liberal and disciplinary, not narrow or special. Under this system the college does not demand, it is true, one invariable set of studies of every candidate for the first degree in arts; but its requisites for the degree are none the less high and inflexible, being nothing less than four years devoted to liberal culture.

THE ELECTIVE PRINCIPLE

As to the propriety of allowing the college student to choose his studies, I quote from the same pre-eminent authority:

The next educational principle which I believe to apply to two-thirds of the entire educational course between five and twenty-five years of age, is the principle of selection or election of studies. In the first three or four years of a child's education, say from five or six to nine years, there are not so many possible subjects of equal value and necessity but that the child may pursue them all to some adequate extent; but by the ninth or tenth year of age more subjects will claim the child's attention than he will have time for, and therefore arises the necessity for election of studies. As the child advances from the elementary to the secondary school and from the secondary school to the college, the number and variety of subjects from which to choose will rapidly increase until, in the department of arts and sciences in the university he will find that he cannot attempt to follow the one-twentieth part of the instruction offered him. . . . Who shall make the selection? is really the only practical question. The moment that we adopt the maxim that no subject shall be attempted at all, unless it be pursued far enough to get the training it is fit to supply, we make election or selection of studies a necessity. This principle has now been adopted by all colleges and universities worthy of the name.

A mental discipline which takes no account of differences of capacity and taste is not well directed. It follows that there must be variety in education instead of uniform prescription. To ignorant or thoughtless people it seems that the wisdom and experience of the world ought by this time to have produced a uniform course of instruction good for all boys, and made up of studies permanently pre-eminent; but there are two strong reasons for believing that this convenient result is unattainable; in the first place the uniform boy is lacking, and, in the second place, it is altogether probable that the educational value of any established study, far from being permanently fixed, is constantly changing as new knowledge accumulates and new sciences come into being.

IS THE STUDENT COMPETENT TO CHOOSE HIS STUDIES?

And who shall make the selection? Again I quote:

A well-instructed youth of eighteen can select for himself, not for any other boy or for the fictitious universal boy, a better course of study than any college faculty, or any wise man, who does not know him and his ancestors and his previous life, can possibly elect for him. I have never known a student of any capacity to select for himself a set of studies covering four years, which did not apparently possess more theoretical and practical merit for his case than the required curriculum of my college days.

When the revelation of his own peculiar taste and capacity comes to a young man, let him reverently give it welcome, thank God and take courage. Thereafter, he knows his way to happy, enthusiastic work, and, God willing, to usefulness and success.

And if the student's tastes, capacity and ultimate goal incline him to select the fundamental medical sciences as a part of his arts or science course, shall he be denied the privilege? Are these studies not calculated to make for "liberal culture?"

THE CULTURAL VALUE OF THE MEDICAL BRANCHES

I quote again from the same authority:

The training of a medical student, inadequate as it is, offers the best example we have of the methods and fruits of an education, mainly scientific. The transformation which the average student of a good medical school undergoes in three years is strong testimony to the efficiency of the training which he receives.

It speaks volumes for the force of medical practice that out of such raw material there could be produced in the course of a few years so fair a proportion of skillful, humane and successful practitioners. We have here a demonstration that medical study, contrary to the too common opinion, is, to a man of ordinary intelligence and conscientiousness, refining, developing and uplifting.

There is no line between culture subjects and professional subjects. There is absolutely no line. I read the other day an admirable definition by President Hadley of what we wanted the college to effect, not the professional school—presumably Yale College. He said we wanted to teach the college youth civic duty and religious earnestness, and health of mind and religious aspiration; he wanted to teach him public service as the root of American life and therefore of American education. Now, that is true as gospel, gentlemen. It is the educational gospel. But, in my judgment, it is not the gospel of the American college only, it is the gospel of American education from the primary school through the professional school, and I know of no subject better adapted to develop the sense of civic duty, of public service, and of moral and religious earnestness, than the subjects taught in the medical school.

Shall we not agree with these significant and emphatic expressions from one of the greatest educators of our time? And if we do so agree, can there be any possible doubt of the propriety of including the fundamental medical sciences in the university curriculum and counting credits for work therein on the course for a baccalaureate degree? So far from degrading, does not such a procedure enlarge the possibilities of the course and enhance the significance of such a degree?

HAS IT DEGRADED THE DEGREE OF M.D.?

Has the combined course operated to degrade the degree of M.D. and to lessen its significance in the United States? Up to five or six years ago no medical college in this country, with one exception, required more than a high school diploma for admission—most of them admitted students with considerably less than this. The exaction of two years of college work, the minimum demand of the combined course, was there-

fore a marked advance on previous standards. Moreover, it appears to have been the step which has brought about a general advance in admission requirements. For nearly twenty years we have had in this country a medical school whose minimum requirement is the possession of a bachelor's degree. Its high standards and distinguished service have been a source of great pride and satisfaction to the American medical profession. Such an institution was needed at the time of its foundation—but we have needed perhaps far more, a general uplift all along the line—an elevation of the character and the standards—especially of admission—of all medical schools. No material progress was made toward such an increase until the proposition to require one or two years of college work (not four) was made a few years ago. How gratifyingly rapid has been the upward movement since that time is shown by the last report of the Council on Medical Education of the American Medical Association. About sixty medical colleges have announced their intention to require at least one year of college work by the autumn of 1910; over thirty of these colleges will require two years; the state boards of medical examiners in at least two states no longer recognize the diplomas of medical students who do not take two years of premedical college work, and four others are soon to exact at least one year of such work. Emphatically, the combined course has not degraded but has distinctly elevated the degree of doctor in medicine as conferred in the United States.

WORLD-WIDE UNIFORMITY OF STANDARDS

It has been urged by some that we should seek in this country such standards as would make the degree of M.D., as conferred in the United States, uniform with that given throughout the world. It is to be said of this suggestion that it is impracticable, indeed impossible, because there is no uniformity of standard in the other parts of the world. A glance at the report of the Council on Medical Education, in which the facts in regard to this matter have been very fully and very clearly set forth will show that the degree of M.D. means one thing in Great Britain, another thing in France, yet a different thing in Italy, and still another in Germany, while in the Scandinavian countries it means a more prolonged period of systematic college work than anywhere else in the world. Of these several standards it is likely that a considerable majority of the medical profession of America would regard the medical standards and curriculum of Germany as approaching most nearly the ideal to which we in this country should seek to conform. Opinions differ somewhat as to just what, in our American school system, the German gymnasium most nearly approximates. It has been declared, by some, that the completion of the course in the German gymnasium means no more than the diploma from our better high schools. By others it is regarded as about the equivalent of a baccalaureate degree from an American college. The correct opinion probably, and that held by the majority of educators, is midway between these two estimates; it holds the gymnasium certificate to be about equivalent to the completion of the sophomore year of the better American university or college. If this be the case, the combined course of six years, leading to the degree of B.S. and M.D., with the additional year of interne service now sought and secured by a large number of medical graduates, approximates

closely indeed to the German plan. This fifth or interne year is shortly to be made, in at least one institution, a prerequisite for the degree of M.D.

ARE TWO DEGREES DESIRABLE, SUCH AS M.B. AND M.D.?

Again it has been argued that if we are to admit students to the medical school with only two years of college credit, while many others present a baccalaureate degree, then some distinction should be made between these two groups in the kind of medical degree conferred. It has been suggested, for example, that the degree of M.B. be conferred on those students not possessing an A.B., B.S. or corresponding degree, before entering the medical school, reserving the degree of M.D. for those students who were college graduates before taking up the study of medicine. This would make the degree of M.D. a secondary or higher degree corresponding to the master's degree, and, some apparently have thought it might even come to have the significance of a Ph.D. It is a serious objection to such a plan that it would involve the amendment of the medical practice acts in many states in which the possession of the degree of M.D. is made an essential prerequisite for licensure. Under this arrangement, these two medical degrees would not be at all equivalent to the corresponding degrees in vogue in Great Britain and some of her colonies. Moreover, the degree of M.D. could never come to have a significance corresponding to that of a master's degree or to the degree of Ph.D., unless the requirements were made equally rigid. Is it not far better that the college graduate who enters the university medical school should find it possible to secure one or both of these higher academic honors, the M.S. or Ph.D., and should he not be encouraged so to do by accomplishing "masterly" or "doctorate" work in one of the medical sciences? The regulations governing these higher degrees should be in no wise relaxed, and they make it impossible for any medical student to secure them by the mere perfunctory accomplishment of the regular medical curriculum. By prolonging his residence, however, one or two years, doing creditable research in one of the medical sciences and presenting the results of his investigation in an acceptable thesis, he has the opportunity to secure this higher academic distinction (with the superior training and power for which it stands), by special research in anatomy, physiology, bacteriology, or any other of the sciences fundamental to medicine.

THE DEGREES OF M.S. OR PH.D. FOR WORK IN THE MEDICAL SCIENCES

That such accomplishment is entirely practicable in connection with and by extension of the regular medical courses in the university has already been demonstrated in at least one university, where, in the last decade ten or twelve students in the medical department have secured the degree of Ph.D., and several others the master's degree. The gain to these students in power and prestige and the gain to the medical profession which they enter can hardly be overestimated. Will it not be a distinct advantage to science, as well as to medicine, when investigative work, of the right sort, in even the clinical branches of medicine, is generally recognized as worthy of credit in the course for a Ph.D. degree, and the real unity of the applied medical sciences with the pure medical sciences is thus emphasized?

THE BEST PREPARATION FOR MEDICAL STUDY

Does the two years of college premedical work demanded by the combined course afford the best pre-

paration for the study of medicine? What is the best preparation? Is there an ideal uniform preparation for all students?

These questions naturally suggest themselves in this connection, and it can not be too strongly emphasized that the four years of high school plus two years of college work comprises not by any means an ideal, but simply the very minimum of preparation with which any young man can afford to take up the study of medicine under existing conditions. The absolute essentials, including physics, chemistry, biology and German, now regarded as indispensable by most medical educators, can not be covered in less time than this. That fact was clearly demonstrated by the investigation of the committee on college preparatory work, in its report to the Council on Medical Education in 1907. The maximum amount of time which one may devote to such preparatory work is merely a question of age, and is by no means uniform for all. It seems obvious that there is no limit to the amount of education, and of knowledge which one might, with advantage, use in the study and practice of medicine. But the *time* which one may spend in such education and the acquisition of that knowledge is distinctly limited by the necessity of his getting about the ultimate business of his life at a reasonably early age. There are two strong reasons for this—one economic, the fact that he must become a bread-winner, and, one psychologic, the fact that the mental faculties, like the muscular system, begin to "set" and to lose their power of adaptability to new lines of effort at a certain age, usually in the early twenties. It is almost universally agreed that a young man ought to graduate in medicine, to have his hospital training and to be started in the practice of his profession well under the age of thirty. Says an educational authority: "If a young man takes his A.B. at twenty-two, he can hardly hope to begin the practice of his profession before the age of twenty-six. That is quite late enough."

The conviction that, under prevailing conditions, the exaction of the baccalaureate degree for admission to the four years' medical course means for many young men, deferment of entrance into practical life much beyond this period, has been all but universal among educators. To meet this difficulty, it has been proposed (1) to abbreviate the college course leading to the baccalaureate degree to three years and even to two years; or, (2) to combine the collegiate and medical school course by (a) giving advanced credit of one year in the medical school to the holder of a bachelor's degree as formerly practiced, or (b) to permit the college student to take for his senior collegiate year, the first year in the professional school, after the plan in operation at Wabash College, the University of Illinois and some other institutions; or (c) by combining, in certain universities, the academic and professional courses as has been described in this paper. Those plans which secure four full years of study between the high school or academy and the conferring of the baccalaureate degree are surely much less objectionable than the proposition to curtail the time and work demanded for that degree. All of these combination plans should be permitted, under proper supervision and restrictions. Each has its advantages, and meets best the needs of certain students. No device for curtailing the amount of his preparation should be sought by or advised for the student who can "go the whole road" within the age limit of twenty-seven or twenty-eight, but for a long

time to come a considerable proportion of earnest, capable medical students will be so circumstanced that it will not be to their best interests so to do. Experience has demonstrated that the student who has had only two years of college preparatory work, provided that has included the requisite chemistry, physics, and biology, with German and French, can pursue the medical courses alongside his fellow who has completed the college course without serious handicap. The additional two years of preparation which the latter has enjoyed is much to be desired, but its advantages are more evident in later life. A few medical schools will prefer to exclude all students who have not secured a baccalaureate degree, but the larger service to the community and to the profession is certain to be rendered by most schools if they make the entrance requirements more flexible and adjustable to the needs of a larger number of students.

IS THE COMBINED COURSE UNFAIR TO THE DETACHED COLLEGE?

It is objected by some of the colleges, having no medical departments, that the combined course is unfair to them because it tends to attract their students to the university with its medical school at the end of the sophomore year. Most of the colleges object, also, and with some reason, to the plan mentioned above, which had its origin in one of these colleges, in which a student is permitted to leave the college at the end of his junior year, taking for his senior baccalaureate course, the first year in an approved professional school—law or medicine. The contention is that these plans take the student from the college at the time when the college most desires to have him for its own.

In answer to these objections it is to be said first, that in the practical experience of at least one college, for now some years, these fears have not been realized not a single student has been tempted away by the opportunity thus offered to abbreviate his course. Second, if a few students are thus seduced from the college, there must be set off against these the hundreds of students which the increased requirements for admission to the medical school will bring to them. For a century and more the vast majority of medical students in this country have been passing direct from the common or high school, by the door of the college, into the medical school. The two years of college work now demanded by many, and almost certainly in the near future to be exacted by all medical schools, must turn this procession of students into the college, and if these hundreds of new students are thus secured to the college by the increased requirements—the direct outgrowth of the combined course—may we not reasonably feel that it is the business of the college to keep them; that it should be able to make its work so useful and attractive, and so to convince the student of the advantages of full collegiate training, as to induce him to remain until he attains his baccalaureate degree?

Two things, however, are due the college from the medical school: First, the latter should use its every effort to persuade students preparing for medicine to take the full college course if it is possible for them so to do; second, the medical school should recognize, both in time and subject credit, any and all good work done by the college in the medical branches—chemistry, histology, embryology, etc. At present it is not possible for the medical school to give such time credit. The proscription of this custom by the medical examining boards of several states constitutes one of the most

illogical, unjust, unwise and probably illegal regulations which have ever been made in connection with medical education. Illogical, because credit is thus denied for work far superior to that done in the majority of medical schools recognized by these boards; unjust, because the colleges had prepared themselves to teach these subjects in large part at the urgent solicitation of the better medical schools, only to find the promised credit in the medical schools withdrawn just as their students were prepared to ask it; unwise, because it abolished an arrangement which had been one of the most effective agencies in inducing young men to secure college training before taking up medical study. In one of the states in which this obnoxious legislation was first enacted, the board has apparently never been willing to risk its submission to the courts of law. Certainly at least eight or ten graduates in medicine, to the writer's knowledge, who had been granted a year of advanced standing for collegiate work and a baccalaureate degree by the medical school from which they graduated, have settled in this state, have applied for admission to examination for licensure, have been refused, have stated their intention to continue in practice, though ready at any time to take the regular examination, and in every instance these physicians have been subsequently requested to appear for examination, have passed the same and secured the license. Within two years, the attorney-general of this state has rendered an opinion on this obnoxious regulation flatly in opposition to the contention of the board.

Undoubtedly some colleges have attempted the teaching of medical branches which they should not have undertaken at all. Undoubtedly, the holders of a baccalaureate degree from unworthy colleges were in some instances granted advanced standing by medical schools when the medical work done was wholly undeserving of such credit. But the remedy for the abuse of a good custom lies not in the abolition of the custom, but in the correction of the abuse. What the medical examining boards should have done was to have investigated all colleges teaching medical subjects for which their students claimed advanced credit in the medical school. These colleges should then have been classified, as the boards have classified medical schools, into "recognized" and "unrecognized" or "partially recognized." This important question will never be satisfactorily or finally settled until some such plan is adopted.

SHALL THE COLLEGES TEACH MEDICAL SUBJECTS?

What shall the college teach in the fundamental medical branches? No more important question confronts the colleges to-day than this one. I have visited many scores of colleges in the past few years, and everywhere this question was among those that were uppermost in the minds of the faculties. One thing seems certain, and that is that the answer is by no means uniform for all. What subjects each college should include in its curriculum depends on many factors of locality, equipment, resources, the predilections of its teachers, the demand of its students. To settle this point there is needed the most careful deliberation of its faculty, and the advice and cooperation of those engaged in medical education. The college is much more likely to err by attempting to teach too many things than by offering too few. Many excellent colleges are unfitted to teach any medical branches at all, while others, even among the smaller schools, are doing efficient work in such subjects as histology, embryology, physiology, and human anatomy with dis-

section, work, indeed, of far better quality than up to the present has been done by the majority of medical schools. Is it not the height of absurdity to deny recognition for this work because, forsooth, the institution in which it is done has not been christened "medical school"?

The university, with its medical department, possesses, and must continue to possess an advantage over the detached college in respect to the combined course for the baccalaureate and medical degrees, but the college has a right to insist that when its circumstances and resources permit it to give adequate instruction to its students in medical subjects, that work shall receive just and full recognition by the medical school.

SURGICAL PATHOLOGY: ITS SCOPE AND TEACHING

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As the question, "What is surgical pathology?" has so frequently been put to me by the graduates of years past, by several general pathologists to institutions having no such departments connected with their respective colleges, and especially since the question was very recently asked by one of the visiting German pathologists attending the recent convention, I feel that an effort to elucidate this question may not be amiss.

Naturally, this question comprehends the nature of surgical pathology and the reason for making it a special department of pathology or, more properly, of surgery. When we speak of surgical pathology, we refer especially to those portions of pathology which deal with conditions directly amenable to surgical treatment and investigation and which can be studied either *in the living* individual or *out* of him while he still *lives*. It naturally deals with the grosser abnormalities, but especially with those parasites of the human body, the tumors, the acute, suppurative and certain of the chronic productive inflammations and the infectious granulomata, such as tuberculosis, syphilis, etc., when directly amenable to surgical treatment. By confining the work to these limitations and endeavoring to correlate the knowledge gained from the microscope with that obtained at operation and from the full knowledge of the patient's history before and after the operation, it endeavors to perfect that knowledge to its finest degree, at the same time making constant effort to increase the scope of its practical benefits.

Leaving the study of the larger difficult and intricate problems of pathology to those trained and skilled pathologists and thinkers who devote to it their entire time without any of the diversions of practice in the busy medical world, those who make surgical pathology their sole objective feel that they are better equipped to comprehend and make use of whatever knowledge of practical value may be derived from this study than those who see but one side of the subject and never come in contact with living, suffering or cured patients. Their knowledge of the symptoms which have directed their attention to this tumor or that inflammatory process, coupled with that which they have seen or should see at the operation, gives them better opportunity to place the proper interpretation of that found in the laboratory and learned from the mi-

croscope. Their knowledge of the later progress of the case (and on that the surgeon should always make it his object to keep them informed), coupled with the knowledge of what is found on the operation table, should better fit them to direct their investigations in such a manner as to strengthen the weak points in the operative technic, if there be any, and lead them to interpret better, for the surgeon or for themselves, the limitations and meanings of the gross morbid pathology found under the eye in the living body.

From the standpoint of surgery, the branch should be divorced from the general teaching in surgery, because of the well-known fact that there are few, if any, surgeons with their numerous operations, many hours of teaching and the weighty responsibilities, who would have the time and patience required of him who would do laboratory work in pathology. The proper effort in this line requires not only that he shall keep well in touch with the latest and best surgical knowledge, but that he shall also keep in touch with that immense and progressive field of general pathology which every day, by means of its advanced experimental knowledge, is commanding further attention in all lines of medical work. He must keep himself informed on both sides of the question so as quickly to be alive to the possibilities of applying the one to the other with the best result for the patient.

From the standpoint of the student, there are many reasons why this branch should be taught separately by those especially equipped for the work. In the earlier years of his student career there are many fundamental branches crowded into his head, the practical use for which he can not conceive, and in which his interest is lacking. Among these branches is pathology, although it may possibly excel the others from the standpoint of interest to the student, because then he commences to feel that he is at least dealing with the abnormal, which alone he considers essential. The subject is so tremendous in its scope that the time allotted to its teaching, while often great, is rarely sufficient to cover it completely even from the standpoint of the pathologist and the morbid anatomist. Therefore, it is more than can be expected of any teacher who wishes to keep himself well informed on all the latest advanced pathologic discoveries, in order to present them in an acceptable but not too intricate a manner to the student, and at the same time contribute his mite to the general progress of the science, that he should keep abreast of the latest advances of surgery and present to the student the practical applications of the subjects he is called on to teach. The reverse of the proposition applies to the surgeon.

Again, allowing the possibility of one man being able to control the literature and his time so that he would be able to teach his pathology and at the same time give all the practical applications of this knowledge, would the student, as yet in his early years, be prepared properly to grasp this knowledge and to retain it until such time when he will need it most; that is, after his student days are over? As the matter stands at present, I believe that not many will contradict the statement that there are few students who, in their serious efforts to wrestle with and comprehend the more intricate problems in pathology, such as immunity, etc., do not relegate to the background the simpler problems of microscopic diagnosis and the gross general characteristics of certain morbid growths and processes. After leaving the more elementary subjects, they plunge head-

long into clinics and operative surgery, receive lectures on lectures on symptoms and diagnosis, with little stress on the gross pathology and none on the microscopic pathology. This is partly because it is presumed that that knowledge on the subject has already been imparted to the students and that they are, therefore, familiar with it. At times it may possibly be because the active surgeon has acquired, by long experience, that intuition in surgical diagnosis and interpretation which unconsciously results from and finally supplants that pathologic knowledge which he formerly had, but which has become somewhat hazy with the mist of time.

These are conditions which are perfectly natural and to be expected, but nevertheless not to be desired. The student mind, immature in medical conceptions, is unable properly to grasp and to correlate these two great and useful subjects and thereby acquire with the material already at hand and at his disposal that knowledge which has taken many of his predecessors years to acquire through varied and often bitter experiences and sad mistakes. It is this training in the correlation of the great subjects of pathology and physiology with medicine and surgery which has developed the vast majority of our world-renowned diagnosticians, surgeons and clinicians. It is not the art of surgery which has accomplished the greatest wonders, but it is the science of accurate diagnosis and interpretation which has raised surgery to the high pinnacle of to-day.

It is this breach in the teaching of the medical schools that surgical pathology tries to fill. There is much that it does do and still more that it might try to do, but one object it certainly endeavors to attain, and, if that is accomplished, the failures may be considered as atoned for. It endeavors to teach the student never to think of any one phase of the subject to the exclusion of the others, but continually to correlate his knowledge of anatomy, physiology and pathology and to make it applicable to the subject at hand. It endeavors to show that symptoms are merely effects which must follow definite underlying pathologic, physiologic or anatomic derangements and that clear and comprehensive understanding of the conditions to be dealt with necessarily means a clear conception of the gross or minute processes which are occurring beneath the superficial coverings of the skin and tissues. It endeavors to develop in the student "the microscopic eye" so that when he is called on to study a case he may quickly call to mind the possible morbid processes with which he may be dealing and the necessary morbid effects that they would produce and, by exclusion, arrive at an accurate diagnosis with its proper and scientific treatment.

As to the practical methods used to carry out these ideals, they may be many and varied. That which appeals most to me and which I have endeavored to carry out as far as possible is somewhat along the following lines. First, there should be a close and definite relationship between the departments of surgery and surgical pathology so that those in the department of surgical pathology shall have the freest access to all the surgical cases, on whatever service they may be, in order that they may be fully informed as to the history and progress of every operative case within the hospital. They should be informed in advance of every operation to be performed and as far as possible should participate in the operation so as to have that intimate knowledge of the conditions which comes only with sight and touch, at close quarters. Every specimen removed from the living body, no matter how trivial or unimportant

it may appear grossly, should be sent, either immediately in the fresh state or carefully preserved in whatever form of preservation may best suit the laboratory chief, to the laboratory for examination. Every single specimen should be carefully and accurately labeled, and with each specimen should be sent a slip, giving all the important data pertaining to the case. Preferably, it should be accompanied by a copy of the full history. These histories should be filed away and indexed so as to be immediately available to any one studying the specimen.

When specimens are received in the laboratory, they should be immediately carefully described, photographed when possible or drawn if of sufficient value; then a section removed for microscopic examination and the remainder prepared by Kaiserling or other method for permanent mount. The histories, with photographs, negatives and pathologic reports, should be filed away in large envelopes so that at a moment's notice all the available data may be at hand for a careful study of the case as a whole. For the same reason all the specimens in the laboratory should be cross-catalogued in three different manners, viz.: according to the name of the patient, according to the organ or region affected, and according to the nature of the affection. Choice typical specimens should be sectioned, stained and mounted for class laboratory work, and at times it may be of advantage to teach from specimens which are not typical if thereby some point in diagnosis may be more forcibly brought to the front. At this period in the course I do not think it fair to the student to require him to spend valuable time sectioning and staining specimens; I believe that his time should be devoted to more careful study of them with a view toward the practical application of his knowledge in the wider subjects of surgery. As many of the specimens, while valuable from the teaching standpoint, are not always available when desired, and since but a very small minority of the students ever look at their slides again after leaving college, it has not been my practice to give these slides to the students, but to use them year after year until they are destroyed by breakage, etc. Usually there will be sufficient of the specimen so that slides may be presented to a few of the more interested of the students should they desire them. The classes can easily be handled if the student be given an individual tray accommodating five or more different slides for the day's study. So much for the conduct of the laboratory and the preparation for the course.

The course itself should be placed as near to the end of the college curriculum as is possible, so that it may go hand in hand with the advanced teaching in surgery and at the same time better prepare the outgoing student to take up his work in hospitals, army, navy or other advanced training ground. It should consist of both lectures and laboratory work. The lectures should be illustrated by lantern slides, by patients, specimens and illustrations whenever possible, in order to treat thoroughly the theoretical portion of the subject and in order to assemble all the essential facts from the correlated branches in so far as they are related to the subject in hand. The laboratory work is intended for a careful study of microscopic slides illustrating the various phases of the affection just lectured on. The laboratory work should be made to coincide as much as possible with the lectures so that the full force of whatever may be taught can be realized at the same time. This

work can be further helped by making this course coincide, when possible, with the lectures on surgery.

The subjects to be taught and the order and manner in which they shall be approached are matters on which all may differ and still attain good results. I have found the old method followed in the teaching of surgery, according to systems, very satisfactory and see no reason to change. I usually begin by considering the fundamental essential for surgery, namely, regeneration and repair in the various character of tissues; then I take up the diseases of the skeletal system, the surgical affections of the gastrointestinal system from the lips to the anus, including the gall bladder and pancreas, the thyroid gland, the genital system in male and female, including the breast, the surgical affections of the urinary system and, finally, the lymph system and miscellaneous conditions, as skin tumors, etc.

In treating all these subjects, whenever time will permit, a very hurried survey is first made of the anatomy, histology and physiology of the organ or region to be studied in order that the student may have at hand all the data necessary for the proper application of his pathologic knowledge to the study of the living patient. The pathology of the condition and the latest experimental findings are then gone into as carefully as possible with especial stress on their relationship to other organs and the region affected when such relationship exists. Methods of transference of conditions with routes, whenever traceable, are studied in detail, as in the case of metastasis of tumors, etc. Symptoms and recognized methods of treatment are touched on only when there is a pathologic lesson to be derived or when their own origin is easily and distinctly traceable to some plainly demonstrable macroscopic or microscopic pathologic condition. In other words, the student's attention is called to symptoms only when necessary to show how clearly dependent they are on abnormalities of structure, causing abnormalities in physiologic function. He is not required to know them as forming a clinical entity, but whenever possible an effort is made to make it easy for him to conjecture as to their presence from a simple process of deductive reasoning. The whole subject is then clinched by a couple of hours spent in the laboratory studying microscopic and gross specimens covering the subject considered.

This I submit as my answer to the query, "What is surgical pathology?" The subject as a distinct specialty is comparatively young, and courses in the various colleges are of very recent date. We feel that with proper encouragement both by students and co-educators much good can be accomplished for the student, his burdens made lighter instead of increased, his mental attitude toward medical subjects broadened, and at the same time there will develop a set of men trained in experimental surgery and pathology, well equipped to take up the burdens when time shall rob us of the masters of to-day.

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Carbohydrates in Diabetes.—I. V. Lemann, in the *New Orleans Medical and Surgical Journal*, April, states that each case demands separate study, because cases differ not only in grade but in kind also. The tolerance of patients to various carbohydrates is different. Various complications call for alterations in diet, and unless the physician is prepared to give intelligent attention to these details he can not hope for good results from the diet he prescribes for his diabetic patients.

CANCER OF THE BREAST

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In the present contribution, I shall refer only incidentally to statistics. In several previously published papers¹ I have given my statistics at length. I desire now to express some opinions that I have formed and facts that I have collected from a study of my own personal cases during the past twenty-five years, selecting a few cases of cancer of the breast, and analyzing them critically, because I believe it is a better way to arrive at the truth, than by a promiscuous study of a large number of cases with statistics only as a guide to determine certain important facts.

I intend to consider very briefly some salient facts in regard to the final outcome of thirty-nine cases of cancer of the breast, the histories of which I know from the time of the operation to the present day. These thirty-nine cases have been selected from a large number solely for the reason that I have a personal knowledge of each case from the incipency of the disease to the present moment. All these patients have lived beyond the three years' limit of time. One patient has lived twenty-five years, another nineteen years, another seventeen years, and another fifteen years, and the rest from three to fourteen years with no return of the disease. In this list one was eighty-five years and another eighty-two years old. I mention these two cases to illustrate the fact that age itself appears to offer no barrier to an operation for the relief of cancer of the breast.

I am convinced that a study of the cure of cancer of the breast from a percentage point of view only has created a very false impression among surgeons and a depressing effect on the laity. The all-important question for the surgeon and the patient is this: Can a permanent cure be effected if the operation is undertaken early, and radical in character? If this view can be substantiated it will create hope in the patient, and inspire courage in the surgeon.

The clinical picture of cancer of the breast has been so drawn in past years as to create a most unfavorable impression. The early and radical operation is certain to efface this gloomy picture, and to draw in its place one that will inspire hope in the unfortunate victims of the disease. The safety of the operation is a subject worthy of consideration. In all of the operations which I have mentioned, and an accurate knowledge of which I possess, there has not been a death except in two cases of hemophilia, and such deaths are not peculiar to this special operation, but would occur in connection with any other major operation. The mortality therefore, in several hundred cases would be almost nothing, even if these cases were included, and absolutely nothing if they were excluded. The percentage of permanent cures, on the other hand, can not be so correctly estimated because so many cases are lost sight of and therefore can not furnish data for statistical purposes. In a recent small series of cases extending over three years from the time of the operation the percentage of permanent cures amounted to 77 per cent. In a previous series the percentage was 45 per cent., but these operations were done earlier in the history of what is called the complete operation. The sum total of percentages of cure therefore, would fall below the high figure previously mentioned, and above the lower figure stated in the second series. These facts certainly en-

1. Tr. Am. Surg. Assn.

courage the surgeon to hope for even better results, and as we learn more about the disease and still further improve the technic of the present operation, the future holds out even greater encouragement for more brilliant results in the cure of a disease, which in former years baffled the skill of the greatest surgeons of the day.

PERMANENT CURE

The permanent cure of cancer of the breast is a subject in which the surgeon as well as the patient take the greatest interest. All other subjects, such as etiology, diagnosis, operation, and the like, are insignificant to the patient as compared with that of the permanent cure.

What constitutes a permanent cure? Authorities differ on this question. No one is willing to admit a less time than three years as decisive. Recently some surgeons have placed the limit of time as five years. In some of my cases ten to eighteen, and even twenty-five years have elapsed with no return of the disease.

The percentage of returns after three years is so insignificant that it would seem wise for surgeons to accept this standard, not only for the encouragement of the patient, which is no small fact in the management of the disease, but because it establishes a fixed standard from which the case from an operative as well as an optimistic point of view can be judged.

ADVISABILITY OF OPERATION IN ADVANCED CASES

There is much diversity of opinion on this question. From my own experience I feel certain that it is a wise course to operate unless the mediastinal glands are involved, or unless there is visceral metastasis, or the growth is adherent to the chest wall. I have been astonished at some results after operation, in cases in which I felt absolutely certain a return and death would follow in a few months. Yet these patients have recovered and have remained free from the disease for years, and thus have demonstrated the error of a too conservative view held by the profession at large.

In some cases in which the outlook was most unfavorable, as manifested by extensive ulceration, hemorrhage, wide-spread axillary involvement, the final results have been entirely satisfactory. No better proof of this statement can be made than by a brief reference to three cases occurring in the list of thirty-nine cases of cancer of the breast. It seems pertinent to call attention to these three cases because they demonstrate the possibility of a cure when everything looked hopeless. I admit that we can not place much reliance on a cure when cases present such a chain of unfavorable symptoms. It only shows that surgeons should not withhold an operation from the patient, even when the outlook is most discouraging. The patients should have the benefit of the doubt; it is always best, however, to explain to the friends the situation, and then they will not be too greatly disappointed if the operation is attended with a quickly fatal result.

The first patient had a foul, ulcerating, hemorrhagic, and fungous breast, with axillary enlargement. I advised the operation, not with the expectation of curing the disease, but purely from an humanitarian point of view. I felt sure that the hemorrhages could in a measure be controlled, the offensive smell to a greater or less extent be removed, the constant pain, at least for a while, be relieved, and the patient be made more comfortable during the few months she lived. To my surprise after nine years this patient has been free from

the disease, and to all intents and purposes is at the present time in perfect health. The operation was radical as the circumstances permitted, and I am at loss to explain the cure under these unfavorable conditions.

The second patient was the victim of a fungous, hemorrhagic foul-smelling carcinoma of the breast. I hesitated to operate at all, but did so at the request of the husband, with a full understanding that the operation was one to palliate the distressing symptoms, and with no expectation of cure. This operation was performed five years ago, and only recently the patient died from an acute disease, with no evidence of any return of the cancer.

Both of these tumors were examined by microscopists of world-wide reputation, who pronounced them carcinoma. I merely mention these two cases in the list of thirty-nine to illustrate the fact that sometimes recovery takes place in the most hopeless cases. Such instances appear to me to urge the surgeon to operate in the most desperate cases, with the most forlorn prognosis, unless, as previously indicated, there is involvement of the mediastinal glands, or visceral metastasis, or adhesion of the growth to the chest wall. I can offer no explanation as to the behavior of these two tumors, but they both seem worthy of record as evidence that our knowledge is still incomplete in regard to the course of certain types of cancer of the breast.

The third case is one in which I had operated nearly ten years ago and later a metastasis occurred in the lung with an extensive hemothorax. By aspiration a very large quantity of bloody fluid was withdrawn to relieve a severe dyspnea. To my utter astonishment, this patient, after the paracentesis, began immediately to improve from an almost bed-ridden condition, and for many years was in fairly good health and was in the habit of coming to my office from a distance for two or three years. From a study of these cases, bearing on the subject of permanent cures, I have been impressed with the fact that the histologic formation of the tumor influences in a marked degree the question of permanent cures. For example, I have found that the tumors which show structures departing but slightly from the normal, correspond in nearly every case with the group of cases, the clinical histories of which were favorable, because in these cases no return of the carcinoma occurred. The tumors that showed a great departure from the normal structure occurred in the cases with unfavorable clinical histories. The more typical the structure, therefore, the more favorable the prognosis; the more atypical, the more unfavorable the prognosis. In other words, epithelioma develops by asexual cell proliferation; the more embryonic the cell is, the more malignant the growth; and the nearer the cell approaches the normal, the less malignant the growth.

CONDITIONS REQUIRED FOR COMPLETE RECOVERY

The early and radical operation is of paramount importance, since the facts I have already mentioned clearly demonstrate the value of this rule. The early operation is indicated because glandular infection is not likely to be present, and the patient is in better physical health, from absence of worry and pain. This fact should impress the family physician with the responsibility of referring his patient early to a surgeon, who then must assume the responsibility of this important question. No growth in the breast, however small, should be disregarded, especially if the patient is ap-

proaching the menopause. It is by a view to prophylaxis that the mortality of death from cancer of the breast is to be still further reduced.

The more radical the operation, within reasonable limits, the better the prognosis. It seems unnecessary and a loss of time to discuss this point, since it is universally admitted that the more radical the operation, the less likely it is that the disease will return. The difficulty seems to be as to what constitutes a radical operation. Surgeons agree that all skin over the infected area should be sacrificed. The breast, with Sir Astley Cooper's ligaments, should be entirely removed, the pectoral fascia and muscles should be excised, the axillary glands, the perimammary and retromammary fat, likewise the paramammary areolar tissue should be dissected out as the minimum operation. If the cancer involves the ribs, perforates the thoracic wall, and has already infected the mediastinal glands, no operation, however radical, would be attended with any success. The same rule may also apply to that form of cancer termed *en cuirasse*, or *en plaques*, or acute miliary carcinoma. I am firmly convinced that any radical operation, more than has been described, will be of no avail. The element of time should be seriously considered, since the performance of any operation which requires the patient to be under an anesthetic for four or five hours, is attended with a risk, which if possible should be obviated. These prolonged operations are sometimes followed by ether pneumonia, acute sepsis, profound shock, suppression of urine, and many other like conditions, which jeopardize the life of the patient. In other words, we must not lose sight of some of the general principles connected with surgery, at the expense of the elaboration of an operation, the performance of which eliminates some of the best precepts and practices of our art.

In most of my cases in which no return has ever occurred, even though twenty-five years have elapsed since the operation, the patients, almost without exception, were operated on within six months from the first appearance of the disease. This point seems to me of the greatest importance in relation to the prognosis, and without question the earlier the operation the more certain it is that a permanent cure can be effected. At this point naturally the question arises as to a certainty of diagnosis within six months. I admit that it is often difficult to determine with absolute certainty that any small nodule in the breast is carcinomatous. The obstacle presented by the theory that a correct diagnosis of carcinoma within six months is a *sine qua non* for operative interference has been removed in my own mind, by a rule that all nodules or tumors in a breast in a woman at the time of or near to, or after the menopause, especially with a depressed nipple and skin dimpling, should be removed by a complete ablation of the breast. The risk run is too great if surgical interference is deferred until the diagnosis is made certain.

In several cases during the past few years I have adopted this procedure, and to my surprise the microscopic report has been returned with the diagnosis of incipient epithelioma. In such cases the patients do well as they are taken early in the course of the disease, and the nodule is small and surrounded by healthy glandular tissue. In the hands of a good surgeon with aseptic environment the risk of removing the breast is so slight that it may almost be disregarded as a factor in determining the question of an operation.

A point still further to consider is that in a large majority of cases in which a nodule or tumor is felt, it is almost certain in time to become malignant, if it has not already begun to undergo malignant degeneration. This same law of early surgical interference holds good in case of tuberculous induration, in syphilitic ulceration, in actinomycosis, or in other infective processes.

The question is more difficult when the patient is a young woman, and the growth is adenomatous. Such cases are more difficult to manage; but I am still of the opinion that all adenomata in the young should be removed, and in the case of very young girls only the nodule itself excised and examined, and if then found to be undergoing epitheliomatous changes, the entire breast should be removed by a radical operation. In the case of young girls or young women, the breast can be raised by a flap with an incision under the breast and in its fold, and turned on the thoracic wall, and the adenoma attacked from the posterior surface of the gland. After excision of the adenoma the breast can be turned down and sutured with the scar completely hid from view. I have done this and preserved the symmetry of the breast; and I have record of cases of this kind in which the breast subsequently performed its function of lactation.

In cases of chronic mastitis in a woman over forty, if pain is a constant factor, and the interstitial induration is marked, the breast should be removed to prevent the possibility of malignant degenerative changes. Within a few weeks I removed a breast for painful mastitis, and Dr. Norris reports that beginning epithelioma is present.

THE MANAGEMENT OF CASES THAT DO NOT ADMIT OPERATION

These are the cases that tax the surgeon's skill, and cause severe suffering to the patient. Nothing is more distressing to the surgeon and painful to the patient than to watch the progress of a fatal disease with the full knowledge of the condition—both waiting, utterly helpless, until the end comes, and death closes the scene.

In such cases the surgeon's duty is to mitigate the suffering, and to make the patient as comfortable as possible with a view to euthanasia. The different methods of treatment of cancer of the breast, in cases in which no operation is possible, can be discussed very briefly. The *x-ray* is one of the methods now in vogue. One writer has reported a dozen cases of cancer of the breast in which cures were effected by the *x-ray*. The absence of a microscopic examination of any of the tumors, and the fact that not a single case in the list had yet reached the three years' limit of time make these cases valueless as a basis on which to study results.

The *x-ray* is a force that should not be employed by one who is not an expert in its use, because its employment even by the best men has been followed by violent dermatitis, by ulcers that fail to heal, and that finally became the starting point of epithelioma. In a recent article by Pusey, some interesting clinical facts have been brought out in connection with the *x-ray*, which are worthy of mention. He thinks that the *x-ray* is not suitable for cases of carcinoma in which the adjacent lymph nodes are involved. It is also futile in cancer of the neck, or of the viscera. In recurrent carcinoma of the breast, alleviation of suffering for a few months has followed the *x-ray* treatment, but no cures have

followed a year's test. In primary carcinoma of the breast I fail to find an authentic case which has been permanently cured; but if for any reason no operation can be performed, the *x*-ray is worthy of trial on account of the possibility of alleviation of suffering.

Radium is a new therapeutic measure, the value of which is unknown. This is conceded even by those who have used it most extensively in the treatment of malignant disease. It is a force that is most powerful, and the permanency of the cures claimed by its advocates is not yet determined.

It is only fair to say that I do not wish to place myself on record as depreciating in any way the use of radium, or any of these agencies. I only contend that they have their limited use in certain varieties of malignant ulcers, and that in no case should they take the place of surgical procedure, except in cases unsuitable for operation.

The important clinical fact must not be lost sight of, that in nearly all cases, like those of reported permanent cures by the *x*-ray, or those cases of reported cure by radium, a microscopic examination is wanting to prove the diagnosis correct. In certain superficial epithelial ulcers radium has effected a cure.

The serum treatment of cancer of the breast has not yet yielded any satisfactory results. As far as I can ascertain from the best authorities, no cures have been accomplished by serum injection in cases of cancer of the breast.

In a recent communication, Dr. Clowes of the State Cancer Laboratory states that so far as he is aware "no results have ever been published from strictly scientific institutions regarding successful treatment of cancer of the breast by means of serum. We have ourselves experimented in the past with horse serum, and the serum of dogs and goats, after the animals in question had been treated with repeated doses of cancer material.

"The results have been negative, although in one case the development of the tumor was unquestionably delayed for some time, but if anything grew more rapidly than would have otherwise been the case towards the end. Even were a case of successful treatment reported in the literature, in which pathologic examination excluded error of diagnosis, I should still feel inclined to consider it one of spontaneous recovery."

The serum treatment of cancer of the breast must still be held *subjudice*. It has failed to cure cancer in any form, but it has succeeded in the hands of some surgeons in effecting a cure in certain varieties of sarcoma.

The surgeon is utterly powerless to treat cancer of the breast by other means than operation until our scientific laboratories discover whether cancer is a metabolic or a parasitic disease. When this great discovery has been made, the treatment of cases of cancer in which operation is not possible will in all probability be accomplished.

The employment of drugs for the relief of pain is indicated in cases of inoperable cancer of the breast, and these remedies should be used in sufficient doses to accomplish the object. The management of cases of cancer of the breast in which operation is not admissible should engage our study, and it is to be hoped that before long some remedy will be forthcoming that will cure this disease when it has advanced beyond the stage at which it is curable by operation.

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CANCER OF THE BREAST

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PHILADELPHIA

It is manifest that only a few of the more important and fairly well-demonstrated features of carcinoma can claim our consideration. It would be profitless to wander into the attractive yet elusive field of the etiology of carcinoma in general. While much has been written during the past year tending to show the parasitic origin of cancer, I am still of the opinion, as I have ever been, that the arguments of those who can see nothing in carcinoma but a germ disease are, to say the least, inconclusive. Attractive as this subject is and as much as I should like to discuss it, there are other features of cancer about which there is less ground for speculation and concerning which a discussion on this occasion is both more apposite and germane. We, as practitioners of medicine and surgery can safely leave this most important, yet unsolved, problem in the hands of laboratory experts, feeling hopeful if not entirely confident that convincing proof may ere long be forthcoming.

More will be gained at this time by insisting on that which is, and has long been, definitely known to operating surgeons, but is yet hardly appreciated by practitioners, who, as a rule, first see patients with mammary cancer and are consulted for advice. The fate of these unfortunate victims of cancer is largely in the keeping of the family physician, and he can not escape the responsibility; to show the importance of this fact is, I conceive it, the first duty incumbent on me. An early diagnosis, when the disease is strictly local, makes an operative cure not only possible, but highly probable, whereas a tardy recognition of mammary carcinoma can not be atoned for by the most extensive and brilliant operative procedure. Patients too long neglected are doomed to a lingering, loathsome and painful death simply because the disease is no longer local, but has become general. That the transition from a local, discrete and entirely operable condition, to a general, disseminated and inoperable one may take place quickly, is demonstrated by the most elementary anatomic and pathologic investigation. Cancer begins as an undue proliferation of the epithelial cells of the mamma and continues to be a strictly local neoplasm and therefore easily and completely removable if attacked before metastases have occurred in the neighboring or distant lymphatic glands and viscera. I shall show that early operation will cure 80 per cent. of all cases without glandular involvement, and also demonstrate as conclusively that infection of even the nearest lymphatic nodes—the axillary—permits an abiding result in only 25 per cent. of such cases. Need more be said to those who continue to hold pessimistic opinions, the offspring of the false teachings of a past era? If the profession could be made first, to realize, and second, to teach the laity that mammary growths are usually malignant and should be considered and treated as such until their benignity is proven, the operative results would be far better than they are. As it is, they are much better than is generally appreciated, and, notwithstanding the many inexcusable blunders in diagnosis, and the more frequent belated reference of such cases to surgeons, one-third of such patients at the very least are permanently cured. Until we can say that at least two-

third or three-fourths of breast cancers are cured by operation, and prove it by incontrovertible statistics, both physicians and surgeons are carrying a heavy, indeed, a grievous responsibility—the former because they do not demand early, and the latter because they do not perform a complete operation. The remaining 25 per cent. of patients will necessarily be doomed on account of the treacherous nature of the affection, which has passed from a local to a more or less disseminated process before its host sought medical advice. If the disease were only as painful in its first as it is in its last stages, then a much larger number of patients would seek early relief. But the fact is as I have stated it, and I emphasize and accentuate it simply for the reason that all of the laity and nearly all of the profession consider a non-painful tumor benign. I shall show that pain in cancer is a late symptom and depends almost entirely on either adhesions or ulcerations, and when present to a pronounced extent, admonishes the operator that the ease has likely passed the propitious time for surgery. The exceptions are so few as practically to constitute a negligible quantity. Hence, better results, if they are to be forthcoming, can only follow an early diagnosis; and I shall try to show that it can usually be made by the general practitioner (91 per cent. of cases), and that in the small percentage (9 per cent.) in which it can not be recognized by its objective and subjective symptoms, there is both a certain and a conservative way of making the diagnosis.

The three most important things to consider when a tumor of the breast is under consideration are; first, age of the patient; second, location of the growth; third, whether or not it is adherent to the surrounding parts.

AGE OF THE PATIENT

Formerly age was considered to be of the first and greatest importance in differentiating mammary neoplasms. It was thought that carcinoma rarely affected women less than forty years of age. While it is undeniably more common after than before forty, still there are enough cases in young women to discredit any diagnosis based on age alone. I analyzed carefully the statistics of 5,000 cases with reference to age incidence, reporting the same in my book on the breast,¹ showing that 20.5 per cent., or one-fifth of all cases occur in women under forty. Of these, 9 per cent. were between 20 and 30, and 11.5 per cent. between 30 and 40. It is unquestionably true that cancer in all parts of the body is more frequent now than formerly, that races hitherto immune (African and North American Indian) are frequently affected, and that barriers other than racial are being broken down in its encroachments. The youngest patient reported by S. W. Gross was 28 years of age. I have operated on five patients under 30 years of age—23, 25, 25, 27, 28 respectively. The late A. J. McCosh reported to me in a private communication a patient 19 years of age, M. Richardson one aged 21, and Park and Warren one each aged 22. Almost an equal number of cases occur in the two decades between 40 and 60—26 per cent. in women between 40 and 50, and 27.5 per cent. between 50 and 60. After 60 there is a sharp decline in the number of cases.

Therefore, the period of greatest liability is about and after the climacteric, when the gland is undergoing functional decline and its epithelial elements are prone

to proliferate unduly. This should be kept constantly before us because an involution mastitis, the condition most difficult to differentiate from carcinoma, is also likely to occur about the menopause. The probable painfulness of mastitis and the varying amount of swelling it causes are always suggestive of an inflammatory process.

SITE OF GROWTH

Perhaps of greater importance than the age of the patient will be the site of the tumor. While cancer may, and does at times, affect all parts of the breast, it is more frequently found in the axillary hemisphere than in the sternal half of the gland; and of the two outer quadrants, the upper is more frequently involved than the lower. Next in point of frequency, the middle portion of the gland—that directly behind the areola—will be involved. It is the latter variety of tumors that by their adhesions to neighboring structures pull on and cause retraction of the nipple. Benign tumors and sarcoma, *per contra*, are both more frequently met in the sternal hemisphere, the upper and inner quadrant particularly.

MOVABILITY OR IMMOVABILITY OF TUMOR

The movability or immovability of a tumor is above all other things its most suggestive and greatest diagnostic characteristic. A tumor which is both freely movable and is certainly not adherent to the skin is assuredly non-cancerous in nature. It may be either disconnected from the skin, or slightly movable, and still be malignant. But if it is immovable and sufficiently adherent to the surrounding superstructure to pull on and cause retraction of the nipple or dimpling of the skin, it is almost pathognomonic of carcinoma. Retraction of the nipple as a means of diagnosis has had enough, perhaps too much emphasis, as many consider that it must occur in cancer of the breast. The truth is that it occurs in but a little over one-half of the cases (51 per cent.). Dimpling of the skin over the tumor is not always, but nearly always present if rightly sought after. Pinching the skin over the tumor between the thumb and forefinger will usually elicit this sign. Moreover, the skin over the tumor is somewhat roughened and corrugated, and has not inaptly been compared to the skin of an orange. A more delicate test than pinching the skin in the manner indicated is to expose both breasts fully and move each to and fro in every direction until an asymmetry over the tumor shows by contrast as the result of pulling on the skin if the trabeculae are shortened to any extent whatsoever. This is a valuable sign and the more one uses it the greater will he be inclined to value it, particularly in small, deep-seated, or retromammary growths which are comparatively difficult of diagnosis in large and fatty breasts.

OTHER DIAGNOSTIC POINTS

Other considerations, such as the race, social state, fertility or infertility of the host, together with the presence of a history of trauma and heredity, have each of them too indefinite a bearing seriously to influence a careful diagnostician. If all point in the same direction, they are of confirmatory value. Married women are undoubtedly more often affected than unmarried, and fruitful more frequently than sterile women.

The influence of heredity can not and should not be ignored, neither should it be magnified. It would seem to me that it can not be inferred, much less shown, in

1. Diseases of the Breast. P. Blakiston's Son & Co.

more than one-fourth of all breast cancers. I have only once operated on mother and daughter. Both, I am pleased to say, are still living in good health, the daughter having been operated on in June, 1904, and the mother in July, 1906. The case of the latter was one of the most interesting I have ever seen, inasmuch as the removed specimen demonstrated cancer and a number of very small abscesses—which I think were tuberculous—and Professor McFarland, the pathologist, was unable to say which was the primary condition. A photograph of the specimen is shown in my book.¹ I have frequently operated on women who gave a history of cancer of the breast in their mothers and sisters, and occasionally it has shown itself in three generations—grandmother, mother and daughter.

Before leaving the subject of diagnosis, it must be candidly admitted that in about 10 per cent. of patients cancer of the breast can not be recognized clinically in its early or operable stage, for in addition to the difficulty of differentiating between solid growths, it is even more difficult to distinguish between benign and malignant cysts. This can safely be determined only by the microscope, and that it is necessary to be most careful in separating the one from the other no experienced surgeon will deny.

It is true that a bloody or sanguinolent discharge indicates malignancy, but a clear fluid does not by any means demonstrate benignity. Nothing save the microscope can positively discriminate between simple and malignant cysts. Hence, the danger of any other treatment than excision, not only of the entire cyst wall, but of enough adjacent tissue reasonably to insure eradication of the disease. I would emphasize the fact that cysts are often malignant when they would seem macroscopically, on account of their thin walls and clear contents, to be innocent; furthermore, that the degree of their malignancy is very great, so much so that a mistake made at the time of operation may not, probably will not, be atoned for by a second and more complete operation after the microscopist has made his report. In the first place, a radical second operation, even if performed within a fortnight, is likely to result in failure on account of the liberation and distribution of epithelial cells at the time of the first operation. Secondly, the patient will generally refuse a second operation; and it is most embarrassing to the surgeon to be placed in such a position. Here, as elsewhere, partial removal may do more harm than good, stimulating the remaining cells to an unwonted growth. Therefore, there is but one reasonably safe and certain method to follow in doubtful cases: the patient's consent to a complete operation should first be obtained, explaining fully that it will not be resorted to unless the microscopic examination made at the time of the operation demonstrates its necessity. The most suspicious part of the growth should be removed, along with adjacent structures if possible, and given to a microscopist who is present and who is, moreover, familiar with making reports from frozen sections. The wound should be instantly plugged with gauze, then cauterized with the actual cautery. In this way *only* will the danger of possible dissemination of cancer be minimized. I have followed this plan more than fifteen years and have known but one malignant tumor mistaken by the pathologist for a benign one. In this case the mistake was more than pardonable, although a clinical diagnosis of cancer had been made as it was not until many sections had been cut at the second or confirmatory

examination ten days after the first operation that carcinomatous tissue was encountered. In other words, the portion of the growth first examined was benign. That at the second examination was also found to be benign, until the thirteenth section was made and examined. Figures 1 and 2, from photomicrographs of the only lobule involved, indicate the malignant change to be in its incipency. The pathologist, Dr. Wieder, thinks it as early, and therefore as favorable a case as he has ever examined. I am indebted to him for these excellent photomicrographs. The patient was advised to have and fortunately accepted the second operation.

Admitting that mistakes must occasionally occur in the hands of those doing frozen section work, it is no more than we must expect even in the less rapid and presumably more careful work ordinarily done in the pathologic laboratory; for I have known some of the very best pathologists to make mistakes and reverse themselves after several examinations of the same tumor. Only a few weeks ago I removed what I supposed to be a large sarcoma of the breast. Figure 3 shows this specimen. In ten days after the operation the report came back from the laboratory "sarcoma undoubtedly," four or five of the best pathologists in Philadelphia having examined the specimen. In fact, it was shown at the Pathological Society of Philadelphia. Several weeks afterward a second report was sent me to the effect that the tumor was also in places carcinomatous. This opinion has been expressed by pathologists of very highest standing, among the number Professor Smith of the University of Pennsylvania, and Dr. Repplier of the Presbyterian Hospital. It is only reasonable to suppose that such apparently contradictory reports must now and then result, notwithstanding every precaution to insure accuracy primarily. This is the only case I have ever encountered in which there were both sarcoma and carcinoma undoubtedly present in the same specimen. Others have reported such cases, and it explains many strange and inconsistent things in the subsequent history of cases. For instance, it explains why the secondary or daughter growth did not resemble the parent neoplasm.

COMPLICATIONS

Next to the variety of the growth, the prognosis is most influenced by the presence or absence of enlarged glands in the axilla and elsewhere. This fact has been emphasized by every writer from time immemorial. It has been made more definitely clear by the recent statistics of the Johns Hopkins Hospital² and the Massachusetts General Hospital,³ in both of which series the cases were carefully scrutinized with reference to the involvement of the axilla. In 64 of 232 patients operated on in the Johns Hopkins Hospital, in whom there were undemonstrated glandular involvement, 51 or 80 per cent. were free from recurrence at the expiration of three years. Of 110 patients with demonstrated axillary involvement, only 24.5 per cent. were free from recurrence at the expiration of three years. Of 236 patients with palpable axillary involvement, before operation, operated on in the Massachusetts General Hospital during the decennium from 1894 to 1904, only 12 per cent. were cured by operation. Of 117 patients operated on in the same hospital, in whom no glands were felt in the axilla, 29 per cent. were cured. In nearly all of the cases, even though palpable enlarge-

2. Halsted: Tr. Am. Surg. Assn., 1907, xxv, 64.

3. Greenough, Simmons and Barney: Tr. Am. Surg. Assn., 1907, xxv, 90.

ment of the glands was not manifest, there was found to be microscopic involvement. It is only fair to suppose that limited involvement of the axillary glands may be successfully met by operation, for in such cases the epithelial cells are confined to the interior of the glands and therefore can be entirely removed. But if there is gross involvement of the axilla, particularly if the glands have become matted and fused together, the presumption is that the capsule and tissues around the glands have also become infected and that the prognosis even after an extensive operation, must necessarily be bad. The advantage resulting from early operation, before there is palpable involvement of the axilla, and the hazard of delay until axillary involvement has taken place, could not be more forcibly shown than has been done by the statistics of two such large and representative hospitals. Moreover, the experience in these hospitals, and in all others so far as my knowledge goes, demonstrates forcibly that in cases in which axillary involvement is so great as to make

notably the skin and pectoral wall. Every surgeon has recognized the gravity of adhesion to the chest wall and the comparative futility of operation to give more than temporary relief. The statistics of the Massachusetts General Hospital, while clearly indicating this to be a serious complication, show that of 45 such patients, 5, or 11 per cent. passed the three-year limit without recurrence. Of 194 cases in which there was no adhesion to the chest wall, 41, or 21 per cent., were successful. Where the skin alone is adherent, the prognosis, while less favorable than in cases without adhesion, is better than it is where adhesion to the chest wall is present. Of 262 patients with adherent skin, only 42, or 16 per cent. were cured by operation. In 71 patients in whom the skin was not adherent, 23, or 37 per cent., were cured. Therefore, this complication is of much greater importance than it would at first seem, and its unfavorableness is easily appreciated by remembering the fact that the largest and most important of the lymph-bearing channels are found in the skin.

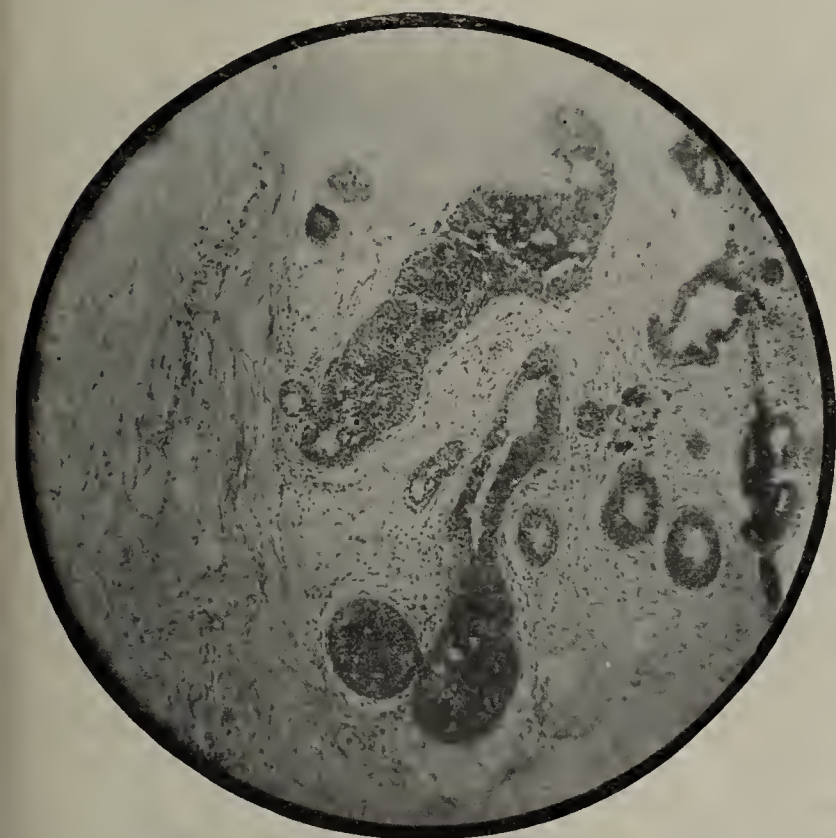


Fig. 1.—Specimen from malignant tumor, at first mistaken for benign growth; low-power view of only lobule involved.

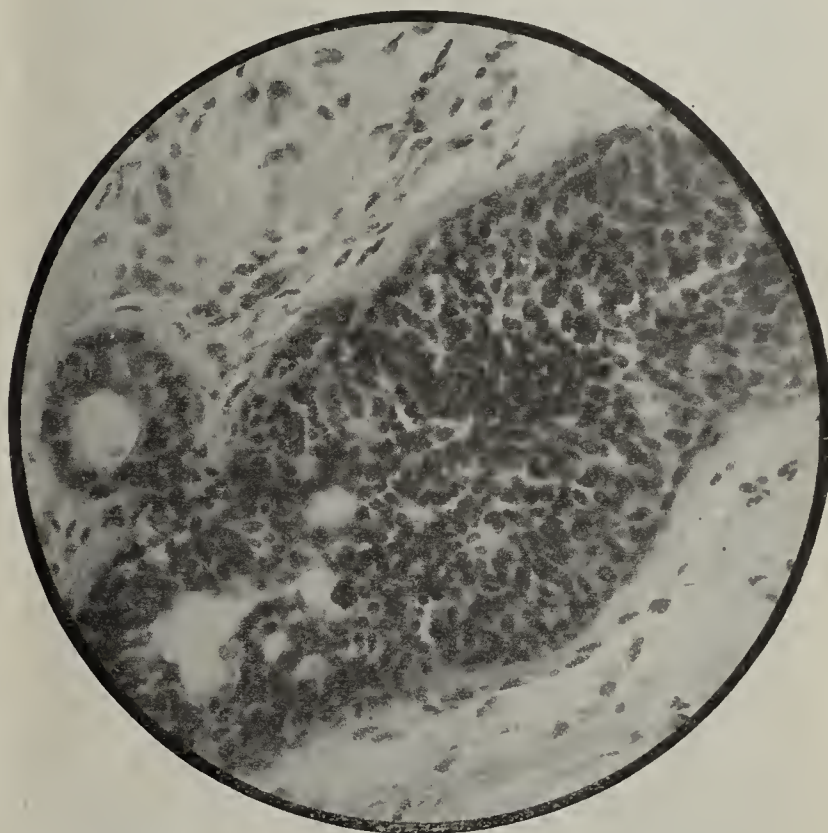


Fig. 2.—High-power view of same acinus shown in Figure 1.

resection of the axillary vein necessary in order seemingly to get beyond the encroachments of the disease, operation, though possibly prolonging life, has not resulted in a single cure. I would again insist on the fact that no one, however skilled, can always or usually recognize before operation the presence of enlarged axillary glands; and that such enlargement, though not detected beforehand, will nearly always be encountered when the axilla is carefully explored. It is certainly never safe to assume that enlarged axillary glands do not exist. In all cases, even cases of adenocarcinoma in which glandular involvement is less apt to occur than in other varieties, a thorough dissection of the axilla is just as important as removal of the breast itself. Only once have I operated for either medullary or scirrhous carcinoma without encountering unmistakable enlargement of the axillary nodes when the axilla was explored. Frequently I have failed to detect such enlargement before operation.

Next and hardly secondary in importance to involvement of the neighboring lymphatic glands is the adhesion of the growth to neighboring structures,

ENLARGED SUPRACLAVICULAR GLANDS

Palpable enlarged glands above the clavicle have always been considered by surgeons to be the gravest of complications, and practically to preclude operative relief. In fact, they have almost universally been looked on as a positive barrier to operation. While of the greatest significance, it must be remembered that such enlargement may be inflammatory. Of 40 patients with palpable neck involvement operated on in the Massachusetts General Hospital,³ 2 were found to be free from carcinomatous involvement and were well three years after operation. All of the remaining 38 cases were fatal. Of 40 operative cases in the Johns Hopkins Hospital⁸ with positive involvement of the neck and the axilla, 3, or 7.5 per cent. were cured. This is perhaps the best showing that can be made in this class of cases, inasmuch as the neck operation was first advised and has been insistently carried out at the Hopkins Hospital during the past fifteen years. While I have never known a patient of my own with either palpable or microscopic involvement of the supraclavicular glands to be cured by operation, I did have one

patient with decided neck involvement who lived four years after the operation. Although she died of recurrence, it was in the pectoral wound and there was never return above the clavicle. This case long since taught me that palpable neck involvement, while most serious, is not necessarily hopeless. Furthermore, recent anatomic investigations have made it clear that lymphatic involvement of the neck may occur very early in the history of cancerous growths located in the superior hemisphere of the breast, as there are lymphatics which pass over the clavicle and do not connect at all with the axilla. Therefore, I invariably explore the neck in all growths superiorly situated, though I usually find it free from involvement. I do not, however, consider my duty to the patient accomplished until the exploration, the work of a few moments, is made.



Fig. 3.—Patient with tumor, supposed to be sarcoma, with second pathologic report pronounced carcinomatous.

ULCERATION

I consider ulceration of the skin one of the gravest prognostic signs and have never had a patient with such ulceration cured by operation. Of 60 patients in the Massachusetts General Hospital, 4, or 6.6 per cent. were free from recurrence at the end of three years. Of 316 patients without ulceration, 21 per cent. recovered. Of 31 patients operated on after ulceration occurred, Wunderli reports but 2 living at the end of three years. He does not state that they were free from recurrence.

PROGNOSIS

Cancer of the breast is necessarily lethal without surgical intervention. The duration of life rarely exceeds thirty-six months from the inception of the growth. The variety of the neoplasm more than any other feature influences its course. The more abundant the cellular and the less pronounced the fibrous element, the greater will be its deadliness. *Per contra*, those

neoplasms in which there is abundant stroma or connective tissue and in which the cellular element is comparatively scanty are the least malignant. This has been so generally recognized by pathologists as to constitute a surgical tenet. A report of all patients operated on in the Massachusetts General Hospital during ten years gives added emphasis to this fact, inasmuch as it is therein made very clear that medullary growths are the deadliest. Adenocarcinomata are less malignant than other varieties of cancer, and the scirrhus variety stands midway in malignancy between medullary and adenocarcinoma. The atrophic scirrhus is the most favorable variety.

Cancer *en cuirasse* is invariably fatal and not amenable to operative procedure. Contrary to what many have supposed, Paget's disease of the nipple, according to the Massachusetts General Hospital's statistics, even if operated on, does not give a good prognosis.

Acute cancer, or the carcinomatous mastitis of Volkmann, is necessarily fatal. In September last I operated on the only case of the kind I had ever seen at that time.

Cancer of both breasts warrants only the most pessimistic opinion as to its future course, nearly all the patients succumbing quickly.

We now come to consider one of the most important, perhaps the most important question in regard to the prognosis after operation in cancer of the breast. How long must a patient go without recurrence before she can be considered cured? Volkmann's law, namely, that patients who passed three years without local or general evidence of recurrence should be considered safe, though generally accepted for years by surgeons everywhere, has now been overthrown. The subject of late recurrences was thoroughly investigated and reported on by several members of the American Surgical Association at its meeting in 1907. The paper of Ransohoff,⁴ of Cincinnati, made it perfectly clear that patients apparently cured by operation may suffer a fresh outbreak, not only after three years, but even as late as twenty and twenty-five years, and that there is practically no limit to be placed beyond which trouble may not arise.

While this is unfortunately true, nevertheless a careful investigation of the subject shows clearly enough that after three years 85 per cent. of such cases remain well and that only 15 per cent. show later recurrences, (Coley⁵). After five years of postoperative freedom, less than 10 per cent. suffer recurrences. The statistics of Ransohoff, Coley and Marggraff make it clear enough that recurrences pretty generally come within the first, occasionally in the second, and infrequently in the third year.

It is not to be inferred that in all of the 15 per cent. of cases there were recurrences *in loco*. Far from it, as in many of the cases reported the cicatrix was perfectly free from disease and the recurrence was in the lungs, the liver, the bones, the stomach, the rectum, the uterus, or other distant organs. I freely confess that I am unwilling to accept some, at least, of the cases reported as instances of late recurrence; for I fail to see how such organs as the stomach, rectum and uterus, without direct lymphatic connection with the breast, could reasonably be considered infected as the result of a process going on in the breast five, ten, fifteen, or twenty years previous. It is difficult to conceive of the cancerous

4. Tr. Am. Surg. Assn., 1907, xxv, 189.

5. Tr. Am. Surg. Assn., 1907, xxv, 205.

process pursuing such a latent course for so many years. It would seem to me far more reasonable to assume that a fresh outbreak, having no direct connection with the disease in the breast, has occurred in an individual of demonstrated susceptibility to cancer. Is it not fair to assume that a patient who has had cancer of the breast and been cured of it may at some future time develop, independently, the same disease in the stomach, the rectum, or the uterus—organs so very prone to carcinoma? It should be remembered that 35 per cent. of all cancers in the human body are in the stomach and 25 per cent. in the uterus. Consequently, it is unreasonable to say that some of the women who have been cured of cancer of the breast may not at some future time suffer from an independent outbreak elsewhere, especially if the organ affected has no direct lymphatic connection with the mammary gland. While it is logical, I admit, to assume that recurrences *in loco* are the result of cells left behind at the time of the operation—for such will generally have been the case—still, I am of the opinion and insist on it, that all such cases are not necessarily instances of recurrence. Do we



Fig. 4.—Patient six years after a double breast operation. The right side was closed by grafting; the left was not.

I do believe and have repeatedly said before, notably in my Oxford paper in 1904, that the three-year period should be extended to five years, when the patient can be looked upon as reasonably safe.

The next question of importance is: how many patients will reach the three-year limit apparently cured? It is a very easy matter to show that operative results in cancer of the breast are not only improving with each decennial period, but that each quinquennium brings an improvement in results, owing undoubtedly to the fact that wide and complete removal of the primary focus is being more generally accepted. It would be interesting to compare the statistics for each quinquennial period from 1867, when Moore⁶ first advocated the complete operation, to the present time. It will be shown that the best operative results have been obtained by those surgeons who accepted and put into practice the teachings of Willy Meyer⁷ and Halsted⁸ of Baltimore. Both surgeons independently and simultaneously

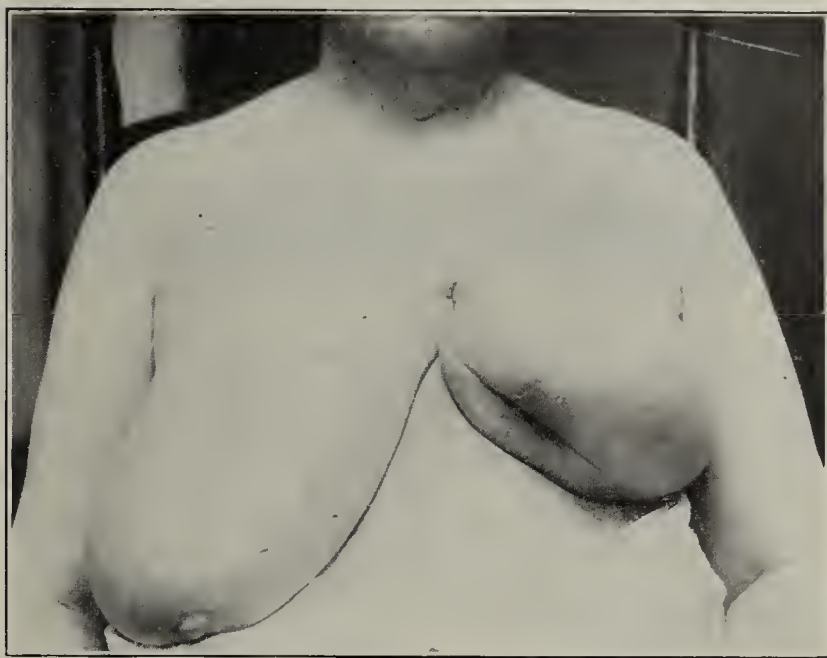


Fig. 5.—Atrophic scirrhus carcinoma.

not believe that scars or cicatricial tissue, wherever situated, are more liable to take on carcinomatous degeneration than healthy tissue? Why, then, may not a scar, perfectly free from cancer cells for many years, undergo, as the result of prolonged irritation, carcinomatous degeneration? If it may happen in a non-cancerous patient, why may it not all the more readily occur in one with a demonstrated susceptibility to cancer? Most of us have encountered patients with epitheliomata, sometimes many years apart, which could not reasonably be explained except as fresh and independent outbreaks. A certain percentage of patients who have had smallpox, typhoid fever and other infectious diseases and who have therefore been considered immune, have subsequently after many years fallen victims to a second or third attack which was lethal. Such exceptions do not in any way invalidate a good working rule. I would not be considered guilty of too much optimism in dealing with so treacherous an affection as carcinoma, yet I think that it is only right to look the question fairly in the face and to give the unfortunate victims of cancer all the hope to which they are entitled. Why make the 85 per cent. who are safe after three years of freedom from recurrence, and their relatives and friends, unhappy by insisting on the possibility of disaster overtaking the remaining 15 per cent.?

urged a most radical change in the method of operating. Halsted insisted on removal of the greater pectoral muscle, and an exploration of the supraclavicular triangle in every case. Meyer advised that both the greater and lesser pectorals should be sacrificed, not because the latter muscle was infected, but to insure an easier and better axillary dissection. That a thorough dissection of the axilla can be made with the muscles *in situ*, is, to say the very least, questionable. In the decennium from 1870 to 1880, 9.5 per cent. of cures was the most claimed by those doing the best operative work. In the decennium from 1880 to 1890, S. W. Gross of Philadelphia, and Sir William Banks of England claimed 21.5 and 21 per cent. of cures respectively. From 1890 to 1900 a decided advance was made both in the method of operating and in the number of cures obtained. One of the very greatest surgeons (Bull) in this city of great surgeons, now unfortunately a victim of a malignant disease himself, published in 1895 a series of carefully followed cases, showing 26.6 per cent. of operative cures. F. S. Dennis⁹ reported in 1891 a series of 116 cases with less than 1 per cent. operative mortality, 5 per cent. of local recurrences and 45 per

6. Tr. Roy. Med.-Chir. Soc., 1867.

7. Med. Rec., 1894, xlv, 746.

8. Ann. Surg., 1894, xx, 507.

9. Tr. Am Surg. Assn., 1891.

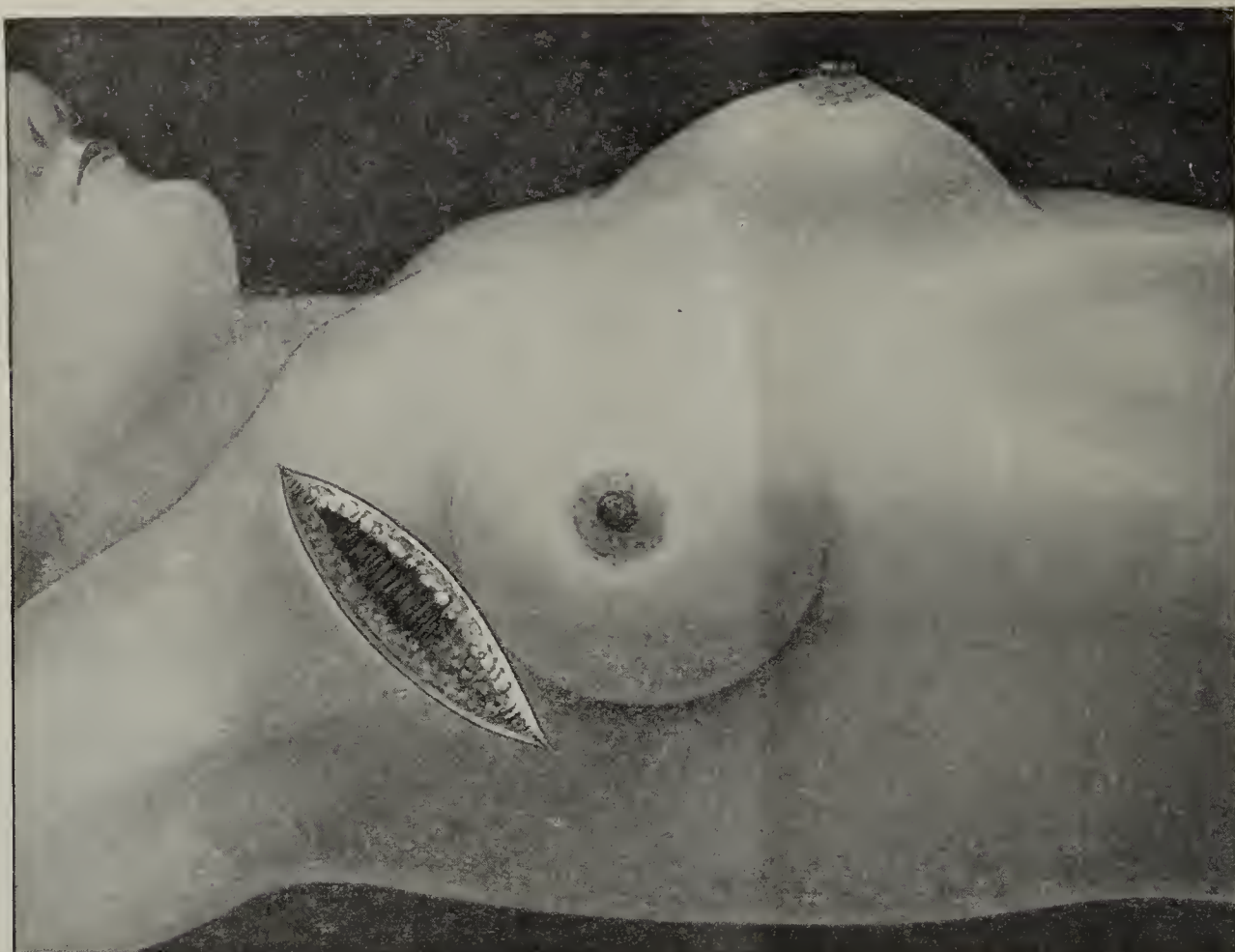


Fig. 6.—Primary skin incision.

cent. passing the three-year limit. This was the best showing, so far as I know, made by any surgeon up to that date.

These results, together with the pronouncement of Meyer and Halsted, in favor of a freer and more anatomic operation, stimulated others to greater endeavor, and, we may say, presaged the greatest advance yet made in breast surgery. At the present time it is not claiming too much to say that at least one-third of the mammary cancers which come to operation should be cured, and that early cases should give a much better prognosis — one-half or two-thirds of the patients making permanent recoveries. If the patient fortunately presents herself for operation before there is either adhesion of the skin, axillary involvement or other complication — in other words, while the disease is strictly local—80 per cent., or four out of five, should be cured.

But, taking cases as they come, early and late, we find that of 210 patients operated on in the Johns Hopkins Hospital, whose cases were traced later, 42.3 per cent. were apparently cured three years

or longer.² This is the best showing made by any hospital of which I have knowledge, but no better than a number of individual surgeons have done. It is my own belief that we shall more accurately measure the true value of any operation for cancer by taking the smaller series of surgeons who are able to follow their private patients for many years after operation. It is simply impossible to trace accurately a large number of hospital cases. I have long since been made to realize the impossibility of satisfactorily doing so and, therefore, have abandoned the attempt. In the first place, one's private patients are more intelligent, seek

advice earlier, submit to operation more readily, and if told that their safety depends on regular visits to the surgeon for at least five years after operation, they will willingly do so.

I have not for many years hesitated to tell patients that they have cancer, and, in my judgment, it is a great mistake not to do so. If the advantages of an early operation and the hazards of delay are fairly placed before patients, they will rarely hesitate. Therefore, it is

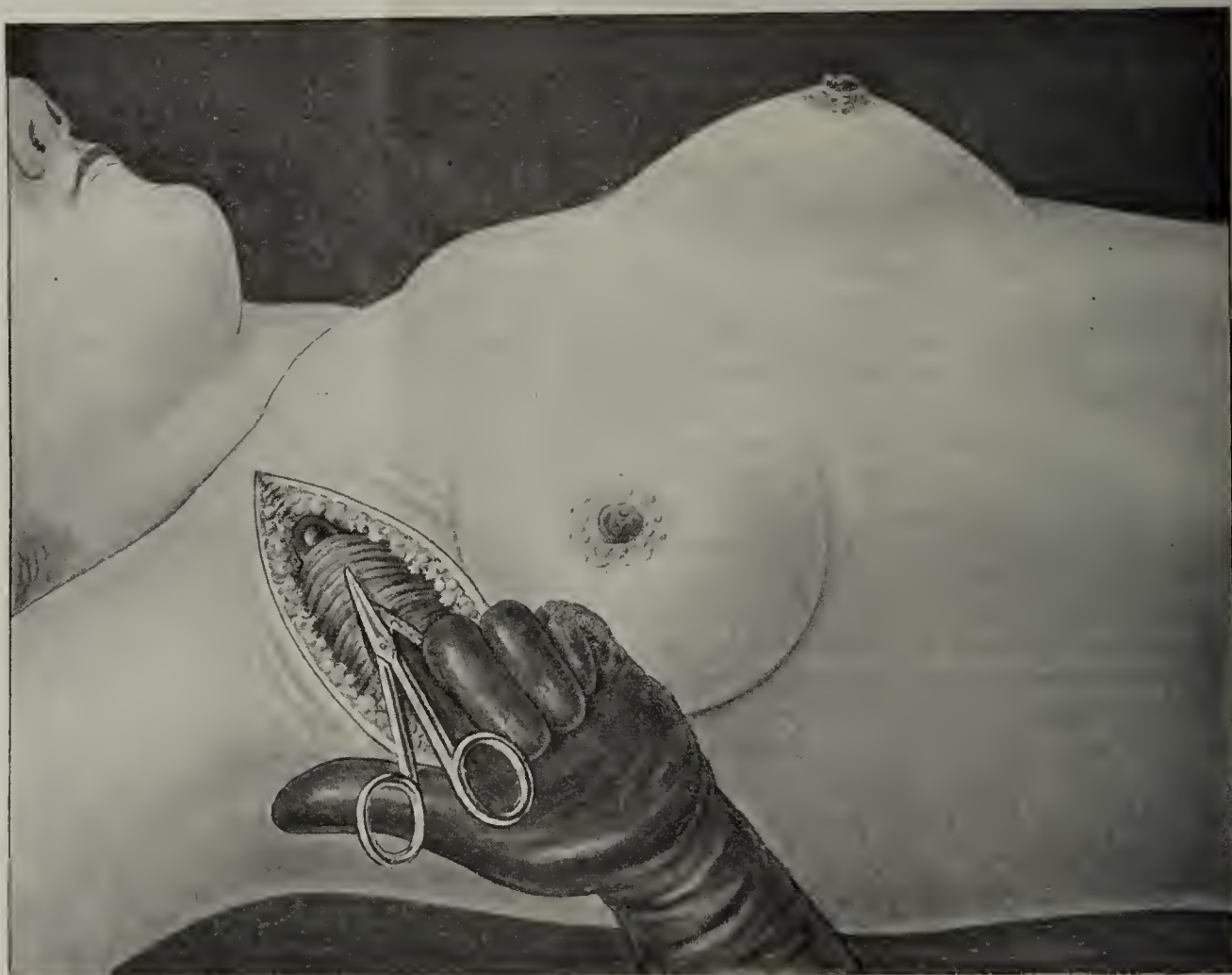


Fig. 7.—Division of pectoralis major near its insertion.

much better and fairer to them to call the disease by a name which all understand and dread rather than to call it a "tumor" or a "malignant growth," the nature of which they do not apprehend. Of course, half-truths are told with the very best and most humane motives, but the whole truth very soon dawns on the unfortunate victims with appalling force, and, mayhap, when it is too late. The truth should be told delicately and with consideration, of course, but it should be told, nevertheless.

During the ten years from Sept. 1, 1898, to September, 1908, or since my removal to Philadelphia, I have certainly operated on more than a hundred patients with cancer of the breast. Of the ward patients treated in the five hospitals with which I have been connected—I estimate them at fifty or upward—very little is definitely known. Therefore, all are excluded. Of 25 private patients operated on, which includes every patient treated from 1898 to 1905, 7 are dead and 1 is living with recurrence. This patient had, at the time of operation, a very large goiter, rapid-

ly increasing in size, which she declined to have removed. Dr. Fell, of Wilkes-Barre, writes me that the goiter has further increased in volume and that the opposite breast is certainly involved to a pronounced extent. Seventeen, or 68 per cent., are living in good health without local or general evidence of recurrence.

To show that my cases were at least of average severity, two of the patients had been operated on by other

surgeons and had suffered recurrences. In one of them I was compelled to resect the axillary vein to the extent of four inches on account of extensive axillary infection. Both of these are dead. In one other case the growth was so advanced that I should very likely have declined to interfere, but for the insistence of the patient's husband, who was a physician. Both he and she declined operation when I first advised it a year before, as they were about starting to California for the winter on account of his health. Two of the 17 recovered patients had adenocarcinoma, 2 had cancerous cysts, 2 medullary, and 11 scirrhous growths. One of the cured patients had both breasts affected.

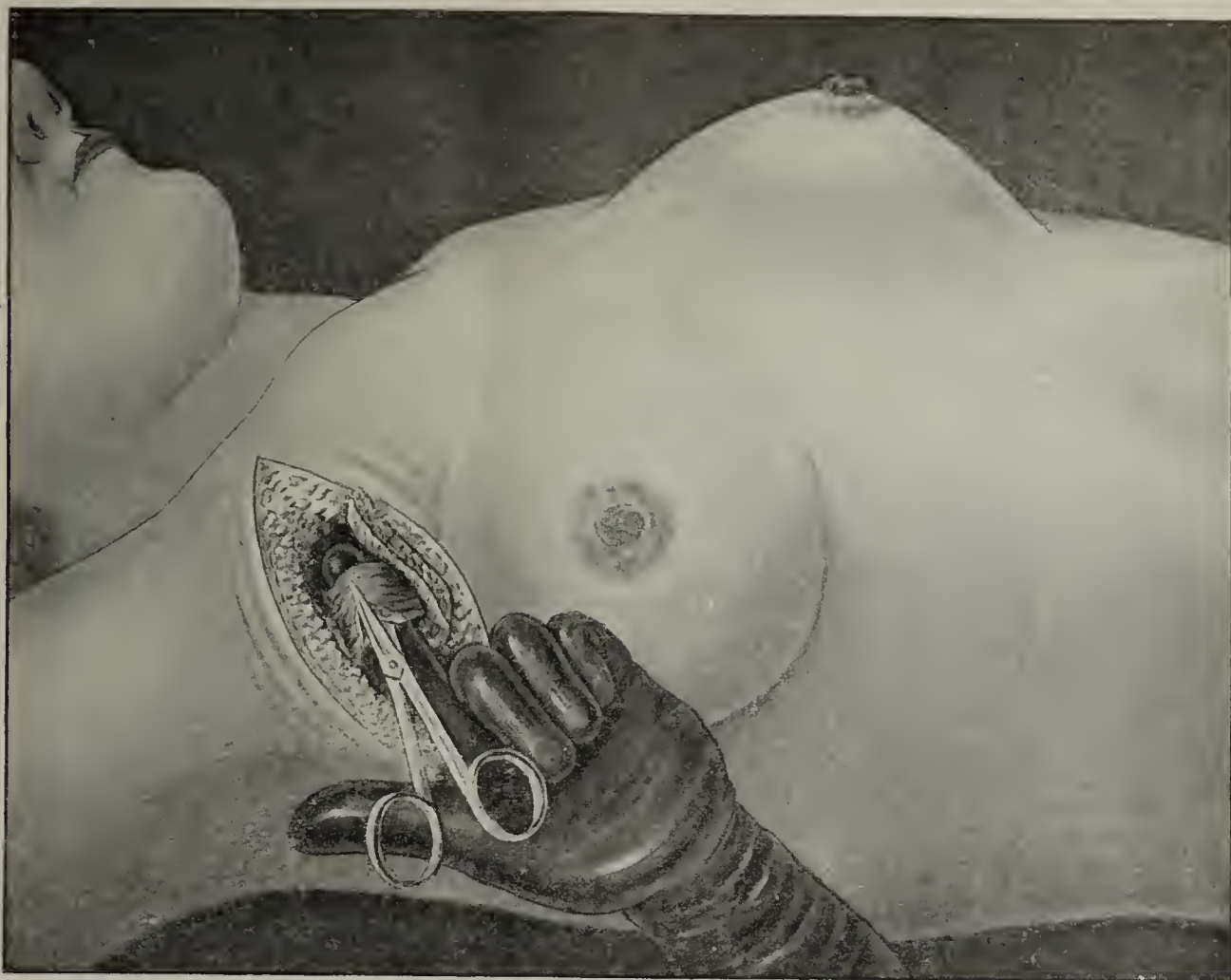


Fig. 8.—Division of pectoralis minor at its insertion.

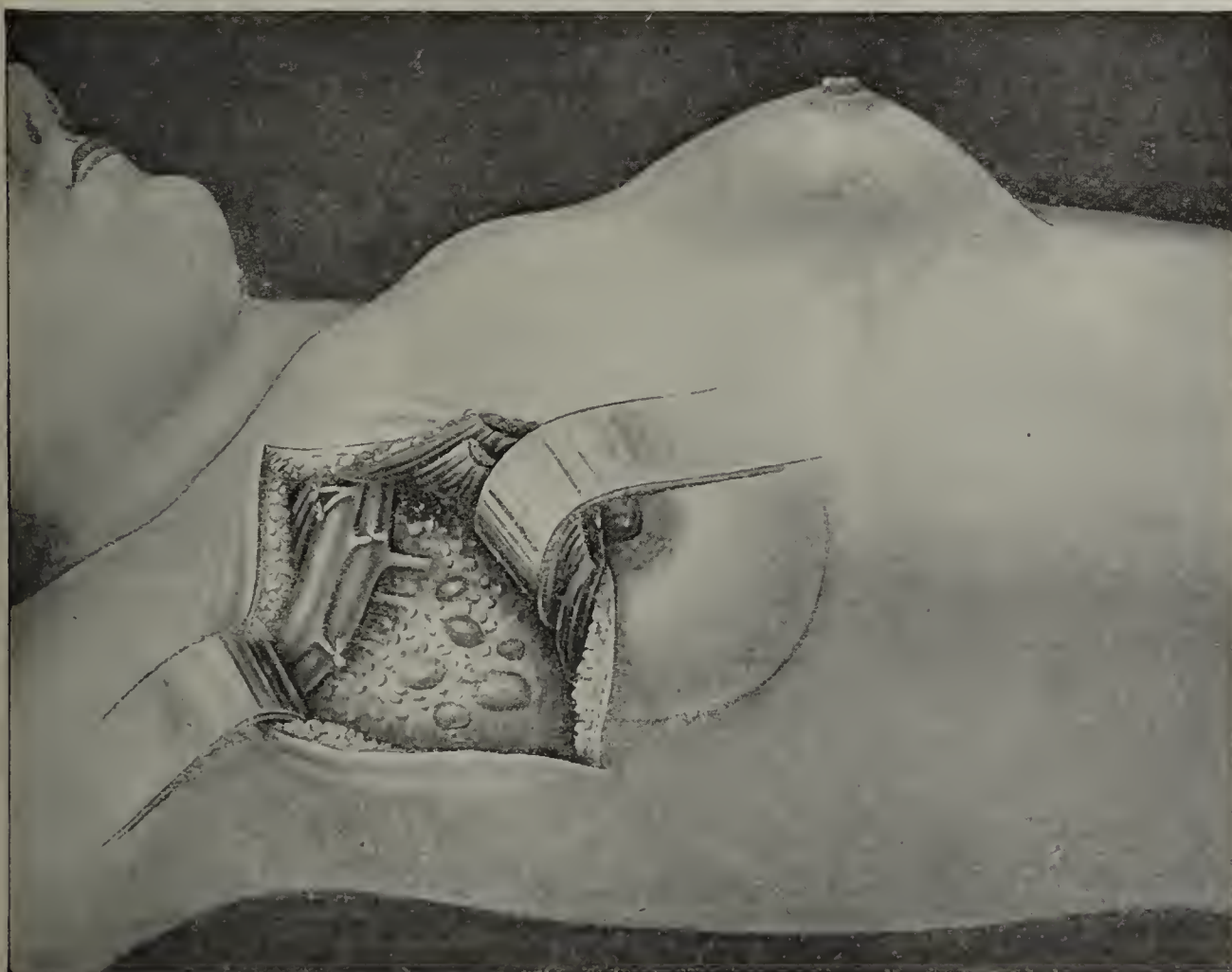


Fig. 9.—Axilla freely exposed and vessels divided at their origin.

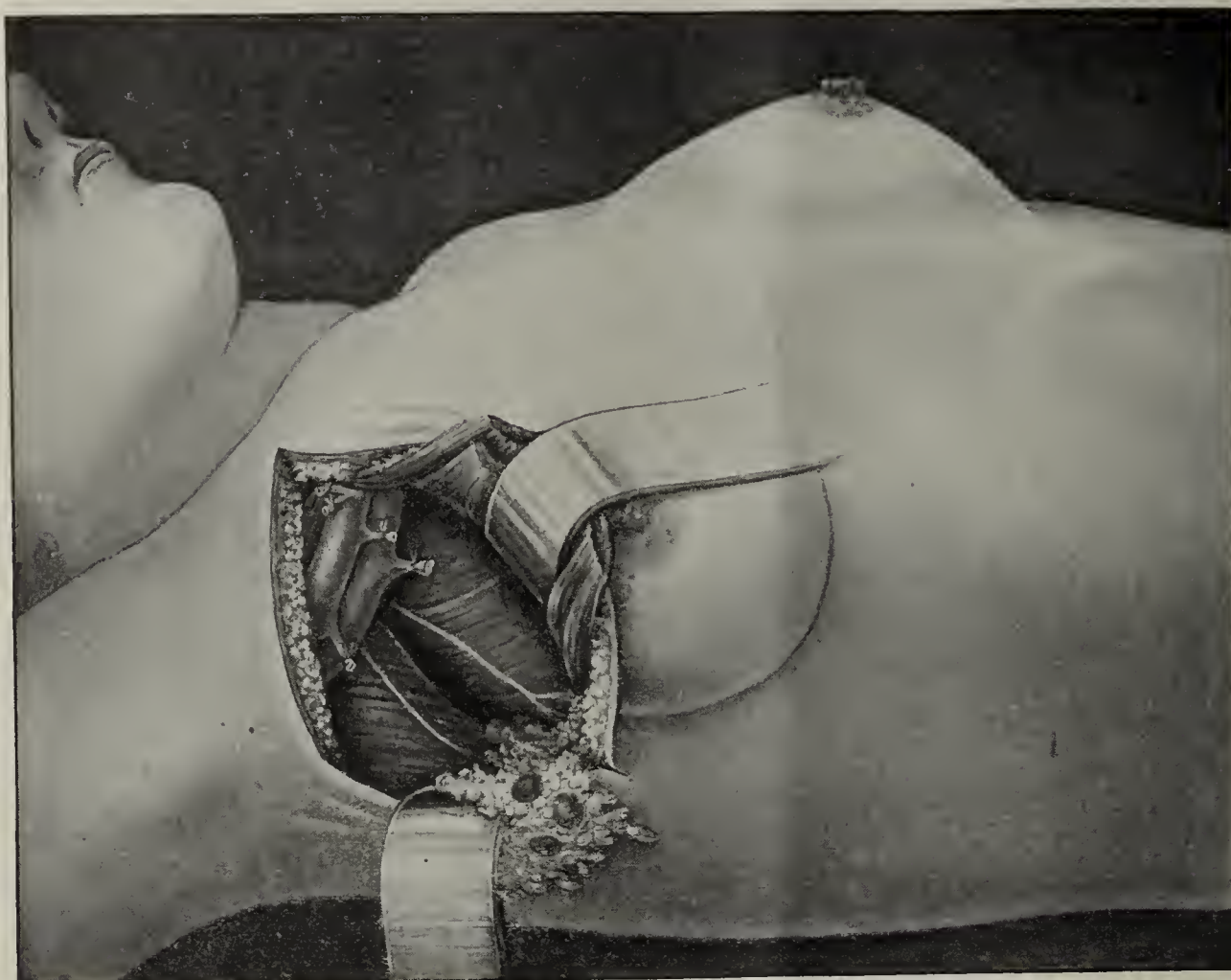


FIG. 10.—Axillary dissection completed. Fascia, fat and enlarged glands en masse shown at base of axilla. External respiratory, or nerve of Bell, shown on the inner wall of the axilla. Subscapular nerve on the posterior wall. Sheath covering all muscles removed.

An interesting and encouraging feature of the series is that two of the cured patients were operated on during pregnancy. Both went to term. Patient 14, whose case was fatal, also had pulmonary tuberculosis. Cancer and tuberculosis rarely coexist, this being the only time I have encountered it. This was a patient of Dr. P. S. Donnellan, now residing in San Diego, Cal.

The patients whose cases are of longest standing were operated on January, 1899, May, 1900, December, 1900, and November, 1902, respectively. All are perfectly well. Figure 4 is from a photograph of the last, on whom a double amputation was done. Skin grafting was done on the right, but not on the left side.

I may add that one patient, a woman, aged 77, with a very bad heart, died suddenly within a week after the operation. As this case has no possible bearing on the subject of ultimate result, it is only mentioned for the reason that I wish to in-

clude every private case submitted for operation. Had the patient survived the operation, the chances of a radical cure would have been good, as the growth proved to be adenocarcinoma.

Since 1905 I have operated on a larger number of private cases than in the preceding seven years, and many of the patients have gone long enough to convince me that the end-results will be at least as good if not better than in the series herein reported.

My method of operating has meantime changed somewhat, all the while tending to become more radical. Two years ago I definitely abandoned all flap operations as being at least potentially dangerous. They are alluring and seductive, inas-

much as they often facilitate the closure of a wound otherwise difficult; but that they may do so to the prejudice of an abiding result there can not be the slightest doubt. He who always begins and ends his incision in the same manner for a disease so protean in its manifestations and so widely variant in its local ex-

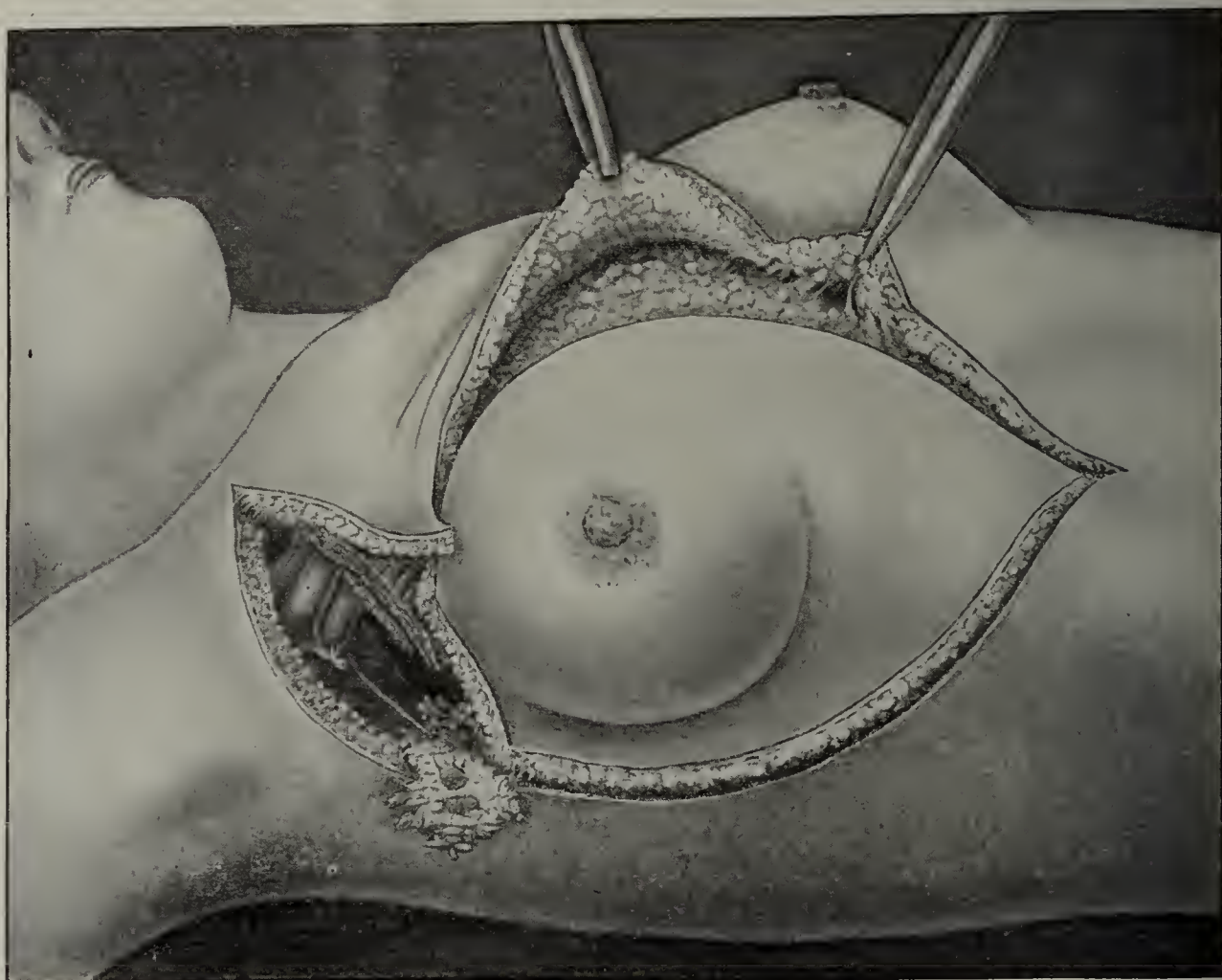


Fig. 11.—Second skin incision. Observe the extensive undermining anteriorly.

pressions will in time necessarily be disappointed and chastened, if not disheartened utterly. If anything has been demonstrated, it is that recurrences generally manifest themselves in the skin, and that its wide removal is the prime consideration, even though the necessarily large wound made must be closed by either undermining or skin grafting.

The operative mortality was less than 1 per cent. in 2,133 operations performed by 25 American surgeons who do a very extensive operation. The radical procedure is just as safe as incomplete operations — I believe safer, because it permits accurate work in the axilla. Much of the previous heavy mortality from breast operations resulted from hemorrhage, shock and sepsis, due to wounding the vessels, especially the axillary vein, on account of an attempt to clear out the axilla through an inadequate wound.



Fig. 12.—Undermining inferiorly. Muscles, breast and axillary mass being reflected prior to removal.

TREATMENT

There is but one treatment for cancer of the breast—operation—and the earlier and more radical the procedure the better. The chances of a cure in any given case depend almost wholly on the timeliness and manner of operating. It should be unnecessary to point out the futility and harmfulness of local applications, caustics, radium and x-rays. All are time-consuming, none of demonstrated value; consequently they should not be used until after operation has failed, or possibly as an adjuvant to it in well-selected cases. Hence, it is necessary only to consider a few of the more prominent and basic principles in the operation for breast cancer. A large wound, removal of the pectoral muscles, a thorough axillary dissection *en masse*, are theoretically admitted to be necessary by practically all advanced surgeons. A few who do not remove

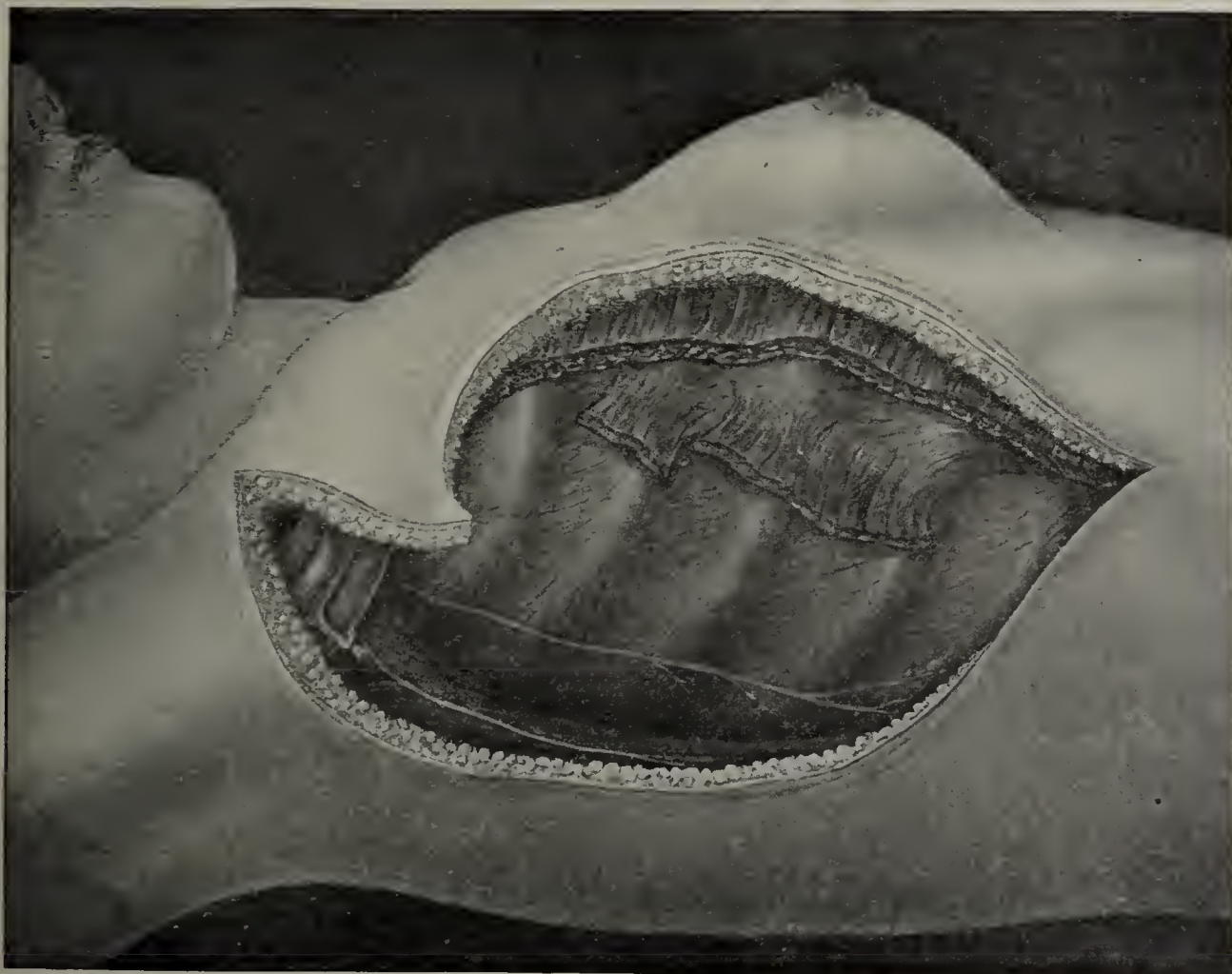


Fig. 13.—Appearance of the wound after removal of the breast, muscles and axillary mass. A small part of the origin of pectoral muscles left as a covering for the ribs. This very much facilitates grafting, when necessary, which is rarely the case. In fourteen operations during the winter it has been necessary in only two cases.

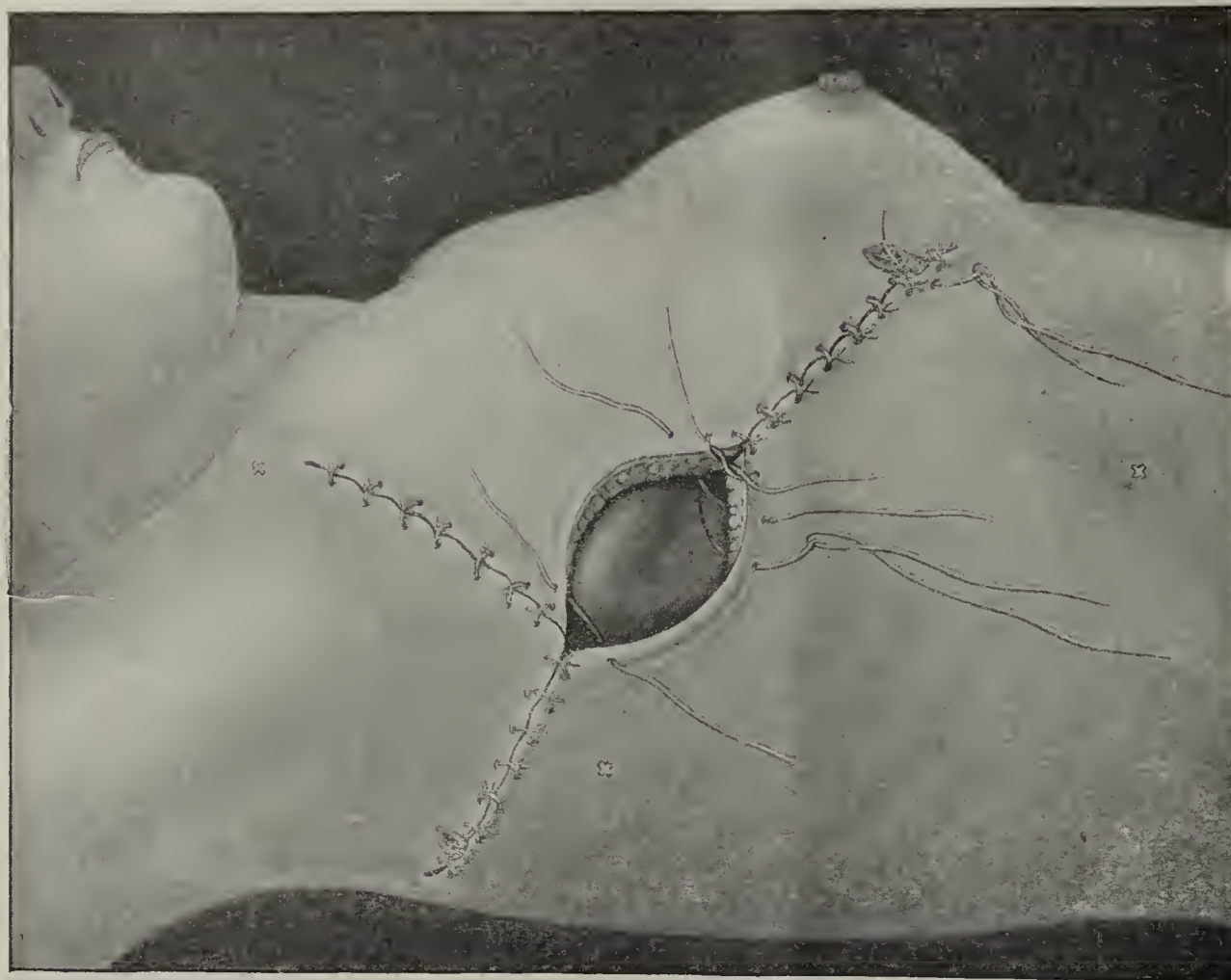


Fig. 14.—Wound being sutured. Middle third of horizontal incision may be, if necessary, covered by skin-grafting. It is rarely necessary. Latterly the drainage tube at either end of horizontal wound is omitted.

the muscles cut across and retract the ends, so as to uncover the axilla, subsequently suturing them. A smaller number, I think, practice removal of the fasciæ covering the subscapular, serratus, latissimus and other muscles exposed in the axillary dissection; and still fewer continue the incision far enough internally and inferiorly to expose the sheath of the rectus in the epigastric triangle. Almost none remove it. The investigations and teachings of Mr. Handley,¹⁰ of London, indicate that carcinoma spreads peripherally by permeation of its epithelial cells along the deep fascial planes; hence the reasonableness of removing fasciæ possibly infected. Mr. Handley also insists—and he has much to support his contention—that abdominal metastases are more frequent than thoracic ones and, instead of the lungs being most often the site of secondary foci, as we formerly believed, the liver in

hemisphere. The latter metastasize to the axilla, where it is possible for us to pursue and destroy the enemy; but the former metastasize to the liver, mediastinum, lungs, sternum, ribs or vertebræ—all veritable Gibraltars—defying surgical attack by either assault or siege.

reality is most obnoxious, and that to overcome infection traveling from breast to liver the sheath over the upper part of the rectus should be removed. I was so impressed with his views set forth at Oxford before the British Medical Association in 1904, where we appeared jointly in the discussion of cancer of the breast, that I at once began enlarging my wound internally, making a freer dissection of the epigastric triangle and removing the sheath of the rectus in all cases when the tumor involves the sternal hemisphere, especially its lower quadrant. I have always believed and frequently insisted on it previously that growths involving the inner half of the breast are deadlier than are those of the outer

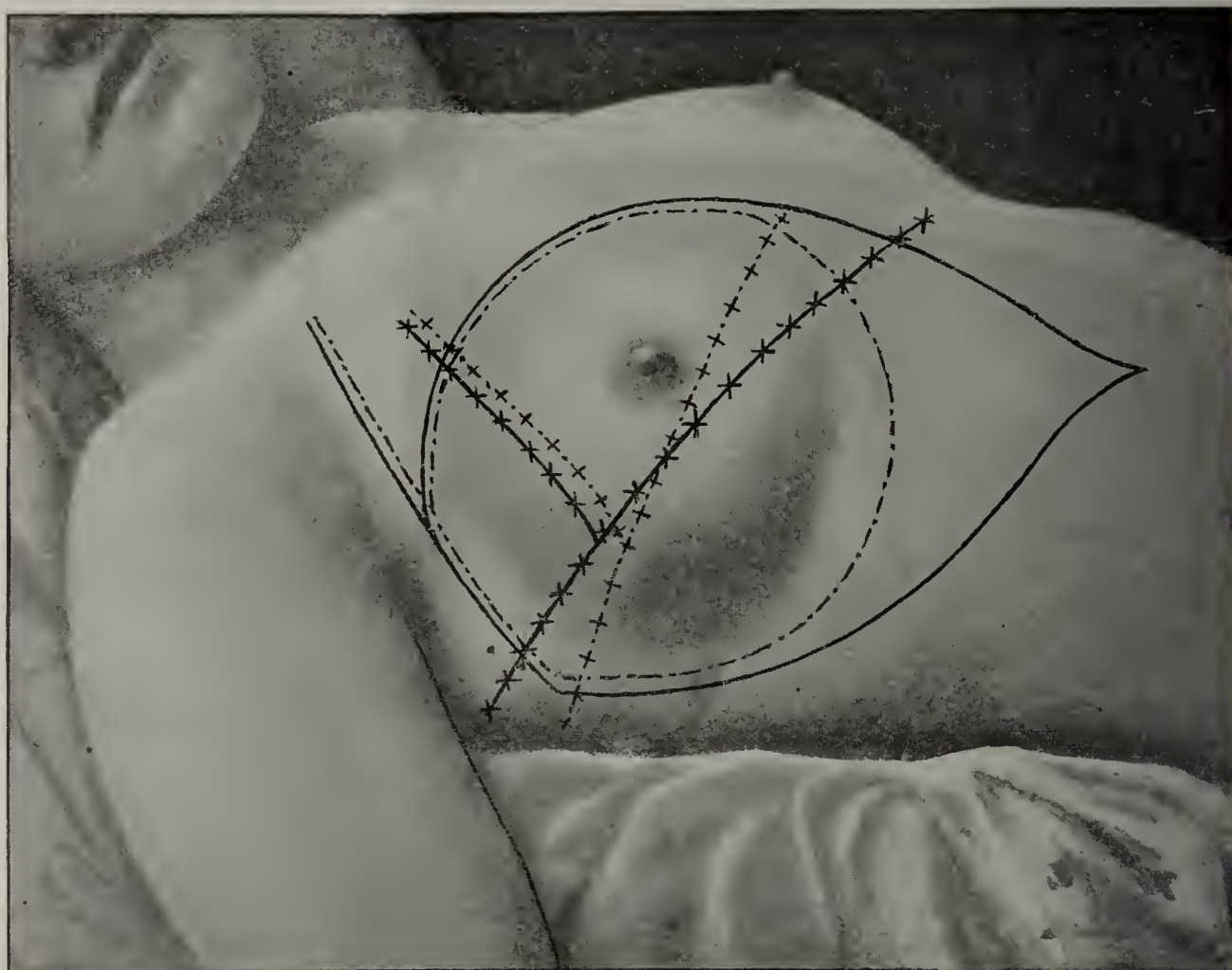


Fig. 15.—Solid black line represents line of incision for oval operation; solid black line with crosses represents suturing after oval operation; broken line represents incision for circular operation, and crossed broken line represents suturing after circular operation.

10. Cancer of the breast and its Operative Treatment, John Murray, London, 1906.

A vast majority of surgeons so plan their incisions as to work from sternum to axilla, in spite of the inherent dangers incident to such practice, first accentuated, I believe, by A. G. Gerster so long ago as 1885.¹¹

In a paper remarkable for its foresight, he used the following words: "The operation should be begun, if possible, with the evacuation of the axillary space and its contents, together with the breast and the intervening tissues, should be removed in one piece." Dr. Gerster informs me that he not only advised, but practiced, this method of operating since 1885, always clearing the axilla, and, so far as he could, ligating the vessels at their origin. He, of course, admits that the later suggestion of Halsted and Meyer (removal of the muscles) greatly facilitates both the axillary dissection and ligation of those vessels high up in the axilla, and was prompt to accept it as necessary for a complete operation.

The advantages of first attacking the axilla are direct and manifest and should be more generally appreciated. They are: First, the axilla may be so hopelessly involved as to make an attempt at removal worse than fruitless. Hence, the sooner it is known the better. Second, the blood vessels can be reached and tied at their origin, which materially lessens both hemorrhage and shock, as the same vessel is not repeatedly cut as is necessarily done in working toward instead of from the axilla. Third, the axillary space is dissected from above downward instead of from below upward, because it is both easier from a surgical and better from a pathologic viewpoint, inasmuch as the dissection is begun beyond the encroachments of the disease. Fourth, we avoid largely, if not wholly, the great danger of expressing and distributing cancer cells to adjacent tissues and remote organs as a result of manipulating the infected mamma and lymph nodes. This is a considerable, not a chimerical danger—so much so that unnecessary handling of the infected tissues should be avoided. Gerster made this clear in his paper,¹¹ and insisted that it was the chiefest danger to be feared. Fifth, a dissection *en masse* is sometimes made impossible if the work is begun at the sternum, as the heavy mass may pull on and break the axillary tail. It certainly will, if not held by an assistant, during all of which time the infected breast is being manipulated. Sixth, the functional use of the arm will be better, for the reason that in beginning at the axilla instead of ending the incision at this point greater precision is assured. The incision should not extend onto the arm, as the resulting cicatrix in such cases not infrequently restricts the limb in its future movements. This I consider of the greatest importance, as I have more than once seen after the employment of incisions which did either begin or end on the arm a cicatrix which restricted the limb in its upward and backward movements. I have not had the slightest interference with the movements of the arm since confining my incision to the chest. The axilla is reached by a straight incision extending from beneath the clavicle to an inch or less below the tendon of the pectoralis major and at least two finger-breadths internal to the sulcus between arm and chest. This permits perfect access to and work in the axilla.

The several steps of the operation as I now practice it are better shown in Figures 6 to 16 than by a description. Figure 14 shows a drainage-tube at either end of the horizontal incision. I formerly thought this necessary. Latterly I omit drainage.

CECOSTOMY AND CONTINUOUS COLOCLYSIS IN GENERAL PERITONITIS AND OTHER CONDITIONS

CHARLES A. L. REED, M.D.

CINCINNATI

A method of treatment that I have been using, for some time, in certain cases of general peritonitis and in some other conditions, is as follows:

1. Recognizing that general peritonitis is always the result of infection, I place the patient in the Trendelenburg position and operate in the usual way to find, and, if possible, to remove the source of infection.

2. Whatever may be the details of that operation, I bring up the cecum and fix it in an incision made directly over its situs, open the loop thus anchored, and in the opening I insert a soft rubber catheter which I fix by a suture to the abdominal wall.

3. I then put a self-retaining effluent tube into the rectum.

4. Through the cecal tube I subject the colon to such treatment and usage as the then existing and subsequently changing conditions may require.

Under this last heading comes, first and foremost, the treatment of patients of general peritonitis, operated on *in extremis*, that is, with a subnormal temperature, uncountable pulse and extreme distention. The first thing accomplished by opening the cecum under such circumstances is, of course, to lessen the distention of the intestines and thus make it possible to deal more effectively with the field of operation. Then immediately after the operation, or, for that matter, before it is completed, I begin continuous irrigation of the colon with normal salt solution at 110 F. About three quarts of solution are retained before the effluent current is established through the rectal tube. By this internal application of heat in direct contact with the solar plexus and by the incidental absorption of water from the colon, a reaction is generally secured with a promptness that seems phenomenal. As soon as this is secured, the free flow from the irrigator is abandoned and the drop-by-drop clysis is substituted and continued for the next twenty-four hours or longer. If the stomach is rebellious, the cecal tube is utilized for feeding the patient. The cecal tube may be retained indefinitely without interfering with convalescence.

This line of treatment is eligible not only in general peritonitis, but in several other conditions. It can be readily adopted as an elective measure, in acute gastric ulcer in which no operation has been done, but in which it is necessary to keep the stomach at rest for a considerable time. It is a capital expedient for feeding purposes following gastroenterostomy and in cases of malignant disease of the stomach or of the upper segment of the intestinal tract, in which operation is not practicable. I have already reported on its utility in certain cases of intractable disease requiring direct medication of the mucosa of the colon.

As a practical expedient this line of treatment has some obvious advantages. In the first place, it is simple and safe. In the next place, its restorative value to the patient—the application of heat, the absorption of fluid and the administration of nutritive and medicinal agents—is beyond question. The complete control thus gained over the colon facilitates the elimination of any toxins that may be lodged in that viscus. Dr. Thomas, pathologist to the Cincinnati Hospital, has made some inter-

11. New York Med. Jour., Feb. 28, 1885.

esting demonstrations in the cadaver showing that the cecal tube may be utilized for flushing the intestinal tract above the ileocecal valve. Properly predigested food introduced directly into the colon is absorbed much more readily, much more certainly and in much larger quantities than when given by the rectum, and the same fact is true of water, even by the drop method.

I wish in conclusion to urge that cecostomy rather than appendicostomy should always be adopted as the operation of choice. As compared with the presenting part of the cecum, the ceco-appendiceal juncture is an inch or more further away from the abdominal wall. The mesocecum is, furthermore, ordinarily so short and is always so inelastic that the appendix can not be drawn and held forward without a degree of tension that is fatal to its integrity. The distensive pressure of any tube inserted and retained in the narrow lumen of the appendix is another influence that causes it always to perish during the first few days after the operation. Thus an appendicostomy always, sooner or later, resolves itself into a cecostomy. It is better, however, to do a cecostomy as an elective operation

The Groton.

THE RELATION OF FOREIGN BODIES IN THE GALL BLADDER TO GALLSTONE DISEASE

JOSEPH RILUS EASTMAN, M.D.

INDIANAPOLIS

Foreign bodies of various kinds have been found occasionally in the gall bladder in association with gallstones. It is probable that the presence of a foreign body in the gall bladder may, under certain conditions, be concerned in the etiology of the stones. The question of whether any foreign body can produce gallstones quite unaided by micro-organisms has been rather conclusively answered in the negative. It is certain that smooth foreign objects may occupy the gall bladder for a long period without retention of precipitated bile salts.

Jaques Meyer introduced small ivory balls into the gall bladders of test animals and found no stones after a year.

Mignot¹ also found that certain foreign bodies, if aseptic, may be retained in the gall bladder for a long time without causing inflammation or precipitation of solids from the bile. Mignot, in his investigations found, also, that foreign bodies impregnated with virulent micro-organisms, singularly enough, did not lead to the formation of gallstones. Such virulently infected foreign bodies produced more or less violent cholecystitis and precipitation of solids but so long as the bacteria retained their virulence they could not, even with the help of the foreign body, form calculi. There resulted a sediment mixed with pus, but the sediment had no tendency to adhere to the foreign bodies. To form stones, he says, the bacteria must be attenuated. Such attenuated bacteria used in his experiments caused precipitation of the bile solids on cotton wool quite promptly, that is, within five or six months.

The above observations concerning the necessity of attenuation proved true of the *Bacillus typhosus*, *Bacillus coli*, staphylococcus, streptococcus and even the non-pathogenic *Bacillus subtilis*. Reports² of similar experi-

ments show that if attenuated bacteria and foreign bodies be introduced together into the gall bladder, stones will be formed.

In the absence of direct proof it seems reasonable to presume that much must depend on the character of the foreign body. The smooth ivory balls of Meyer doubtless produced little irritation; whereas a jagged body, if large, must produce decided irritation and if such irritation be alone unable to produce obstructive inflammation of the gall bladder or ducts it is nevertheless easily seen that the essential bacteria may readily be attracted to such a focus for, as Gilbert has demonstrated, bacteria are frequently sent out from the liver with the bile.

The Mayos³ called attention to the circumstance that the *Bacillus prodigiosus* placed in the anus appeared after two hours in the mouth and that reverse mucous currents in the intestines and ducts will similarly carry up particles of indigo carmine.

It seems not unfair to assume that bacteria may readily pass up the gall ducts from the intestines.

It is well known that entozoa are frequently found associated with gallstones. Such entozoa in their entrance into the gall bladder doubtless furnish at once the foreign bodies and the atria for infection. This is, perhaps true also of the globules of metallic mercury which have been found in gallstones.

That intestinal parasites may find their way into the gall bladder and carry with them the necessary infection is abundantly shown by many reported cases: Lobstein⁴ found round worms associated with gallstones; Gautrelet⁵ found bilharzia or intestinal flukes in connection with biliary calculi; Carless⁶ found pieces of hydatid membrane in the gall bladder and Buisson⁷ found the *Distoma hepaticum* in the gall bladder in a case of cholelithiasis. Homans found gallstone incrustations on sutures introduced through the gall bladder wall at a previous operation, here the suture presumably established an atrium. Nauche reported a case in which he found a steel needle forming the nucleus of a gallstone (Mayo Robson).

I have recently observed a similar case in which the incrustations on the needle were slight and easily removed with gauze and the gall bladder was filled with small stones.

In my case adhesions were present between the gall bladder fundus and the pylorus. It seems most likely that the needle passed directly from the pylorus into the gall bladder carrying bacteria with it. This seems also the most rational explanation of the presence of a fruit-seed in the gall bladder in the case reported by Frerichs. If, however, the ova intestinal worms may travel up the ducts with the aid of reversed mucous currents, the seed may have had a similar experience. Doubtless there are other cases in which pointed foreign bodies, owing to the presence of adhesions between the gall bladder and pylorus may be assumed to have passed directly from the latter to the former. Clarus, quoted by Poulet, in his work on foreign bodies, reports a case observed in St. George's Hospital, Leipsic, in which a needle was found very near to the gall bladder in the groove between the left and right lobes of the liver. To say that this needle passed out at the pylorus is perhaps not justifiable in view of the amazing journeys which needles have been known to make in the body.

3. Keen's Surgery.

4. Rolleston: Disease of the Liver and Gall Bladder.

5. Union méd., xi, 176.

6. King's College Hospital Rep., viii

7. Ueber die Galle, German transl.

1. Robson, Mayo: Diseases of the Liver and Gall Bladder.

2. Riforma med., 1901: quoted by Moynihan: Gallstones and Their Surgical Treatment, p. 45.

The following is a brief report of a case occurring in my practice:

Patient.—Mrs. H. of Walton, Ind., a patient of Dr. Carpenter, was operated on for gallstone disease on March 19. The symptoms which had led the family physician to the diagnosis of gallstones were those which are observed usually in such cases. There had been present gallstone colic, left-sided pains (suggestive of adhesions between the pylorus and the gall bladder) and shoulder pains, followed by nausea and vomiting. There were jaundice and digestive disturbances, muscular rigidity and bile pigment present in the urine as shown by Baudouin's test, also by Loeffler's blue.

Operation.—When the abdomen was opened the gall bladder was found enlarged and adherent and drawn toward the median line of the body lying in immediate relationship with the pylorus. The gall bladder was opened in the usual way. Gallstones were found, and during the removal of these the scoop caught on a mass of what seemed at first to be a very stiff string of organized fibrin occupying the lumen of the organ. On removing this with artery forceps it was seen that the tough fibrin containing bile solids surrounded a stiff, pointed object which later was found to be an ordinary short sewing-needle.

How the needle came into the gall bladder is not known. It is presumed that the woman swallowed it, but this, of course, is only a hypothesis. The woman was accustomed to use needles like that found in her work and had occasionally put such objects into her mouth, as most women do, but does not remember having swallowed a needle. If the needle was swallowed it might easily have found its way into the gall bladder in the manner suggested above.

The body of the gall bladder is, as is well known, in relation by its under surface with the first portion of the duodenum, occasionally with the pyloric end of the stomach and the hepatic flexure of the colon. The needle might have traversed the wall of the intestinal canal proper in any one of these three portions and found the wall of the gall bladder in immediate apposition with the canal, which it had just left. It does not seem at all likely that the needle backed up stream, so to speak through the ampulla of Vater, the common and the cystic ducts. To any one familiar with the causation of gallstones, the probable relationship of the presence of the needle to the stones will be clear. It is quite fair to assume that such a foreign body as the needle, having carried in infection, could provoke sufficient inflammation of the gall bladder and ducts with consequent obstruction as to lead to precipitation of the bile salts and gallstone disease. There were no stones in the ducts and the symptoms, as might be expected, have quite disappeared.

331 North Delaware Street.

The Lachrymal Glands at Various Ages.—A. Goz (Inaug. Diss., Tübingen, 1908), has made an exhaustive study of the human lachrymal glands in male and female of various ages. The tissues were fixed in concentrated sublimate or in formalin; paraffin sections stained in iron hematoxylin and Delafield's hematoxylin and benzopurpurin B. Age bears a direct relation to the size and structure of the glands. The largest were found in women of about middle age. The size of the glandular epithelium decreases after the first year, producing a widening of the glandular lumen. In advanced age there is an increase of connective tissue and an invasion of the glandular substance. It is not uncommon to find in the aged the glandular tissue thus split up into a number of islets but normally glandular degeneration from this source does not occur. The lachrymal glands of the female have a larger average size and weight than those of the male.

REMOVAL OF AN EMBOLUS FROM THE COMMON ILIAC ARTERY, WITH RE-ESTABLISHMENT OF CIRCULATION IN THE FEMORAL

JOHN B. MURPHY, M.D.

CHICAGO

Patient.—Mrs. H. S., aged 41, was admitted to Mercy Hospital at 1:40 p. m., April 29, 1909.

Family History.—Father alive, well, aged 77; mother died at 42 of pulmonary tuberculosis.

Personal History.—The patient was born in Germany and came to Chicago twenty-five years ago; married at the age of 26; habits good; used no alcoholic liquors. Menstruation began at 14 and was until one year previous of the regular twenty-eight-day type; lasted four days; quantity moderate. In the last year the patient had had seventeen periods; flow scanty; last menstruation March 8, 1909; diminished in quantity. She had one child 9 years old; forceps delivery; was confined to bed five weeks; had cholecystic infection in the puerperium and was jaundiced for three months.

Previous Illness.—The patient always had good health up to about five years before the present illness, at which time she had acute rheumatism which lasted four weeks; she had a second attack two years later. The patient was not confined to bed in either of the illnesses and did not know that the endocardium or valves were involved. Following this attack she had shortness of breath and consulted a physician who said she had heart trouble.

Present Illness.—On April 25, 1909, the patient was seized with a sharp pain in the lower part of the left side of the chest and upper abdomen, which later extended down to the pelvis. It was considered pleuritis and the patient was given opiates. The pain continued in the lower part of the abdomen after that in the upper part had entirely disappeared, which would rather controvert the idea of a splenic infarct. On April 26, between 9 and 11 a. m., the patient became nauseated and vomited five or six times; did not have a chill and did not believe she had an elevation of temperature. One hour later both the left and right legs began to pain. A physician was called, and he gave a hypodermic injection in the left leg in the region of the pain. Both legs became cold and remained so until the following morning, when the pain in the right leg ceased and it regained its normal temperature. The left leg remained cold, was blue in the thigh and very pale and shriveled in the toes, foot and ankle. It was cold to midway between Poupert's ligament and the patella. There were large blue blebs scattered over the middle third of the thigh.

Examination.—At the time of admission to the hospital the pulse was 82, respiration 26, temperature not recorded. After the operation pulse was 76, temperature 98, respiration 26. At 4 p. m., April 30, pulse 84, temperature 98.6, respiration 28. May 1, at 4 p. m., pulse 82, temperature 99.2, respiration 26. A careful examination on admission showed that the patient had a mitral, direct and regurgitant murmur. Examination of blood showed 15,400 leucocytes; hemoglobin, 85 per cent. There was no pulsation in her left femoral artery. The upper margin of the area of demarcation that appeared then was about four inches below Poupert's ligament. The limb was undergoing dry gangrene, due to ischemia from arterial obstruction. The patient was immediately taken to the operating room and it was decided to remove the embolus that was occluding the iliac artery.

Operation.—(2:30 p. m., April 29.) The patient was placed on the table with the hip slightly elevated. Nitrous oxid was given for thirty seconds, while an incision four inches long was made downward from an inch above Poupert's ligament parallel to the femoral artery. It extended through the skin and connective tissue. The anesthesia was then stopped, the dissection continued and the femoral artery was exposed for a distance of 2½ inches. It was edematous, easily freed from neighboring structures and two provisional catgut ligatures were thrown around it with an aneurism needle but were not tied. These were used in

preference to the Crile clamp so as to aid in elevating the artery, which was then incised for one inch parallel to its long axis. It was completely thrombosed. With a delicate forceps the clot (a bifurcated plug an inch and a half long) was drawn from below upward, when fresh arterial blood came from below, evidently collateral, through the femoral profundus. A finger was then placed on the lower end of the vessel inside the ligature loop, as shown in the illustration, so as to compress it and stop the return blood and still not injure the intima. With a delicate forceps I began extracting the clot from the proximal side; the artery did not empty. A delicate spoon was then introduced and more clot withdrawn, but no arterial blood came. Then a No. 6 soft catheter was introduced; it passed up a distance of seven and a half inches and was withdrawn filled with grumous, bloody débris, but no arterial blood followed. It was reintroduced but could not be forced through

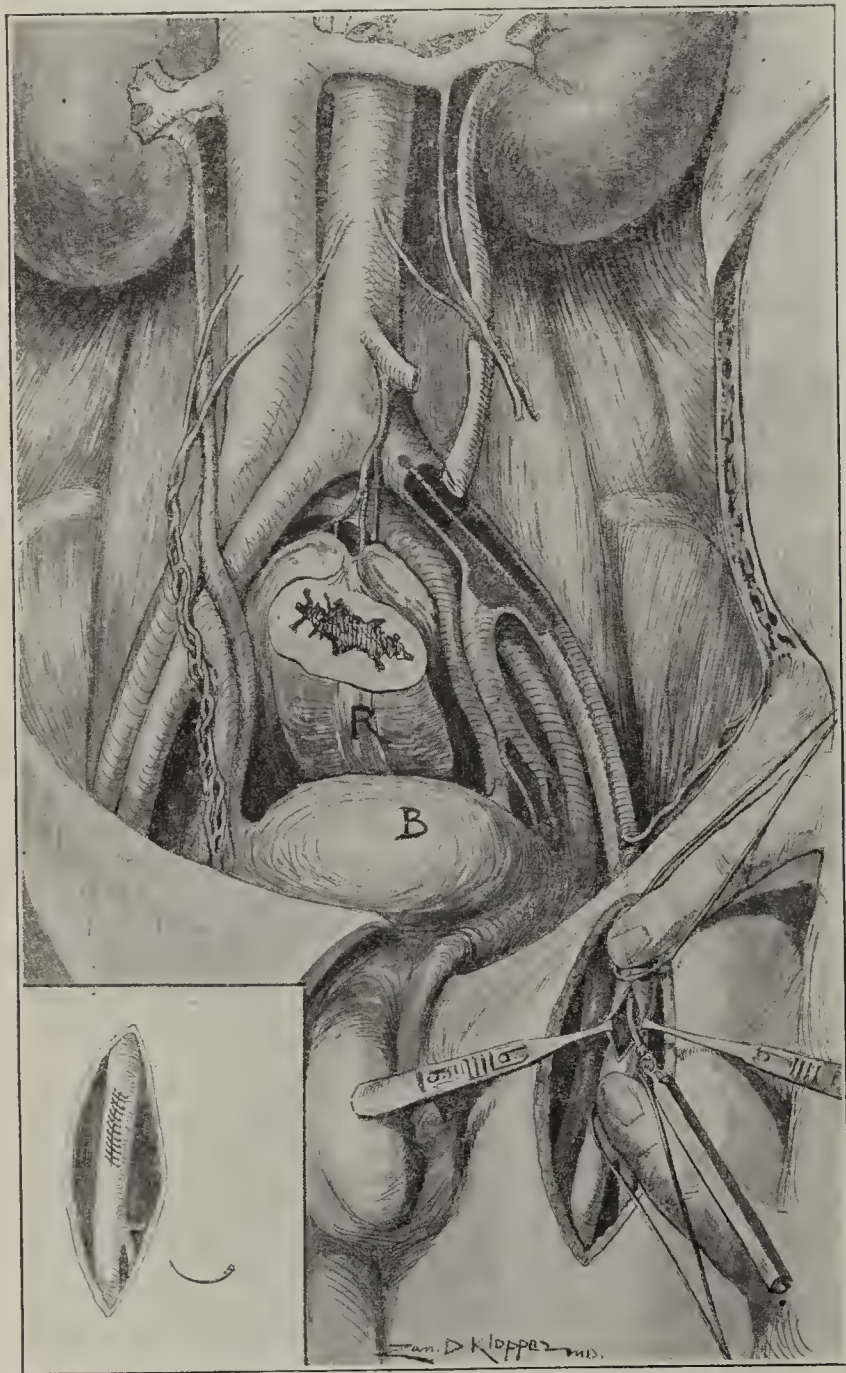
embolic débris and fresh, bright blood. The arterial flow had then all the pressure and quantity of a normal femoral artery. The finger was then inserted in the ligature loop on the proximal side to stop the bleeding. With a fine silk suture on a full curved conjunctival needle a rapid continuous suture of the linear incision in the artery was made. On removing the digital pressure it oozed a little between the second and third stitches. Two additional supporting stitches at this point completely controlled the hemorrhage, and pulsation could be felt throughout the vessel. Unfortunately this operation was four days after the embolus was arrested in the common iliac just below the bifurcation of the aorta. The skin was necrotic and the limb cold to eight inches above the knee.

Postoperative History.—After the patient was removed to her bed she complained of pain and burning in her toes and ankle, the first sensation she had had in any of those parts since the onset. Considering the ease with which this clot was removed from the second inch of the common iliac artery, it is very much to be regretted that operation was not performed early in this case and in all of these cases. The operation was done without an anesthetic practically, and can be done painlessly with a little cocain or salt solution injected into the skin. The collateral circulation was evidently making a great effort to establish itself, for as soon as I removed the plug from the junction of the deep and superficial femorals in the lower portion of Scarpa's triangle, the blood returned from the distal side. The suture of an incision in an artery is as simple as the suture of an intestine, if a sufficiently small needle be used. This I demonstrated in 1896, at which time I made the first successful end-to-end union of an artery that had ever been made, excising half an inch of the femoral artery at about the same point where I incised it to-day. At the line of demarcation the circulation was improved immediately after the re-establishment of the flow, becoming well marked a considerable distance lower; the amputation was made four days later four inches below the line of bleb formation that existed at the time the embolus was removed, and the flap survived. The circulation in all the smaller vessels at the line of amputation was fairly well established, but the trunk of the femoral was occluded by a loose, non-adherent clot, showing that it was the result of the suppression of the circulation from below or backing up of the blood which caused the thrombus, and not an inflammatory condition.

In cases of aseptic embolism immediate removal by division of the artery at the line of the embolism or below it should be resorted to. These emboli produce mere mechanical obstruction and the circulation is at once re-established by their removal.

The symptoms which indicate the occlusion of a large artery are, first, pain; second, ischemia of the limb; third, cooling of the surface; fourth, absence of pulsation in the arterial trunk. The number of hours that may elapse before a tissue becomes incapable of restoration has not been definitely determined, but from the length of time a constrictor may be kept on a limb for the suppression of hemorrhage and the vitality of the limb restored, we know that many hours of complete suppression of the circulation is not incompatible with restoration of the life of the tissues.

Since 1896 I have had two additional end-to-end sutures of arteries, one of the femoral in Scarpa's triangle for a bullet wound, and another of the first portion of the axillary just below the clavicle. In both end-to-end union was effected by my suture method and the circulation in the extremity promptly restored. A little over five years later all three of these end-to-end unions were examined by Dr. Neff and the circulation in the extremities was found perfect. I have also had a lateral suture of the external iliac and axillary arteries with good results. In September, 1908, a successful end-to-end anastomosis was made of the femoral artery into the femoral vein for endarteritis obliterans.



Location of the clot and direction taken by the sound shown semi-schematically.

a resistant body at that point. An ureteral catheter was then inserted; it met resistance at the same distance as before, but was forced through the thrombus and passed up nineteen inches, thus catheterizing the abdominal aorta. A small quantity of arterial blood followed its withdrawal. A uterine sound was then introduced. At a distance of seven and one-half inches it met resistance. It was forced a half inch farther, and on its withdrawal a large quantity of grumous, thrombotic débris came, but no arterial blood. It was pushed a little farther on and met a firm resistance. No blood followed its withdrawal. It was introduced for a third time, and with a little additional force at eight and one-half inches it seemed to pass through into a free space. This was followed by an intense arterial flow, carrying with it a lot of

Since I published my original experiments and results in this line and demonstrated the feasibility of this work, Payr, Hoeffner, Exner, Ullman, Carrel, Guthrie and others have supported the practicability of arterial suture and demonstrated that extremities and organs can be transplanted and the circulation maintained, if accurate suture of the arterial and venous trunks is made. The transplantation of organs must adapt itself best to embryologic ectodermic and endodermic glands, as their function is essentially a cellular one and not materially dependent on nerve supply, just as in horticulture the product of the graft depends on the "epithelial" cells in the bud, and these are maintained through nutrition derived from the engrafted trunk, the "epithelial" cell producing its normal or physiologic product.

In the removal of septic infarcts there is little to be gained in a practical way, as they are usually multiple. With the infarcts resulting from acute or chronic vegetations on the cardiac valves, good results should be obtained. Even cerebral ischemia should be amenable to this treatment, when due to an embolus arrested in the common or internal carotid by opening the common carotid and aspirating through a catheter; or a subclavian clot by incision of the axillary artery.

I believe that aspiration through a catheter is a better means of removing the plug than the one which I adopted. If the catheter is divided on the slant with its end open it can be readily introduced into the artery; unless the embolus is extremely hard it can with suction be drawn into or fragmented by the catheter and thus the artery freed.

Incision into the artery at the seat of arrest of the embolus, if it has been there for any length of time, is not an advisable procedure, as I found in my experiments that when a thrombus rested any considerable time on the intima it roughened it and increased its tendency to subsequent thrombosis. Therefore, the artery had better be divided above or below (preferably the latter) the point of impaction of the embolus. A gradual occlusion of the circulation does not produce gangrene in the extremity. In the British Museum are specimens showing that in gradual occlusion of the thoracic and abdominal aorta by cicatricial masses an abundant collateral circulation was developed sufficient to compensate for the occluded artery. It is the sudden ischemia that causes the gangrene.

The curved needle of the conjunctival type, which has its cutting edge easily rubbed off on a whetstone, is a good type of needle for deep work. A straight needle is difficult of insertion, and an "extremely fine needle" is not a *sine qua non* to arterial suture. After the removal of the Crile clamp or the digital compression there is often considerable oozing through the stitch holes. A gauze compression for thirty or forty seconds will completely stop all this bleeding. Silk should be used and not animal suture, as a clot rapidly forms around the silk, plugging the stitch hole.

The diagnosis of embolism of the mesenteric artery has never been made early enough to have this procedure available as a life-saving measure, but let us hope. Here, as in other types of emergency surgery, the operation must be timely in order to be successful. This applies particularly to the cerebral ischemias. The removal of an embolus from the pulmonary artery by Trendelenburg, while it terminated fatally, deserves special mention.

100 State Street.

Clinical Notes

FAVUS TREATED BY BACTERIAL INOCULATIONS

PRELIMINARY REPORT OF A CASE

G. A. PERSSON, M.D.

MOUNT CLEMENS, MICH.

This case of tinia favosa is perhaps particularly interesting, because, so far as my knowledge goes, there is no case of favus on record in which the opsonic treatment has been used.

Patient.—When the patient first came to my office, which was about Oct. 3, 1908, he presented a classical picture of the disease. The eruption, which is shown in Figures 1 and 2, was very extensive. The lower extremities were affected in the same proportions, particularly below the knees. The nails on both fingers and toes were also involved, which gave the patient continual annoyance. The characteristic "mouse" odor was evident. The patient's general condition appeared about normal. For twenty-three years he had suffered continually without any relief, except for very short periods of slight improvements during the first three years of the disease.

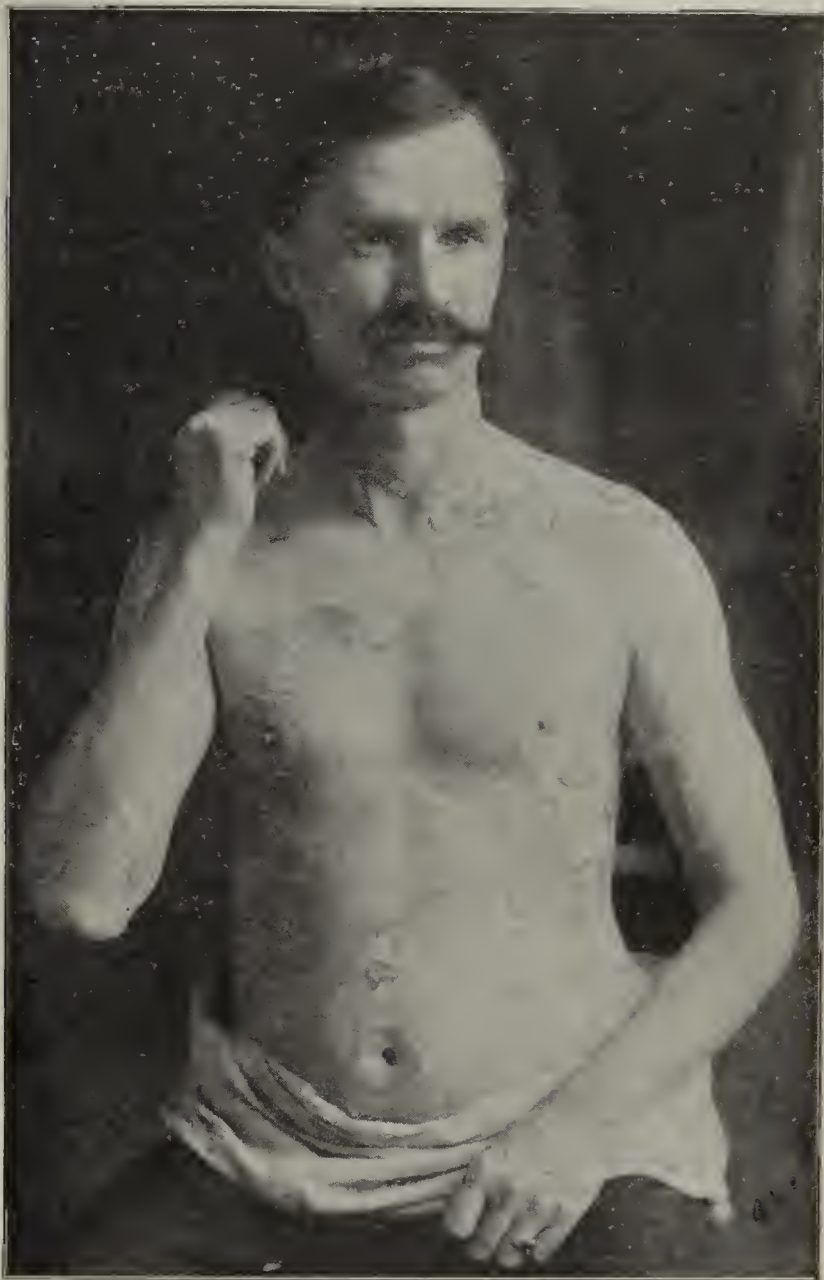


Fig. 1.—Patient with tinia favosa from photograph taken before beginning of treatment.

Examination.—Microscopic examination of the scales revealed the presence of the *Achorion schönleini*. It was decided to isolate the specific fungus of this disease and prepare a bacterial vaccine from it. A culture from the scales planted on agar and grown in the incubator for seventy-two hours gave the characteristic culture, microscopic examination of which revealed a mixed culture of the *Achorion schönleini* and *Staphylococcus aureus*.

Treatment.—For the purpose of preparing a bacterial vaccine from the *Achorion schönleini*, a pure culture was made in the following media: 80 parts of sterile sea-water, with a specific gravity of 1015 to 20 parts of a 5 per cent. solution of nucleinic acid. This culture was placed in the incubator for seventy-two hours, when microscopic examination revealed a decided alteration in the fungus. In place of the narrow flattened tubes or

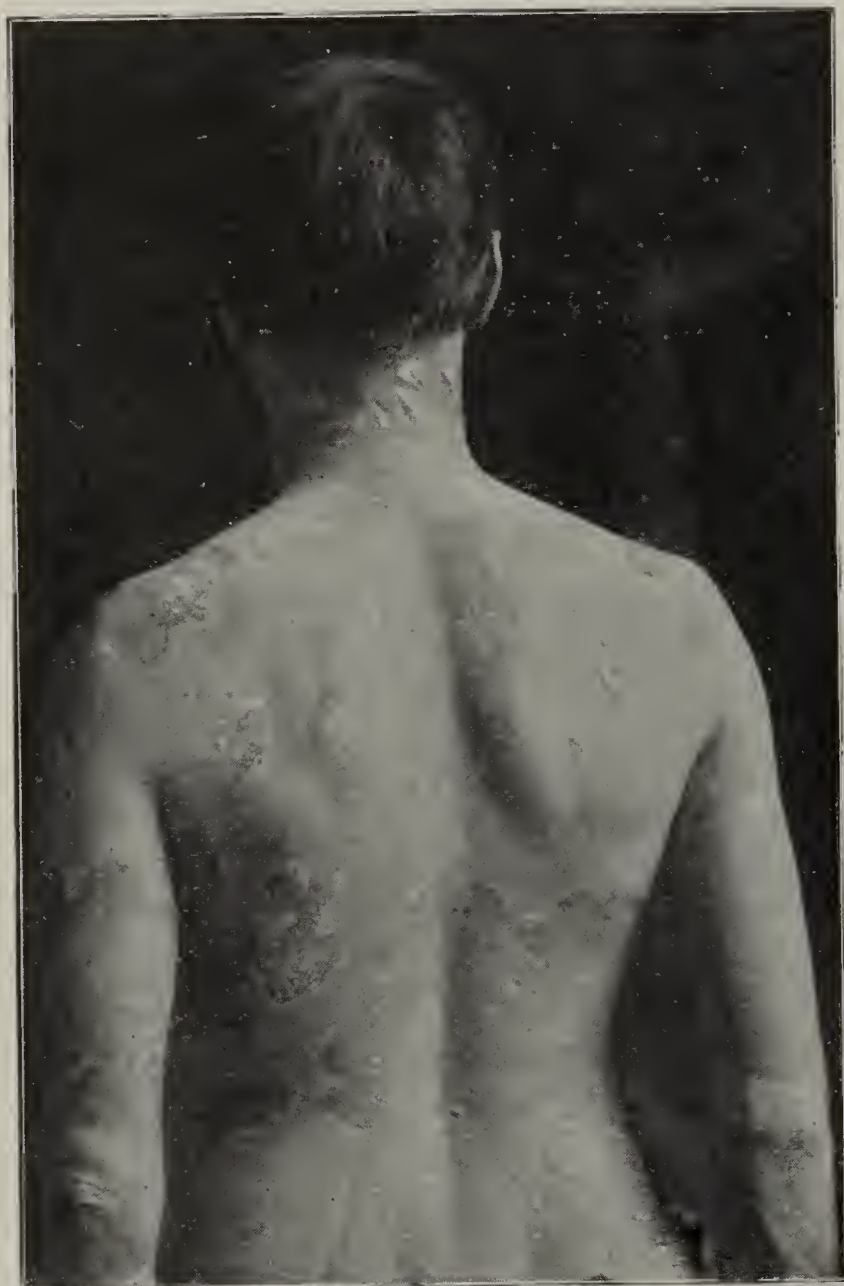


Fig. 2.—Another view of favus patient shown in Figure 1.

threads, ramifying in all directions, without definite arrangement, unicellular threads, quite uniform in length, and very numerous spores were found. Proper dilution of this culture by physiologic salt solution was made to give a bacterial suspension representing 5,000,000 individual segments or spores to the cubic centimeter. This was sterilized at 180 F. for forty-

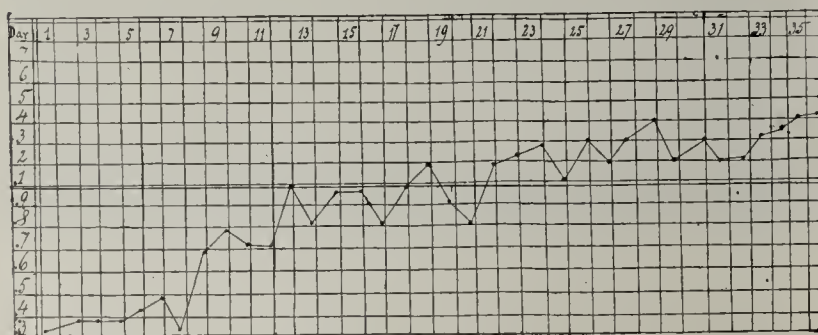


Fig. 3.—Chart of patient's opsonic index during treatment. Amounts of bacteria given in treatments were as follows: first three days, 500,000 a day; fourth and fifth days, 500,000 twice a day; sixth day, 2,000,000 twice a day; seventh, eighth and ninth days, 3,000,000 twice a day; tenth day, 4,000,000 twice a day; from the tenth to the thirty-fifth inclusive, 5,000,000 twice a day; from the thirty-fifth to the sixty-fifth inclusive, 2,000,000 every second day.

five minutes. The patient received in all seventy-seven inoculations, the amounts of which are given under the chart of the opsonic index, Figure 3.

Course of Disease.—Up to the tenth day there was very little improvement in the conditions of the skin. On the thirteenth day the patient was ordered to take a warm bath, which removed nearly all of the scales, leaving a dark red surface. Up to the eighteenth day a few scales had formed on various parts of the former eruption. The patient was again ordered to take a warm bath, which removed the scales, and it was noticed that the skin appeared more like normal, the dark red color having largely disappeared. On the twenty-seventh day few areas of small size were visible. Another warm bath at this time removed all the scales. The patient was ordered to use friction in form of mechanical vibration all over the body, particularly to the parts which were last affected. From this time no further eruption appeared and the skin gradually regained its normal color. The patient was discharged during the latter part of November. Up to the present time there is no return of the disease.

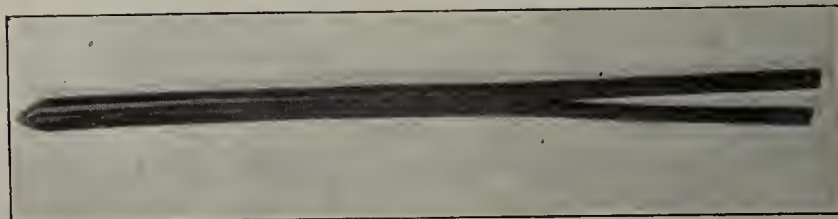
A DOUBLE CATHETER FOR IRRIGATION AND DRAINAGE

CONTINUOUS IRRIGATION AFTER PERINEAL PROSTATECTOMY AND DRAINAGE AFTER PERINEAL SECTION

HARVEY A. MOORE, M.D.

Clinical Professor of Genitourinary Surgery, Indiana University School of Medicine, Attending Genitourinary Surgeon, Indianapolis City Hospital and State College Hospital, etc.
INDIANAPOLIS

Continuous irrigation after prostatectomy and drainage after perineal section have always been more or less of a *bête noire* to surgeons. Dr. H. H. Young, of Baltimore, recommended the stitching together of two catheters, and this has proved an excellent expedient. Acting on that suggestion, I have designed a double tube for drainage and irrigation. This is a double soft rubber catheter in one piece, and has proved much more effective. The smaller section is the inflow and the larger the outflow; at the vesical extremity of each there are two openings, one at the end and one at the side. At the outer end the catheters are not joined for a distance of



Double tube for continuous irrigation after perineal prostatectomy and drainage after perineal section.

six inches, thus allowing them to diverge at any angle for convenience of attachment to the supply and drainage receptacles, respectively.

The greatest advantages of this instrument are, first, that, on account of the large lumen of each catheter, there is practically no danger of blocking the outflow by coagulated blood or other debris, and, second, that irrigation, continuous or interrupted, may be done without any manipulation of the wounded parts, the patient being thus left undisturbed.

I have used this tube in a number of cases after perineal section and perineal prostatectomy, and have found it much more satisfactory than any other drainage. The tubes are made regularly in 24 and 30 F., but may be had in any size.

321 Newton Claypool Building.

RESECTION OF SEVENTY INCHES OF INTESTINE AFTER PERFORATION OF THE UTERUS

WITH A COINCIDENT RELIEF FROM INTESTINAL INDIGESTION

H. P. BARTON, M.D. AND C. A. SMALLEY, M.D.
LOS ANGELES, CALIF.

History.—On Aug. 26, 1907, Mrs. C., a primipara, being threatened with a miscarriage, called her physician, who caused her removal to a hospital and there with the patient anesthetized, attempted to empty the uterus. The patient had not been frank with her physician, and under the impression that the pregnancy was of only a few weeks duration, he attempted to use a curette. He perforated the uterus, and while using the ovum forceps, drew out through the vagina a loop of intestine before recognizing his mistake. We were called in to aid in repairing the damage. Considering the traumatism, the patient was found to be in a very fair condition, and after a hypodermoclysis of normal salt with adrenalin added, she rallied so well that we deemed it advisable to make the repairs immediately, and the anesthetic was continued.

Operation.—The abdomen was opened in the median line. The blood welling up into the wound from the abdominal cavity was mopped out and there appearing to be no further hemorrhage, the uterus was brought up into the wound. A jagged perforation about one and one-half inches in length was discovered in the fundus a little posteriorly. This opening was enlarged sufficiently to draw the incarcerated intestine out, and, protected by hot towels, it was placed to one side of the incision. A four or five months fetus was then delivered through the enlarged perforation together with the placenta and membranes. The perforation was closed by deep muscular stitches of catgut, with a Lembert suture of catgut for the peritoneum. Attention was then directed to the intestine.

Resection of Intestine.—A portion of the jejunum and ileum was found to be detached from its mesentery, the mesentery being shrunken and black.

The injured portion of the intestine, measuring seventy inches, was resected and the mesentery corresponding to the resected intestine was removed in the shape of a "V." The intestine was then rejoined by an end-to-end anastomosis, a linen suture for the mucus and submucous coats being used, with catgut for the peritoneal coat. The mesentery was then brought together with a fine continuous catgut suture on both sides. The abdominal incision was closed in layers with catgut for the peritoneum and fascia, and a silkworm subcuticular stitch for the skin.

Postoperative History.—The patient was returned to her room in fairly good condition and progressed nicely, her temperature at no time running above 100 degrees.

September 1: The wound was inspected and a hernia in the incision was found. She was therefore taken to the operating room, anesthetized, and the skin suture removed. The catgut in the fascia and peritoneum had been absorbed and the intestine lay in contact with the skin. The peritoneum was again closed with catgut and through and through figure of eight silkworm stitches were used for the fascia and skin.

The patient then progressed to an uneventful recovery, and was discharged from the hospital, Sept. 15, 1907.

As a rather interesting sequel to this operation the patient, who had been a persistent sufferer for several years from intestinal indigestion and had been thin in flesh, developed a voracious appetite, which required four or five meals a day for several weeks to satisfy. She seemed to digest her food perfectly and gained many pounds in weight.

Whether the relief of this indigestion resulted from the removal of a diseased portion of the intestine we do not attempt to say.

447 South Olive Street.

A UNIQUE PERFORATION OF THE SIGMOID FLEXURE, CAUSED BY AN ENEMA FROM GARDEN HOSE

WILLIAM HESSERT, M.D.

Professor of Surgery, Chicago Polyclinic; Surgeon to The Alexian Brothers' Hospital and St. Joseph's Hospital

CHICAGO

History of Injury.—A middle-aged Italian was referred to me by Dr. Guagliata with the following history: The patient, a chronic sufferer with constipation, had long been in the habit of getting relief by attaching a piece of garden hose to the kitchen faucet, inserting the other end into his anus, and then turning on the stream. He had employed this procedure many times before successfully and with no untoward effects. On the day in question he had, before going to work in the morning, employed his customary flushing. This time, however, something unusual happened, for he was seized with severe pains in the abdomen. He went out and worked as a common laborer for several hours without experiencing much discomfort. Then, however, the pains recurred or became more severe and he went home. The abdominal pains were intense and were accompanied by vomiting. The patient was then seen by his family physician, who elicited the foregoing history and sent him to the hospital. I saw the patient about eight hours after the accident.

Examination.—The patient, a muscular man of about 45, presented a picture of bad shock. The expression was anxious, and cold beads of perspiration stood on his forehead. The respirations were rapid, shallow and of a costal type. The extremities were cold and the knees were drawn up. The pulse was 120 and of small volume. The patient complained of pain all over the abdomen. The abdominal wall was muscular and of board-like rigidity throughout, but was not distended. Palpation elicited tenderness throughout, possibly more in the lower abdomen, and the reflex rigidity was extreme. Rectal examination was painful, but gave no further information. The percussion note over the abdomen was tympanitic in front and dull in the flanks; this dullness did not change with patient in a lateral position. Temperature was 99. In other words, the patient presented a classic picture of "acute abdomen," or beginning general peritonitis.

Operation.—The patient was immediately prepared for laparotomy, and the abdomen was opened about ten hours after the garden hose injection had been taken. When the abdomen was opened in the median line below the umbilicus a great quantity of turbid fluid gushed forth, in which were floating quantities of fecal matter large and small. On examination a perforation was quickly discovered in the sigmoid flexure of the colon. It was a longitudinal tear, located opposite the mesocolon, one and one-half inches in length. The injured bowel was brought up, washed off with salt solution, and sutured with a double row of silk sutures in the usual manner. No further perforations being found, the peritoneal cavity was thoroughly flushed out with hot normal salt solution, a large split rubber tube with a gauze wick was inserted into the pelvis and the abdomen closed.

Postoperative History.—Recovery was uneventful. The patient was given water freely by mouth, but no proctoclysis, nor were enemas given for a week. The bowels moved freely after several days without the use of a cathartic, and regularly thereafter. After forty-eight hours the abdomen was soft and free from tenderness, and as there was little drainage the rubber tube was replaced by a cigarette drain. This was gradually shortened and the sinus was entirely closed in about three weeks. The patient was most intractable throughout; he did not stay in Fowler's position, or even in bed after the first few days. At the end of the first week he begged for his clothes and was up and about after ten days. He left the hospital before the wound had entirely healed, but it was subsequently learned that he suffered no ill effects from being about so early.

685 Fullerton Avenue.

A CORNEAL CURETTE

JOHN M. WHEELER, M.D.

NEW YORK .

The instrument shown in the accompanying illustration may be used for curetting the cornea in any condition in which curetting is indicated, but its chief field of usefulness is in the removal of foreign bodies. Both edges are ground sharp, and the end of the instrument is ground to a point which projects a little beyond the shank. The construction of the curette is such that in its use the field of operation is not hidden from the surgeon. Most foreign bodies can be removed from the cornea without difficulty with the cutting edge of the instrument, and the foreign bodies almost invariably



stay on the curette. Occasionally a small bit of emery or like material penetrates the cornea to such a depth that the use of a sharp-pointed instrument is indicated. For this reason a point is supplied on the curette, and in using this point the shank of the instrument acts as a guard, so that there is no danger of perforating the cornea in removing foreign particles.

On account of its safety this little instrument will appeal especially to the general practitioner who of necessity must often remove foreign bodies from the eye.

64 West Fortieth Street.

Therapeutics

CHRONIC BRONCHITIS

Forchheimer, of Cincinnati, thoroughly discusses this troublesome disease in the *American Journal of the Medical Sciences*, February, 1909. He believes that the patient who has marked exacerbations in cold weather or has a prolonged winter cough should, if possible, go to a warmer climate during the cold season. This is especially advisable in cases in which there is an intermittence of the bronchial catarrh during the warm seasons, because many times chronic bronchitis begins as a recurrent winter cough which persists, until finally, it becomes an all-the-year cough. Like all recurrent inflammations and neuroses, the more frequently it occurs or the longer that it has lasted, the more persistent is the condition, consequently, every effort should be made to prevent a prolonged winter cough.

Of course, the most frequent cause of such a recurrent cough is latent or more or less active tuberculosis, but chronic bronchitis without tuberculosis while not of common, is certainly not of infrequent occurrence. If there is any season of the year that is worse for such patients than any other, it is the windy, dusty period of early spring, when there is but little, if any snow in the Northern and Eastern United States, and when it is a little too cold to sprinkle the streets properly, or the city authorities are careless in not beginning the sprinkling of the streets early in the season. Dust is certainly an exciting cause of the bronchitis, and also such dust carries with it germs which easily produce

infection, when deposited on mucous membranes that are so unhealthy as are the bronchial mucous membranes of these patients. Also, most of these patients become more or less debilitated by the cough and expectoration, and are susceptible to other infections, especially of the upper air passages.

It is too often forgotten in the treatment of chronic bronchitis that though the cough and expectoration is the most important symptoms and the one for which the patient desires treatment, a careful investigation into his general condition, and treatment aimed at his general health will cause more improvement than the administration of expectorants, either sedative or stimulant. Generally, however, some expectorant may be advisable. In this form of bronchitis, opium, or any of its derivatives, is rarely indicated as a sedative, as the cough is usually for the purpose of removing the secretion in the bronchial tubes, and a sedative, or anything that would diminish the irritability of the nerves so that the secretion would accumulate and not be expectorated, would be inadvisable and contraindicated. Also, ipecac, alkalies, and pilocarpin, mentioned by Forchheimer, are rarely indicated in chronic bronchitis. Ammonium chlorid for its stimulant action in causing the mucous membrane to secrete a healthy mucus may for a short time be of advantage, but should not be used too long, as it sooner or later causes nausea and disturbance of the stomach.

In certain cases, some of the aromatic expectorants as turpentine, benzoates, eucalyptol, and santal oil may be of benefit to the patient. Creosote or some of its many preparations may be of value, but most of these drugs, if administered for any length of time, cause indigestion, and, if there is any kidney disability, many of them are contraindicated.

Terpin hydrate is often the best and simplest drug to administer.

If an asthmatic condition be present with the bronchitis, potassium or sodium iodid becomes the best treatment.

Circulatory debility should certainly be treated. Strychnin alone will often do these patients good. Arsenic in small doses is sometimes of advantage.

Forchheimer believes that there is no doubt that some of the aromatic oils, when inhaled from proper inhalers, are of great value.

He also calls attention to the posture treatment when profuse bronchial secretion tends to remain in the bronchial tubes, and would gradually raise, little by little, the foot of the bed of such a patient, until the head is distinctly lower than the feet. He finds by experience that the first elevation of the bed at the bottom should be about two inches; later this may be increased to four or five inches. If there is one particular part of the lung where the secretion accumulates, such a side posture as will facilitate the flow of this secretion toward the larger tubes and thus promote expectoration, may be adjusted by pillows or bolsters.

In fetid bronchitis, creosote, thymol, oil of eucalytus, or oil of pine inhalations are of benefit. Also the administration of creosote and of santal oil internally seems to be of benefit, but the more thoroughly the dilated bronchi are evacuated of their secretions by posture, the less odor will the expectoration have. Also, such patients with fetid bronchitis should, if possible, sojourn for some time in pine woods.

It should not be forgotten that these patients in some instances have combined with the necessary cough an entirely unnecessary one, a cough that raises nothing and is due to throat irritations, often to an enlarged and irritated lingual tonsil. Such a cough can be more or less controlled by the patient, if he is told that it is almost unnecessary, and may also be markedly helped by a few daily local applications of boroglycerid to the lingual tonsil. Soothing alkaline gargles will relieve this kind of a cough, which should not be treated by sweet, irritating, or nauseating expectorants.

Forchheimer well says that the best climate, or the best "cure," to which the bronchitis patient should be sent is determined by the individual condition of that patient. While one patient had best go to New Mexico, another had best take a sea voyage; while one needs circulatory and skin stimulation at some sanatorium or hot springs, another needs exercise and mountain climbing.

As Forchheimer suggests, and as has been pointed out by others, there can be no question that we do not frequently enough teach these bronchitis patients respiratory exercises.

Patients with some arteriosclerosis do well on small doses of iodid, given for long time. Other patients need sufficient daily exercise to cause profuse perspiration.

EPILEPSY

Lest too much reliance be placed on the administration of drugs in this disease, it is well for us to consider the statements made by Dr. William T. Shanahan, assistant physician at the Craig Colony for Epileptics, Sonyea, N. Y. (*The Dietetic and Hygienic Gazette*, March, 1909). He says that the three great essentials in the management of epilepsy are the diet, hygiene, and occupation, and that it is only after these have been arranged to the best possible advantage of the patient that medicinal treatment is to be considered.

To ascertain the best diet for the individual epileptic, the gastric and intestinal digestive powers should be thoroughly investigated, and to do this properly, the twenty-four hours' urine and the feces should be carefully examined. Such examinations, at least if several times done, will disclose many errors in metabolism, which may be prevented by treatment, management, or a radical change in the diet. The digestive system being made as perfect as possible, the toxins that so often are the instigators of epileptic attacks will not form, be absorbed, and circulate in the blood. Not only should the kidneys and intestines be made as nearly as possible perfect excretory organs, but the skin should be made as active as possible by massage and exercise.

Of course all epileptics should avoid alcohol, and often tea and coffee. Rich, greasy, highly seasoned foods, or indiscretions as to amount, should not be allowed to occur in the dietary of an epileptic, and special care should be exercised that the epileptic receives nothing but the freshest and most properly cooked food.

If, in spite of corrections in the diet, intestinal fermentation and putrefaction occur, the various culture preparations of lactic microbes may be administered, or yeast often acts to advantage in preventing such intestinal conditions. Radical changes in diet—from a mixed diet to a vegetable diet, or to a milk diet, or to a temporary buttermilk diet—may aid in eradicating the disturbance in the intestine.

Constipation should certainly never be allowed in epileptics, and drugs may be administered to prevent it, if must be, although of course it is best to prevent constipation by diet, exercise, and by drinking plenty of water. The best laxative, if one must be given, must be determined by the individual patient. If, in spite of ordinary laxative drugs or laxative treatments, the feces tend to remain long in the intestines, active catharsis with calomel or castor oil must be caused periodically. With such persistent constipation the advantage of the administration of sweet oil, and of the high injection into the colon of warmed sweet oil should be remembered.

Shanahan says that for the control of the epileptic seizures, bromin or its salts still hold an important place. He does not state which bromid he prefers, but sodium and potassium are probably the best. If plenty of water is drunk to make the skin and kidneys active, if the bowels move well daily, and if the skin is properly bathed, and good, healthy out-door exercise is taken, the disturbing symptoms of bromism will not develop, especially as the large doses once given have been found unnecessary. If salt (sodium chlorid) is more or less thoroughly removed from the diet, it has been found that the bromin salt, perhaps preferably sodium bromid, takes its place, and less bromid is needed to control the frequency of the epileptic seizures. Shanahan cautions not to stop suddenly the administration of large doses of bromids.

He also states that if the excretory organs of the patient are kept active, the condition of status epilepticus, or rapidly repeated seizures of epilepsy, will not occur; hence the prophylactic treatment is the best. Such a condition, however, being present, he says that chloral hydrate must be used; it is best given by enema and its retention may be aided by laudanum. He does not say how much is generally needed, but states that it should be used with caution, and exhaustion guarded against by the use of stimulants such as aromatic spirits of ammonia, and enemata of strong black coffee, at a temperature of from 100 to 105 F. If needed, he would also give physiologic saline solution intravenously or by hypodermoclysis, and if there is much cardiac depression he uses strychnin, digitalis, and strophanthus.

At the onset of the status epilepticus, gastric and intestinal lavage are often of value. Venesection may be used in plethoric cases, and lumbar puncture has been tried, but with only questionable success. If the epileptic seizures are rapid and severe, chloroform inhalations may be administered until the chloral has had time to absorb from the rectal or colon injection.

Of course in treating any individual epileptic, an attempt should be made to correct any physical disability that may be present. Adenoids and enlarged tonsils should be removed; decayed teeth should be cared for; eyes should be fitted with glasses, if they require it; hemorrhoids should be removed, if present; pelvic disturbances in females must be prevented, medicinally, if may be, or operatively if must be.

Shanahan does not speak of the disturbances of menstruation being a frequent cause of epilepsy in girls and women, nor of the advantage of the administration of thyroid both as an emmenagogue and as a preventive of nitrogen poisoning. It is a fact that many female epileptics may be greatly improved and even cured with general management and the proper administration of thyroid.

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[For other information see second page following reading matter]

SATURDAY, MAY 22, 1909

AORTITIS, AORTIC ENDOCARDITIS AND SYPHILIS

With the development of two new diagnostic criteria of syphilis, the Wassermann reaction and the finding of spirochetes, it has been possible to approach the so-called parasyphilitic diseases from a new ground, with the result of brilliantly confirming the conclusions previously reached by clinical observation. As the parasyphilitic affections are late manifestations or results of syphilitic infection, and for the most part not accompanied by definite syphilitic lesions, the search for spirochetes has not been of much help in their etiologic determination, since these organisms are usually found with difficulty in even the most typical lesions of the tertiary stage. With the help of the Wassermann reaction, however, it has been demonstrated that the relationship between syphilis and such diseases as tabes and general paralysis is fully as frequent as the clinicians have long believed, and if anything more so. The variations in the results obtained by the laboratory investigators who have applied the serum test to these diseases, are about the same as we have been accustomed to see reported by clinicians who were endeavoring to establish a relationship on the basis of clinical history and coexisting syphilitic manifestations.

Among the parasyphilitic lesions degenerative and productive changes in the aorta, with resulting aneurism or aortic insufficiency, have long presented problems to the pathologist and clinician of great practical as well as theoretic interest. Even Ambroise Paré, Morgagni and other early masters of medicine recognized that syphilis played an important rôle in the etiology of arterial diseases, but we owe especially to the work done under Heller at Kiel our present understanding of the characteristic features of aortic syphilis. Now it is generally recognized that fleshy nodular thickenings of the aorta, most abundant in the ascending part, and frequently extending to the aortic valves with resulting incompetence, are commonly of syphilitic origin, especially when they concern individuals in the prime of life. Microscopically, these lesions are found to involve chiefly the media and adventitia, consisting of foci of round cells in the vicinity of the vasa vasorum, while in the media may be found foci of necrosis which sometimes are typically gummatous in character. As a rule, the histologic features of these lesions are not such as to prove

conclusively their syphilitic origin, and consequently the pathologists have discussed at much length the proportion of such aortic lesions that should be ascribed to syphilis, and the possibility of similar lesions being produced by the acute infectious diseases. It seems to be generally accepted, however, that the most usual cause of such changes in the aorta is syphilis, although it is possible and probable that they are not by any means specific evidence of syphilitic infection. In other words, their status is just about the same as that of tabes and paresis in respect to etiology. Mönckeberg found that of the reported cases of aortitis 33 per cent. showed positive evidences of syphilis, while in a further 44 per cent. other parasyphilitic affections coexisted. Chiari reported that of 27 cases of undoubted syphilis examined post-mortem aortitis was present in 16, and of 44 paralytics 21 showed aortitis, indicating that more than one-half of all syphilitics coming to autopsy show characteristic lesions in the aorta. Similar results have been obtained by clinical observation. In v. Strümpell's clinic of 24 cases, tabes and aortic lesions, chiefly aortic insufficiency, coexisted in 15.

For some reason the application of the serum test to aortic disease has lagged behind its use in the study of nervous cases, but the results that have now been obtained are fully as convincing, and perhaps even more valuable from the therapeutic point of view than the results in tabes and paralysis. Fränkel and Much first applied the Wassermann test to the blood from cadavers showing aortitis with aortic insufficiency, and in all the six cases examined the reaction was positive. Citron¹ has studied systematically, by the serologic method, with interesting results, all the cases of aortic insufficiency coming to Kraus' clinic in Berlin in the past year and a half. Although only 14 per cent. of all cases of uncomplicated aortic insufficiency gave definite, and a further 26 per cent. suggestive, clinical evidence of syphilis, yet no less than 62.6 per cent. gave a positive serum reaction.

The earlier attempts to locate spirochetes in the aortic lesions resulted for the most part negatively, so that the positive findings reported by Schmorl, Reuter and Benda were accepted with more or less skepticism in view of the possibilities for error that the degenerated aortic tissues offer to the searcher for spirochetes. However, now that Wright and Richardson² have reported the finding of structures morphologically identical with *Spirochæta pallida* in all of five cases of aortitis examined by them, there will be no hesitation in the acceptance of these positive findings by Americans who are familiar with the splendid technic of the Boston laboratory.

All the above findings taken together would seem to prove finally the importance of syphilis in the etiology of the nodular form of aortitis which is so frequently

1. Berl. klin. Wehnschr., 1908, xlv, 2142.

2. Boston Med. and Surg. Jour., 1909, clx, 539.

associated with insufficiency of the aortic valves. Indeed there seem to be relatively few cases of simple aortic insufficiency that are not due to syphilis, especially if we exclude those cases where there is a history of rheumatism. As the Wassermann test seems to have distinct value in indicating the activity of syphilitic lesions, there would seem to be an excellent opportunity for therapeutic advance in the treatment of aortic regurgitation when of syphilitic origin, as most of the uncomplicated cases are shown to be.

RELATION OF HUMAN AND BOVINE TUBERCULOSIS

We are approaching the end of the solution of a problem which for many years has been the subject of bitter controversy and during the past eighteen years has been the object of perhaps more extensive work than any other in medicine. The relation of human and bovine tuberculosis is a question of first importance and deserving the most careful consideration.

The investigations which have led up to the proof of the intercommunicability of the disease in man and cattle may be divided into three periods: first, those taking place before the publication, in 1882, of the discovery of the tubercle bacillus by Koch; second, those occurring between the time of the discovery of the tubercle bacillus and its differentiation into human and bovine types by Theobald Smith in 1896-1898; third, those occurring since the establishment of these two types.

During the first period, it was shown by direct experiment that cattle could, though with difficulty, be infected with tuberculous material of human origin; their resistance to the human virus is so great, however, that it is unlikely that the infection occurs naturally.

Evidence of infection from tuberculous cattle to man could not, of course, be sought experimentally, but numerous observers collected statistics which furnish much circumstantial evidence that not infrequently man is infected with the virus of bovine tuberculosis. Numerous cases were studied in which, among children especially, the disease was in all probability caused by consumption of milk from tuberculous cows. A smaller number of cases, but cases furnishing more conclusive proof, were those in which direct inoculation occurred, as in those cases where tuberculous lesions followed wounds received by veterinarians and butchers while handling tuberculous meat.

The evidence obtained during the second period, that is, after the discovery of the tubercle bacillus, differed but little from the preceding, except that the demonstration of the bacilli made the diagnosis more certain, and its cultivation in pure culture gave a greater value to the direct inoculation experiments in animals. This circumstantial evidence was so convincing that it would doubtless have served to bring about the observance of adequate precautionary measures had it not been for the spirit of controversy which existed.

The discovery of the two types of tubercle bacilli, human and bovine, made possible the solution of the problem. On the basis of this distinction the German commission, the British commission and a number of individuals have proved that bovine tuberculosis is communicable to man. In over 300 cases reported in the literature in which the determination of the variety of bacillus present has been made, bacilli of the bovine type have been found in over 60 cases, a little more than 20 per cent. This can not be taken as representing the true incidence of bovine infection in man, since in some of the series investigated cases were chosen in which it seemed especially probable that the infection was of bovine origin. The results indicate clearly, however, that bovine tuberculosis is a source of danger to man sufficiently great to demand rigorous precautionary measures against it.

To arrive at a more accurate knowledge of the incidence of infection with the bovine type of bacillus in man, a great number of cases of tuberculosis, including the various forms of the disease, must be brought under investigation.

It will be of great interest and importance to see if certain forms of tuberculosis are constantly associated with one or the other type of bacillus. It is already evident that the bovine bacillus rarely, if ever, produces pulmonary tuberculosis. On the other hand, it has been found in a considerable number of cases of cervical adenitis and *tabes mesenterica*, as well as in other forms of tuberculosis.

The bearing which the type of bacillus present in a given infection will have on the therapeutic treatment of the case is not yet clear. In most of the work which has been done on the immunization of cattle against tuberculosis, living but attenuated cultures of tubercle bacilli of the human type have been used; there have been a few experiments, however, which indicate that vaccinations with attenuated cultures of bovine bacilli are more potent to protect cattle than are the vaccinations with the human bacilli. This fact may become significant in the treatment of human tuberculosis. Although at present there is but little to indicate that tuberculins prepared from the two types of the bacilli differ essentially, yet individuals with tuberculosis who had received one kind of tuberculin over a long period of time without evident benefit sometimes show a definite and progressive improvement when a change is made to tuberculin produced by the other type of bacillus.

Whether this result depends on the type of bacillus present in the infection has not been investigated, nor have we enough evidence to say whether we should use the homologous tuberculin or vaccine or the heterologous ones, but in the present unsatisfactory state of the therapy in tuberculosis, advantage should be taken of these points if any advantage lies in them. Further investigations are required along these lines.

THE ANTITOXIN UNIT AS A MEASURE OF CURATIVE VALUE

While most of the active workers in the field of immunization have believed that the curative value of a serum could be accurately gauged by the number of antitoxin units it contained, there have not been lacking some dissenting voices. As is well known, the content of a serum in diphtheria antitoxin units is determined, as a rule, by mixing measured quantities of the serum with a standard toxin and injecting the mixture, under carefully controlled and uniform conditions, into a guinea-pig of 250 grams weight. The degree of protection afforded by a given serum under this procedure is generally considered to indicate its relative value for curing diphtheria in man. That is to say, if 10 c.c. of 200-unit serum proves efficacious in curing a patient, just one-half the amount, or 5 c.c. of a 400-unit serum should prove equally efficacious.

Roux, Cruveilhier and others were among the first to report findings at variance with this conclusion. According to these observers, the dose of diphtheria antitoxin which has the greatest therapeutic effect is not always the one that contains the greatest number of antitoxic units. If this be true, the inference would seem to be justified that the antitoxin is not the only important preventive and curative substance in the serum. Steinhardt and Banzhaf,¹ on the other hand, after a careful repetition of Cruveilhier's experiments, arrived at diametrically opposite results. They found no evidence that the therapeutic power of a serum was dependent on anything except the number of antitoxin units it contained, and they conclude that the present method of standardizing antidiphtheritic serum accurately measures its therapeutic value.

The question has also been investigated more recently by Kraus² of Vienna, who has obtained results similar to those of Roux and Cruveilhier. Kraus studied not only antidiphtheritic serum, but also antidysenteric serum and the antitoxic cholera serum (*el Tor vibrio*). With all of these he found that no fixed relation existed between the amount of antitoxin and the curative value of the antitoxic serums. As a rule, his experiments showed that the "high potency" antidiphtheritic serums (from 300 to 600 units) possessed a relatively lower curative power than those of less antitoxic concentration (from 100 to 150 units). Kraus is inclined to attribute this phenomenon to a difference in the "avidity" of the antitoxin in different serums. In the discussion following Kraus' paper, Kretsz stated that the clinical results with the high potency serums, as he had observed them in a Vienna hospital, were less satisfactory than those with the low potency serums in which, of course, a greater bulk of serum was used. It should be noted that this is contrary to the recorded experience in the New York hospitals and elsewhere in this country.

Part of the discrepancy between the conclusions drawn by Kraus and those of Steinhardt and Banzhaf may be explained by the different modes of experimentation employed by these investigators, but that this is the sole factor concerned in bringing about the divergence seems hardly probable. Kraus expresses his conviction that the problem of measuring the curative value of a serum is not solved and that a re-examination of the whole subject is urgently needed.

DISSEMINATION OF FOOT-AND-MOUTH DISEASE BY VACCINE VIRUS

The statement¹ from the Bureau of Animal Industry of the Department of Agriculture in Washington concerning the source of the recent outbreaks of foot-and-mouth disease in Michigan, Pennsylvania and other states is of special interest. A new, hitherto apparently unsuspected source of this disease has been discovered, namely, lymph from vaccine calves. This discovery with its important practical consequences and the whole outcome of the investigation outlined in the statement are highly creditable achievements both to the Bureau of Animal Industry and to the U. S. Public Health and Marine-Hospital Service. The manufacturers in question participated with commendable zeal in carrying out the radical measures instituted by the government in order to rid the market of the unwittingly contaminated vaccine by recalling all the virus on the market.

That the virus of foot-and-mouth disease could exist undiscovered for so long a time in calves used for the production of vaccine virus is not at all incredible in view of the fact that the company from which the original contaminated vaccine came killed its calves so soon as their yield of virus was collected. It was only when the used calves were returned to the market that the infection began to spread.

Discovery of the actual agent of foot-and-mouth disease in contaminated vaccine by any other method than animal experiments is out of the question, because it concerns an agent that is not visible or cultivable by our present methods. Being a filterable virus, that is, passing through filters that hold back ordinary bacteria, it is commonly spoken of as an ultramicroscopic virus. Hence the presence of the virus of foot-and-mouth disease in vaccine lymph can not possibly be detected by the routine methods ordinarily employed to test the purity of vaccine lymph. Under the circumstances it was a matter of good fortune that human beings are relatively but little susceptible to foot-and-mouth disease and apparently not at all when the virus is applied as in vaccination; were it otherwise there surely would have resulted a large number of human cases. As it is, not a single case appears to have developed.

While the cost of this outbreak of foot-and-mouth disease has proved to be no small item, it is a great

1. Jour. Inf. Dis., 1908, 5, p. 203.

2. Centralbl. f. Bakt., Beilage zu Abth. I., 42, 1908.

1. Miscellaneous Department in this issue of THE JOURNAL.

satisfaction to know that through efficient governmental agencies has the outbreak not only been definitely overcome, but also that such knowledge has been gained as will prevent future outbreaks from this source.

VALUE OF STATE BOARD STATISTICS

We present this week for the sixth consecutive year tabulated statistics based on examinations conducted by state medical licensing boards during the past year. These statistics appear on pages 1691 to 1713 and are worthy of careful study. The four large tables, A, B, C and D, give the results in detail, while the others are presented to bring out the more important deductions.

These statistics, while they should not be taken alone in passing judgment on any medical school, constitute a very important part in the investigation of medical colleges and throw much light on several factors having to do with medical education. In the lists of medical schools shown in Tables I, J and K, with a very few exceptions, the classification is surprisingly upheld by the extended investigation and inspection of medical colleges made by the Council on Medical Education.

Occasionally a college may be listed in Table I, when in justice it should not appear in the better class of colleges. These apparent discrepancies are due to the character of the state board examinations as they are generally conducted and which can frequently be passed by graduates of colleges which give no laboratory or clinical training. Meanwhile, since we began publishing these data six years ago, some colleges have been able to lower their failure percentages considerably by giving special state board quizzes, without in any way improving their equipment for teaching. These methods of cramming for state examinations, however, will probably be corrected through the adoption of practical tests which are already being required by several boards and which will doubtless soon be generally adopted. That state boards are becoming more careful at their examinations is shown by the increasing percentage of failures from 19.1 per cent. for all candidates in 1904 to 21.7 per cent. in 1908 and by the number of colleges having less than 10 per cent. of failures being reduced from 64 in 1907 to 48 this year.

An important fact drawn from Table B is that over 64 per cent. of the graduates of medical colleges become licensed in the states wherein the colleges are located, and the percentage is really higher for colleges of inferior grade. Thus a state is not only responsible for the existence of any low-grade medical schools, but is itself the recipient of the greater part of the poorly trained graduates of those schools, and the standing of the profession as a whole in those states will be correspondingly impaired.

That seven states together registered 213 undergraduates during 1908 is shown by Table M. The number of such candidates registered will be greatly reduced, however, since three of the states, Alabama, Arkansas and Rhode Island, have recently secured legislation demanding that all candidates be graduates of reputable medical colleges. We urge that these statistics be given a

careful study, especially by those who are interested in the problem of medical education and medical licensure.

Thanks are hereby extended to the various licensing and examining boards for their cooperation in the work of compiling these statistics.

Medical News

ARKANSAS

Commencement Exercises.—The thirtieth annual commencement exercises of the Medical Department of the University of Arkansas, Little Rock, were held April 30, when a class of 22 was graduated. The diplomas were awarded by Governor George W. Donaghey, and the address to the graduates was delivered by Rabbi Louis Witt.——The third annual commencement exercises of the College of Physicians and Surgeons were held in Little Rock, April 29, a class of 14 receiving diplomas. The faculty address was by Dr. C. T. Drennen, Hot Springs.

Personal.—Dr. Claude E. Laws, Fort Smith, has been appointed a member of the State (Eclectic) Medical Board, vice Dr. Jacob F. Lewis, Little Rock, resigned.——Dr. Joshua C. Sexton has been elected president, and Dr. Henry E. Thomas, a trustee of the newly-organized antituberculosis society at Siloam Springs.——Dr. Charles A. Archer, DeQueen, has been elected delegate from the Sevier County Medical Society to the state medical society, and Dr. R. H. Hopkins, DeQueen, and Oliver O. Hammonds, DeQueen, were named as alternates.

Society Elections.—Clark County Medical Society, at its annual meeting in Arkadelphia, April 29, elected Dr. E. Kindle Williams, Arkadelphia, president; Dr. John H. Cuffman, Gurdon, secretary-treasurer, and Dr. James C. Wallace, Arkadelphia, delegate to the state society.——Logan County Medical Society, at its meeting in Paris, April 16, elected Dr. Early E. Scott, Magazine, president; Dr. M. E. Foster, Roseville, vice-president; Dr. John S. Shibley, Paris, secretary-treasurer; Dr. Samuel P. McConnell, Booneville, delegate to the state society, and Dr. Will H. Bennett, Paris, alternate.——At the annual meeting of Polk County Medical Society, held in Mena, April 17, the following officers were elected: Dr. Andrew J. Pool, president; Dr. William C. Vandiver, vice-president; Dr. Frank A. Lee, secretary; Dr. Philip R. Watkins, treasurer, and Drs. William P. Parks, Philip R. Watkins, and Columbus C. Gunnels, censors, all of Mena.——At the annual meeting of Conway Medical Society, held in Morrillton, Dr. Frank Gordon, Morrillton, was elected president; Dr. J. F. Halbrook, Cleveland, vice-president; Dr. George W. Ringgold, Morrillton, secretary-treasurer and delegate to the state society.——Howard County Medical Society, at its annual meeting in Nashville, elected the following officers: Dr. William H. Toland, Mineral Springs, president; Dr. David A. Hutchinson, Nashville, vice-president; Dr. Jesse S. Hopkins, Dierks, secretary; Dr. W. M. Gibson, Nashville, delegate to the state society, and Dr. James M. Daly, Nashville, alternate.——At the annual meeting of Boone County Medical Society, held at Harrison, Dr. R. S. Crebs, Olvey, was elected president; Dr. Alfred M. Hathcock, Harrison, vice-president; Dr. J. L. Sims, Harrison, secretary; Dr. Hugh L. Routh, Batavia, treasurer, and Dr. Frank B. Kirby, Harrison, delegate to the state medical society.——At the annual meeting of Garland County Medical Society, held in Hot Springs, April 7, the following officers were elected: Dr. Morgan F. Mount, president; Dr. Elmer H. Ellsworth, vice-president; Dr. John S. Wood, secretary; Dr. Joseph S. Horner, treasurer; Drs. Eugene C. Hay and Randolph Brunson, delegates to the state society, and T. Earl Sanders and Linda H. Barry, alternates, all of Hot Springs.——Independence County Medical Society, at its annual meeting in Batesville, April 5, elected the following officers: Dr. Charles G. Hinkle, Batesville, president; Dr. William T. P. Huddleston, Sulphur Rock, vice-president; Dr. Oscar J. T. Johnston, Floral, secretary-treasurer and alternate delegate to the state society; and Dr. Robinson C. Dorr, Batesville, delegate.

COLORADO

Personal.—Dr. T. Clarkson Taylor has been appointed health officer of Fort Collins.——Dr. Albert W. Rew has been appointed city physician of Fort Collins, vice Dr. Wilbur O. Upson.——Dr. John R. Espey, Trinidad, is said to have been sustained in his contention that Dr. Alfred Freudenthal has

no right to practice independently in Trinidad until after the expiration of the contract made that he would not so practice for five years, the life of the contract. Dr. Espey had previously obtained a favorable decision in the district court.

Sanatoria Unite.—The Swedish American Sanatorium Association at Edgewater has united with the Swedish Consumptive Sanatorium at Englewood to form the Swedish National Sanatorium for Tuberculosis. The present capacity of the institution is 50. It is expected that 25 cottages for individual patients will be added during the year. About one-third of the patients are treated without charge and the institution is supported by contributions of Swedish people throughout the country. Dr. Charles A. Bundsen, Denver, is chief medical adviser.

GEORGIA

State Board Election.—The State Board of Medical Examiners, on May 4, elected the following officers: President, Dr. Isham H. Goss, Athens; vice-president, Dr. Samuel S. Gaulden, Quitman, and secretary, Dr. Edwin R. Anthony, Griffin.

Griffin Hospital.—At the annual meeting of the Griffin Hospital Association, April 30, it was recommended to install a steam heating apparatus to cost \$800, to make additions and repairs to the main building to cost \$1,500, and to add a colored ward to cost \$700.

Tuberculosis Exhibit.—The tuberculosis exhibit was opened to the public of Atlanta at the Central Congregational Church, April 12. At the opening session, five governors of the state were on the platform.—The exhibit of the National Association for the Study and Prevention of Tuberculosis was opened in Augusta, April 30.

Sale of Narcotics Restricted.—At a meeting of the State Board of Pharmacy, a ruling was made that after thirty days the dispensing of drugs containing narcotics shall be allowed only on the prescription of a physician. Dr. T. A. Cheatham, state drug inspector, announces that he will vigorously prosecute all violators of the law.

IDAHO

Personal.—Dr. William A. Wright, Pocatello, has been appointed surgeon-general of Idaho, with the rank of colonel.—Dr. Charles C. Phillips, Lewiston, who has been seriously ill with kidney disease, is reported to be improving.

State Board Election.—The newly-elected officers of the State Board of Medical Examiners are Dr. Ira R. Woodward, Fayette, president; Dr. Susan E. Bruce, Lewiston, vice-president, and Dr. William F. Howard, Pocatello, secretary-treasurer.

New Medical Society.—Twin Falls County Medical Society has been organized with the following officers: President, Dr. D. C. Weaver, Twin Falls; vice-president, Dr. A. F. McClusky, Buhl, and secretary-treasurer, Dr. F. F. Benoit, Twin Falls.

Oppose Removal of School.—Physicians of Boise advance convincing arguments against the change of the location of the School for Deaf, Dumb and Blind from Boise. Boise is said to be the most logical location for the school, which should be at a point where means are at hand for the conservation of health and where the unfortunate children may be familiarized with the traffic of a city for their future protection.

ILLINOIS

New Society Organized.—Bond County Medical Society was organized at Greenville, May 4, by Dr. J. Leaming Wiggins, East St. Louis, vice-president of the Illinois State Medical Society, and Dr. Charles W. Lillie, East St. Louis, with a charter membership of 15.

Patients to Construct Hospital.—The labor of patients will, it is announced, be used largely in the construction of the new buildings of the Illinois Northern Hospital for the Insane, Elgin, this year. Dr. George N. Lucas, of the hospital staff, has been placed in charge of the construction work. The first undertaking will be the construction of a general bath house and swimming tank for patients; the second, the erection of a hospital for the acute insane, to cost \$35,000.

District Society Meeting.—At the thirty-third annual meeting of the Brainerd District Medical Society, held in Lincoln in joint session with the Fifth Councilor District Society, the following officers were elected: President, Dr. Don W. Deal, Springfield; vice-presidents, Drs. John W. Bozarth, Mount Pulaski; Chauncey W. Cargill, Mason City, and Carl H. E. E. Rembe, Lincoln; secretary, Dr. Harry S. Oyler, Lincoln; treasurer, Dr. Charles C. Reed, Lincoln; councilor, Dr. J. Whitefield Smith, Bloomington, and censors, Drs. Albert L. Brittin,

Athens; Irving Newcomer, Petersburg, and Albert E. Campbell, Clinton.

CHICAGO

Bequest to Hospital.—By the will of Otho S. A. Sprague, who died February 12, in Pasadena, a bequest of \$20,000 is made to the Presbyterian Hospital of Chicago.

Physicians' Club Elects.—At the annual meeting of the Physicians' Club, May 14, Dr. George E. Baxter was elected secretary, vice Dr. Edwin B. Tuteur, and Drs. Frank Billings, Henry T. Byford, William Cuthbertson, Henry B. Favill, Charles L. Mix and Edwin B. Tuteur were elected directors.

Personal.—Dr. Otto T. Freer has been elected a corresponding member of the Danish Oto-Laryngological Society in recognition of his work in rhinology and laryngology, and in appreciation of his operative demonstrations in Copenhagen last summer.—Dr. G. Paull Marquis leaves for Europe May 24.

INDIANA

Standard Medical Case for Trains.—Superintendents and chief surgeons of almost every railway operating in Indiana met the railroad commissioners April 27, and discussed a uniform type of medical case to be made a part of the equipment of every car. The law requires that each medical case shall contain two gauze bandages, two triangular pieces of gauze eighteen inches wide, and one pound of absorbent cotton.

Society Meetings.—At the annual meeting of the Twelfth Councilor District Medical Society, held in Fort Wayne, May 4, the following officers were elected: President, Dr. Edmund M. vanBuskirk, Fort Wayne; vice-presidents, Drs. Walter F. Carver, Albion, and Willard W. Swartz, Anburn; secretary, Dr. John H. Gilpin, Fort Wayne, and treasurer, Dr. David C. Wybourn, Sheldon. Dr. Kent K. Wheelock, Fort Wayne, was recommended for district councilor.—The physicians of Boonville have organized a local medical society with Dr. Walter P. Robinson, president, and Dr. William P. Ford, secretary.—The annual meeting of the Third District Medical Society was held in Mitchell April 30. Dr. Elihu P. Easley, New Albany, was elected president, and Dr. James B. Duncan, Bedford, vice-president. Jasper was selected as next place of meeting.

IOWA

Convicted for Unlicensed Practice.—James E. Myers, Lansing, is said to have been convicted of practicing medicine without a state certificate at the present session of the district court, Waukon.

New Hospital.—A new general hospital, known as the City Park Hospital, has been opened at Mason City. It has accommodation for 25 patients and a training school. The directors are Drs. Charles L. Marston, Clarence M. Swale, William E. Long, C. Freeman Starr and Fred Albert.

Alumni Reunion.—The third annual alumni reunion and clinic of the alumni of the College of Medicine of the University of Iowa was held April 27 and 28, with 218 in attendance. Dr. James E. Conn, Ida Grove, was elected president of the association, and Dr. Clarence E. Van Epps, Iowa City, secretary-treasurer.

Personal.—Dr. Charles M. Harrington, Knoxville, who has been ill, was taken to Mercy Hospital, Des Moines, to be operated on for appendicitis April 19.—Dr. J. Arthur W. Burgess, Iowa Falls, is reported to be in a critical condition from septicemia.—Dr. Norman W. Knepper, Collins, was shot in the breast by his wayward son and seriously wounded April 23.—Dr. Charles Palen has been reappointed city physician of Dubuque.

KANSAS

Individual Drinking Cups.—All common drinking cups in trains, depots and schools are to be abolished by order of the State Board of Health, September 1, as a menace to health.

New Graduates.—The nineteenth annual commencement of the Kansas Medical College, Medical Department of Washburn University, Topeka, was held April 28, when a class of 17 was graduated. The honorary degree of M.D. was conferred on Dr. Charles F. Menninger, a member of the faculty of the school. Dr. William S. Lindsay, retiring dean of the school, acted as master of ceremonies, and the degrees were conferred by President Frank Sanders of Washburn University.

KENTUCKY

Personal.—Dr. E. H. Gary has been appointed assistant city chemist and dairy expert, Louisville, vice Dr. Letchworth Smith, deceased.—Dr. Sara T. Mayo and Edith Loeber have recently joined the clinical staff of the Antituberculosis

League of Louisville.—Dr. Dickran H. Eskilelian, Hopkinsville, has gone to Armenia to visit his parents.

Southwestern Physicians Elect Officers.—At the thirty-ninth annual meeting of the Southwestern Kentucky Medical Association, held May 11 and 12 in Paducah, the following officers were elected: President, Dr. William L. Mosby, Bardwell; vice-presidents, Drs. John S. Davis, Lovelaceville, and William W. Richmond, Clinton; secretary, Dr. Charles E. Purcell, Paducah (re-elected); treasurer, Dr. Charles H. Brothers, Paducah, and historian, Dr. Robert T. Hoeker, Arlington. Benton was selected as the next meeting place.

Antituberculosis Association.—At the annual meeting of the Louisville Antituberculosis Association, April 12, Drs. Samuel A. Hartwell, Jr., Dunning S. Wilson, Frank C. Wilson and Jacob A. Flexner were elected directors, and Drs. D. S. Wilson and Flexner were made members of the executive committee.—It is planned that some time within the month 5,000 women from churches and social organizations of Louisville will start out for a period of two hours' work, to consist of visiting every house in the block in which the visitor lives, and requesting from every person in that block ten cents for furtherance of the antituberculosis movement.—Dr. Dunning S. Wilson of the Louisville Antituberculosis Society delivered a lecture in Henderson May 5 on "The Prevention and Cure of Tuberculosis."

MARYLAND

County Medical Society.—At the annual meeting of Cecil County Medical Society, held at Elkton, May 1, the following officers were elected: President, Dr. Camillus P. Carrio, Cherry Hill; vice-president, Dr. Jesse J. Wright, Warwick; secretary-treasurer, Dr. Howard Bratton, Elkton; censor, Dr. Henry A. Mitchell, Elkton; and delegate to the state society, Dr. John H. Jamar, Elkton.

Against Tuberculosis.—The Social Service League, recently organized at Rockville, has made arrangements for meetings in various parts of Montgomery county, at which addresses on "Tuberculosis" will be delivered. The Montgomery County Medical Society has endorsed the work and offered to co-operate actively in it, and the trustees of the county almshouse have agreed to set aside a portion of the building for the treatment of consumptive patients.

Baltimore

Dinner to Faculty President.—Dr. Howard A. Kelly gave a dinner in honor of Dr. Brice W. Goldsborough, Cambridge, president of the Medical and Chirurgical Faculty of Maryland, at the Maryland Club May 12.

Memorial Year Book.—*The Clinic*, the year book of the graduating class of the College of Physicians and Surgeons, is dedicated to the memory of the late Prof. Isaac Ridgeway Trimble, professor of anatomy in that institution. A tribute is also given to the late Dr. George J. Preston in a poem of eulogy.

Personal.—Dr. J. Albert Chatard has been elected president of the French Benevolent Society.—Dr. E. Linden Mellus is in France.—Dr. William S. Thayer will sail for Europe the end of this month.—Dr. Robert S. Kirk has been elected superintendent, and Dr. John Roth assistant superintendent of the Baltimore Eastern Dispensary.

MICHIGAN

Personal.—Dr. Perry Schurtz has been made president of the Grand Rapids Board of Health.—The Gratiot County Medical Society announces that its meeting May 28, will be in honor of Dr. William D. Scott, Ithaca, one of the oldest practitioners of the county, at which a loving-cup will be presented to Dr. Scott by Dr. Stiles Kennedy, St. Louis.

Governor Signs Tuberculosis Bill.—Governor Warner, on April 27, signed the bill which makes it the duty of physicians to report to their local boards of health within twenty-four hours every case of tuberculosis which comes to their knowledge; imposes on health officers the duty of making quarterly reports in detail of these cases to the State Board of Health, and provides that owners of apartments and houses must notify the local authorities when tuberculosis patients die or move from their premises, that they may be disinfected in accordance with the regulations of the board.

MISSOURI

More Power for Board of Health.—The senate on April 21 passed a bill prohibiting physicians, whose licenses have been revoked by the State Board of Health, from practicing, pending the decision of the Circuit Court in a case taken on writ of certiorari

Graduation Exercises.—The annual graduation exercises of the Barnes Medical College, St. Louis, were held at the Odeon May 14, when a class of 26 was graduated. The annual banquet of the alumni association of the college was held at Hotel Jefferson, May 12, Dr. E. A. Bernins, vice-dean of the college, presiding as toastmaster.

Boisliniere Memorial Fund.—The St. Louis Medical Library Association has assumed trusteeship of the Boisliniere memorial fund, which now amounts to \$1,000, the income from which is to be expended in purchasing periodical literature, bearing on the subjects of obstetrics and gynecology, in which special branches the late Dr. Boisliniere was a distinguished practitioner.

Optometry Bill Defeated.—The legislature has refused to consider the bill introduced by opticians, providing for the creation of a board of examiners in optometry. The defeat was accomplished through the energetic work of the physicians of the state and the active cooperation of Mr. Theodore Haggrenow, a druggist of St. Louis, a member of the committee to whom the bill was referred for recommendation.

Recommendations for Health of St. Joseph.—The health department of St. Joseph has recommended that the city construct an emergency hospital, establish an outdoor ward for tuberculous patients, provide for the care of scarlet fever and diphtheria occurring in hotels, boarding houses, etc., establish inspection of the sanitary conditions and sources of milk supply, and inaugurate medical inspection of public schools.

Vital Statistics Bill.—A bill providing for the collection of vital mortuary statistics has passed the legislature, and is now ready for the governor's signature. It is in accordance with the bill drafted by the committee on legislation of the American Medical Association; and when made a law will place Missouri in the list of states recognized by the United States census department as having adequate state registration for vital statistics.

Society Meetings.—The annual meeting of the Southwest Missouri Medical Society was held in Springfield May 6 and 7, and the following officers were elected: Dr. C. A. Moore, Springfield, president; Drs. William J. Rabenau, Fordland, and O. N. Cotter, Republic, vice-presidents; Dr. Herbert S. Hill, Springfield, secretary (reelected); and Dr. Lee Cox, Springfield, treasurer (reelected).—At the annual meeting of the Southeastern Medical Association, held in Farmington, Charleston was selected as the next place of meeting. The following officers were elected: President, Dr. Barnard W. Hays, Jackson; vice-president, Dr. Charles R. Fleming, Farmington; corresponding secretary, Dr. Thomas C. Allen, Bernie; recording secretary, Dr. Hutton, Chaffee, and treasurer, Dr. William R. Goodykoontz, Caledonia.

MISSISSIPPI

Convicted and Sentence Suspended.—H. A. Thigpen pleaded guilty in circuit court at Laurel to practicing medicine without a license, and is said to have been fined \$25 and costs and, in addition, to have been given a jail sentence of six months, the latter being suspended so long as the defendant desists from practice.

College Commencement.—The third annual commencement exercises of the Mississippi Medical College, Meridian, were held April 30, when a class of 16 was graduated. President, Dr. William W. Hamilton, Meridian, gave a brief history of the college, the doctorate address was delivered by Dr. R. A. Venable, and the diplomas were presented by Rev. J. E. Jones, president of the board of trustees.

Faculty Elected.—Preliminary to the closing of the fiscal year of the Mississippi Medical College, Meridian, the following faculty was elected: Dr. Nathan L. Clark, professor of medicine; Dr. William W. Hamilton, professor of obstetrics; Dr. T. Alexander Barber, professor of diseases of the eye, ear, nose and throat; Dr. Samuel H. Hairston, professor of histology and bacteriology; Dr. Montague J. Lowry, professor of surgery; Dr. Edward E. Robinson, professor of gynecology; Dr. Jefferson W. Anderson, professor of physiology and hygiene; Dr. William W. Reynolds, professor of anatomy; Dr. Thomas J. Houston, professor of genitourinary diseases, and physical diagnosis; Dr. John R. Tackett, professor of clinical medicine; Dr. Henry S. Gully, professor of clinical surgery; Dr. James Bennett, professor of materia medica and therapeutics; Dr. J. H. Phillips, professor of oral hygiene and dental prophylaxis; Dr. James McQ. Buchanan, professor of mental and nervous diseases; Dr. Charles P. Mosby, adjunct professor of diseases of the eye, ear, nose and throat; Dr. Thomas E. Royals, professor of pediatrics; Dr. A. W. Pigford, demonstrator of anatomy; and Hon. A. S. Bozeman, pro-

fessor of medical jurisprudence. The faculty then met and elected the following officers: Dr. Montague J. Lowry, president; Dr. T. Alexander Barber, dean; Dr. Nathan L. Clark, vice-president, and Dr. John R. Tackett, treasurer.

NEW JERSEY

State Society to Meet.—The Medical Society of New Jersey will hold its annual meeting at Cape May, June 23-25.

Society Meetings.—At the annual meeting of Mercer County Medical Society, held in Trenton, May 11, the following officers were elected: President, Dr. Charles H. Mitchell; vice-president, Dr. Gustave A. Schoening; secretary, Dr. Edgar L. West; treasurer, Dr. Iraueus M. Shepherd; recorder, Dr. Charles J. Craythorn, and delegates to the state medical society, Drs. William S. Lalor, George N. J. Sommers, and Paul L. Cort, all of Trenton.—Salem County Medical Society, at its annual meeting, held in Salem, May 5, elected the following officers: President, Dr. John M. Summerill, Penn Grove; vice-president, Dr. George W. Fitch, Daretown; secretary-treasurer, Dr. Henry Chavanne, Salem; reporter, Dr. John F. Smith, Salem; censors, Drs. William H. James, Pennsville, Frank B. Harris, Canton, and Richard M. Davis, Salem, and delegates to the state medical society, Eugene E. DeGroff, Woodstown, and Lester H. Hummel, Salem.

NEW YORK

Site for Insane Hospital Again Opposed.—It is announced that the State Commission in Lunacy had chosen a new site for the proposed asylum at Farmington, L. I. With the announcement that an offer for property had been accepted, the same opposition that was raised in connection with the Grenvale purchase is met. The citizens of Farmington in a mass meeting filed a protest with the governor, the senator, assemblymen, and lunacy commission, against the location of a hospital for the insane at or near the village.

Bills Signed.—Governor Hughes has signed the following bills: Senator Platt's, providing that any person knowingly bringing a domestic animal suffering from an infectious or contagious disease into the state shall be liable to all damages caused by the spreading of such disease; Senator Raines', relative to quarantine for rabies, posting notices and providing a penalty for destroying such notices while they are in force; Representative Shea's, providing that the state shall pay 50 per cent. of the appraised value of an animal condemned for glanders; Representative Boshart's, giving the chief veterinarian of the State Department of Agriculture the same authority to quarantine on account of contagious diseases, as is now held by the assistant commissioners, and also providing for a more stringent labeling of articles termed in the agricultural law "concentrated commercial feeding stuffs," and Senator Newcomb's, rearranging the control of infectious and contagious disease hospitals in New York City as between the various city departments devoted to this work.

New York City

New Training School Opened.—The formal opening exercises of the New Bellevue Training School for Nurses were held April 28. The building is located between East Twenty-fifth and Twenty-sixth streets, and cost about \$1,000,000.

Hospital Suspends.—The Brooklyn Memorial Hospital for Women and Children has been closed because the work of the institution has been so seriously handicapped by the lack of facilities. Arrangements are being made for the erection of a new structure which it is hoped may be erected in two years. The Memorial Dispensary which has been connected with the hospital has been removed to Sterling Place.

To Help the Blind.—The New York Association for the Blind recently gave a benefit at the Hippodrome where between five and six thousand dollars was raised. In connection with the entertainment was an exhibition demonstrating the various kinds of work that could be done by the blind. The association asks \$100,000 as a permanent fund to carry on its work and already has \$85,000 pledged on condition that the remaining \$15,000 be raised.

Enlarge City Hospital.—Plans have been filed for the erection of a two-story and attic pathologic laboratory building as an annex to the Metropolitan Hospital, Blackwell's Island. The main floor will contain the offices, the museum and specimen room and a room for autopsies; the second floor will be fitted as a library and with laboratories for microscopical, chemical and bacteriological research, and also a special private laboratory for the surgeons and the attic will be fitted as a menagerie for animals for experimental use. The structure will cost \$40,000.

United Hebrew Charities May Get Million.—The \$1,000,000 left to the United Hebrew Charities on condition that an agency should make collections for the six charities and that the funds should be distributed among them by Louis A. Heinsheimer, is still in the hands of Alfred M. Heinsheimer, as several of the institutions refused to accept the terms of the will. A meeting was recently held at which a thorough canvass of the situation was made and a resolution was passed calling for the appointment of a committee to consist of one person from each of the six institutions and each of these to choose three additional persons. The testator desired this plan of cooperation in order to reduce the expenses of collection.

NORTH DAKOTA

County Medical Society Organized.—The Richland County Medical Society was organized at Wahpeton May 3. Dr. Martin W. Ivers, Abercrombie, was elected president; Dr. Robert H. Devine, Wahpeton, vice-president; Dr. Timothy O'Brien, Wahpeton, secretary; Dr. Louis W. Meekstroth, Wahpeton, treasurer, and Dr. Charles P. Spottswood, Hankinson, censor.

State Association Meeting.—The annual meeting of the North Dakota Medical Association was held in Fargo, May 11 and 12. The following officers were elected: President, Dr. John E. Countryman, Grafton; vice-presidents, Drs. Henry H. Healy, Grand Forks; N. Oliver Ramstad, Bismarck, and Louis W. Meekstroth, Wahpeton; secretary, Dr. Hezekiah J. Rowe, Casselton (reelected); treasurer, Dr. J. Dempsey Taylor, Minot (reelected); delegate to the American Medical Association, Dr. Victor H. Stickney, Dickinson; alternate, Dr. Zella W. Stewart, Grand Forks, and councilors, Drs. P. J. Artz, Jamestown; Charles McLaehlan, New Rockford; R. W. Pence, Minot, and Edgar A. Pray, Valley City. Grand Forks was chosen as meeting place for 1910.

OHIO

Will Not Prescribe Liquor.—The Wyandot County Medical Society, at its meeting April 29, adopted a resolution that its members refuse to furnish prescriptions for intoxicating liquors until, after having made a personal examination of each patient, it is deemed that the stimulant is necessary.

Sanatorium Dedicated.—On May 1, the Brookside Sanatorium, Dayton, was formally presented to the local tuberculosis society by E. B. Markey, who, in his address, dedicated the institution to the cause of bettering the condition of unfortunate consumptives. Rev. William A. Hale delivered an address on the "Great Cause of Tuberculosis." The sanatorium is located within six miles north of Dayton, and the buildings consist of a two-story brick house, and several structures erected on plans approved by the International Tuberculosis Congress.

Cincinnati

Fresh Air Society.—At the annual meeting of the Fresh Air Society it was announced that the society expected to care for from 2,000 to 3,000 on its farm near Terrace Park, during the coming season, and a plea was made for funds for this purpose, for the painting of cottages, fitting up the dining room, and constructing cement walks, for all of which \$1,100 is needed.

New Plans for Interne Examination.—A new plan for the examination of internes has been adopted in Cincinnati. Four hospitals consented to hold a single examination under the auspices of the staff of the Cincinnati Hospital, the successful candidates being allowed to select the hospital in which they prefer to serve, the selection to be made in order of rank. There were 23 who passed the examination, but as there were only 20 positions to fill, 3 will act as alternates.

PENNSYLVANIA

Personal.—Dr. and Mrs. William G. Miller, New Castle, will sail for Germany early in June.—Dr. Ernest L. Clark has been elected president of the Media Free Library Association.

Appropriations Cut.—Governor Stuart reduced in general the appropriations to the state and semi-state institutions recommended by the legislature. The appropriations to these institutions, however, are higher than they were two years ago.

Food Bill Approved.—Governor Stuart approved the Todd-Murphy Food Bill, May 13. The act is now in force, previous conflicting statutes being repealed thereby. This act permits the use of benzoate of soda and sulphur dioxide as preservatives. A long list of preservatives is forbidden by the act,

including boron compounds, pyroligneous acid, salicylic acid, formaldehyd, sulphate of copper, alum and many others.

Portrait of Dr. Agnew Unveiled.—On May 13, a portrait of the late Dr. D. Hayes Agnew was unveiled at Mercersburg Academy. The members of the Franklin County Historical Society and the medical societies of Mercersburg, Chambersburg and other towns in Franklin county attended the ceremony. The address was delivered by Dr. J. William White, professor of surgery in the University of Pennsylvania.

Tuberculosis Society Directors Elected.—At the annual meeting of the Pennsylvania Society for the Prevention of Tuberculosis, held in Philadelphia April 14, the following directors were elected: Drs. Howard S. Anders, Frank A. Craig, J. Clinton Foltz, Albert P. Francine, C. Lincoln Furlush, William D. Robinson, Jr., William C. White, T. Mellor Tyson, J. Willoughby Irwin, Henry D. Jump, and J. Gurney Taylor, Philadelphia, and Dr. Charles H. Miner, Wilkesbarre.

Bill Vetoed.—Governor Stuart has vetoed the Blewitt bill, which requires all state or other hospitals in the state receiving annual appropriations from the state to furnish to sick or injured firemen, either permanent or volunteer, caused by exposure or accident while in the performance of their duties, a private room or rooms, together with all medical attention, board and supplies, free of charge. The Governor said that there appears to be no occasion for such legislation, and that therefore the act is not approved.

Philadelphia

City to Give Milk to Babies.—The Department of Health and Charities is prepared to distribute free milk and ice to babies during the hot months of the summer. This is the first time that the city has undertaken to supply milk to the children of the poor.

Health Bureau Chief Resigns.—Dr. Alexander C. Abbott, chief of the bureau of health, has resigned his position to take effect June 1. He will devote his time to his work at the University of Pennsylvania and will have charge of the laboratory of hygiene and physiology.

Educational Tuberculosis Exhibition.—An educational tuberculosis exhibition by the Pennsylvania Society for the Prevention of Tuberculosis, was opened in the Auditorium of the Kensington Young Men's Christian Association, May 17, and will remain five days. Demonstrations are being given each day and preventive measures for combating the disease are being outlined.

Lectures to Mothers.—At a conference, May 13, between the Director of Public Health and Charities, and Mrs. Frederick Sehoff, president of the Mothers' Congress, arrangements were made for a series of lectures to mothers on the care and treatment of infants. The lectures will be delivered in the public schoolhouses after school hours by the assistant medical inspectors and nurses connected with the health bureau.

WASHINGTON

First-Aid Equipment for Schools.—The Seattle board of education has ordered that first-aid cases, blankets and hot-water bottles be installed in all school buildings having domestic science departments. The cost of this equipment will be a little less than \$600.

Hospital Notes.—Work will soon commence on the hospital to be erected by the Sisters of Charity between Jefferson and James streets and Seventeenth and Eighteenth avenues, Seattle. The building will be of steel brick and concrete construction, six stories in height, and will cost about \$250,000. —Physicians of Bremerton have raised \$1,100 by popular subscription to purchase a site for a hospital for Kitsap county. The building proposed will cost about \$7,000. —Plans for a three-story addition to the Hoquiam General Hospital to cost about \$10,000, have been prepared, and construction work will soon be begun. —The Emergency Hospital, Seattle, on the fourth floor of the new Municipal Building, was officially opened March 31, when 19 patients were transferred to the hospital. About \$125,000 has been spent on the new hospital, which is under the direction of Dr. James E. Crichton, commissioner of health, assisted by Drs. Frank S. Bourns and Inslee B. Greene.

WISCONSIN

Home for Consumptives.—Plans are being made in Milwaukee for the construction of an isolation hospital for consumptives at Wauwatosa, on a site purchased three years ago for \$32,000. The principal building on the ground will be remodeled to conform to the modern ideas of open-air treatment, and eventually smaller cottages will be erected for the use of patients.

Personal.—Dr. Adelbert Schneider, Milwaukee, has returned from Europe.—Dr. Lawrence P. Mayer, Hudson, is seriously ill with septic pneumonia.—Dr. A. D. McKinley has resigned as house surgeon at the Johnston Emergency Hospital, Milwaukee, to become superintendent of the Fox Lake Sanitarium.—Dr. James W. St. John, Janesville, has been appointed fire and police commissioner.

GENERAL NEWS AND COMMENT

Vanderbilt Alumni Meet.—The alumni of Vanderbilt University Medical Department, Nashville, Tenn., will have their headquarters at Young's Hotel at Atlantic City during the meeting of the American Medical Association, and on June 8 a banquet will be given at the hotel at 8 p. m.

Meeting of Milk Commissions.—The third annual meeting of the American Association of Medical Milk Commissions will be held June 7, at the St. Charles Hotel, Atlantic City. The association now has a membership of 48 milk commissions. Proceedings of the 1908 session will be mailed in a few days.

Internists Elect.—At the annual meeting of the Association of American Physicians, held in Washington May 11 and 12, the following officers were elected: Dr. Henry Hun, Albany, N. Y., president; Dr. Frederick Forelheimer, Cincinnati, vice-president; Dr. George M. Kober, Washington, secretary; Dr. Solomon Solis Cohen, Philadelphia, recording secretary; Dr. J. P. Crozer Griffith, Philadelphia, treasurer, and Dr. Henry Sewell, Denver, counselor.

Gastro-Enterological Meeting.—The twelfth annual meeting of the American Gastro-Enterological Association will be held at Atlantic City at the Hotel Windsor, June 7 and 8. The address of the president, Dr. Julius Friedenwald, Baltimore, will be on the "Development of Gastrology," and in the evening of the first day a symposium on "Gastro-Enterostomy," participated in by Drs. W. B. Cannon, Fred T. Murphy, and Franklin W. White, Boston, Henry W. Bettmann, Cincinnati, and John M. T. Finney, Baltimore.

Laryngologists to Meet.—The thirty-first annual congress of the American Laryngological Association will be held in Harvard Medical School, Boston, May 31 to June 2, under the presidency of Dr. Algernon Coolidge, Jr., Boston. The entertainment includes a luncheon given by the Boston members to the fellows and their ladies and the president's reception on the first day; a luncheon given by the Boston members of the American Otological Society and the American Laryngological Association to visiting fellows and the annual dinner on the second day. On the third day the Otological Society and Laryngological Association discuss nasal and pharyngeal conditions as causative factors in aural diseases.

The Carroll Fund.—The following subscriptions have been received since the last report:

From Medical Officers of the Army.....	\$ 20.00
Dr. F. W. Taylor, Paauilo, Hawaii.....	5.00
Medical Society, Sioux County, Iowa.....	11.00
Dr. A. de Bey, Orange City, Iowa.....	
Dr. G. A. F. de Lespinasse, Orange City.....	
Dr. C. de Jong, Orange City.....	
Dr. A. L. Druet, Boyden, Iowa.....	
Dr. N. G. O. Coad, Hull, Iowa.....	
Dr. D. J. Gleusteen, Alton, Iowa.....	
Dr. G. Marris, Hull, Iowa.....	
Dr. F. L. McAllister, Hawarden, Iowa.....	
Dr. C. S. McCarthy, Hawarden, Iowa.....	
Dr. H. D. Oggel, Maurice, Iowa.....	
Dr. D. J. Werkman, Secretary, Hull, Iowa.....	
Kansas State Medical Society, Columbus, Kansas.....	55.50
Dr. A. W. Hewlett, Ann Arbor, Mich.....	5.00
Dr. Alex. C. Soper, Jr., Chicago.....	5.00
Dr. J. H. Carstens, Detroit.....	5.00
Ohio State Medical Society, Columbus, Ohio.....	112.00
Denver County Medical Society, Denver.....	35.00
Physicians Round Table of the Chicago Athletic Club.....	20.00
	\$ 273.00
Previously acknowledged	3,825.65
Total	\$4,098.65

The sum of \$3,326.50 is still needed to raise the mortgage on this property. Remittances should be sent to Major Ireland, care Surgeon-General's Office, War Dept., Washington, D. C.

Tropical Medicine.—The Far Eastern Association of Tropical Medicine will meet in Manila, P. I., March 6-14, 1910. The session will open at Manila. On the second day protozoology and helminthology will be considered; on the third day, cholera, plague and leprosy; on the fourth day, surgery, obstetrics and diseases of children; on the fifth day, fevers in the tropics, including malaria, typhoid, etc.; on the sixth day, dysenteries and beriberi; on the seventh day, the association will go to Bagnio, Benguet, the summer capital of the Philippines, where tuberculosis, climate, hygiene and sanitation will be discussed,

and the business session will be held. Dr. Paul C. Freer, Manila, president of the association, is anxious to have a number present from the United States in addition to the contingent from the far East, and suggests that any who are intending to make a tour of the world eastward, to so plan their routes as to arrive at Manila in March, the best season, thus having January and February, the best months in the year for India.

FOREIGN

Prizes Offered by the Spanish Academy of Medicine.—The Academy of Medicine at Madrid offers a prize of \$150 and a gold medal for the best works received on "Heart Failure" and "Infant Feeding." The works must be in Spanish, French or Latin, and be sent in anonymously before June 30, 1910. The secretary is D. M. Iglesias, Calle Mayor 6, Madrid, Spain. Among the other prizes offered are two for the best description of some epidemic in Spain which the writers have passed through, citing cases, treatment, etc., with a certificate signed by the *alcalde* or priest as to the writers' professional zeal and devotion during the epidemic. The Rubio prize of \$240 is to be awarded for the most important work or discovery by a Spanish physician during the preceding two years.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 8, 1909.

Bequest for Surgeons Who Contract Blood Poisoning in Operating

Mr. George Smith, a dental surgeon of Newent, Gloucester, who died at the age of 77, made a novel bequest. He left the residue of his estate, valued at \$58,000, after payment of certain legacies to the Royal Infirmary, Manchester, and University College Hospital, London, in equal shares, to be used for the benefit of the members of the surgical or dental staff who may be disabled by infection from puncture or who may contract blood poisoning while examining or operating on patients or making postmortem examinations.

Bequest for a Hospital Free from Socialist and Religious Control

A surgeon, Mr. John Kershaw, F.R.C.S., of St. Anne's-on-Sea, Lancashire, has left \$250,000 for the erection and maintenance of a hospital on his Sunfield estate at Royton, a cotton district in Lancashire. The hospital is to be absolutely free to all who seek treatment. No inquiry is to be permitted as to the means or religious belief of the applicants and no minister of religion nor any socialist is to be an officer of the hospital.

Early Diagnosis of Cancer of the Uterus

At the 1907 annual meeting of the British Medical Association the Section of Obstetrics and Gynecology adopted a resolution requesting the council to appoint a committee to consider the best means of disseminating knowledge of the importance of the early recognition of cancer of the uterus. The committee presented a report which was considered and generally approved by the same section in 1908. At a meeting held on April 28 last the council approved of an appeal to doctors, midwives and nurses to promote the earlier recognition of uterine cancer and directed that this should be communicated to British and colonial medical and nursing journals. The appeal is a lengthy document in which the early diagnosis of the disease is minutely discussed. Its curability by operation in the early stage is emphasized. It is pointed out that the early symptoms are irregular bleeding of any description, even if only in traces—bleeding postcoitum and watery, blood-tinged discharge. There may be no loss of strength or other symptom.

Sir Almroth Wright on Immunization Against Disease

Sir Almroth Wright was entertained at a dinner given in his honor by the Authors' Club, where he delivered an address on "Immunization Against Disease," which was listened to with great interest by a distinguished audience. He contended that our civilization was by no means as complete as we were wont to think. We had not yet come to appreciate the rôle of bacteria, which were among the newly discovered things of the world. We thought we had conquered them by our sanitation, but we had only been fighting against a small portion of them. We had got the better of smallpox, typhoid and dysentery, which now killed very few people in England. But the most serious ills of life now produced by bacteria were not epidemic diseases, but chronic diseases. Everybody

was the subject of, or was going to be the subject of, bacterial disease. These forces would have to be got under control before we could consider our civilization complete. The triumphs of antiseptic surgery were great, but no drug had been discovered capable of killing microbes in the interior of the body. The modern method of immunization began with inoculation against smallpox, which was superseded by the discovery of vaccination. Pasteur devoted his life to the extension of this discovery—immunizing against disease. His name would be associated with prophylactic and phylactic inoculation. The next step was comparatively small. Given a localized disease, such as a boil, by phylactic inoculation, Sir Almroth had found that he could stir up the machinery of immunization and so cure it. Gradually he had applied this principle to other diseases. His conclusion was that given a localized disease and knowing the infective organism, immunization by a vaccine was always possible. In Sir Almroth's opinion, that would ultimately be the treatment of bacterial disease.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, May 6, 1909.

The Reform of Instruction Question

The Association of Members of the Teaching Corps of the Faculties of Medicine, whose foundation I chronicled in a previous letter (*THE JOURNAL*, April 10, 1909, p. 1192), at its first general assembly occupied itself with the question of the *agrégation*. The assembly discussed the question whether the test of admissibility should be by examination or by *concours*. The second solution (*concours*) was decided on by 156 votes against the 52 cast for the project of an examination conferring certificates. The assembly endorsed the position taken in the report of Professor Grasset of Montpellier, viz.: 1, that the admissibility, instead of being a degree or a definitive title, consisted only in a temporary right to the *concours*, limited to the three *concours* following the admission; 2, that the admissibility confers on those who have obtained it no other privilege than that of presenting themselves at the *concours* for admission to the *agrégation*, and does not allow them to be named without a *concours* for the posts of chief of clinic, substitute professor, etc., in the faculties and schools of medicine. The association of members of the teaching corps unanimously pronounced in favor of maintaining the *agrégation*, and of permanent tenure of the post of *agrégé* (at present the *agrégés* are appointed only for a period of nine years).

The Struggle Against Infant Blindness

The minister of the interior has issued to the prefects an important circular relative to the measures to be taken for the prevention of infantile blindness. Notwithstanding that the number of cases of ophthalmia neonatorum has sensibly diminished during ten years, much yet remains to be done in this field. The circular refers to the decree authorizing pharmacists to furnish midwives with a 2 per cent. solution of silver nitrate for preventive instillation in the eyes of the newborn. It recommends the utmost publicity for the following notice: "If the child's eyelids are red, swollen, or glued together, if there is any trickling of liquid or of pus, you may be sure that it does not come from a draught, but from a serious disease. You should suspect ophthalmia, which may make the child blind, and should cause it to be immediately examined and attended by a physician that very day." Finally, the circular calls on the prefects to organize in their departments a medical service for the prevention in school children of the disorders resulting from neglected myopia. It also insists on the necessity for suitably equipping both in personnel and material the local ophthalmologic clinics.

A permanent investigating committee for the aid of the blind, instituted by M. Mirman, director of assistance and public hygiene, has been at work for three months at the ministry of interior, and M. Clemenceau informed himself as to the views of this committee before issuing the above mentioned circular to the prefects.

The recent inaugural thesis of Dr. Jules Vergne on eye inspection in schools, brings strongly into view the gravity of the disease and the necessity for combating it with energetic measures. The following figures are taken from the statistics given by Dr. Vergne: in a *lycée* of the department of the Cher, out of 275 pupils examined only 130 were found normal; in a communal school in Paris, 85 children out of 202 showed a perceptible diminution of visual acuity.

Myopia is generally held to be of school origin. If it were really such, the districts where the illiterates are most numer-

ous should furnish the least myopies. Dr. Vergne, however, found entirely the opposite conditions prevailing, when arranging by departments according to the rules of revision the list of young men exempted from military service for myopia. But if the school is not the primary cause of myopia, it is none the less true that the average of myopia increases from class to class. The sight of the children, then, should be the object of constant care, and it is to be wished that eye inspection should form part of the medical inspection of schools, as it has done for some time in England. Thanks to the happy initiative of certain specialists, like Dr. Baudry of Lille, Professor Truc of Montpellier, Professor Motais of Angers, this inspection is already in operation in a certain number of towns.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 28, 1909.

The Twenty-sixth Congress for Internal Medicine

The Congress for Internal Medicine met in Wiesbaden from April 19 to 22 under the presidency of the well-known clinician of Bonn, Professor Schultze. Nearly a hundred papers were announced and in spite of the fact that the special sessions were considerably prolonged, several members did not succeed in addressing the congress, on account of lack of time. Among the papers read the majority dealt with the circulatory system and metabolism. There is much activity in both of these fields at the present time in the German clinics, especially in those of Berlin, Munich, Heidelberg and Tübingen.

On the first day the only address was that of Prof. Magnus-Levy of Berlin, a young but meritorious investigator in the field of diseases of metabolism. He spoke on the subject of "The Metabolism of Mineral Substances in Human Pathology." Among the mineral substances calcium is of great importance for man, as its quantity varies in different diseases. In rickets there is present too little calcium; this does not depend, as was formerly believed, on the lack of calcium in the diet but on a disturbance of the function of the bone cells. Phosphorus, sulphur and iodine have a somewhat obscure relation to the human organism. On the other hand, of late years it has been shown that common salt has a very important influence, 15 to 20 gm. of sodium chlorid, which is usually the amount taken daily by healthy people, are excreted from the system within twenty-four hours. On the other hand, it has been shown by Widal of Paris and H. Strauss of Berlin that when the excretion of salt in patients with diseases of the kidneys diminishes dropsy occurs. On this fact Widal founded the treatment of nephritic dropsy by restriction of salt in the diet and clinical experience has shown that good results are obtained by this method in many cases. In other diseases also salt is influential in the treatment as for instance, in diseases of the circulatory system, and it has been shown that in the treatment of epilepsy by bromids after salt is excluded the action of the bromids is increased. Finally in nutritive disturbances of nurslings, it has been shown by the investigations of the Berlin pediatrician Finkelstein that fever with loss of albumin and fat may be produced by sodium chlorid and disappear on the withdrawal of that substance; eczema may arise from the same cause. On the conclusion of Magnus-Levy's address, Widal of Paris explained his method of "dechlorination" in disease of the kidney. How large an amount of salt is harmless to the patient must be determined in every case as from $\frac{1}{2}$ to 2 gm. a day are sufficient in many cases to make the food palatable. It is not necessary to give the dropsical nephritic patient an absolute milk diet, but a mixed diet may be given if the amount of salt is reduced to a proper degree. A number of other speakers, especially H. Strauss of Berlin, Bickel of Berlin and Gerhardt of Basel, discussed the subject of metabolism of mineral substances, but there is nothing special to note regarding their addresses.

Great interest attaches to the address of Professor Lenhartz of Hamburg on the third day regarding the treatment of gastric ulcer. For several years Lenhartz has departed from the Leube method and gives on the first day of treatment, even immediately after the cessation of hemorrhage, eggs and milk by the mouth. The hyperacidity which accompanies the ulcer is diminished by the albumin of the egg which combines with the hydrochloric acid and medicines for neutralizing the hydrochloric acid are unnecessary. The pain is also relieved by this diet, so that bismuth and morphin are not needed. As the patients are sufficiently nourished from the first day they are not so much reduced as by the ordinary method and there is less danger of death from asthenia which

is likely to happen after severe bleeding. The patient can leave the bed much sooner than usual. In order to compensate for the hemoglobin lost by hemorrhage Lenhartz gives his patient iron pills (Bland's pills?) which are well borne according to his experience. In the discussion Leube spoke first. Notwithstanding the fact that the results of his many years' experience demonstrated the satisfactory character of his method of treatment, he concludes that one is justified from the communication of Lenhartz in putting patients on a solid diet sooner than heretofore; but for the first days of treatment the nutrient enemata are to be continued especially after hemorrhage. Most of the other speakers, v. Müller of Munich, Moritz of Strassburg, Gerhardt of Basel, Fleiner of Heidelberg, Krehl of Heidelberg, etc., took an intermediate view, but confirm from their own experience the claims of Lenhartz. Fleiner, however, adheres to the old plan of the Leube treatment in its entirety.

On the third day of the session the well-known London neurologist, Head, opened with an address on the subject, "Sensibility and the Testing of Sensibility." Head studied the disturbance of sensibility arising after section of the sensory nerves of his own left forearm, according to the methods developed by him and especially made a comparison of the disturbance during and after the regeneration of the nerves with those disturbances already determined. The details of this investigation must be omitted for lack of space.

From the great number of other papers I give only a brief notice of a few. The clinical significance of the electrocardiogram was much discussed and its value for the diagnosis of disturbance of the heart function was thoroughly recognized. Professor Hoffmann of Düsseldorf was of the opinion that the curves did not indicate the functional capacity of the heart but only the irritability of the heart muscle. Examination of the heart, lungs and digestive organs by the x-ray was demonstrated. Professor Goldscheider of Berlin described his method of graduated percussion of the lungs, with which he claims to have obtained better results than with the ordinary loud percussion. Professor Pässler of Dresden has carefully observed the condition of the mouth in certain affections which run their course with the picture of general intoxication and found that purulent affection of the pharyngeal tonsil or the teeth was the cause. By appropriate treatment of these organs the general symptoms were relieved.

Plesch, of Budapest, an assistant of Professor Kraus of Berlin, has devised a method by which it has been determined from the respired air that 4.5 liters of blood circulate in the body every minute and that 60 c.c. of blood are expelled from the cavities of the heart at each contraction. The blood moves with a velocity of 50 cm. in a second. A complete course of the blood through the body occurs in 55 seconds with 65 pulse beats. The heart performs in a minute the work of 14 meterkilograms; it is eight times better supplied with blood than the rest of the body. In anemic people the amount of blood circulating to a minute is raised to 20 liters. The heart of a healthy man in 60 years performs 350,000,000 meterkilograms of labor and expels from its cavities 2,800,000,000 liters of blood into the circulation.

Curschmann of Mainz draws attention to the fact that in threatened uremia in consequence of kidney disease the tendon and skin reflexes are markedly increased, a fact that may be of diagnostic importance. O. Müller, of Tübingen, from his investigation on the digitalis bodies, draws the conclusion that these preparations act only on the heart and not on the peripheral blood vessels. v. Tabora, of Strassburg, recommends in case of an overloading of the venous system, either a full venesection or to encircle the limbs with an elastic band, so that the blood may be temporarily excluded from the circulation. Schottelius reports favorable results from the treatment of dysentery with an antitoxic serum.

The next congress will be held in 1910, again in Wiesbaden. The president is Professor Kraus, of Berlin.

Work of the Berlin Medical Inspectors of Schools

Each school physician is required to visit quarterly each school placed under his charge. In the report of the president of the association of Berlin school physicians, which recently appeared, a protest is made against the use of a common drinking glass as, especially during the prevalence of an epidemic, there would be danger of conveyance of disease. The school carbonic acid baths are very much liked. Instruction in swimming is given to pupils without charge. The misuse of alcohol has markedly diminished among the school children and now affects only a very small portion of the pupils. To obviate the disadvantage in sitting still during the classes a free movement is permitted in the ten-minute recesses.

Pharmacology

POSLAM

W. A. Puckner and W. S. Hilpert

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

A number of inquiries having been received regarding the composition of "Poslam," the preparation was examined in the Association's laboratory. It is evident, from the letters received, that this nostrum is widely advertised. As physicians are likely to be questioned by their patients as to the therapeutic value, or lack of value of "Poslam," it is desirable that they should be in a position to express an intelligent opinion on the subject.

EXAMINATION OF THE PRODUCT

The preparation is found on the market in small three-quarter ounce "trial" tins, and in 5½ ounce jars bearing the name "Poslam," and the name of the manufacturers, "The Emergency Laboratories, 32 West Twenty-fifth street, New York City," with descriptive matter, in which it is stated that "*the success of Poslam in the cure of eczema and all kindred skin diseases has been absolute.* . . ."

Poslam as examined in the Association laboratory was found to be a gray ointment of the consistency of petrolatum and possessing an odor of oil of tar. Qualitative examination demonstrated the presence of zinc oxid, sulphur, starch, tar oil, menthol, salicylic acid and a fatty base, probably petrolatum. From the results of quantitative estimations¹ it was concluded that the composition of Poslam was essentially as follows:

Zinc oxid	12.01 parts
Sulphur	6.67 parts
Corn starch	22.00 parts
Tar oil	15.18 parts
Menthol	} Small quantity of each
Salicylic acid	
Fatty base q. s.	100 parts

From the results of the analysis it can be seen that the preparation depends for its action on such simple remedies as zinc oxid, sulphur and oil of tar. These have long been used and known as more or less effectual remedies for the treatment of skin affections, but certainly do not warrant such claims as are made in the advertising matter sent out with poslam stating it to be "The newest medical discovery for the treatment of eczema and all other skin affections" and ". . . entirely different from anything yet used . . ."

ANTINEURASTHIN

A New Use for Eggs and Milk

A German nostrum known as "antineurasthin" has been given—for a substantial consideration—many columns of space in British newspapers. This "cure for nervousness" is an "epoch-making discovery" of one Dr. Hartmann. According to the *Pharmazeutische Zeitung* the firm of "Dr. Hartmann" is one of a group of quack-medicine manufacturers against whom the chief of the Berlin police issued a public warning. The commercial possibilities of antineurasthin having thus received a substantial setback in the paternalistic Fatherland, the business, it appears, was transferred to Germany's more *laissez-faire* western neighbor across the North Sea, and we understand is about to appear in this country also.

THE ANALYTICAL "REPORT"

In any event antineurasthin has been heavily advertised as the cure for the "Twentieth Century Disease," and as a remedy that "directly combats the brain-cell and nerve-ganglionic cell degeneracy," whether this sad state of affairs is "due to overwork or mere malnutrition"! Testimonials of the most approved type and an elaborate "report" from an "analyst" with a long string of high sounding titles form part of the stock-in-trade. The editor of London *Truth*, having had occasion to pay his respects to this nostrum, was particularly struck by the positiveness of the statements that appeared

in the published "report" of this particular "analyst" regarding the virtues of antineurasthin; they read "a good deal more like the work of an advertisement-writer than that of a man of science." For instance, the "analyst" states in his report:

"Antineurasthin" does not only "relieve;" it cures by "feeding" the attenuated nerve cells, and thus after awhile, restored to their normal energy and vital powers, they are able to perform their brain and tissue-renewing functions again without external aid.

It is rather unusual for a chemist to express an opinion like the foregoing, on the medical properties of a preparation, based merely on a laboratory analysis. *Truth* sent a representative to the "laboratory" and found that it consisted of some rooms "somewhere upstairs" in the private house at which the "analyst" lodged. The "analyst" himself was not at home and all the landlady could tell about the "Chemical and Physical Laboratories" was that her lodger had "a quantity of bottles" and other paraphernalia in his apartment, "with which he occasionally made appalling smells."

WHAT IS ANTINEURASTHIN?

As to what this "cure for nervousness" is, there seems to be a difference of opinion. According to the manufacturer:

Antineurasthin itself is a scientifically compressed compound of the Myelinic (or Lecithinic) elements of certain costly foods, especially rich in this valuable brain-building constituent of the best of our daily foods.

But the *British Medical Journal*, which had the stuff analyzed suggests that the composition of this marvelous re-newer of brain energy is approximately as follows:

Dried yolk of egg	3.8 per cent.
Dried white of egg	5.4 per cent.
Dried separated milk	57.8 per cent.
Gum	2.0 per cent.
Potato starch	22.7 per cent.
Moisture	8.3 per cent.
Aromatic substances	Traces

The daily dose of four tablets or 122 grains would, according to this formula, contain the equivalent of 10 grains of yolk and 43 grains of white of egg (not dried); the ratio between these is about the same as exists in an average egg and the two may be put together and regarded as about a teaspoonful of fresh egg; in addition the daily dose would represent about 2 oz., or a quarter of a tumblerful, of separated milk and a little starch.

In extolling the "lecithinic elements of certain costly foods" of which its product is said to consist, one wonders whether the Antineurasthin Company is guilty of a subtle joke in thus referring to the outrageously high price of hen's eggs during the past winter! As to the ethics of selling eggs and milk under a fancy name and for a still more fancy price, as a cure of nervousness, we can not do better than quote from the article in *Truth*, already referred to, and which bears the caption, "Hens' Eggs and Nerve Trouble."

"What the public should understand, however, is that most preparations of this kind are based on some remedy, the efficacy of which in certain cases is well-known. In this particular instance the remedy seems to be yolk of egg. The great discovery of Dr. Hartmann converts the domestic hen into a rival of the goose that laid the eggs of gold. The *modus operandi* is worth the attention of poultry farmers. You dry your hens' eggs; you mix them up with plenty of starch, separated milk, or other harmless ingredients; you get a few imposing testimonials and reports from parties who deal in such articles; you engage a smart advertisement-writer, prime him with a little fact and a great deal of scientific jargon; you rent as many pages or columns in the press as you can afford; and your hens' eggs hatch out into handsome dividends. The Twentieth Century Disease, however, goes on as before. My own impression is that quite the worst disease of the twentieth century is the disposition to swallow excessive quantities of preparations of this character, and equally excessive quantities of the newspaper advertisements relating to them."

Eye Examination in Children.—K. H. Goldstone advises examination of the eye fundus in any child who after the fifth month fails to hold up its head, who does not grasp objects, and in whom hyperacusis is present. He believes that amaurotic family idiocy is not so rare as was formerly thought.—*Jour. Med. Soc. of New Jersey*, February.

1. Details of the quantitative analysis of Poslam will appear in the Annual Report of the Chemical Laboratory of the American Medical Association, or they may be had on request.

Miscellany

The New Building of the Medical and Chirurgical Faculty of Maryland

The new building of the Medical and Chirurgical Faculty of Maryland, noted editorially in *THE JOURNAL*, May 15, p. 1580, is the first to be erected by a state medical society in the United States and will be a suitable meeting-place for the society as well as a safe depository for the new library. The dedication will be reported in connection with the state society meeting.

For many years the Medical and Chirurgical Faculty of Maryland has been housed in an ordinary three-story dwelling-house where the meeting halls were too small and the book shelves overcrowded. The contributions for the building have been made by members of the society and public-spirited citizens both toward the general building fund and also to a separate fund contributed as a testimonial to Dr. Osler. In addition, the General Assembly of Maryland, in 1908, voted a donation of \$12,500.

The building is the result of much study, both of the needs of such a building, and of other libraries. The chief feature that the committee had in view was to combine a medical building for a meeting-place for the members of the society and for instructive lectures to the public, and an endeavor was made to have the meeting rooms confined to the first floor. The second feature was to have a quiet place for reading where there would be little or no noise or confusion. The book stack is unique in that very little light from the outside has been permitted, there being only a few small windows, so that the books are protected from the action of light.

The property on which the library stands has a frontage of sixty-six feet on the east side of Cathedral street between Preston and Biddle streets, and runs through to Maryland avenue with a depth of two hundred and forty-six feet.

The building itself is a fire-proof construction of reinforced concrete and brick, having a facade of about 50 feet in height, with a pilaster treatment above, and a basement story on the street level. The treatment is of the Georgian or English colonial type of architecture executed in granite, limestone, terra cotta and brick; the brick work is laid in Flemish and English bond. The entrance to the building is through a vestibule with a marble base and architraves, to the main corridor leading to the stairs and principal rooms. On the right on entering there are two rooms that will be used by the registry for nurses under the direction of the Maryland Association for Nurses. On the left is a room dedicated to the late Dr. Aaron Friedenwald, handsomely furnished in oak and brown leather, and to be used as a conversation room. Back of this is a small meeting hall, with a seating capacity of about 150. Again on the right are the committee, cloak and toilet rooms, and a handsome stairway of solid masonry with marble steps and mahogany handrail, with a wrought iron balustrade, and well-lighted by a skylight and windows.

At the end of the corridor, opposite the front door, is the main auditorium, having a seating capacity of 500, well-lighted by windows at the back and by a large skylight in the vaulted ceiling. The two halls are so arranged that the two may be used together to accommodate unusually large audiences.

The basement of the building contains ample space for the storage of books, manuscripts and reports, and also has a shipping and receiving department; and contains the heating apparatus. Connected with the basement corridor through wide glazed doorways is a supper room of ample size, equipped with kitchen and pantries.

On the second floor of the building extending across the whole front is the main reading-room, known as the "Frick Room," having a high ceiling with beams and an elaborate cornice and wainscot of green material trimmed with mahogany, with a handsome fire-place and mantel at one end of the room and a gracefully arched alcove at the other. This room is furnished in mahogany, with easy chairs, writing tables and other conveniences for the use of the readers. Opening from this room is the periodical room, and back of this the librarian's office, and between this and the book stack is the cataloging room.

The back of the main building, which does not include the principal auditorium mentioned above, is given up to the stack room, which is designed after the most modern models, is fitted with the best Snead metal fireproof stacks and has a capacity of 70,000 volumes; it can be entered only through a fireproof door from the cataloging room and is practically a solid vault of concrete, brick and steel.

On the third floor are five large rooms, one of which will be used for a clinical laboratory for the use of the members, the others for section meetings and committees.

The fourth floor is not visible from the front and contains housekeeping apartments for the librarian and assistant, complete in every detail of convenience and equipment.



The new building of the Medical and Chirurgical Faculty of Maryland.

Origin of the Outbreak of Foot-and-Mouth Disease

The Bureau of Animal Industry of the U. S. Department of Agriculture has just published the result of the investigation of the origin of foot-and-mouth disease among cattle which prevailed during the early part of last winter. An abstract of the report furnished by the bureau is as follows:

The recent outbreak of foot-and-mouth disease in Michigan, New York, Pennsylvania and Maryland started from calves used in the propagation of smallpox vaccine virus which had been contaminated with the virus of foot-and-mouth disease, and the contaminated strain of vaccine originally came from a foreign country. These are the conclusions from an investigation made jointly by the Bureau of Animal Industry of the Department of Agriculture and the Public Health and Marine-Hospital Service of the Treasury Department, a report of which has just been issued. The investigation was conducted by Dr. John R. Mohler, chief of the Pathological Division of the former bureau, and Dr. M. J. Rosenau, director of the Hygienic Laboratory of the latter bureau.

Foot-and-mouth disease was discovered among cattle in Pennsylvania Nov. 10, 1908, and was reported to the Department of Agriculture by the state veterinarian of Pennsylvania. A few days later it was found also in Michigan, New York, and Maryland. In view of the strict quarantine maintained by the Department of Agriculture on imported live stock and the fact that the importation of ruminants from countries where this disease existed was prohibited entirely, the department considered it highly improbable that the infection was brought in with animals. When, therefore, the disease was traced by inspectors of the Bureau of Animal Industry to calves that had been used for vaccine by a Detroit establishment (Parke, Davis & Co.), and the cases of longest standing were found among these calves, these facts caused Secretary of Agriculture James Wilson and Dr. A. D. Melvin, Chief of the Bureau of Animal Industry, both of whom had gone to Detroit to make a personal investigation of the outbreak, to suspect that the vaccine was contaminated with the virus of foot-and-mouth disease. As the United States Public Health and Marine-Hospital Service was charged by law with the supervision of biologic products used in human medicine, that service was requested to join the Bureau of Animal Industry in making an investigation.

The main facts regarding the outbreak as brought out in the report are as follows: The H. K. Mulford Company of Glenolden, Pa., imported certain smallpox vaccine virus which

cine virus. In the recent investigation by Drs. Mohler and Rosenau, however, they used animals which had been vaccinated and were therefore immune to vaccinia or cowpox, so that in case the infection of foot-and-mouth disease was present in the vaccine under suspicion the lesions of that disease would not be suppressed or obscured by those of vaccinia. By this method and by means of intravenous inoculation they were able to detect the contaminating infection when it might not otherwise have been discovered.

The fact that the infection was present in the vaccine virus of the Mulford Company for so long a period, but was not transmitted to outside cattle, was doubtless due to this firm's practice of killing its calves after taking the vaccine virus. Parke, Davis & Co., on the other hand, rented their calves and placed them again on the market a short time after the vaccine material was taken. In this way the disease spread from the vaccine stables of Parke, Davis & Co., but not from those of the Mulford Company, although it was the vaccine virus from the latter establishment that infested the former's cattle.

According to Drs. Mohler and Rosenau, foot-and-mouth disease is primarily and principally a disease of cattle, and affects man only secondarily and casually. Children are occasionally infected by drinking unboiled milk during the periods in which the disease is prevalent in the neighborhood, while persons in charge of diseased animals may become in-

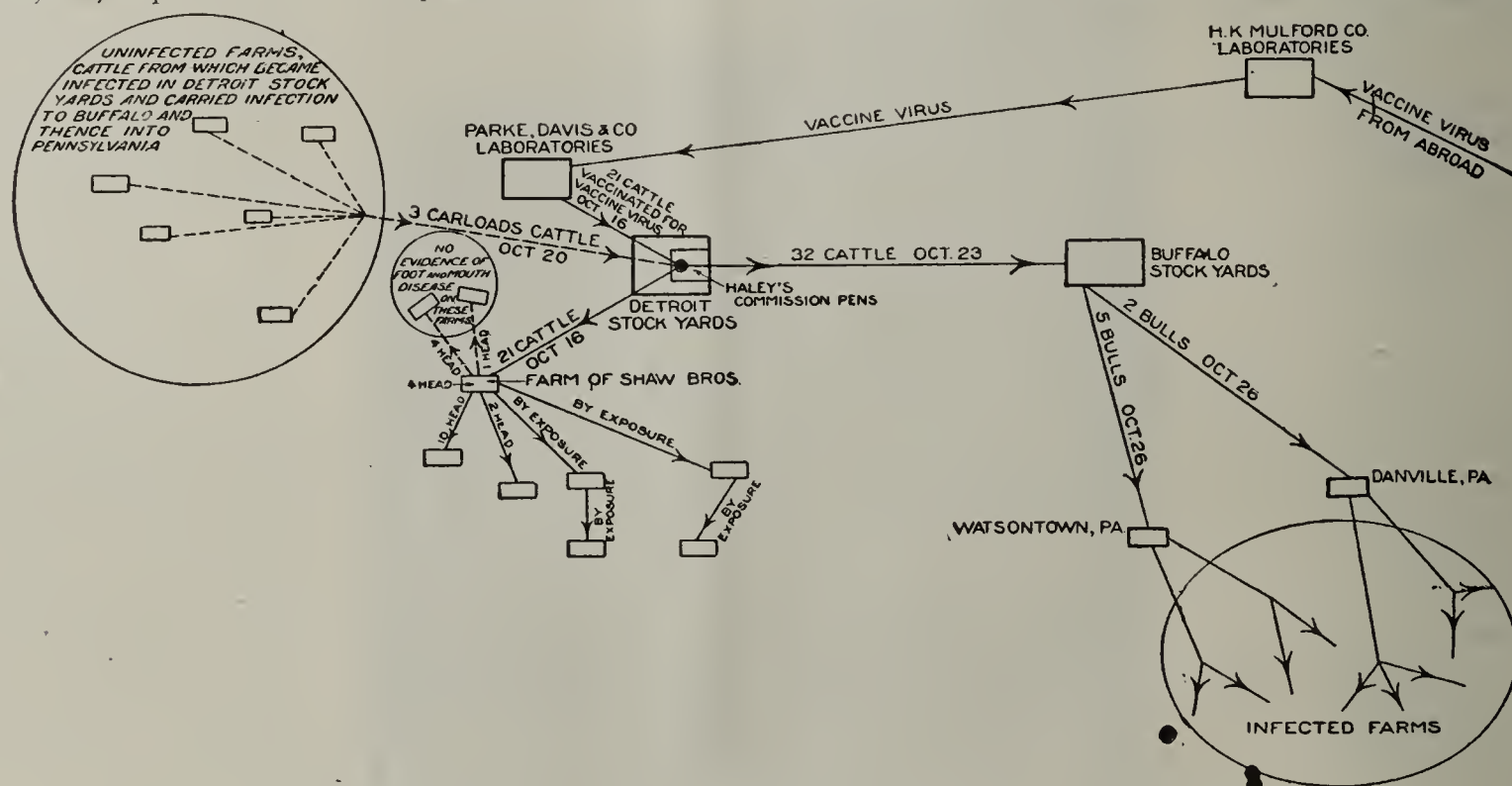


Diagram showing how infection of foot-and-mouth disease was spread.

was contaminated with the infection of foot-and-mouth disease. In May, 1908, some vaccine of this strain was procured by Parke, Davis & Co., of Detroit. Calves used by the latter firm in propagating vaccine were sent October 16 to the Detroit stock-yards and thence on the same day to a farm near Detroit. On October 20 three carloads of cattle from points in Michigan reached the Detroit stock-yards and were put into the pens that had been occupied by the vaccine calves four days previously. Some were sold for slaughter at Detroit, while the remainder were shipped to Buffalo, and some were reshipped to Danville and Watontown, Pa., where the disease was first observed some days later. The disease spread to various places in Pennsylvania and New York and to one locality in Maryland.

Three separate series of experiments were made by Drs. Mohler and Rosenau. Young cattle and sheep were inoculated with vaccine virus obtained from both firms. Foot-and-mouth disease was produced in experimental animals by the use of vaccine of the same strain obtained from both sources, while other strains of vaccine tested gave negative results. The disease was also transmitted from one animal to another, through several series, in two instances by natural modes of infection.

The investigation also indicates that the outbreaks of foot-and-mouth disease in New England in 1902-3 were probably due to contaminated vaccine of Japanese origin from the Mulford Company. While an investigation was made at that time, the results were confusing so that it was not definitely determined that the outbreaks were due to contaminated vac-

fects through contact with the diseased parts or by milking, slaughtering, or caring for the animals. The disease when communicated to man, however, is very seldom fatal, the affection usually being too slight to come to the notice of the family physician.

As soon as the facts regarding the contamination of vaccine became known the licenses of the two firms involved were at once suspended, all the suspected vaccine virus on hand was destroyed and that on the market withdrawn, and other measures of a radical nature were taken. The report commends the intelligent and prompt cooperation of the Mulford Company and Parke, Davis & Company in accomplishing this end.

After examination of every strain of vaccine on the market it is stated that there is now on the market no vaccine contaminated with the virus of foot-and-mouth disease. Regulations have been formulated with a view to preventing hereafter the propagation of contaminated vaccine virus. No instance of the transmission of foot-and-mouth disease to man through vaccine virus has been recorded, and it is considered doubtful, in view of the tests made, if it is possible to reproduce the disease in him by the cutaneous inoculation commonly used in the process of vaccination.

The recent outbreak of foot-and-mouth disease in live stock has been eradicated after vigorous work by the Bureau of Animal Industry in cooperation with state authorities, involving the expenditure of \$300,000 by the Federal Government alone. The quarantine on the last of the infected territory was removed April 24.

Book Notices

THE SURGERY OF THE EAR. By Samuel J. Kopetzky, M.D., Attending Otologist, New York City Children's Hospitals and Schools. Cloth. Pp. 368, with illustrations. Price, \$4.00. New York: Reiman Co.

This book mentions everything of importance relative to aural surgery and evidently is the result of painstaking and conscientious effort. Anatomic considerations accompany the description of each operation and the latest modifications and suggestions are included, so that the work may be regarded as up-to-date and based on a careful study of the literature of the subject.

As is proper, the greatest stress is laid on mastoid and its accompanying brain and neck surgery, but the minor operative procedures, such as paracentesis, ossiculectomy, and the little operations on the external auditory canal are also considered; and subjects accessory to the surgery of the ear, such as paralysis of the facial nerve and the diagnostic procedure of lumbar puncture, receive satisfactory mention. It is evident from the text that Dr. Kopetzky has had an extensive personal experience in the operative measures he describes.

While the book has the merits mentioned it demands a careful revision in future editions in order to remove the faults which it now possesses. Description is frequently vague and Dr. Kopetzky's familiarity with his subject has often led him to use mere allusion in place of the careful and detailed explanation required to instruct those less versed in the study of the ear. Many of the operations are so vaguely described and with such a lack of adroitness in expression that it would be necessary to consult other books before one could feel prepared to perform them; and the anatomic part of the book suffers from the same lack of skill in the use of language. In fact, the English of the entire work needs careful revision and there is hardly a page where some bit of description or an expression is not lacking which, if supplied, would help to explain a subject now left obscure. As an example, in the paragraph on new growths of the auditory canal no mention whatever is made of the nature of these growths, so that the reader can not tell whether the author is referring to a carcinoma, a papilloma or a fibroma. Anatomic structures familiar to the author are frequently referred to by him by but a part of their names, thus confusing the reader. Thus the squamous portion of the temporal bone is spoken of simply as the squamosa. There is also much inaccuracy in Latin diction, such as the use of "*cavitas concha*" for "*cavitas conchæ*," "*porous acusticus*" for "*porus*." Similar little slips in English and Latin are frequent throughout the work and show a carelessness in revision which is unfortunately frequent in American medical literature. To sum up, the book is one which catalogues fully its topics and contains much useful information conscientiously collected; but this information is presented in a manner which is often so confused and inaccurate in expression that it conveys no clear idea to the reader and could not serve as a guide for the operative procedure of which the description is attempted. The work is far from belonging to the list of classical text-books which have a standard place in medical literature because they represent the product of superior authoritative knowledge combined with the rare qualities of exact, lucid and logical description.

ANATOMIE UND MECHANISMUS DER SKOLIOSE. Von Carl Nicolaoni, Professor der Chirurgie an der Universität Graz, K. K. Hofrat. Cloth. Pp. 58, with illustrations. Price, \$2.25. Wien: Urban & Schwarzenberg, 1909.

This book of 58 pages contains a minutely detailed description of the macroscopic anatomic peculiarities occurring in high-grade lateral curvature of the spine, most of the material having been drawn from a very complete dissection of the cadaver of an adult female scoliotic. The changes in shape and position of the abdominal and thoracic viscera are noted and described, as well as the skeletal abnormalities. The work will be of great interest to the orthopedic specialist, but is too highly technical for those not especially familiar with the subject. A series of 37 plates, beautifully executed, accompanies the text. The German literature on the subject is briefly reviewed, and there is a short introduction by Julius Hoheuegg.

UEBER FREMDE KÖRPER, WÜRMER UND INSEKTEN IM MENSCHLICHEN OHR UND IHRE BEHANDLUNG VON DEN ÄLTESTEN ZEITEN BIS HEUTE. Von Dimitrios Styl. Dimitriadis, Privat-docent an der Athener Universität. Pp. 248. Athens: Druck von P. D. Sakellarios, 1909.

The quaint work of Dr. Dimitriadis on foreign bodies, worms and insects in the human ear is essentially a historical one. By reference to the original source he sketches the views regarding foreign bodies, animate and inanimate, in the ear from the days of classic Greece to modern times. It is interesting to note that even the earlier observers recognized the importance of foreign bodies in the ear and gave sound advice regarding their removal. Almost all surgeons agree in recommending the syringe before using traction instruments. From more recent literature he quotes some of the oddities occasionally observed and shows by illustrative cases the possible danger to life from foreign bodies in the ear, especially from unskillful efforts at removal. Six plates illustrate surgical instruments of the ancients.

DISEASES OF THE DIGESTIVE CANAL. By Paul Cohnheim, Specialist in Diseases of the Stomach and Intestines in Berlin. From the Second German Edition. Edited and Translated by Dudley Fulton, M.D., Lecturer on Medicine, University of Southern California, Los Angeles. Cloth. Pp. 373, with illustrations. Price, \$4. Philadelphia: J. B. Lippincott Co.

The practicality of this work should commend it to the general practitioner, for whom it is especially intended. Marked emphasis is placed on obtaining a thorough clinical history, and laboratory methods are simplified and assigned their proper place as aids in the diagnosis. The principles of dietetic treatment, massage, etc., are given in an appendix. The translation is well done; but the term Rhodankalium is transferred directly from the German, and we fear it might be unintelligible to the average reader.

SPECIAL HOSPITALS—THEIR ORIGIN, DEVELOPMENT AND RELATIONSHIP TO MEDICAL EDUCATION, THEIR ECONOMIC ASPECTS AND RELATIVE FREEDOM FROM ABUSE. By Richard Kershaw. Paper. Pp. 72. London: Geo. Pulman & Sons, Ltd.

This brochure is a defense of specialism in medicine and an apologia for special hospitals in general and the Central London Throat and Ear Hospital, of which Kershaw is secretary, in particular. It begins with an interesting review of specialism in medicine from the earliest date, with illustrations of Greek and Roman votive tablets, oculists' seals, etc. It then discusses chronologically the establishment of the special hospitals of modern times in Great Britain and Ireland from the foundation of the London Fever Hospital, 1801, to the nine special hospitals founded in the last decade of the nineteenth century, bringing the total up to 167. Hospital economy is considered and the abuse of hospital charity discussed. The value of special hospitals in medical education is demonstrated by the fact that nearly all the heads of special departments in the great teaching hospitals of medical schools gained their training in the special hospitals. We are sorry that Kershaw helps to spread the prevalent idea that no dissection was permitted in the teaching of anatomy and surgery until the middle of the sixteenth century.

FRÜHDIAGNOSE UND TUBERKULOSE-IMMUNITÄT, unter Berücksichtigung der Neuesten Forschungen: Konjunktival und Kutan-Reaktion, Opsonine, etc., Speziell der Therapie und Prognose der Tuberkulose. Von A. Wolff-Eisner, Berlin, Arzt f. innere Krankheiten u. Bakteriologie des städt. allgemeinen Krankenhauses Friedrichshain-Berlin. Edition 2. Paper. Pp. 378, with illustrations. Price, 12 marks. Würzburg: Curt Kabitzsch (A. Stuber's Verlag), 1909.

As the title indicates, this book discusses the latest developments in the study of the reactions of the human body to tuberculous infection with especial reference to their practical application in diagnosis, treatment and prognosis. The characteristics, the significance, and the technic of the production of the cutaneous and conjunctival reactions are fully described and well illustrated. While the book in some ways bears evidence of considerable haste in preparation, yet it is recommended as an exhaustive and authoritative work in the field that it covers. The illustrations and curves are instructive and valuable. There is a good table of contents, a list of 577 references to the literature, but no index at the end of the volume.

SURGICAL DISEASES OF CHILDREN. By Samuel W. Kelley, Professor of Diseases of Children, Cleveland College of Physicians and Surgeons. Cloth. Pp. 768, with illustrations. Price, \$5.00. New York: E. B. Treat & Co., 1909.

A book devoted to surgical pediatrics is something new. Ordinarily the subjects are covered in works on orthopedic surgery and general surgery. Dr. Kelley's implied reason for the creation of this new general subject is that of all surgical disorders of children, some are found only in children, some are found most often in children, and the rest are modified by occurrence in children. Thus surgical pediatrics, as a subject separate from general surgery, is justified in the same way as medical pediatrics as separate from general medicine, but differently from the justification of orthopedic surgery which is identified by dealing only with certain structures, and not only with a certain age.

The book systematically covers examination of children, surgical pathology of childhood, general infections, fractures and other traumas; all congenital and acquired deformities, bone and joint diseases, and regional surgery in children. The book is well illustrated, the twenty-six page index, an important part of any large book, is carefully prepared, and Dr. Kelley's tone is judicious, personal and not unduly authoritative, for no one man can be authority for such a long range of subjects.

A MANUAL OF CLINICAL DIAGNOSIS. By James Campbell Todd, Ph.B., M.D., Associate Professor of Pathology, Denver and Gross College of Medicine (University of Denver). Flexible Leather. Pp. 318, with illustrations. Price, \$2.00. Philadelphia: W. B. Saunders Co., 1908.

This manual is well adapted to be a guide to the clinical laboratory work of the general practitioner. The methods are practical and are selected on the principle that it is better to learn one method well than to be acquainted superficially with many. The book is convenient in size and well illustrated, which adds greatly to the value of such a work.

A TEXT-BOOK OF MEDICAL CHEMISTRY AND TOXICOLOGY. By James W. Holland, A.M., M.D., Professor of Medical Chemistry and Toxicology, and Dean, Jefferson Medical College, Philadelphia. Second Edition. Cloth. Pp. 655, with illustrations. Price, \$3. Philadelphia: W. B. Saunders Co., 1908.

The second edition of Dr. Holland's text-book presents a thorough revision, which brings it in accord with the recent edition of the United States Pharmacopeia and the advances in physiologic chemistry. Few medical students enter on their course with a thorough understanding of general chemistry; and this fact makes it necessary to devote a large part of the work—more than half—to general chemical principles and the chemistry of the elements. The treatment, however, is specially suited to the requirements of the medical student. The sections dealing with organic and physiologic chemistry include the methods of analysis of the gastric contents, milk and urine. The tests given are such as will be practically useful. While the revision has introduced the most recent methods, it is a little disappointing to find antiquated methods like Ewald's salol test and the use of potassium iodid to determine the absorptive power of the stomach still retaining a place in so excellent a text-book.

A SYSTEM OF MEDICINE. Vol. 4. Parts 1 and 2. By Many Writers. Edited by Sir Clifford Allbutt, K.C.B., M.A., LL.D., D.Sc., F.R.C.P., F.R.S., F.S.A., Regius Professor of Physic in the University of Cambridge, and Humphry Davy Rolleston, M.A., M.D., F.R.C.P., Senior Physician, St. George's Hospital, Cambridge. Cloth. Price, \$3 per volume. New York: The Macmillan Co., 1908.

This volume iv has been divided into two parts: The sections on diseases of the nose, pharynx and larynx have been expanded and combined with a section on diseases of the ear to form a separate volume. Some new articles have been introduced and the subjects treated in the previous edition brought up to date. No extensive review or commendation of this valuable and well-known work is necessary. The inclusion of diseases of the ear in a work on general medicine, while unusual, seems eminently appropriate, both on account of the intimate relations of the ear with the brain, and also because the general practitioner will naturally desire to find in his treatise on medicine such an account of ear diseases as will enable him to treat successfully such patients as need not be referred to a specialist.

Association News

CLINICS AT PHILADELPHIA

Series of Clinics and Demonstrations Arranged for Those Who Go to Atlantic City

THE JOURNAL has received the following announcements:

MEDICO-CHIRURGICAL COLLEGE

The Medico-Chirurgical College of Philadelphia cordially invites any members of the American Medical Association to visit the institution on their way to or from Atlantic City, and to attend the special clinics as indicated below:

Monday, June 7

- 9 a. m. Internal Medicine, Prof. James M. Anders.
- 10 a. m. Surgery, Prof. William L. Rodman.
- 11 a. m. Surgery, Prof. William L. Rodman.
- 12 m. Orthopedics, Prof. James P. Mann.
- 1 p. m. Ophthalmology, Prof. L. Webster Fox.
- 3 p. m. Internal Medicine, Prof. Judson Daland.

Saturday, June 12

- 10 a. m. Obstetrics, Prof. W. Frank Haehnlen.
- 11 a. m. Surgery, Prof. Ernest Laplace.
- 12 m. Genitourinary Diseases, Prof. H. M. Christian.
- 1 p. m. Pediatrics, Prof. W. C. Hollopeter.
- 3 p. m. Otology, Prof. Edward B. Gleason.

Other clinics will be arranged for Monday, June 14, if desired by any of the visitors.

The members of the Association are also cordially invited to attend the Alumni Reunion and Smoker of the Medico-Chirurgical College on the evening of Tuesday, June 8, which will be held at the Hotel Rudolf, on the Boardwalk, at Atlantic City.

SAMARITAN HOSPITAL

The staff of the Samaritan Hospital, Broad and Ontario streets, Philadelphia, will give clinics for visiting physicians as follows:

Monday, June 7

- 11-12 a. m. Medical Clinic, Dr. I. Newton Snively.
- 12-1 p. m. Gynecologic Clinic, Dr. Frank C. Hamond.
- 1-2 p. m. Exhibition of Gynecologic Specimens, Dr. Harry A. Duncan.
- 2-3 p. m. Rectal Clinic, Dr. Collier F. Martin.
- 3-4 p. m. Ear, Nose and Throat Clinic, Dr. Nathan G. Ward.
- 4-6 p. m. Surgical Clinic with Demonstrations of Spinal and Narcotic Anesthesia, Dr. W. Wayne Babcock and Dr. William A. Steele.

Saturday, June 12

- 11-12 a. m. Obstetric Clinic, Dr. John C. Applegate.
- 12-1 p. m. Gynecologic Clinic, Dr. Wilmer Krusen.
- 1-2 p. m. Pediatric Clinic, Dr. James H. McKee.
- 2-3 p. m. Medical Clinic, Dr. Samuel Wolfe.
- 3-4 p. m. Ophthalmic Clinic, Dr. Wendell Reber.
- 4-5 p. m. Surgical Clinic, with Demonstrations of Spinal and Narcotic Anesthesia, Dr. W. Wayne Babcock.
- 5-6 p. m. Genitourinary Clinic, Dr. William A. Steel.

Correspondence

A National Home for Aged or Invalid Physicians

To the Editor:—The establishment of a national home for aged, incapacitated and invalid physicians is a question which can profitably be considered by the American Medical Association. The broad humanitarianism of such a plan should appeal to our membership; its practicability should insure an early investigation and a report of its advisability.

The project is feasible. That has been demonstrated by labor unions and fraternal orders. In 1892, the Union Printers' Home, the pioneer of such institutions, was dedicated at Colorado Springs, Colo. In the seventeen years which have elapsed since that time every cent of the \$800,000 which has been spent in maintenance and in permanent improvements, with the exception of a \$10,000 gift and an endowment of \$1,000, has come from the ranks of the union. The monthly assessment on each of the 45,000 members was originally ten cents; this was increased a few years ago to fifteen cents, which means half a cent a day, or less than the amount an average printer will earn in a minute's working time. This provides an annual fund of nearly \$90,000. More than 1,000 members have been admitted to the Printers' Home; the average number of residents is 150; and the average cost per month \$30. The property has a valuation of \$1,000,000.

The Modern Woodmen of America, with a membership of 1,000,000, has this winter opened its national sanatorium for the treatment of tuberculosis, north of Colorado Springs. This institution will ultimately involve an expenditure for personal improvements of \$500,000 or more, and will provide accommodations for 500, or possibly 1,000 patients. It costs every member of the order ten cents a year.

With a membership of about 32,000, the American Medical Association is assured of ample support in undertaking to build and maintain an institution of this character. An assessment of \$2.50 the first year would provide all the money necessary for the purchase of a site and the erection of the necessary buildings. After that, a monthly assessment of five or ten cents would adequately maintain the home.

Such an institution would fill a want in the membership of the Association. To the physician who is no longer able to engage in the practice of his profession because of broken health, it would offer a retreat where he could build up his lost strength and vitality under the most favorable of conditions; to the aged practitioner who still is required by force of circumstances to continue his daily work at a time when his years of active service should entitle him to a rest, it would be a haven of peace. The matter of planning the institution on such broad lines that provision might be made for the care of the families of those who seek its shelter is one that should be given the most careful attention.

This is a humanitarian project of the highest type; it is not charity. Every member of the American Medical Association, on doing his share in the establishment and maintenance of the institution, would by right feel that it truly should be and would be his home should the vicissitudes of life, from which none of us are immune, ever give him reason to seek its kindly shelter. This is a matter which is deserving of the most careful consideration of our membership, and I present it at this time that it may come up for preliminary discussion at least, at the forthcoming convention at Atlantic City.

A. C. MAGRUDER, M.D., Colorado Springs, Colo.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

METHOD OF DETERMINING DIASTOLIC BLOOD PRESSURE

To the Editor:—I have just been reading two articles in German periodicals describing the determination of diastolic blood pressure by the auscultatory method. When I was in Germany last summer, I learned this method from a young German physician in Nauheim and have successfully used it with interest ever since. In none of these articles is mentioned this method, which I have found in practice to be much simpler than any other and just as accurate.

The method is this: After the physician has determined the systolic pressure by some method involving the circulatory compression of the arm, he relaxes the pressure and says to the patient, "At one time during the examination, you felt a very distinct throbbing of the arm. Now I am going to make the determination over again and I want you to tell me as soon as that throbbing returns to as great an extent as you felt it at any time." Then the physician gradually makes pressure on the arm and when the patient says, "Now I feel the throbbing to as great an extent as before," the physician reads the diastolic pressure.

I have tested this method in comparison with the other methods and my personal belief is that with the instruments so far invented, it will be found, in the hands of most observers, more correct than any of them. Of course most of my own experience has been with my own blood-pressure apparatus, using hydrostatic pressure as shown in the accompanying illustration.

I therefore enumerate the diastolic pressure determination methods as follows: (1) the tactile method; (2) the graphic method; (3) by the observation of the fluctuations of pressure; (4) the auscultatory method; (5) the subjective pulsation method, which I employ.

LOUIS FAUGÈRES BISHOP, 54 West 55th St., New York.



DISINFECTION BY FORMALDEHYD

To the Editor:—Please tell me how formaldehyd and potassium permanganate are used in combination as a germicide, and what is the result of the combination.

C. C.

ANSWER.—This method was described in THE JOURNAL, July 14, 1906, xlvii, 139, and Jan. 12, 1907, xlviii 159. The action between the potassium permanganate and a part of the formaldehyd produce enough heat to volatilize the greater part of the formaldehyd as formaldehyd gas, which is the disinfecting agent.

RUOTTE'S ANASTOMOSIS OF SAPHENOUS VEIN TO PERITONEUM

To the Editor:—In THE JOURNAL (Nov. 14, 1908, li, 1662), which I have had the pleasure of taking for two years, there is a paper by Alexis Carrel, entitled "Results of the Transplantation of Blood Vessels, Organs and Limbs," in which the following passage appears: "Ruotte cut the saphenous vein and sutured its peripheral end to the peritoneum in a case of chronic ascites. The ascites disappeared." As there is no further mention of the said Ruotte, I apply to you for any possible information in regard to Ruotte's paper.

L. SLAVINSKI, M.D., Warsaw, Poland, Russia.

ANSWER.—Ruotte published his work on the treatment of chronic ascites by anastomosis of the saphenous vein to the peritoneum in *Lyon médical*, 1907, page 574. The title of the paper is "Abouchement de la veine saphène au péritoine comme traitement de l'ascite." In a case of cirrhosis of the liver, the ascites reproduced itself very quickly after puncture. Ruotte dissected and cut the saphenous vein 8 cm. below its mouth, and sutured its peripheral end to the peritoneum just above Poupart's ligament. The ascites disappeared. Several months after the operation, the patient was in good condition and the ascites had not reappeared. In another case, the patient was in a very bad general condition and died a few days after the operation. Post-mortem examination showed that the saphenous vein was normal. On the peritoneum, a little infundibulum was seen at the place of its anastomosis to the saphenous vein. A catheter could easily be introduced from the peritoneum to the femoral vein through the saphenous vein.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ended May 15, 1909:

Hanson, L. H., 1st lieutenant, granted leave of absence for fourteen days.

Woodson, R. S., major, granted leave of absence for four months.

Russell, F. F., major, ordered to Philadelphia and New York City, on business of the Medical Department, and then to return to Washington.

Schmitter, Ferdinand, 1st lieutenant, granted leave of absence for ten days.

Whitmore, E. R., capt., detail with Bureau of Science, Department of the Interior, Philippine Islands, extended one year.

Field, Peter C., capt., ordered to duty at a military tournament at Toledo, Ohio, June 26, 1909.

Chamberlain, W. P., major, granted leave of absence for ten days.

Love, Albert G., 1st lieutenant, granted leave of absence for fourteen days.

Crosby, E. D., lieutenant-col., Kean, J. R., lieutenant-col., Ireland, M. W., major, Russell, F. F., major, detailed to represent the medical department of the Army at the meeting of the American Medical Association at Atlantic City, N. J., June 8 to 11.

Thomason, H. D., capt., relieved from duty at Fort Douglas, Utah, and ordered to Fort Missoula, Mont., for duty.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended May 15, 1909:

Nash, F. S., surgeon, ordered to additional duty at the Marine Recruiting Station, Philadelphia.

Minter, J. M., asst.-surgeon, detached from the Naval Recruiting Station, Cincinnati, and ordered to the Naval Medical School Hospital, Washington, D. C., for treatment.

Gardner, J. E., Medical inspector, ordered to additional duty at the Naval Recruiting Station, Boston.

Byrnes, J. C., medical inspector, detached from the West Virginia and ordered to the Tennessee as fleet surgeon of the Pacific Fleet.

Porter, F. E., P. A. surgeon, detached from the Naval Recruiting Station, Boston, and ordered to the Naval Station, San Juan, P. R., sailing from New York May 22.

Turner, H. W. B., asst.-surgeon, detached from the Hancock and ordered to the Paducah, sailing from New York about May 21.

Fauntleroy, A. M., P. A. surgeon, detached from Marine Recruiting Office, Philadelphia, and ordered to the Hartford.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 14, 1909:

SMALLPOX—UNITED STATES

California: Berkeley, April 17-24, 1 case; Oakland, April 19-26, 2 cases; Sacramento, March, 1-31, 2 cases.
 Georgia: Macon, April 25-May 2, 7 cases.
 Illinois: Danville, April 25-May 2, 8 cases; Galesburg, April 24-May 1, 1 case; Springfield, April 23-30, 1 case.
 Indiana: Fort Wayne, April 17-24, 1 case; Indianapolis, April 25-May 2, 1 case; La Fayette, April 26-May 3, 3 cases; South Bend, April 25-May 1, 3 cases.
 Iowa: Cedar Rapids, April 1-30, 2 cases; Council Bluffs, April 25-May 3, 1 case; Sioux City, April 1-30, 1 case.
 Kansas: Kansas City, April 25-May 1, 1 case; Wichita, 4 cases.
 Kentucky: Lexington, April 25-May 1, 2 cases.
 Louisiana: New Orleans, April 25-May 1, 5 cases.
 Minnesota: Duluth, April 22-29, 2 cases.
 Missouri: St. Louis, April 25-May 1, 1 case.
 Montana: State of, March 1-31, 55 cases.
 Nebraska: South Omaha, April 3-10, 1 case.
 New Jersey: Trenton, April 25-May 1, 2 cases.
 New York: Niagara Falls, April 25-May 1, 1 case.
 Ohio: Ashtabula, April 25-May 1, 6 cases; Cincinnati, April 23-30, 18 cases; Cleveland, 1 case.
 Tennessee: Knoxville, April 25-May 1, 13 cases.
 Texas: Hidalgo County, Jan. 15-April 1, 16 cases; San Antonio, April 25-May 1, 4 cases.
 Utah: State of, March 1-31, 136 cases.
 Washington: Spokane, April 17-24, 6 cases.
 Wisconsin: La Crosse, April 25-May 1, 1 case; Superior, 3 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, March 13-20, 4 cases, 2 deaths.

SMALLPOX—FOREIGN

Brazil: Bahia, March 13-27, 8 cases, 2 deaths; Pernambuco, March 1-15, 5 deaths.
 Canada: Halifax, April 17-24, 1 case; Toronto, Feb. 27-April 17, 14 cases.
 Ceylon: Colombo, Dec. 12-Jan. 16, 64 cases, 12 deaths.
 China: Amoy, March 20-27, present; Hongkong, March 20-April 3, 2 cases.
 France: Paris, April 10-17, 1 case.
 India: Bombay, March 30-April 6, 17 deaths; Calcutta, March 20-27, 446 deaths; Madras, March 27-April 2, 3 deaths; Rangoon, March 20-27, 3 deaths.
 Indo-China: Saigon, March 14-21, 2 cases, 1 death.
 Italy: General, April 10-18, 61 cases; Catania, April 10-17, 1 case; Naples, April 11-18, 11 cases.
 Java: Batavia, March 13-20, 3 cases.
 Mexico: Guadalajara, April 15-22, 1 death; Mexico City, Feb. 27-March 27, 91 deaths; Monterey, April 18-25, 8 deaths; Veracruz, 2 cases, 2 deaths.
 Persia: Karmanshah, Feb. 17-March 17, 22 deaths.
 Portugal: Lisbon, April 10-17, 6 cases.
 Russia: Batoom, Feb. 1-28, 1 case; Moscow, March 27-April 10, 52 cases, 23 deaths; Riga, April 10-17, 2 cases; Warsaw, Feb. 6-13, 2 deaths.
 South Africa: Durban, March 20-27, 1 case, imported.
 Spain: Almeria, March 1-31, 1 death; Barcelona, April 12-19, 1 death.
 Straits Settlements: Penang, March 20-27, 1 case, imported.
 Switzerland: Zug, canton, April 11-17, 1 case.
 Tripoli: Tripoli, March 27-April 10, 90 cases, 10 deaths.
 Uruguay: Montevideo, Feb. 1-28, 11 deaths.

YELLOW FEVER

Brazil: Bahia, March 13-27, 21 cases, 12 deaths; Pernambuco, March 1-15, 1 death.
 Ecuador: Guayaquil, March 27-April 3, 18 deaths.
 Mexico: San Barnardo, vicinity of Maxcanu, April 24-May 1, 1 case; Ticul, April 10-17, 2 cases.

CHOLERA—INSULAR

Philippine Islands: Provinces, March 13-20, 118 cases, 72 deaths.

CHOLERA—FOREIGN

Ceylon: Colombo, Dec. 12-Jan. 2, 4 cases, 3 deaths.
 India: Bombay, March 27-April 6, 14 deaths; Calcutta, March 20-27, 143 deaths; Madras, March 27-April 2, 3 deaths; Rangoon, March 20-27, 4 deaths.
 Russia: St. Petersburg, April 16-21, 22 cases, 2 deaths.

PLAGUE

Brazil: Bahia, March 13-27, 5 cases, 1 death.
 China: Hongkong, March 20-April 3, 11 deaths.
 Russia: General, April 2-8, 2 cases, 1 death.
 India: General, March 20-27, 6,059 cases, 5,035 deaths; Bombay, March 30-April 6, 407 deaths; Calcutta, March 20-27, 6 deaths; Rangoon, March 20-27, 16 deaths.
 Japan: Formosa, island, March 13-27, 99 cases, 85 deaths; Kobo, vicinity, March 27-April 3, 1 case.
 Mauritius: Port Louis, Jan. 1-31, 12 cases, 12 deaths.
 Straits Settlements: Singapore, March 13-20, 1 death.
 Turkey: Jiddah, April 19-21, 1 case, 2 deaths.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended May 12, 1909:

Carmichael, D. A., surgeon, granted 14 days' leave of absence from May 26, 1909.

Wertenbaker, C. P., surgeon, detailed to represent the Service at the annual meeting of the National Association for the Study and Prevention of Tuberculosis to be held in Washington, D. C., May 13-15, 1909.

Lavinder, C. H., P. A. surgeon, granted 4 days' leave of absence en route to Columbia, S. C.

Lumsden L. L., P. A. surgeon, granted 7 days' leave of absence from May 10, 1909, under paragraph 191 Service Regulations.

Warren, B. S., P. A. surgeon, detailed to represent the Service at the meeting of the Arkansas State Medical Society to be held at Pine Bluff, Ark., May 19-21, 1909.

Collins, G. L., P. A. surgeon, granted 3 days' leave of absence from April 30, 1909, under paragraph 189 Service Regulations.

Pettyjohn, Joseph, P. A. surgeon, on arrival of Asst.-Surgeon J. R. Hurley, directed to proceed to San Francisco.

Marshall, E. R., asst.-surgeon, granted 2 days' leave of absence from May 13, 1909.

Ames, R. P., acting asst.-surgeon, directed to proceed to Gualan, Guatemala, and other places on line of Guatemala Railway to observe sanitary conditions.

Foster, J. P. C., acting asst.-surgeon, granted 4 days' leave of absence from May 13, 1909.

Goldsborough, B. W., acting asst.-surgeon, granted 5 days' leave of absence from May 12, 1909, without pay.

Hume, Lea, acting asst.-surgeon, directed to proceed to Del Rio, Texas and vicinity.

Rodman, John C., acting asst.-surgeon, granted 14 days' extension of leave from April 13, 1909, on account of sickness.

Stearns, H. H., acting asst.-surgeon, granted 2 days' leave of absence, April 12 and 14, 1909, under paragraph 210, Service Regulations.

Terry, M. C., acting asst.-surgeon, granted 2 days' leave of absence from April 18, 1909.

BOARDS CONVENED

Board of medical officers convened to meet at the Marine Hospital office Galveston, Texas, May 12, 1909, for the purpose of making a physical examination of an applicant for the position of cadet in the Revenue-Cutter Service. Detail for the board: P. A. Surgeon G. M. Corput, chairman; Acting Asst.-Surgeon Wm. H. Gammon, recorder.

Board of medical officers convened to meet at the Marine Hospital, Baltimore, as soon as practicable, for the purpose of making a physical examination of an applicant for the position of cadet in the Revenue-Cutter Service. Detail for the board: P. A. Surgeon G. M. Corput, chairman; Acting Asst.-Surgeon Wm. H. Gammon, recorder.

Board of medical officers convened to meet at the Marine Hospital, Baltimore, as soon as practicable, for the purpose of making a physical examination of a First Lieut., U. S. Revenue-Cutter Service. Detail for the board: Surgeon W. P. McIntosh, chairman; P. A. Surgeon M. K. Gwyn, recorder.

Boards of medical officers convened to meet on May 15, 1909, for the purpose of making physical examinations of officers of the Revenue-Cutter Service for promotion, as follows:

Portland, Me. Surgeon P. C. Kallach, chairman; Acting Asst.-Surgeon A. F. Stuart, recorder.

Boston. Surgeon L. L. Williams, chairman; Passed Asst.-Surgeon T. W. Salmon, recorder.

New York. Passed Asst.-Surgeon C. W. Vogel, Chairman; Asst.-Surgeon F. A. Ashford, recorder.

Baltimore. Surgeon W. P. McIntosh, chairman; P. A. Surgeon M. K. Gwyn, recorder.

Norfolk, Va. P. A. Surgeon G. L. Collins, chairman; Acting Asst.-Surgeon R. W. Browne, recorder.

Galveston, Tex. P. A. Surgeon G. M. Corput, chairman; Acting Asst.-Surgeon W. H. Gammon, recorder.

Board of commissioned medical officers will be convened to meet at the Bureau, Monday, June 14, 1909, for the examination of applicants for the position of Assistant Surgeon in the Public Health and Marine-Hospital Service.

Marriages

HAROLD WARD DANA, M.D., to Miss Gertrude Veronica Quinn, both of Boston, May 6.

HARRY R. SPICKERMON, M.D., to Mrs. Lela Fay Spickerman, both of Muncie, Ind., recently.

GEORGE ROGER MYERS, M.D., Hurlock, Md., to Miss Edna Wright, at Hurlock, April 28.

ROLAND B. MACON, M.D., to Mrs. Adele Slayden Cross, both of Clarksville, Tenn., May 4.

WILLIAM A. RAIMAN, M.D., to Miss Rebecca Checkwood, both of Swarthmore, Pa., recently.

ARTHUR MARRIOTT SHIPLEY, M.D., to Miss Julia Armistead Joynes, both of Baltimore, May 6.

JOSEPH EDWARD PIRRUNG, M.D., Cincinnati, to Miss Adele Heile, of Covington, Ky., April 20.

WILLIAM C. ELLIOTT, M.D., Holly Springs, Miss., to Miss Mary A. Hughes, of Memphis, recently.

ARTHUR RANDOLPH GREEN, M.D., to Miss Florence Elizabeth Seeley, both of New York City, May 5.

FERDINAND LEO KIEFFER, M.D., Covington, Ky., to Miss Bertha Grau of Newport, Ky., May 5.

M. HEMINWAY MERRIMAN, M.D., New York City, to Miss Mallory Betts, of Norwalk, Conn., May 3.

JAMES ROYDAN PEABODY, M.D., Colorado Springs, to Miss Annie Hodgson Long of Louisville, Ky., May 11.

Deaths

John M. Boyd, M.D. University of Pennsylvania, Philadelphia, 1856; a member of the American Medical Association; surgeon in the Confederate service throughout the Civil War; chief of staff of the Knoxville (Tenn.) General Hospital since its foundation; president of the board of trustees of the Tennessee Deaf and Dumb School; a member of the board of trustees of the University of Tennessee; died at his home May 16, aged 75.

Henry Albert Crandall, M.D. Castleton (Vt.) Medical College, 1859; a member of the Vermont State Medical Society and a charter member of the Burlington Medical and Surgical Club; physician to the Mary Fletcher Hospital, Burlington; assistant surgeon of the Sloan General Hospital, Montpelier, during the Civil War; in 1891 health officer of Burlington; died at his home from cerebral hemorrhage, May 6, aged 77.

Dorrance William Aldrich, M.D. Bellevue Hospital Medical College, New York City, 1874; a member of the American Medical Association; a veteran of the Civil War; in 1886 appointed local surgeon for the Burlington System at Galesburg, Ill.; in 1876, 1880 and 1884, coroner of Knox county for two-year terms; and once mayor of Galesburg; died at his home, May 8, aged 63.

Charles John Sharretts, M.D. College of Physicians and Surgeons, New York City, 1878; of New York City; attending physician to the Montefiore Home; visiting physician to the Church Charities Hospital, Astoria, L. I.; for many years examiner for the Metropolitan Life Insurance Company; died at his home in Flushing, L. I., May 7, aged 54.

Roger Brooke, M.D. University of Maryland, Baltimore, 1887; a member of the American Medical Association, and once vice-president of the Medical and Chirurgical Faculty of Maryland; died at his home near Sandy Spring, Md., May 9, from heart disease, aged 63.

James McMahon, M.D. Upper Canada School of Medicine, Toronto, 1850; for fifteen years chief of the law stamp office, Osgoode Hall, Toronto; and from 1875-1894 member of the Provincial Parliament for North Wentworth; died suddenly at his home in Toronto, April 23, from cerebral hemorrhage, aged 87.

I. Winslow Ayer, M.D. Eclectic Medical Institute, Cincinnati, 1860; of Northville, Mich.; who during the Civil War, practically unassisted and impelled only by patriotism, unmasked the "Confederacy of the Northwest;" died in the Wayne County Hospital, April 29, aged 83.

William Peale Brewer, M.D. Medical College of Virginia, Richmond, 1864; of New Orleans; a Confederate soldier and later transferred as assistant surgeon to the medical corps; for two years surgeon to the Confederate Veteran Soldiers' Home; died in Touro Infirmary, May 5, a few days after an operation for appendicitis, aged 67.

Clarence Bentley Paul, M.D. Marion-Sims College of Medicine, St. Louis, 1893; a member of the Iowa State Medical Society; supreme medical director of the Homesteaders; and one of the founders of the Brotherhood of American Yeomen; died suddenly at his home in Des Moines, May 8, from heart disease, aged 48.

William D. Wells, M.D. Memphis Hospital Medical College, Memphis, Tenn., 1894; formerly of Gaus, Okla.; a member of the American Medical Association; died in the Sebastian County Hospital, Fort Smith, Ark., May 2, from the effects of chloral, supposed to have been taken with suicidal intent.

William H. Shultz, M.D. Indiana Medical College, Indianapolis, 1871; a member of the Indiana State Medical Association; a veteran of the Civil War; formerly president of the local board of U. S. Pension Examining Surgeons of Lebanon; died at his home in that city, May 6, from influenza, aged 48.

William Stanbury Plotner, M.D. Western Pennsylvania Medical College, Pittsburgh, 1888; the first student to enroll in that institution and valedictorian of his class; a member of the Turtle Creek Valley Medical Society; died at his home in East Pittsburgh, Pa., May 8, from disease of the liver, aged 48.

John Jones Burroughs, M.D. New Orleans School of Medicine, 1860; Bellevue Hospital Medical College, New York City, 1875; Jefferson Medical College, Philadelphia, 1876; a surgeon in the Confederate Service during the Civil War; died at his home in Houston, Texas, May 3, aged 78.

Noyes B. Prentice, M.D. Starling Medical College, Columbus, Ohio, 1855; Western Reserve University, Cleveland, 1857; for two terms United States marshal; one of the oldest practitioners of Cleveland; died at his home in that city, May 1, from pneumonia, aged 80.

Paul A. Barrier, M.D. Long Island College Hospital, Brooklyn, 1860; a member of the American Medical Association; surgeon in the Confederate service during the Civil War; died at his home in Mount Pleasant, N. C., May 5, from cerebral hemorrhage, aged 76.

Benjamin A. Jaudon, M.D. Jefferson Medical College, Philadelphia, 1853; surgeon in the Confederate service during the Civil War; president of the Marion County (Mo.) Savings Bank; died suddenly at his home in Palmyra, April 30, aged 76.

Landon Spray Murray, M.D. University of Wooster, Cleveland, Ohio, 1868; of Medina, Ohio; a member of the American Medical Association; died at the home of his niece in Seville, Ohio, April 29, from acute cardiac dilatation, aged 69.

Benjamin J. Fulkerson, M.D. New York University, New York City, 1881; a member of the American Medical Association and the Tyrone Medical Club; died at his home in Tyrone, Pa., from nephritis, May 6, aged 54.

Henry Clay Lane, M.D. Western Pennsylvania Medical College, Pittsburgh, 1902; a member of the Turtle Creek Valley Medical Association; died at his home in East Pittsburgh, Pa., May 7, from heart disease, aged 32.

David W. Riggs, M.D. Jefferson Medical College, Philadelphia, 1861; a surgeon in the Federal service during the Civil War; of Northside, Pittsburgh, Pa.; died in Rochester, Minn., from pneumonia, May 7, aged 75.

Frederick Augustus Cutter, M.D. Bellevue Hospital Medical College, New York City, 1865; McGill University, Montreal, 1873; of Sutton, Que.; died at the home of his son in Berkeley, Cal., May 8, aged 66.

William Henry Finn, M.D. Harvard Medical School, Boston, 1863; surgeon in the Navy during the Civil War; a member of the Philadelphia Historical Society; died at his home in Philadelphia, May 5, aged 74.

Carey William Howe, M.D. University of Buffalo, N. Y., 1860; assistant surgeon of the One Hundred and Sixteenth New York Volunteer Infantry during the Civil War; died at his home in Buffalo, May 7.

Edward S. Carr, M.D. Jefferson Medical College, Philadelphia, 1874; a member of the Tennessee State Medical Association; died at his home near Castalian Springs, May 7, from cerebral hemorrhage, aged 56.

Henry W. Bishoff, M.D. University of Pennsylvania, Philadelphia, 1866; a member of the Dauphin County Medical Society; died suddenly at his home in Halifax, Pa., February 1, from myocarditis, aged 72.

Christian M. Schulte, M.D. Washington University, Baltimore, 1876; at one time ward physician in the health department of Baltimore; died at his home in that city, May 5, from pneumonia, aged 58.

William Davis Tanner, M.D., a veteran of the Mexican War; who practiced in White county, Ill., from 1850 to 1870; died at his home in Denver, April 8, from senile debility, aged 85.

George H. Thrash, Jr., M.D. Chattanooga (Tenn.) Medical College, 1892; died at the home of his father in Hominy, N. C., May 3, from septicemia, due to an operation wound, aged 40.

Luther J. Cranfill, M.D. Fort Worth (Texas) University, 1903; of Loco, Okla.; a member of the Oklahoma State Medical Association; died on a train near Fort Worth, Texas, April 25, aged 50.

George W. Eager, M.D. College of Physicians and Surgeons, New York City, 1846; for twenty-four years postmaster of Montgomery, N. Y.; died at his home in that place, April 23, aged 84.

Henry R. Given, M.D. Rush Medical College, Chicago, 1871; a member of the Nebraska State Medical Association; died at his home in Wymore, April 18, from diabetes, aged 62.

Nathaniel M. Smith, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1881; died suddenly in his apartments in Marion, Kan., May 3, from heart disease, aged 58.

Elwyn Ashworth Holroyd, M.D. Rush Medical College, Chicago, 1879; died at his home in Chicago, May 13, from hemorrhage of the lungs, due to pulmonary abscess, aged 57.

Joel Eff Buckman, M.D. Barnes Medical College, St. Louis, 1904; of Modesto, Ill.; died at the home of his parents in Farmingdale, Ill., May 3, from tuberculosis, aged 30.

Marinda Emily Fullam, M.D. Northwestern University Woman's Medical School, Chicago, 1886; died at her home in Aurora, Ill., January 5, from paralysis, aged 68.

Velmore Huse, M.D. Baltimore Medical College, 1898; of New York City; died in the Austin Hospital, New York City, May 7, from appendicitis, aged 34.

O. W. Morris, M.D. Indiana Eclectic Medical College, Indianapolis, 1893; died at his home in Elwood, Ind., May 5, from cerebral hemorrhage.

Timothy Edward McOwen, M.D. Harvard Medical School, Boston, 1885; of Lowell, Mass.; died at St. John's Hospital in that city, May 5, aged 47.

John W. Megee, M.D. Beaumont Hospital Medical College, St. Louis, 1889; died at his home in Clarence, Mo., April 29, from tuberculosis, aged 53.

Robinson Peter Corbett (license, Ohio, 1896; years of practice); died at his home in St. Louisville, Ohio, from senile debility, May 8, aged 82.

Ephraim H. Harris, M.D. New York Medical College, New York City, 1866; died at his home in Grinnell, Iowa, May 5, from paralysis, aged 79.

James McGuffin, M.D. Electropathic Institute, Philadelphia, 1877; of Milwaukee; died at the Layton Home in that city, May 6, aged 80.

Charles C. Phillips, M.D. Philadelphia College of Medicine and Surgery, 1853; died at his home in Pitman, N. J., April 22.

Daniel Webster Durrett, M.D. University Medical College, Kansas City, Mo., 1900; of Pawnee, Okla.; died at the home of his brother near Emden, Mo., April 23, from tuberculosis, aged 38.

Henry Barnett, M.D. Eclectic College of Maine, Lewiston, 1887; died at his home in Lancaster, N. H., April 29, aged 52.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

The Medical Profession and Vital Statistics

The May number of the *Ohio State Medical Journal* states that J. J. Boone of Mt. Victory has been arrested for failure to comply with the vital statistics law, he having refused to report deaths because the law does not provide pay for such service. It is proposed to make this a test case to determine whether the state has a right to require compulsory service of professional men without providing compensation.

Commenting on the case, the Ohio editor says, "Every profession, whether law, journalism, education, medicine, the ministry, etc., primarily exists in the interests of the public. The organized effort of each one is directed to this end. Failing in this it would degenerate and fail of its own mission. The state, recognizing the functions of the various professions toward the people, enacts and enforces laws to conform to professional standard. Vital statistics stand in relation to the public good. The organized medical profession appreciates this fact and has been instrumental in securing the vital statistics law. All sanitary laws represent the progress of the medical profession. Professional standards are expressed in the language of state medicine. Medical licensure by the state is intended to safeguard public interests and imposes those conditions of qualifications and public service which the right to practice medicine implies. Men whose occupations stand in relation to the public health are required to conform to certain rules of conduct . . . laws are passed in the interest of the people and not especially for the medical profession. They are intended for the physician to obey. . . . It is a foregone conclusion that the courts will not grant special favors to physicians under the operations of the vital statistics act."

The only legal justification which can be found for the requirement by the state of a license on the part of a practicing physician is that the legally qualified physician occupies

the position of a quasi-public official and that in return for the performance of certain duties he is granted certain special privileges. It is necessary for the good of the community that carefully compiled statistics should be available regarding the causes of death. To be of any value such statistics must be based on reports from competent persons, that is from legally qualified and recognized physicians. The duty of making reports of births and deaths therefore is a part of the implied contract by which the physician holds a license from the state authorizing him to practice medicine. As every attorney who is admitted to the bar by the profession of his state is regarded, in a sense, as an officer of the state, so every legally qualified physician should be regarded, in a sanitary and hygienic sense, as a state health officer. The duty of reporting births and deaths is one of the most important of his obligations and should not for a moment be neglected nor should the state be expected to provide a nominal compensation for such service. If the physician were on the same plane as the grocer or dry-goods merchant, he could reasonably refuse to perform any service unless he were compensated therefor. The groceryman, however, does not receive any license from the state, neither does he ask the state to prevent any except legally qualified grocerymen from engaging in business. When the medical profession assumes the position of a specially qualified and privileged class, it must recognize the duties and obligations of such a class as well as the advantages. The enforcement of the new Ohio law regulating vital statistics is of great importance at the present time.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month—Fourth Weekly Meeting

ACUTE MASTOIDITIS

Causes, general and local, symptoms and physical signs, prognosis, abortive treatment. Operative treatment, indications, technic.

SUBPERIOSTEAL ABSCESS IN ACUTE MASTOIDITIS.—Diagnosis and treatment.

ACUTE MASTOIDITIS IN INFANTS.—Differences in temporal bone, in symptoms; treatment.

CHRONIC MASTOIDITIS

Pathology, symptoms. Radical mastoid operation, indications, technic, dangers. Intracranial complications, frequency, mortality. Sinus phlebitis and sinus thrombosis, pathology, symptoms, treatment. Otitis brain abscess, symptoms, diagnosis. Cerebellar abscess, symptoms, diagnosis. Infective meningitis, pathology, diagnosis, prognosis.

CHRONIC NON-SUPPURATIVE OTITIS MEDIA

Causes, pathology, diagnosis. Palliative and surgical treatment.

OTOSCLEROSIS.—Causes, diagnosis, treatment.

LABYRINTHINE DISEASES.—Causes, diagnosis

MONTHLY MEETING

The Early Diagnosis and Treatment of Acute Catarrhal and Purulent Otitis Media.

The Relation of Nasopharyngeal Diseases and Obstructions to Diseases of the Ear.

The Symptomatology and Diagnosis of Acute Mastoiditis.

END OF SECOND YEAR COURSE

The program for the last meeting of the tenth month as given above, concludes the outline of the second year of the Postgraduate Study Course. The publication of the third year outline will begin in September.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

American Academy of Medicine, Atlantic City, June 5-7.
Am. Assn. of Genito-Urinary Surgeons, Pocono, Pa., May 31-June 1.
Am. Assn. of Med. Milk Commissions, Atlantic City, June 7.
Am. Climatological Association, Fortress Monroe, Va., June 4-5.
American Dermatological Association, Philadelphia, June 3-5.
Am. Gastro-Enterological Association, Atlantic City, June 7-8.
American Gynecological Society, New York, May 27-29.
American Laryngological Association, Boston, May 31-June 2.
American Laryn., Rhin. and Otol. Society, Atlantic City, June 3-5.
American Medico-Psychological Assoc., Atlantic City, June 1-4.
American Neurological Association, New York, May 27-29.
American Orthopedic Association, Hartford, Conn., June 14-16.
American Pediatric Society, Lenox, Mass., May 27-28.
American Proctologic Society, Atlantic City, June 7-8.
American Surgical Association, Philadelphia, June 1-3.
American Urological Association, Atlantic City, June 7.
Con. of State and Prov. Bds. of No. Am., Washington, June 4-5.
Connecticut State Medical Society, Hartford, May 26-27.
Maine Medical Association, Portland, June 16-17.
Massachusetts Medical Society, Boston, June 15-16.
Natl. Con. State Med. Ex. and Licensing Bds., Atlantic City, June 7.
New Jersey Medical Society, Cape May, June 23-25.
Rhode Island Medical Society, Providence, June 1.
Wisconsin State Medical Society, Madison, June 30-July 2.

LOUISIANA STATE MEDICAL SOCIETY

Thirtieth Annual Meeting, held at New Orleans, May 4-6, 1909

The President, Dr. E. DENEGRE MARTIN, in the Chair

Election of Officers

The officers elected were named in THE JOURNAL, May 15.

Contribution to Carroll Fund

A resolution was adopted that \$150 be appropriated toward the fund for the relief of the widow of Major Carroll.

Prophylactic Serotherapy and the Theory of Anaphylaxis

DR. I. I. LEMANN, New Orleans: While anaphylaxis has been widely discussed during the past three years by workers in the field of immunity, it has received comparatively little attention in general societies and medical journals, this paper presents a brief summary of the literature and I ask: What shall be our attitude in regard to prophylactic injections of serum in the light of probable subsequent anaphylactic reactions? An experience which I had in January, 1907, illustrates one phase of the anaphylactic reaction. The patient, a girl of thirteen, frequently had sore throat, and on many of these occasions the attacks suggested diphtheria. During one of them, in November, 1903, she was given an injection of diphtheria antitoxin, but a swab culture taken at the time proved negative. At the time there were no symptoms of serum disease. In the last days of December, 1906, she had another of her customary attacks and the same thing was done; again the culture was negative. Twenty-four hours after the injection she developed a general urticaria, and the pulse became abnormally slow, although the temperature remained about 101 F. During the next twenty-four hours the pulse was as slow as 40 a minute. For several days the bradycardia continued and was gradually substituted by a tachycardia, which reached 120; this was associated with marked irregularity and intermission. There were no murmurs and there was no enlargement of the heart. This tachycardia continued for a year, while the irregularity of the cardiac action as manifested by undue hastening of the pulse on slight exertion continued for eighteen months. While we must insist on serum inoculations as a therapeutic measure of the highest value, how must we look on prophylactic injections in the light of possible subsequent anaphylaxis? I confess that after my experience I have given up the old rule of injecting antitoxin in doubtful cases at the time of taking the swab culture and have awaited the result of the bacteriologic examination. In this way, I have avoided, I think, unnecessary sensitizings and hence unnecessary risk in case of future urgent need of the employment of serum. About prophylactic injections I am inclined to feel the same way.

DISCUSSION

DR. J. T. HALSEY, New Orleans: I have had two experiences similar to that of Dr. Lemann, and the lesson I have drawn is to avoid unnecessary antitoxin injections.

DR. C. C. BASS, New Orleans: Admitting that anaphylaxis exists, we must not lay too much stress on it, or we will do more harm than good. When it is possible to make a culture in a suspected case of diphtheria, it is probable that we should not administer serum until a diagnosis is made. As a prophylactic measure we will probably in the future use bacterial vaccines.

DR. L. G. LEBEUF, New Orleans: I think some work ought to be done to determine which patients may receive injections with safety and which may not. Is any work being done along that line?

DR. I. I. LEMANN: The remarks I made do not apply to the therapeutic use of the serum. Klemperer has made a suggestion that we could determine whether or not it would be safe to give serum to a given individual by taking a small amount of blood from that individual and injecting it into a guinea-pig and then injecting the guinea-pig with horse serum also. If the guinea-pig reacts anaphylactically, it is unsafe to give the patient horse serum. It is plain, however, that this is not practical.

Treatment of Tuberculosis at Covington Sanatorium

DR. WALLACE J. DUREL, New Orleans: This report includes cases treated from 1905 to 1907. In all, 59 patients were treated. Of these, 2 were in the first clinical stage; 15 in the second; 21 in the third; 21 in the fourth. In 7 cases there was laryngeal involvement, 4 of the cases ending in recovery, and 3 in no improvement. In 11 cases there were stomach or digestive disorders, 4 ending fatally. Two patients suffered with joint tuberculosis; both recovered. The great percentage of the patients reported here as apparently cured had already followed the climatic treatment, without any benefit, before undergoing the hygienic-dietetic treatment. Most of the individuals were given tuberculin and creosote. The total percentage of results was as follows: First clinical stage, 100 per cent. apparent cure or complete recovery; second clinical stage, 100 per cent. apparent cure or complete recovery; third clinical stage, 57.1 per cent. apparent cure or complete recovery, 23.8 per cent. disease arrested, 19.1 improved, no mortality; fourth clinical stage, 19.1 per cent. disease arrested, 28.5 per cent. improved, 38.1 per cent. mortality. These statistics, while not large, should convince physicians that the cure of tuberculosis is not entirely dependent on climate.

(To be continued)

OHIO STATE MEDICAL ASSOCIATION

Sixty-fourth Annual Meeting, held at Cincinnati, May 5-7, 1909

President's Address: History of the Association

DR. D. R. SILVER, Xenia: The history of the organization may be divided into four periods, the first extending from 1812, when just five delegates were present. These men made a winter journey of more than 100 miles on horseback over the corduroy roads of that time, nearly a century ago. In 1827, fifteen years later, a convention was held at Columbus, with Dr. Wooley, of Cincinnati, as president, at which time a plan and constitution for a state medical society was adopted, the first session of which was to convene in 1829. However, the organization seems never to have proceeded beyond the convention form, and was operated under the old district medical law, which was repealed in 1833. The second period of medical history dates from January, 1835, when Dr. William Aul, of Columbus, issued a circular letter to all regular and scientific medical practitioners who were desirous to advance the honor and dignity of the profession, to meet in convention. They did meet, and Dr. Daniel Drake was one of the leading spirits. He gave an address urging the establishment of a school for the instruction of the blind. Under this system medical conventions continued to be held until May, 1846, when the Ohio State Medical Society was organized at the Neil House in Columbus, and the enrollment of membership numbered 25. Thus commenced the third

period of medical history in Ohio. The fourth period began with the reorganization in 1902, when the membership was about 1,000. The work of Dr. McCormack, in Ohio, has contributed not a little to a more perfect organization of the profession and a great deal to the education of the people of the state. The senatorial candidacy of Dr. C. A. L. Reed can not fail to have a far-reaching influence in shaping future legislation. Optometry is the most plausible of any of the pretensions of quackery, and to oppose this form of charlatany I recommend that the component societies provide for the reading of papers in the annual programs on the subject of refraction and other anomalies of vision. The Ohio Commission for the Blind, which was inaugurated at the instance of the American Medical Association, is doing good work. I also recommend the establishment of tuberculous sanatoria, and that the medical profession take an active interest in directing the laity, so that there may be no mistake there in political influence. Vasectomy should be performed on habitual criminals because the propagation of the criminal classes is said to be more than twice as great as the general population. In the election of delegates to the American Medical Association I recommend that the secretary of the state society and the chairman of the legislative committee be ex-officio delegates to the parent society, and that the other four delegates, to which we are entitled, be elected for a period of four years instead of two, for the purpose of obtaining greater influence in the deliberations of the national association.

Report of Committee on Public Policy and Legislation

The optometry bill, providing for a state examining and licensing board, was introduced in the senate, but not reported out of committee. A bill to give authority to boards of education for the medical inspection of public school children was enacted. An attempt to introduce a bill looking to the creation of a state examining board for nurses was frustrated. A suggestion that the house of delegates adopt resolutions placing the association in cooperation with the temperance movement in Ohio, by urging all members to comply with the intent of prohibition laws in exempting alcoholic preparations when prescribed for medicinal purposes, was duly carried out. The committee reiterated the defensive attitude necessary to be taken by the association in order to protect the Medical Practice Act against the invasion of cults and classes who are constantly seeking recognition by the state for the favor of practicing medicine in some of its branches without proper qualification before the state board.

Reports of Officers

The treasurer reported that the amount received last year from dues was \$3,962.00, representing so many members of the association. The amount received from subscription, \$5.00; from advertising, \$3,214.00, making a total of \$7,355.00, of which \$7,226.00 was paid out, leaving a balance on hand of \$129.00.

Election of Officers

The officers elected were named in THE JOURNAL, May 15.

Multiple Myeloma

DR. GEORGE F. ZINNINGER, Canton: Judged by their histopathologic structure, in that they have a definite specific cell and a connective tissue and blood vessel stroma, together with the fact that they show distinct evidence of invasive growth by breaking through bony walls and infiltrating adjacent structures, one can hardly hesitate to regard these tumors as true neoplastic growths. If on the other hand the multiple tumors are not metastases into a single system, but tumors all of multiple inception, this seems to lend support to the view that they are due to some generalized disease most probably of an infectious etiology. These tumors always arise in the bone marrow, proliferating, and producing erosions of the bones in which they arise. In their histopathologic structure similarity is to be noted in the description of the various authors reporting the cases. They all speak of a tumor made up of a delicate stroma of connective tissue; in the meshes of the stroma are packed cells which may be round,

but more often are oval or pear-shaped, having no cell wall, bearing a rather large single or multiple nucleus usually eccentrically placed and in most of them nuclei are to be found. The tumors are very vascular; the larger and smaller blood vessels ramify in the sparse connective tissue stroma. The vessels are thin-walled, and the tumor cells are in intimate relationship with the vessels. Clinically, there is constant pain over definite areas of bone having a cancellous structure, the bone developing a bulging swelling, the appearance later of definite soft tumor masses. The patient shows some emaciation, growing pallor, anemia and weakness, all of which are strongly suggestive of multiple myeloma.

Aspects of Angina Pectoris

DR. FRANK WINDERS, Columbus: A study of this subject may well be preceded by the statement that angina pectoris is not a distinct disease, but rather a symptom group, the etiology and pathology of which must be determined for each individual case. I accept the classification of Nothnagel, who distinguishes angina pectoris major, in which there are definite anatomic changes in the heart or its vessels, from angina pectoris minor, in which no such changes can be demonstrated. So-called minor cases are not infrequently as grave in their prognosis as the major cases. Cases which at autopsy show lesions of the heart or its vessels present either (a) disease at the first portion of the aorta or at the aortic valve, which causes interference with the entrance of blood into the coronary arteries; or (b) disease of the coronary arteries. The association of attacks of angina and disturbance of digestion has long been recognized, but it remained for Russell to give a plausible explanation of this relation. This author directs attention to the normal arterial abdominal reflex and its exaggeration as an important factor among the causes of angina pectoris. An additional factor has to do with the increase of blood pressure, following the ingestion of heavy foods and stimulating drinks and is the presence in the blood itself of products of digestion which act as irritants to the arterial coats, thereby exciting them to contraction. A continuation of these influences results in a continued arterial contraction and this in turn in a compensatory thickening of the arterial walls. Cardiac embarrassment results from the foregoing causes. A general arterial hypertonus produces a narrowing of the lumen of the vessels, which in turn causes an increase in blood pressure, and thus an increased burden is placed on the heart in its efforts to empty the left ventricle.

(To be continued)

MISSISSIPPI STATE MEDICAL SOCIETY

Forty-second Annual Meeting, held at Jackson, April 13, 1909

(Continued from page 1610)

The Hypodermatic Use of Quinin in Severe Malarial Infection

DR. B. H. BOOTH, Drew, advocated the hypodermatic use of quinin, especially in treating children. It was more effective by this manner of administration and by so using it we avoided irritating the stomach. The administration by needle reduced the amount and number of doses and was really less objectionable than the discomfort produced by the nauseous taste of the drug. The danger of abscess formation was not great when proper care in administering and proper asepsis were observed. Any soluble salt might be used, his preference being the bimuriate.

DISCUSSION

DR. GLASS, Coahoma: In administering quinin hypodermically, too small a syringe is generally used. I have found in using the ordinary hypodermic syringe that the solution was too concentrated, too irritating; therefore, I use my antitoxin syringe, dissolving the quinin in a saline solution. When given in this way one can usually note the effect of the quinin in about forty minutes. It is important that the solution be sufficiently diluted.

DR. E. H. MARTIN, Hot Springs, Ark.: When it is necessary to administer quinin hypodermically, it should be dis-

solved in a sufficient quantity, preferably a saline solution, to insure absorption. Given in this way, there is little danger of abscesses.

DR. G. H. McNEILL, Newton: A sufficiently diluted solution can be administered with the small syringe, by detaching the bulb and refilling it as often as desired, and this can be done with only one insertion of the needle. I say this for the benefit of the physician who does not possess a large syringe.

DR. DULANEY: I am much gratified to note that the profession is getting back to the use of quinin. In administering this drug hypodermically, I dissolve 5 grains of quinin in 30 drops of water; I have no trouble with abscesses, and usually obtain good results.

DR. H. CHRISTMAS, Tehula: A physician of many years' practice was sent for in a case of hematuria. When he arrived he questioned the young physician in attendance as to what he had done for the man. The doctor replied that he had blistered him, given calomel and almost a bottle of quinin. The older physician then suggested giving the man a rest; giving him a hypodermic of atropin and something to eat, and see what the effect would be. The next morning the man was much better, and eventually recovered. He then told the young doctor the man was dying of too much doctor, and not from the disease.

DR. ASHLEY: Have any patients complained of intense pain when given quinin hypodermically? I was given quinin hypodermically and my suffering was almost unbearable. The first two injections were not so painful, but the others caused intense pain. It did not cause abscesses, only the usual knot, which I still have. The quinin was given in very diluted form, and with good effect as to the disease.

DR. COOK, Forest: Possibly the bad effects resulting from giving quinin hypodermically are caused by giving it under the skin; if injected deep into the muscles there would be no danger of abscesses. I had a patient who could not take quinin by mouth without producing a rash. She was very ill, and all other remedies had failed. I gave a diluted solution of quinin bimuriate hypodermically, putting the needle deep into the muscles. No bad effects followed, and the patient recovered.

DR. H. L. SUTHERLAND, Rosedale: I suppose that all physicians are of the opinion that quinin is the only safe remedy in malaria. The main thing, however, is to determine whether the condition is active malaria, or anemia secondary to malaria. If repeated examination of the blood does not reveal the parasite, I see no use in giving quinin, but if the examination reveals the parasite, I always give quinin. In giving it hypodermically, if in a weak solution, and the needle is put deep into the muscles, there is little danger of abscesses.

DR. B. H. BOOTH: I hope that I made it clear in the paper that if care is taken not to strike a vein there is little or no pain in the hypodermic administration of quinin.

Puerperal Eclampsia

DR. L. D. HARRISON, Clarksdale, advocated bleeding in eclampsia. The preventive treatment, the care of the patient during pregnancy, must not be neglected but when brought face to face with the condition no time is to be lost and blood should be taken, the idea being to bleed for effect and not for quantity.

DISCUSSION

DR. M. ALEXANDER, Tunica: In the days of bloodletting, this disease was looked on with dread by all practicing physicians. I can not understand why a physician should go back to the dark ages for a remedy when there is such a remedy at hand as veratrum, which in my opinion is almost specific in puerperal eclampsia, eliminating urea, which to a great extent has poisoned the system, and relieving the pressure on the nervous system.

DR. JONES: I believe in the old foggy idea, if you have a good thing, stick to it. In puerperal convulsions I consider

blood letting a safe remedy. In cases of puerperal eclampsia what is needed is complete relaxation both inside and outside.

DR. M. C. ELLIS, Senatobia: When I find that I can not control convulsions with veratrum, and the pulse was still bounding, I bleed, and bleed for effect—bleed until the pulse is slower.

DR. A. E. KENNEDY, Magee: I believe in calomel in puerperal eclampsia, and plenty of it. In a case that I had some years ago, I gave 60 grs. of calomel, followed by an ounce of castor oil. The woman recovered.

DR. P. BUTLER, Little Springs: I treated the first cases of puerperal eclampsia that I had by bleeding, but in my hands bleeding was not satisfactory. Since I began to use veratrum, followed by bichlorid of mercury, I have not lost a patient with puerperal eclampsia.

DR. R. M. DONALD, Hattiesburg: In puerperal eclampsia I give large doses of veratrum, repeated if necessary, and just as soon as I can get the patient to take it, I give calomel in large doses.

DR. L. D. HARRISON: Dr. Alexander stated that he could not remember so far back when this ancient remedy of bloodletting was resorted to, but I can refer to authorities as late as 1906-1908 who advocate bloodletting in puerperal eclampsia. Veratrum, I contend, weakens the heart action, and does not aid elimination. I have never seen a case of puerperal eclampsia that was not relieved by bloodletting. I have seen patients die from all the treatments named, but I have never yet seen one die from bloodletting. The other remedies are not quick enough in their effect.

Hygiene and Prophylaxis in the Care of Children

DR. O. N. ARRINGTON, Brookhaven, entered a plea for greater care in the handling of children. Education of the laity along these lines is sadly needed, most deaths among children being from preventable conditions.

DISCUSSION

DR. ROSAMOND, Memphis, Tenn.: Too much can not be said about the necessity of the baby being given its mother's milk and that mother who can nurse her baby and won't, is morally responsible for that child's life. Another subject of grave importance is the problem of the negro nurse girl. The physician can not make too great an effort to instruct the mother along this line. The nurse girl carries the little baby into all manner of filthy dens, and the mother is sitting quietly at home, either ignorant or indifferent as to where her child is being taken. It is in these places that the baby contracts all manner of contagious and infectious diseases.

DR. ROSA WISS, Meridian: The physician should impress on the mother the importance of giving the baby water. Babies do not want it at first, but they soon acquire a taste for it. The baby who is given water is usually a healthy baby.

DR. B. L. CULLEY, Jackson: If you begin right with the baby, it is not hard to keep right, and the right way to start the baby off is at its mother's breast. I do not think that a physician should be too hasty in cutting the cord, as the baby should be allowed to get a good supply of blood to start life with. Another important point is to impress on the mother the baby's need of water. So many mothers are afraid to give the baby water, and have to be told to do this from the very beginning of the child's life. It will frequently stop a colicky baby from crying when nothing else will.

DR. COOK, Hattiesburg: When the mother has a superabundance of milk, more than the child can digest, it will suffer with colic, and will vomit up the milk constantly. I think a restriction should be made as to the quantity of milk taken.

DR. ELLIS: In cases in which the mother has a superabundance of milk, but the milk is blue, I give potassium, which lessens the quantity of milk, but increases its richness.

DR. DAVIS: When the mother gives too much milk, I find that using only one breast acts admirably. Very often mothers give more milk from one breast, and in those cases I would let the mother dry the other breast.

(To be continued)

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

*One Hundred and Eleventh Annual Meeting, held in Baltimore,
May 13-15, 1909*

Dedication of New Building

With three days of perfect May weather the Medical and Chirurgical Faculty of Maryland held its one hundred and eleventh annual meeting and celebrated the completion and occupation of its fine new library building, May 13, 14 and 15. A picture and description of the building appear in this issue of THE JOURNAL, page 1679.

The presentation address was made by Dr. Edward N. Brush, Baltimore, chairman of the building committee. "This building belongs, it is true, to the medical profession, but solely as a means of helping the citizens of the state. Here is housed a library which is in constant demand, not alone and not by any means in its broadest intention and use, for the benefit of the medical men who resort to it, but for your benefit, men and women of Maryland, and for the benefit of your families."

Felicitating addresses were also made by Dr. Abraham Jacobi, representing the New York Academy of Medicine; Dr. James Tyson, representing the College of Physicians of Philadelphia, and Dr. John W. Farlow, of the Boston Medical Library Association.

The acceptance of the building in behalf of the society was by the president, Dr. Brice W. Goldsborough, who said: "We have looked forward to this day for many months with happy anticipations, and we are not disappointed. The erection of this building has been the inspiration of our lives. It will promote harmony. It will elevate the profession out of selfishness. It will aid in the development of our fellow-men. It will establish good-fellowship. I voice the unanimous sentiment of the society when I testify to the untiring zeal, energy and devotion of the building committee." Dr. Goldsborough gave an interesting summary of the past history of the society and particularly of its recent work and made a number of suggestions for increasing its efficiency.

Legacies and Gifts

Dr. Edward N. Brush, Baltimore, chairman of the building committee, announced that \$20,000 had been left to the faculty by the will of a member whose name he was not permitted to give. Dr. William Osler, Oxford, Eng., announced a gift to the library of the first edition of Vesalius, which he purchased recently in Rome. An interesting even of the last evening of the meeting was the presentation of a portrait of Dr. William H. Stokes, formerly superintendent of Mount Hope Retreat, by Dr. Henry M. Hurd.

The Old and the New

Dr. William Osler, Oxford, Eng., delivered an address with the above title in Osler Hall. Overhanging him as he spoke was his full-length portrait in oil, the gift of his friends, and the only ornament of the room. The address will appear in full in THE JOURNAL.

Reports of Committees and Officials

The Committee on Public Instruction reported that twelve jubilee lectures had been delivered during the winter by Drs. G. M. Linthicum, L. F. Barker, J. M. T. Finney, J. C. Bloodgood, W. T. Watson, Harry Friedenwald, H. O. Reik, R. T. Abercrombie, B. Holly Smith, W. P. Spratling, Misses M. E. Lent and E. N. La Motte. The lectures were delivered at the Baltimore Medical College Building, and such topics as "Hygiene of the Mouth and Eye," "Insects in Disease," "Nursing," "Physical Development," "Non-Drug Treatment," "Care of the Ear," "State Cure of Epileptics," etc., were treated. Other lectures have been given before societies, mothers' meetings, etc. In addition to this, a series of weekly articles on similar topics have appeared in the newspapers. Lectures on tuberculosis and other subjects have also been delivered in the counties. The aid of the newspapers was also sought in the effort to reach the public and weekly "Health Bulletins" were published in the Sunday papers from June 14, 1908, to the present time. These articles dealt with their subjects in a simple, popular manner and were anonymous. They were favorably received and highly appreciated by the public and also by the newspapers and have brought about kindly rela-

tions with the latter, which have not always heretofore existed. The faculty has not been called on for one cent for this work. The small amount of \$15 needed being contributed by the members of the committee. The committee is proud of the fact that it instituted the first instance of such work in the country and that essentially the same plan has been adopted by the American Medical Association.

The report of the Library Committee and Librarian showed that there are now 17,533 books and 176 current journals on file. There were 4,353 readers, and 1,541 books were borrowed for home use. Portraits have been acquired of Drs. I. E. Atkinson, G. J. Preston, Russell Murdock, Moreau Forrest and a print of Rembrandt's Anatomy. Among gifts are Dr. A. D. Atkinson, 183 books; Dr. H. B. Jacobs, 77; Dr. William Osler, 22; Miss Miller, 135; Dr. Charles O'Donovan, 24; etc. Dr. Jacobs gave complete sets of the *Annales de l'Institut Pasteur*, and of the *Bulletin et Mémoire de l'Académie Impériale de Médecine*. Dr. Osler gave a first edition of Vesalius. The library will be open hereafter with a trained attendant on hand till 10 p. m.

The Committee on Sanitary and Moral Prophylaxis reported that a woman had been engaged in instructing women and children along the lines of sex hygiene. Much literature has been distributed and lectures have also been given by members of the society in the counties. Arrangements have been made to give annual lectures at the medical schools on prophylaxis of venereal disease, inculcating that the prostitute is really nothing more nor less than a focus of infection. To ascertain the sentiment regarding sexual necessity 1,014 letters were sent out to physicians and 615 replies were received. There were 484 who did not believe that health was affected by entire abstinence, while 105 asserted the contrary, and 26 were non-committal; indicating that one doctor in every ten in this state is sanctioning the use of prostitutes by unmarried men, a striking result as coming from a body of scientific men and one which can not fail to increase the prevalence of venereal disease. To carry on the work \$3,043.78 has been raised by dues and contributions, of which \$2,803.31 has been disbursed in salaries and running expenses. The Medical Society of Social Hygiene co-operates with the committee. The committee recommends that teaching on sex hygiene be made a part of the medical course in the schools and that action be taken by the society on the question of vasectomy in criminals, insane and imbecile.

The secretary reported an unusually successful year both as to finances and organization. The county societies are in an active and healthy condition, except that of St. Mary's County. The Garrett and Allegany County societies have united, owing to the difficulty in keeping up the first named.

The trustees reported that the property of the faculty on Hamilton Terrace had been sold in fee for \$9,000. The building and site cost about \$90,000. The present debt is about \$32,000.

The Committee on Lay Press reported that cordial relations had been established with the papers, which could not fail to benefit the profession and the public.

Reciprocity

The Board of Medical Examiners reported that Maryland is now in reciprocal relations with Maine, New Hampshire, Vermont, Virginia, West Virginia, District of Columbia, Georgia, South Carolina, Texas, Kentucky, Missouri, Kansas, Nebraska, Oklahoma, Iowa, Minnesota, Michigan, Wisconsin, Illinois, Indiana and Ohio. In a number of states the law makes no provision for recognition of licenses of other states and the Maryland law forbids recognition of licenses of such states. New Jersey has severed its reciprocal relationship on account of differences of preliminary requirements. Delaware and Ohio have also raised their requirements. Accordingly, the Medical Colleges of Baltimore have responded to the demands that those entering on the study of medicine shall be possessed of the preliminary education regarded as essential by those representing the best sentiment on this subject, and the Boards of Medical Examiners of Maryland now interpret the wording of the law, "a competent common school education," to mean "a completed high school education" and no

applicant is admitted for examination to either board who can not give proof of such requirements. The board declares in unmistakable terms its intention to follow and punish the illegal practitioner of medicine, and appended to the report are the results of thirty-two prosecutions of offenders made during the year. At present it does not seem feasible to conduct examinations in laboratories or at the bedside, and the method in vogue will probably continue.

Officers Elected

The following are the officers elected for the ensuing year: President, G. Milton Linthicum, Baltimore; vice-presidents, Drs. Philip Briscoe, Mutual, and Compton Riely and Arthur P. Herring, Baltimore; secretary, Dr. John Rulräh, Baltimore; treasurer, Dr. William S. Gardner, Baltimore; trustee, Dr. Daniel E. Stone, Mount Pleasant; members State Board of Medical Examiners, Drs. Brice W. Goldsborough, Cambridge, and Louis B. Henkel, Jr., Annapolis; councilors, Drs. Guy Steele, Cambridge; Arthur Hawkins, Cumberland, and David Street, Baltimore; delegate to the American Medical Association, Dr. Lewellys F. Barker, Baltimore; alternate, Dr. Samuel T. Earle, Baltimore; committee on scientific work and arrangement, Drs. Joseph Chatard, Arthur M. Shipley and Isaac R. Pels, Baltimore; committee on public policy and legislation, Drs. C. Hampson Jones, and John D. Blake, Baltimore, and W. Frank Hines, Chestertown; library committee, Drs. J. Whitridge Williams, H. Barton Jacobs, Harvey W. Cushing, Gordon Wilson, and Carey B. Gamble, Baltimore; memorial committee, Drs. Joseph T. Smith, Baltimore; Walton Bolgiano and George H. Cairnes, Baltimore; William C. Stone, Ellicott City, and Thomas H. Brayshaw, Glen Burnie; committee on sanitary and moral prophylaxis, Drs. Donald R. Hooker, Lilliam Welsh, Hugh H. Young, O. Edward Janney, and Andrew H. Whitridge, Baltimore; committee on tuberculosis, Drs. Jacob H. Pleasants, John W. Chambers, Richard B. Norment, and Sylvan Rosenheim, Baltimore, and Philip L. Travers, Easton; committee on pure food law, Drs. Nathan R. Gorter, Samuel J. Fort, and Edward L. Whitney, Baltimore, and committee on funds for widows and orphans, Drs. Eugene F. Cordell, Theodore E. Cook and G. A. Christian Deetjen, Baltimore; Richard W. Trapnell, Point of Rocks, and Jacob L. Noble, Preston.

(To be continued)

Medical Education and State Boards of Registration

STATE BOARD STATISTICS FOR 1908

The Annual Presentation of the Results of State Board Examinations with Analyses and Deductions

On pages 1698 to 1713 will be found four tables, A, B, C and D, giving in detail the results of the various state medical license examinations held during 1908. Reports from Oklahoma were received for only one of the two examinations held; otherwise our returns are complete.

These tables have been arranged so that reading from left to right gives the results by colleges, showing how many graduates appeared for examination in each state and whether they passed or failed, as well as the total number examined during the year, the number who passed, the number who failed, the percentage of failure and the number of states in which graduates of each school appeared for examination. Reading from above downward gives the results by states, showing the number registered and rejected from each college, the total number examined, the total number registered, the total number rejected and the percentage of rejections. The fact that the majority of graduates take the license examination in the state in which the college is located is shown by the dark diagonal zone, made by the grouping of figures, passing from the left upper to the right lower corner of each table. These tables are worthy of much careful study and many important deductions are possible.

GRADUATES OF ALL YEARS EXAMINED IN 1908

Table A shows the results for all candidates who took examinations in 1908 regardless of the years in which they graduated. This shows that altogether 7,770 were examined last year, as compared with 7,271 in 1907 and 8,035 in 1906. Of those examined, 21.7 per cent. failed, as compared with 21.3 in 1907, 20.7 per cent. in 1906 and 20.8 per cent. in 1905.

There were 137 of the medical colleges in the United States which had graduates examined. Foreign graduates were examined in 31 states, the total number being 160. The largest number examined in any state was 85, in New York, doubtless because that state has the leading port of immigration. Graduates of Canadian schools were examined in 31 states, more appearing naturally in the border line states.

GRADUATES OF 1908 EXAMINED DURING 1908

Table B gives the results for the graduates of 1908 who were examined during the year by state boards and shows that 4,388 or 56.5 per cent. of all candidates examined during the year graduated in 1908. Educational statistics show that the medical colleges of the United States graduated 4,741 students last year; therefore about 90 per cent. of all 1908 graduates took examinations for license during the year. In some of the states graduates in medicine are allowed to serve their hospital internships without first becoming licensed practitioners, which doubtless accounts for some of the remaining 10 per cent. Of those examined 607 or 13.8 per cent. failed. An analysis of this table shows that of all the 1908 graduates examined 2,823 or 64.4 per cent. were examined in the states in which the colleges from which they graduated were located. This shows that states which sanction low grade colleges are not only responsible for the ill-prepared output of such colleges, but are themselves the recipients of the greater portion of such output.

RECENT GRADUATES EXAMINED DURING 1908

Table C gives the results for graduates of 1903 to 1908 inclusive which were examined during 1908. It includes, therefore, the figures given in Table B. This table is particularly important since it deals with recent graduates and is, therefore, the fairest basis for comparison between colleges. Any classifications of medical colleges from the standpoint of failures at state board examinations should be based on this table. Of all candidates examined in 1908, 6,477 or 83.3 per cent. were recent graduates, and of this number 17.8 per cent. failed, as compared with 21.7 per cent. for all candidates.

OLD PRACTITIONERS EXAMINED IN 1908

Table D is interesting because it shows the results for candidates who graduated in 1902 or previously. The total number examined was 796 or 10.3 per cent. of all candidates examined, as compared with 675 in 1907 and 793 in 1906. This year, of those examined, 251 or 31.5 per cent. failed, as compared with 17.8 per cent. of failures for recent graduates. This total should decrease each year as advances are made in reciprocity. As a rule, the states examining the largest numbers are those which do not reciprocate with other states. A comparison with Table N will be of interest in this connection.

UNDERGRADUATES EXAMINED DURING 1908

Line 141 of Table A shows the number of undergraduates examined in nine different states during 1908. Altogether 494 were examined, as compared with 674 in 1907 and 703 in 1904. The states in which undergraduates appeared, arranged in the order of the number examined, were: Mississippi, 182; Arkansas, 130; Tennessee, 100; Massachusetts, 37; Alabama, 36; Rhode Island, 6, and 1 each in Kansas, North Carolina and Virginia. Legislation requiring graduation of all applicants has since been secured in Alabama, Arkansas and Rhode Island which will greatly reduce the figures in future reports. Of the 494 undergraduates examined, 281 or 56.8 per cent. failed.

COMPARISON WITH PREVIOUS YEARS

A study of the totals and percentages as compared with previous years is of interest. The totals of those examined show a decrease from last year, while the percentage of failures is somewhat higher.

COMPARISON WITH PREVIOUS YEARS (TABLES A, C AND D).											
Year.	Total Examined.	Examined— Passed.	Examined— Failed.	Percentage Failed.	Recent Grads. Examined.	Percentage Failed.	Older Pract. Examined.	Percentage Failed.	Non-Grads. Examined.	Percentage Failed.	Regist'd With- out Written Examination.
1904	7035	5672	1363	19.3	4773	14.1	579	29.7	515	52.6	999
1905	7170	5680	1490	20.8	6054	16.2	690	37.7	472	61.9	394
1906	8035	6368	1667	20.7	6520	16.4	793	27.1	703	51.3	1497
1907	7271	5723	1548	21.3	5922	15.1	675	27.7	674	69.6	1426
1908	7770	6084	1686	21.7	6477	17.8	796	31.5	494	56.8	1276
											Total Registered.
											6671
											6374
											7865
											7149
											7360

Other deductions from the larger tables have been made and are presented in Tables E to N which are worthy of careful study.

STUDY OF COLLEGES BY STATE GROUPS

Table E is based on the first four large tables and gives data regarding the group of colleges located in each state. It shows what states are furnishing the largest numbers of physicians and the failure percentages show what kind of training these colleges are furnishing, so far as may be judged from the failures of their graduates before state boards. By comparing the

TABLE E.—COLLEGES GROUPED BY STATES
Showing Number Examined and Percentage of Failures.

All Colleges of	Graduates.								State Rank According to Number Examined	Rank According to Suc- cess at Examinations.
	Of 1908.		Of 1903 to 1908.		Of 1902 and Previous.		Of all years.			
	Number Ex- amined.	Per Cent. Failed.	Number Ex- amined.	Per Cent. Failed.	Number Ex- amined.	Per Cent. Failed.	Number Ex- amined.	Per Cent. Failed.		
Alabama	30	13.3	34	11.8	3	33.3	37	13.5	26	14
Arkansas	4	50.0	5	60.0	3	33.3	8	50.0	31	28
California	97	22.7	158	33.5	10	30.0	168	33.3	10	25
Colorado	37	13.5	58	12.0	2	0.	60	11.7	21	12
Connecticut	25	0.	49	0.	3	0.	52	0.	23	1
Dist. of Col.....	70	21.4	152	25.7	5	40.0	157	26.1	11	25
Georgia	121	13.2	137	15.3	11	45.5	148	17.6	13	21
Illinois	548	9.3	751	11.1	92	28.3	843	12.9	1	13
Indiana	75	0.	81	1.2	1	100.0	82	2.4	18	2
Iowa	100	13.0	127	15.7	7	28.6	134	16.4	15	18
Kansas	41	2.4	57	10.5	5	20.0	62	11.3	20	10
Kentucky	93	33.3	127	31.5	9	66.7	136	33.8	14	26
Louisiana	115	7.0	139	10.1	16	25.0	155	11.6	12	11
Maine	28	10.7	34	8.8	2	0.	36	8.3	27	6
Maryland	285	19.3	527	24.5	40	20.0	567	24.2	5	24
Massachusetts ...	159	13.2	269	16.7	22	13.6	291	16.5	7	19
Michigan	113	2.7	144	4.2	29	31.0	173	8.7	9	7
Minnesota	67	19.3	114	20.2	7	14.3	121	19.8	16	22
Mississippi	14	78.6	18	77.8	..	..	18	77.8	30	30
Missouri	430	16.7	526	21.3	35	48.6	561	23.0	6	23
Nebraska	86	8.1	110	14.5	11	27.3	121	15.7	16	17
New Hampshire..	6	0.	15	6.7	8	37.5	23	17.4	29	20
New York	349	1.7	536	2.1	35	20.0	571	3.2	3	3
North Carolina ..	73	24.7	95	30.5	..	..	95	30.5	17	24
Ohio	167	4.2	201	6.5	31	35.5	232	10.3	8	8
Oregon	21	47.6	43	56.0	1	0.	44	54.5	25	29
Pennsylvania	464	3.4	640	5.8	60	18.3	700	6.9	2	5
South Carolina ..	17	5.9	24	8.3	4	50.0	28	14.3	28	15
Tennessee	328	31.1	498	36.3	71	31.0	569	35.7	4	27
Texas	26	3.8	41	2.4	4	25.0	45	4.4	24	4
Vermont	32	9.4	60	13.3	6	33.3	66	15.2	19	16
Virginia	91	5.5	124	9.7	10	0.	134	9.0	15	8
Wisconsin	44	11.4	53	11.3	1	0.	54	11.1	22	9
Totals Ex'd 1908	4156	12.7	5947	16.2	544	27.9	6491	17.2	..	..

This table gives data relating to the group of colleges in each state. For example, it shows that of all the medical schools in New York 571 graduates of various years were examined by state boards during 1908, of which number 3.2 per cent. failed. Of the 536 who graduated in recent years, however (1903 to 1908 inclusive), only 2.1 per cent. failed, while of the 35 who graduated previous to 1903, 20 per cent. failed.

The fifth column gives the rank of each state group of colleges according to the number of applicants. The Illinois group of colleges leads, having 843 graduates examined by state boards during 1908, followed by Pennsylvania with 700, New York with 571, Tennessee with 569 and Maryland with 567.

The sixth column gives the rank of each state group of colleges according to the success of the graduates at state board examinations. It is interesting to compare the figures of these two last columns. While the Illinois group ranks first according to the number examined it ranks thirteenth in the success of its graduates at examinations. While Pennsylvania ranks second as to the number examined, it ranks fifth as to the success of the graduates.

percentages of the first column with the other columns it can be seen whether there has been any reduction in failures in recent years. Of the 33 states having medical colleges, 18 furnished 100 or more candidates examined. Of these 18 groups of colleges, only 4 had failure percentages of 10 per cent.; 8 had failure percentages between 10 and 20, and 6 had over 20 per cent. of failures. The highest failure percentage was obtained by the Mississippi group. Of the states having 100 or more examined, however, the highest failure percentage was obtained by the Tennessee group, which had 35.7, followed by the Kentucky group, with 33.8 per cent. Other deductions are given with the table.

STUDY OF LARGER COLLEGES

Table F is also based on the first four tables and gives the results of state board examinations as they affect the 45 largest medical colleges. Although these schools represent less than one-third of all medical colleges in the United States, they furnish 4,421 or about 60 per cent. of all the candidates for license. Of these colleges, even with the graduates of 1908, many show extremely high failure percentages. Of the 19 colleges having 100 or more examined, five stand out prominently with failure percentages of over 30 per cent.

Altogether for these schools 686 or 15.5 per cent. failed, as compared with 20.8 per cent. of failure for the 2,070 candidates from the 92 colleges having less than 50 each examined.

COMPARISON WITH PREVIOUS YEARS (FROM TABLE F).

Year.	Colleges Repre- sented.	Total Examined.	Per Cent. Failed.	Colleges, 100 or More Examined.	Total Examined.	Per Cent. Failed.	Colleges, 50 to 100 Examined.	Total Examined.	Per Cent. Failed.	Colleges, less than 50 Examined.	Total Examined.	Per Cent. Failed.	Foreign and Under- grads. Examined.	Per Cent. Failed.
1904	149	6241	16.4	14	2271	11.7	28	1817	16.9	107	2153	21.0	794	43.1
1905	153	6411	18.3	14	2350	12.4	37	2543	17.7	102	1518	28.9	759	41.1
1906	146	6938	17.3	16	2504	14.5	34	2381	16.9	96	2043	21.3	1097	42.5
1907	146	6207	13.8	12	1626	12.7	36	2578	14.7	98	2003	13.6	1067	55.5
1908	137	6491	17.2	19	2596	15.6	26	1825	15.5	92	2070	20.8	1271	44.6

Besides the graduates of the medical colleges of the United States, 1,279 candidates were examined, made up of foreign college graduates, graduates of miscellaneous colleges and non-graduates, of which number 44.6 per cent. failed.

RESULTS IN HOME STATES AND ELSEWHERE

Table G is of much interest because it shows what portion of the candidates from each college took their examinations in the state where the college was located and what portion went elsewhere. Of the 5,948 recent graduates examined by state boards in 1908, 3,429 or 57.6 per cent. took their license examinations in the home state. Of this number 13.2 per cent. failed, while of those who went to other states 20.3 per cent. failed. The table allows a similar comparison of percentages to be made for each college as well as for each state group of colleges, the latter being shown in heavy faced type. A further description appears with the table.

TOTAL RESULTS FOR FIVE YEARS

Table H shows, so far as reports were obtainable, the number registered and the number rejected in each state for each of the past five years. A comparison of this table with the statistics in the last educational number of THE JOURNAL (Aug. 15, 1908, p. 586), shows what would be expected, that the states having the largest number of medical graduates examine the largest number of physicians. In 1904 several states registered all or the majority of their applicants on the presentation of satisfactory credentials without written examinations. Now only one state, New Mexico, will register candidates on presentation of a diploma, without examination.

This table shows only those registered by examination. Another table (M) shows the total registration by all methods.

CLASSIFICATION OF COLLEGES

Tables I, J, K and L give a classification of the medical colleges of the United States on the basis of the failure of their graduates at state board examinations during the past year. This classification is based on the examination of *recent graduates* as shown in Table C. In forming definite conclusions, the cautions hereinafter given should be observed, of noting the number examined, the number of states in which representatives appeared and the character of the boards making the examination. To form a more exact judgment one should compare the percentage of failures received by any college this year with those received in the classifications published in previous years.

Table I gives a list of 48 colleges which obtained failure percentages below 10 per cent., 20 of which had no failures whatsoever and 31 had less than 5 per cent. The failure percentage for the entire group was 3.6. Table J shows 29 colleges whose failure percentages were between 10 and 20 per cent., of which number 18 had percentages below that for the

group, which was 14.1. Table K includes 46 colleges having failure percentages of 20 per cent. and above, of which number 32 had above 30 per cent., 20 had above 40 per cent. and 10 had percentages of 50 per cent. or above. The highest percentages of failures were 77.8, 75.0 and 66.7, three schools receiving the last given. The percentage for all candidates from this group of colleges was 35.8. In Table L have been placed a number of colleges in regard to which data was insufficient to allow of fair comparison. This list contains 14 colleges, to which should be added the Epworth College of Medicine of Oklahoma, for which no examinations were reported.

COMPARISON WITH PREVIOUS YEARS

	Less than 10 Per cent.	10 to 20 Per cent.	Above 20 Per cent.	Unclassi- fied.	Total.
1904.....	47	27	38	37	149
1905.....	45	22	40	46	153
1906.....	62	24	43	20	149
1907.....	64	27	39	18	148
1908.....	48	29	46	15	138

A comparison of the classification this year with those of previous years shows a decrease in the number of colleges having less than 10 per cent. of failures and an increase in those having above 20 per cent.

TABLE F.—COLLEGES HAVING 50 OR MORE EXAMINED

TABLE SHOWS TOTAL NUMBER EXAMINED, PERCENTAGE OF FAILURES AND NUMBER OF STATES IN WHICH EACH COLLEGE HAD REPRESENTATIVES

Name of College.	Graduates, All Years.			Graduates of 1903-1908.			Graduates, 1902 and previous.			Graduates of 1908.			Marginal Number.
	No. Exam- ined.	Per Cent. Failed.	No. States.	No. Exam- ined.	Per Cent. Failed.	No. States.	No. Exam- ined.	Per Cent. Failed.	No. States.	No. Exam- ined.	Per Cent. Failed.	No. States.	
Jefferson Medical College.....	232	8.6	33	209	6.2	32	23	30.4	14	141	5.7	24	110
College of Physicians and Surgeons, Chicago.....	199	12.6	25	179	10.1	21	20	35.0	12	126	8.7	12	23
University of Pennsylvania, Department of Medicine.....	196	1.0	27	176	0.6	23	20	0.	11	130	0.	14	113
Baltimore Medical College.....	171	34.5	21	161	34.8	21	10	30.0	8	81	23.4	14	52
Northwestern University Medical School.....	167	3.0	21	161	3.1	20	6	0.	5	128	3.1	15	34
Tulane University of Louisiana, Medical Department.....	135	6.7	13	122	5.7	11	13	15.4	7	103	3.9	8	49
Rush Medical College.....	130	6.9	24	91	1.1	17	39	20.6	19	57	1.8	5	35
Meharry Medical College.....	129	50.5	19	125	50.4	17	4	50.0	3	84	44.0	15	121
University of Louisville, Medical Department.....	128	32.0	28	119	29.4	26	9	66.7	8	88	31.8	19	47
University of Maryland, School of Medicine.....	124	17.7	23	111	19.8	20	13	0.	11	64	14.1	11	56
Columbia University, College of Physicians and Surgeons.	124	4.8	19	110	2.7	14	14	21.4	10	49	4.1	3	86
Tufts College Medical School.....	115	13.0	16	110	12.7	13	5	20.0	4	72	11.1	6	61
University of Michigan, College of Medicine.....	112	8.0	21	94	2.1	16	18	38.9	10	73	1.4	10	64
Memphis Hospital Medical College.....	111	35.1	9	94	36.2	9	17	29.4	7	76	35.5	7	120
Washington University, Medical Department, St. Louis....	107	12.1	10	105	12.4	9	2	0.	2	88	11.4	3	79
College of Physicians and Surgeons, Baltimore.....	107	11.3	26	93	8.6	19	14	28.6	11	57	7.0	10	53
Long Island College Hospital.....	105	7.6	8	102	5.9	7	3	66.7	3	58	3.4	3	89
Barnes Medical College, St. Louis.....	104	30.8	22	95	28.4	20	9	55.6	8	65	16.9	11	71
St. Louis University, School of Medicine.....	100	13.0	11	100	13.0	11	.....	.....	.....	87	9.2	8	75
Harvard Medical School.....	98	8.2	19	85	9.4	15	13	0.	9	41	0.	8	60
Medico-Chirurgical College, Philadelphia.....	95	7.4	14	91	6.6	14	4	25.0	3	69	1.4	6	111
Chicago College of Medicine and Surgery.....	94	8.5	16	94	8.5	16	.....	.....	.....	86	7.0	11	26
University and Bellevue Hospital Medical College.....	94	2.1	8	91	2.2	7	3	0.	3	69	2.9	5	93
University of Nashville, Medical Department.....	90	18.9	13	81	18.5	17	9	22.2	4	53	19.0	14	123
University Medical College, Kansas City.....	82	14.6	11	75	13.3	8	7	28.6	6	66	12.1	6	73
George Washington University, Department of Medicine..	76	30.3	16	76	30.3	16	.....	.....	.....	34	26.5	9	17
Indiana University School of Medicine.....	76	0.	3	76	0.	3	.....	.....	.....	71	0.	2	36
Western Pennsylvania Medical College, Pittsburg.....	76	19.7	7	74	20.3	6	2	0.	2	59	10.2	4	114
Johns Hopkins Medical School.....	73	2.7	22	72	2.8	22	1	0.	1	33	3.0	12	54
St. Louis College of Physicians and Surgeons.....	73	47.9	18	64	43.7	15	9	77.8	7	51	41.2	9	76
State University of Iowa, College of Medicine.....	70	15.7	8	65	13.8	6	5	40.0	4	50	12.0	2	40
Cornell University Medical College.....	69	0.	8	68	0.	8	1	0.	1	45	0.	2	87
University of Minnesota, College of Med. and Surg.....	68	11.8	11	64	12.5	10	4	0.	4	32	9.4	6	66
Leonard School of Medicine.....	67	34.3	12	67	34.3	12	.....	.....	.....	52	28.9	10	95
Hahnemann Medical College, Chicago.....	66	21.2	19	57	21.1	14	9	22.2	9	43	18.6	8	29
University of Vermont, College of Medicine.....	66	15.2	12	60	13.3	11	6	33.3	4	32	9.4	4	132
Creighton Medical College.....	64	23.4	13	61	19.7	11	3	100.0	2	45	13.3	7	80
Maryland Medical College.....	60	50.0	19	58	50.0	18	2	50.0	2	19	52.6	10	55
Atlanta School of Medicine.....	58	20.7	7	57	19.3	7	1	100.0	1	53	17.0	7	21
University of Tennessee, Department of Medicine.....	54	38.9	16	39	35.9	11	15	46.7	9	26	23.1	8	124
Yale Medical School, New Haven.....	52	0.	10	49	0.	10	3	0.	2	25	0.	5	16
University College of Medicine, Richmond.....	52	5.8	9	48	6.3	9	4	0.	3	43	2.3	6	135
University of Buffalo, Medical Department.....	51	0.	5	47	0.	2	4	0.	4	31	0.	1	94
Medical College of Virginia, Richmond.....	51	9.8	6	50	10.0	6	1	0.	1	42	4.8	3	133
Albany Medical College.....	50	2.0	8	45	0.	4	5	20.0	5	33	0.	1	35
Totals.....	4421	15.5	.....	4071	14.5	.....	350	26.9	.....	2830	11.6	.....	.....

This table is especially interesting, since it gives data relating to the 45 larger medical colleges arranged according to the number of graduates examined. This allows of comparisons between colleges having classes of nearly equal size.

Of the 19 colleges having 100 or more examined, only 8 have failure percentages of 8.6 or less, while 5 stand out prominently with large failure percentages of 30.8, 32.0, 34.5, 35.1 and 50.5. This marked difference holds even in respect to recent graduates (of 1903 to 1908, inclusive).

Of the 26 colleges having between 50 and 100 graduates examined, 12 had failure percentages less than 10; 6 had failure percentages between 10 and 20, and 8 had failure percentages above 20, the 3 highest having 38.9, 47.9 and 50 per cent.

The average percentages of failures for these larger colleges, for graduates of 1902 and previous years, was 26.9; for graduates of 1903 to 1908, inclusive (recent graduates), 14.5; for graduates of 1908, 11.6, and for graduates of all years, 15.5. Of the 45 colleges, 23 obtained failure percentages below the average. Of the 6,491 college graduates examined by state boards in 1908, these larger schools furnished 4,421, or 68.1 per cent.

TABLE G—COMPARISON OF RESULTS IN HOME STATES AND ELSEWHERE. BASED ON TABLE C.

College.	Total Examined.	Results in Home State.			Results in Other States.		
		Passed.	Failed.	Per Cent. Failed.	Passed.	Failed.	Per Cent. Failed.
ALABAMA -14.8	34	23	4	14.8	7	0	0.
Birmingham Medical College..	14	10	0	0.	4	0	0.
University of Alabama	20	13	4	23.5	3	0	0.
ARKANSAS +75.0	5	1	0	0.	1	3	75.0
Coll. of Phys. and Surg.....	1	1	0	0.			
University of Arkansas.....	4				1	3	75.0
CALIFORNIA -16.7	158	81	47	36.7	24	6	20.0
California Elect. Med. Coll...	5	0	3	100.0	2	0	0.
Coll. of P. and S., Los Angeles.	14	6	5	45.5	2	1	33.3
Coll. of P. and S., San Fran...	34	7	14	66.7	9	4	30.8
Cooper Medical College.....	33	27	5	15.6	1	0	0.
Hahnemann Medical College...	7	3	3	50.0	1	0	0.
Oakland Coll. of M. and S....	2	1	0	0.	1	0	0.
University of California.....	22	15	3	16.7	3	1	25.0
Univ. of Southern California...	41	22	14	38.8	5	0	0.
COLORADO -9.4	58	34	6	15.0	17	1	5.6
Denver & Gross Coll. of Med.	40	21	4	16.0	14	1	6.7
Denver Coll. of P. and S....	5	3	2	40.0			
University of Colorado.....	13	10	0	0.	3	0	0.
CONNECTICUT	49	21	0	0.	28	0	0.
Yale Medical School.....	49	21	0	0.	28	0	0.
DIST. OF COLUMBIA... -13.5	152	39	20	33.9	74	19	20.4
George Washington Univ.....	76	26	13	33.3	27	10	27.0
Georgetown University	30	7	1	12.5	19	3	13.6
Howard University	46	6	6	50.0	28	6	17.6
GEORGIA +22.8	137	90	5	5.3	26	16	38.1
Atlanta School of Medicine...	57	36	4	10.0	10	7	41.2
Atlanta College of P. and S...	34	24	0	0.	9	1	10.0
Georgia Eclectic Med. Coll...	1				1	0	0.
Med. Coll. of Georgia.....	45	30	1	3.2	6	8	57.1
ILLINOIS +4.0	752	448	48	9.7	221	35	13.7
American Medical Miss. Coll.	26	7	0	0.	16	3	15.8
Bennett Medical College.....	35	21	4	16.0	8	2	20.0
Chicago Coll. of M. and S....	94	66	3	4.3	20	5	20.0
Coll. of Med. and Surg. Ph.M.	4	2	2	50.0			
Coll. of P. and S., Chicago...	179	101	10	9.0	60	8	11.8
Hahnemann Med. C., Chicago	57	27	6	18.2	18	6	25.0
Hering Medical College.....	18	12	1	7.7	5	0	0.
Illinois Medical College.....	33	16	6	27.3	9	2	18.1
Jenner Medical College.....	38	25	11	30.6	1	1	50.0
National Med. University.....	16	4	4	50.0	5	3	37.5
Northwestern University.....	161	110	1	0.9	46	4	8.0
Rush Medical College.....	91	57	0	0.	33	1	2.9
INDIANA +33.3	81	78	0	0.	2	1	33.3
Indiana University	76	74	0	0.	2	0	0.
Physio-Med. of Indiana.....	5	4	0	0.	0	1	100.0
IOWA +6.4	127	84	14	14.3	23	6	20.7
Drake University	32	24	5	17.2	2	1	33.3
Sioux City Coll. of Medicine..	20	9	1	10.0	7	3	30.0
University of Iowa (H).....	10	8	1	11.1	1	0	0.
University of Iowa (R).....	65	43	7	14.0	13	2	13.3
KANSAS -1.6	57	32	4	11.1	19	2	9.5
Kansas Medical College.....	17	8	3	27.3	4	2	33.3
University of Kansas.....	26	14	0	0.	12	0	0.
Western Elect. C. of M. & S.	14	10	1	9.1	3	0	0.
KENTUCKY -28.9	127	28	26	48.1	59	14	19.2
Louisville National Med. Coll.	6	0	3	100.0	2	1	33.3
Southern Homeo. Med. Coll...	2				1	1	50.0
University of Louisville.....	119	28	23	45.1	56	12	17.6
LOUISIANA +17.0	139	88	4	4.3	37	10	21.3
Flint Medical College.....	17	8	3	27.3	2	4	66.7
Tulane University.....	122	80	1	1.2	35	6	14.6
MAINE +1.7	34	22	2	8.3	9	1	10.0
Medical School of Maine.....	34	22	2	8.3	9	1	10.0
MARYLAND -15.2	527	98	60	38.0	300	69	22.8
Atlantic Medical College....	23	13	9	42.9	1	0	0.
Baltimore Medical College....	161	19	16	45.7	86	40	31.7
Coll. of P. and S., Baltimore.	93	11	6	35.3	74	2	2.6
Johns Hopkins Med. School...	72	16	0	0.	54	2	3.6
Maryland Medical College....	58	4	11	73.3	25	18	42.0
University of Maryland.....	111	32	15	31.9	57	7	10.9
Woman's Medical College.....	9	3	3	50.0	3	0	0.
MASSACHUSETTS +5.9	269	128	21	14.1	96	24	20.0
Boston University.....	31	17	4	19.0	10	0	0.
College of P. and S., Boston.	43	10	10	50.0	14	9	39.1
Harvard University.....	85	46	0	0.	31	8	20.6
Tufts Medical College.....	110	55	7	11.3	41	7	14.6
MICHIGAN +5.3	144	89	2	2.2	49	4	7.5
Detroit College of Medicine...	35	27	2	6.9	4	2	33.3
Detroit Homeopathic College..	6	4	0	0.	2	0	0.
University of Michigan (R)...	94	53	0	0.	39	2	4.9
University of Michigan (H)...	9	5	0	0.	4	0	0.
MINNESOTA -3.9	114	54	15	21.7	37	8	17.8
Hamline University.....	46	21	9	30.0	11	5	31.3
University of Minnesota (R)...	64	30	5	14.3	26	3	10.3
University of Minnesota (H)...	4	3	1	25.0			
MISSISSIPPI +28.6	18	4	10	71.4	0	4	100.0
Mississippi Medical College....	18	4	10	71.4	0	4	100.0
MISSOURI -1.1	526	138	39	22.0	276	73	20.9
American Medical College.....	10	6	2	25.0	2	0	0.
Barnes Medical College.....	95	2	3	60.0	66	24	26.7
Ensworth Central Med. Coll...	33	7	3	30.0	16	7	30.4
Homeo. College of Missouri...	16	4	3	42.9	5	4	44.4
Kansas City Hahn. Med. Coll.	15	4	2	33.3	9	0	0.
St. Louis College of P. and S.	64	8	7	46.7	28	21	42.9
St. Louis University.....	100	31	7	18.4	56	6	9.7
University of Missouri.....	13	10	0	0.	3	0	0.
Univ. Med. Coll., Kansas City	75	24	7	22.6	41	3	6.8
Washington University.....	105	42	5	10.6	50	8	13.8
NEBRASKA +14.8	110	74	9	11.1	20	7	25.9
Creighton Medical College....	61	34	6	15.0	15	6	28.6
Lincoln Medical College.....	19	13	1	7.2	4	1	20.6
Nebraska College of Medicine.	4	2	2	50.0			
University of Nebraska.....	26	25	0	0.	1	0	0.
NEW HAMPSHIRE -20.0	15	4	1	20.0	10	0	0.
Dartmouth Medical College....	15	4	1	20.0	10	0	0.
NEW YORK -15.6	533	467	9	18.9	58	2	3.3
Albany Medical College.....	45	42	0	0.	3	0	0.
Columbia Univ. Coll. P. & S.	110	88	3	3.3	19	0	0.
Cornell University.....	68	61	0	0.	7	0	0.
Eclectic Med. Coll., New York.	7	7	0	0.			
Long Island College Hospital.	102	86	4	4.4	10	2	16.7
New York Homeo. Med. Coll.	23	21	0	0.	2	0	0.
New York Woman's Med. Coll.	3	3	0	0.			
Syracuse University.....	40	38	0	0.	2	0	0.
University and Bellevue M. C.	91	75	2	2.6	14	0	0.
University of Buffalo.....	47	46	0	0.	1	0	0.
NORTH CAROLINA ... -19.4	95	33	8	19.5	33	21	38.9
Leonard Medical College.....	67	15	3	16.7	29	20	40.8
North Carolina Med. College..	13	5	4	44.4	3	1	25.0
University of North Carolina.	15	13	1	7.2	1	0	0.
OHIO +10.4	201	130	4	3.0	58	9	13.4
Cleveland Coll. of P. and S...	23	18	0	0.	5	0	0.
Cleveland Homeo. Med. Coll...	13	7	0	0.	5	1	16.7
Eclectic Medical Institute....	30	6	3	33.3	18	3	14.3
Medical College of Ohio.....	35	23	0	0.	11	1	5.3
Miami Medical College.....	27	14	1	6.7	9	3	25.0
Pulte Medical College.....	1				1	0	0.
Starling-Ohio Medical College.	34	30	0	0.	3	1	25.0
Toledo Medical College.....	4	3	0	0.	1	0	0.
Western Reserve University...	34	29	0	0.	5	0	0.
OREGON -65.3	43	6	22	78.6	13	2	13.3
University of Oregon.....	23	5	11	31.3	7	0	0.
Willamette University.....	20	1	11	91.7	6	2	25.0
PENNSYLVANIA +1.8	640	362	19	5.0	241	18	6.8
Hahn. M. C. of Philadelphia...	36	22	1	4.4	13	0	0.
Jefferson Medical College....	209	96	1	1.0	109	12	10.7
Medico-Chirurgical Coll., Pa.	91	63	2	3.1	22	4	15.4
Temple College.....	9	8	1	11.1			
University of Pennsylvania...	176	104	0	0.	71	1	1.4
Western Pennsylvania M. C.	74	53	14	20.9	6	1	14.3
Woman's M. C., Pennsylvania	45	16	0	0.	29	0	0.
SOUTH CAROLINA ... -10.5	24	17	2	10.5	5	0	0.
Med. Coll. of South Carolina.	24	17	2	10.5	5	0	0.
TENNESSEE +20.5	493	117	33	22.0	200	148	42.5
Chattanooga Medical College..	38	10	9	47.4	10	9	47.4
College of P. & S., Memphis.	13	6	0	0.	5	2	28.6
Knoxville Medical College....	6	2	2	50.0	0	2	100.0
Memphis Hosp. Med. Coll....	94	13	2	13.3	47	32	40.5
Meharry Medical College.....	125	28	9	24.3	34	54	61.4
Tennessee Medical College....	23	11	3	21.4	6	3	38.3
University of Nashville.....	81	19	0	0.	47	15	24.2
University of Tennessee.....	39	14	5	26.3	11	9	45.0
University of South.....	41	1	1	50.0	21	18	46.2
University of West Tennessee.	8	3	2	40.0	1	2	66.7
Vanderbilt University.....	30	10	0	0.	18	2	10.0
TEXAS -2.6	41	37	1	2.6	3	0	0.
Baylor University.....	8	8	0	0.			
Fort Worth University.....	3	3	0	0.			
Southwestern University.....	6	5	1	16.7			
University of Texas.....	24	21	0	0.	3	0	0.
VERMONT +21.9	60	31	1	3.1	21	7	25.0
University of Vermont.....	60	31	1	3.1	21	7	25.0
VIRGINIA +0.5	124	76	8	9.5	35	4	10.0
Medical College of Virginia...	50	36	4	10.0	9	1	10.0
Univ. College of Medicine....	48	32	0	0.	13	3	20.0
University of Virginia.....	26	8	4	33.3	14	0	0.
WISCONSIN +6.1	53	42	5	10.6	5	1	16.7
Marquette Univ., Med. Dept...	42	33	5	13.2	4	0	0.
Wisconsin Coll. of P. and S...	11	9	0	0.	1	1	50.0
Totals	5948	2976	453	13.2	2008	511	20.3

In this table the number of graduates examined in the state in which the college is located are grouped in one column, while graduates of that college examined in other states are in another column. This shows frequently that the graduates of certain schools have a better chance of passing the examination in the state in which they are located than they have elsewhere. This should always be considered in making comparisons between colleges. A college having an exceedingly low standard, by having all its graduates examined in the home state, may thus show a lower percentage of failures than a college of much higher grade which has graduates examined by several states.

The heavy-faced figures give the results by states. The first column of heavy-faced figures shows the difference between the percentages of home colleges and of colleges of other states. The plus sign indicates that colleges of other states have the larger percentage of rejections; the minus sign indicates that the home colleges have had the greater percentage rejected.

TOTAL REGISTRATION IN 1907

The tables thus far described have referred to candidates registered by examination only. Table M, however, shows the total number registered in each state, including those registered by examination, by reciprocity and under various exemption clauses. Above 100 were registered in 29 different states, above 200 in 9 and above 400 in three, the largest numbers being registered in New York with 751, in Illinois with 691 and in Pennsylvania with 485. Nongraduates were registered in seven different states, the largest numbers being 73 in Mississippi, 67 in Arkansas and 55 in Tennessee.

Table N gives those registered without examination on presentation of satisfactory credentials which included a license issued by some other state. This is usually described by the term "reciprocity," which conveys the idea that the state which accepts the license of another must be granted the same cour-

TABLE H.—PHYSICIANS EXAMINED BY STATE BOARDS, 1904 TO 1908, INCLUSIVE

State.	1904		1905		1906		1907		1908		Total Exam- ined.	Registered.	Rejected.	Percentage Rejected.
	Registered.	Rejected.	Registered.	Rejected.	Registered.	Rejected.	Registered.	Rejected.						
Alabama*	118	20	131	22	133	22	142	38	66	66	763	595	168	22
Arizona	28	7	35	7	35	4	29	2	36	4	187	163	24	12.8
Arkansas*	115	37	83	58	152	73	72	106	120	85	906	547	359	39.6
California	216	80	144	127	190	44	118	84	145	96	1,244	813	431	34.6
Colorado	3	10	283	54	...	...	50	6	52	14	472	388	84	17.8
Connecticut	67	26	66	17	84	28	64	17	67	16	452	348	104	23.0
Delaware	10	1	20	8	11	1	4	2	11	0	68	56	12	17.6
Dist. of Col.	78	14	67	23	63	34	59	37	53	36	464	320	144	31.0
Florida	...	...	24	3	65	7	72	8	79	10	269	241	28	10.4
Georgia	110	4	...	...	164	5	139	22	150	14	608	563	45	7.4
Idaho	23	16	46	15	42	12	38	7	52	16	267	201	66	24.7
Illinois	728	34	759	36	748	69	580	52	646	96	3,748	3,461	287	7.6
Indiana	150	24	249	63	228	12	172	17	172	7	1,094	971	123	11.2
Iowa	238	52	205	30	166	29	146	26	139	43	1,074	894	180	16.8
Kansas	64	13	163	29	180	27	125	14	116	18	749	648	101	13.5
Kentucky	4	6	38	4	52	13	48	19	107	61	352	249	103	29.3
Louisiana	120	20	105	15	133	14	153	7	145	29	741	656	85	11.5
Maine	66	8	68	3	80	8	74	4	92	11	414	380	34	8.2
Maryland	121	66	120	75	112	44	139	41	132	71	921	624	297	32.2
Massachusetts*	320	77	274	63	270	120	226	118	238	108	1,814	1,328	486	26.8
Michigan	52	1	52	5	162	6	150	8	113	6	585	559	26	4.4
Minnesota	134	27	124	39	104	31	80	35	76	25	675	518	157	23.3
Mississippi*	119	130	113	138	156	144	157	191	138	184	1,470	683	787	53.5
Missouri	...	...	...	249	193	186	86	181	50	945	616	329	53.4	
Montana	21	10	31	17	24	25	34	14	51	27	254	161	92	36.6
Nebraska	93	7	87	29	58	25	68	14	103	16	500	409	91	18.2
Nevada	2	0	...	...	2	0	10	1	17	0	32	31	1	3.1
New Hamp.	33	9	15	5	34	17	19	11	37	16	196	138	58	29.6
New Jersey	76	20	55	17	80	13	73	15	89	17	455	373	82	18.0
New Mexico	9	2	...	...	...	5	3	30	2	51	44	7	13.7	
New York	367	62	705	51	329	56	691	54	679	73	3,667	3,371	296	8.1
North Carolina	74	19	92	40	87	41	111	20	95	26	605	459	146	24.1
North Dakota	54	13	72	7	60	10	49	4	52	10	331	287	44	13.3
Ohio	236	13	213	8	222	16	179	9	182	6	1,084	1,032	52	4.8
Oklahoma	30	36	53	28	95	28	...	...	34	10	314	212	102	32.5
Oregon	70	6	68	66	65	56	62	56	43	63	555	308	247	42.7
Pennsylvania	460	121	540	98	519	73	465	54	485	49	2,864	2,469	395	13.8
Rhode Island*	52	5	47	19	54	30	36	23	29	17	312	218	94	30.1
South Carolina	49	6	44	22	39	13	41	17	47	21	299	220	79	26.4
South Dakota	36	12	41	11	26	11	23	5	58	6	229	184	45	19.7
Tennessee*	166	107	86	35	150	96	133	140	213	87	1,213	748	465	38.3
Texas	96	87	117	73	159	53	187	64	143	23	1,002	702	300	29.9
Utah	31	7	32	8	37	7	26	0	27	5	180	153	27	15.0
Vermont	54	1	43	1	35	0	40	7	45	6	232	217	15	6.5
Virginia	121	54	140	50	123	35	124	33	128	53	861	636	225	25.0
Washington	135	46	141	34	137	45	163	38	182	60	981	758	223	22.7
West Virginia	63	40	109	95	84	72	92	9	102	18	734	550	234	29.9
Wisconsin	60	7	95	5	52	2	62	5	80	7	375	349	26	6.9
Wyoming	...	...	12	1	12	3	7	5	7	2	49	38	11	22.4
Totals.	7,035	7,596	8,035	7,271	7,770	37,707	...	...	...	...	...	...	...	...
Registered	5,672	6,042	6,368	5,723	6,084	29,889	...	...	...	...	...	...	...	...
Rejected	1,363	1,554	1,667	1,548	1,686	7,818	...	...	...	...	...	...	...	...
Percent. Rej	19.4	20.5	20.7	21.3	21.7	20.7	...	...	...	...	...	...	...	...

This table gives the number of candidates registered by examination by each state during each of the last five years, as well as the number rejected. The last four columns give the totals for the five years and the percentage rejected by each state.

Five states registered over 1,000 candidates by examination, these being Illinois, Massachusetts, New York, Ohio and Pennsylvania. Over 3,000 were registered in Illinois and New York.

The highest percentage of rejections was 53.5 in Mississippi, followed by Oregon, Arkansas and Tennessee, with 42.7, 39.6 and 38.3, respectively. The states marked with an asterisk (*) included non-graduates among those examined, and for that reason would be expected to have higher percentages rejected.

The lowest failure percentages were in Nevada, 3.1; Michigan, 4.4; Ohio, 4.8; Vermont, 6.5 and Wisconsin, 6.9.

tesy by the state issuing the original license. The term does not well describe this method of registration, however, since several states consider it more fair to the individual to accept his credentials, if satisfactory, whether the state issuing the original license returns the favor or not. A further description appears beneath the table. Without the provision for reciprocity 1,092 physicians would have been compelled to undergo a second trying examination.

CAUTIONS IN FORMING CONCLUSIONS

In making comparisons on the basis of these statistics several factors should be carefully considered. The number examined is important since, if all other conditions are equal, the largest number of graduates examined gives the more accurate finding. But other conditions are seldom equal. The number

TABLE I.—COLLEGES HAVING LESS THAN 10 PER CENT. OF FAILURES BEFORE STATE BOARDS IN 1908. BASED ON TABLE C.

College.	Total Examined.	Number Passed.	Number Failed.	Per Cent. Failed.	No. of States.
ALABAMA					
Birmingham Medical College.....	14	14	0	0.	5
CALIFORNIA					
Oakland College of Med. and Surgery..	2	2	0	0.	2
COLORADO					
University of Colorado, Medical Dept..	13	13	0	0.	4
CONNECTICUT					
Yale Medical School, New Haven.....	49	49	0	0.	10
GEORGIA					
Atlanta College of Phys. and Surgs.....	34	33	1	2.9	7
ILLINOIS					
Chicago College of Med. and Surg.....	94	86	8	8.5	16
Hering Medical College.....	13	17	1	5.6	5
Northwestern University Med. School..	161	153	5	3.1	20
Rush Medical College.....	91	90	1	1.1	17
INDIANA					
Indiana University School of Medicine.	76	76	0	0.	3
KANSAS					
University of Kansas, School of Med..	26	26	0	0.	4
Western Eclectic Coll. Med. and Surg.	14	13	1	7.2	3
LOUISIANA					
Tulane University of La., Med. Dept..	122	115	7	5.7	11
MAINE					
Medical School of Maine.....	34	31	3	8.8	4
MARYLAND					
Coll. of Phys. and Surgs., Baltimore..	93	85	8	8.6	19
Johns Hopkins Medical School.....	72	70	2	2.8	23
MASSACHUSETTS					
Harvard Medical School.....	85	77	8	9.4	15
MICHIGAN					
Detroit Homeopathic College.....	6	6	0	0.	2
Univ. of Mich., Dept. of Med. and Surg.	94	92	2	2.1	16
Univ. of Michigan, Homeopathic Dept.	9	9	0	0.	4
MISSOURI					
University of Missouri, Medical Dept..	13	13	0	0.	4
NEBRASKA					
Univ. of Nebraska, Coll. of Medicine..	26	26	0	0.	2
NEW HAMPSHIRE					
Dartmouth Medical School.....	15	14	1	6.7	5
NEW YORK					
Albany Medical College.....	45	45	0	0.	4
Columbia Univ., Coll. P. and S., N. Y.	110	107	3	2.7	14
Cornell University Medical College.....	63	63	0	0.	8
Long Island College Hospital.....	102	96	6	5.9	7
New York Homeopathic College.....	23	23	0	0.	3
Syracuse Univ., Coll. of Medicine.....	40	40	0	0.	3
Univ. and Bellevue Hosp. Med. Coll...	91	89	2	2.2	7
University of Buffalo Med. Dept.....	47	47	0	0.	2
NORTH CAROLINA					
Univ. of North Carolina, Med. Dept...	15	14	1	6.7	2
OHIO					
Cleveland Coll. of Phys. and Surgs.....	23	23	0	0.	6
Cleveland Homeopathic Med. College..	13	12	1	7.7	3
Medical College of Ohio.....	35	34	1	2.9	7
Starling-Ohio Medical College.....	34	33	1	2.9	5
Toledo Medical College.....	4	4	0	0.	2
Western Reserve Univ., Med. Dept....	34	34	0	0.	5
PENNSYLVANIA					
Hahnemann Med. Coll., Philadelphia..	36	35	1	2.8	10
Jefferson Medical College.....	209	196	13	6.2	32
Medico-Chirurgical Coll., Philadelphia.	91	85	6	6.6	14
University of Pennsylvania, Med. Dept.	176	175	1	0.6	23
Woman's Med. Coll. of Pennsylvania..	45	45	0	0.	13
SOUTH CAROLINA					
Medical College of South Carolina.....	24	22	2	8.3	3
TENNESSEE					
Vanderbilt University Med. Dept.....	30	28	2	6.7	9
TEXAS					
University of Texas, Dept. of Med.....	24	24	0	0.	4
VIRGINIA					
University College of Medicine.....	48	45	3	6.3	9
WISCONSIN					
Wisconsin Coll. of Phys. and Surgs...	11	10	1	9.1	3
Totals	2539	2447	92	3.6	

of different states in which a school's graduates have been examined is important. The larger this number the more accurate will be the conclusions. Again, the character of the boards making the examination and the methods employed by them are important factors to be considered, since some boards

mark severely while others, which is especially true of partisan boards, may be very lenient. Finally in this connection it should be stated that the character of the license examination as usually conducted at the present time is such that graduates of colleges operated largely on quiz-class methods may be most successful in passing them. Therefore, the statistics herewith presented should be taken only as part of any investigation of medical schools, although it is an important part.

TABLE J.—COLLEGES HAVING BETWEEN 10 AND 20 PER CENT. OF FAILURES BEFORE STATE BOARDS IN 1908.
BASED ON TABLE C.

College.	Total Examined	Number Passed.	Number Failed.	Per Cent. Failed.	No. of States.
CALIFORNIA					
Cooper Medical College.....	33	28	5	15.2	2
University of California, Med. Dept....	22	18	4	18.2	5
COLORADO					
Denver and Gross College of Medicine.	40	35	5	12.5	14
DISTRICT OF COLUMBIA					
Georgetown Univ. School of Med.....	30	26	4	13.3	13
GEORGIA					
Atlanta School of Medicine.....	57	46	11	19.3	7
ILLINOIS					
American Medical Missionary Coll.....	26	23	3	11.5	11
Bennett Coll. of Elec. Med. and Surg.	35	29	6	17.1	8
College of Physicians and Surgeons.....	179	161	18	10.1	21
IOWA					
Drake Univ., Col. of Med. and Surg....	32	26	6	18.7	4
State Univ. of Iowa., Coll. of Med.....	65	56	9	13.8	6
State Univ. of Iowa, Homeo. Dept.....	10	9	1	10.0	2
MARYLAND					
Univ. of Maryland, School of Medicine.	111	89	22	19.8	20
MASSACHUSETTS					
Boston University School of Medicine..	31	27	4	12.9	6
Tufts College Medical School.....	110	96	14	12.7	13
MICHIGAN					
Detroit College of Medicine.....	35	31	4	11.4	5
MINNESOTA					
Univ. of Minn., Coll. of Med. and Surg.	64	56	8	12.5	10
MISSOURI					
Kansas City Hahnemann Medical Coll.	15	13	2	13.3	5
St. Louis University School of Med....	100	87	13	13.0	11
University Med. College, Kansas City.	75	65	10	13.3	8
Washington University Medical Dept...	105	92	13	12.4	9
NEBRASKA					
Creighton Medical College.....	61	49	12	19.7	11
Lincoln Medical College.....	19	17	2	10.5	4
OHIO					
Miami Medical College.....	27	23	4	14.8	8
TENNESSEE					
College of Phys. and Surgs., Memphis.	11	11	2	15.4	3
University of Nashville, Medical Dept.	81	66	15	18.5	17
VERMONT					
University of Vermont, College of Med.	60	52	8	13.3	11
VIRGINIA					
Medical College of Virginia.....	50	45	5	10.0	6
University of Virginia, Dept. of Med..	26	22	4	15.4	14
WISCONSIN					
Marquette University, Medical Dept....	42	37	5	11.9	5
Totals	1552	1335	219	14.1	..

TABLE L.—UNCLASSIFIED COLLEGES

College.	Total Examined.	Number Passed.	Number Failed.	Per Cent. Failed.	No. of States.
ARKANSAS					
Coll. of Phys. and Surgs., Little Rock.	1	1	0	0.	1
COLORADO					
Denver College of Phys. and Surgs.....	5	3	2	40.0	1
GEORGIA					
Georgia Coll. of Eclectic Med. and Surg.	1	1	0	0.	1
ILLINOIS					
Coll. Med. and Surg., Physio-Medical.	4	2	2	50.0	1
KENTUCKY					
Southwestern Homeopathic Med. Coll..	2	1	1	50.0	1
MINNESOTA					
Univ. of Minn., Homeopathic Dept.....	4	3	1	25.0	1
NEBRASKA					
Nebraska College of Medicine.....	4	2	2	50.0	1
NEW YORK					
Eclectic Med. Coll. of the City of N. Y.	7	7	0	0.	1
N. Y. Coll. and Hospital for Women...	3	3	0	0.	1
OHIO					
Pulte Medical College.....	1	1	0	0.	1
PENNSYLVANIA					
Temple College, Medical Department...	9	8	1	11.1	1
TEXAS					
Baylor University, College of Medicine.	8	8	0	0.	1
Port Worth University, Med. Dept.....	3	3	0	0.	1
Southwestern University, Med. Coll....	6	5	1	16.7	1
Totals	58	48	10	17.1	..

IN CONCLUSION

Our endeavor in the publication of these statistics has been to give an absolutely fair presentation of actual facts, knowledge of which is always beneficial. We feel sure this exposition of the results of the examination of applicants for license to practice medicine in the United States will help in the advancement of medical education in this country. Our acknowledgments are due to the state licensing boards whose ready cooperation and complete reports have made the publication of these data possible.

TABLE K.—COLLEGES HAVING OVER 20 PER CENT. OF FAILURES BEFORE STATE BOARDS IN 1908. BASED ON TABLE C.

College.	Total Examined.	Number Passed.	Number Failed.	Per Cent. Failed.	No. of States.
ALABAMA					
University of Alabama, Medical Dept..	20	16	4	20.0	4
ARKANSAS					
University of Arkansas, Med. Dept....	4	1	3	75.0	4
CALIFORNIA					
California Eclectic Medical College.....	5	2	3	66.7	3
Coll. of Phys. and Surgs., Los Angeles.	14	8	6	42.8	3
Coll. Phys. and Surgs., San Francisco..	34	16	18	52.9	4
Hahnemann Med. Coll. of the Pacific...	7	4	3	42.9	2
University of Southern California.....	41	27	14	34.2	3
DISTRICT OF COLUMBIA					
Geo. Washington Univ., Dept. of Med.	76	53	23	30.3	16
Howard University, Medical Depart....	46	34	12	26.1	16
GEORGIA					
Medical College of Georgia.....	45	36	9	20.0	7
ILLINOIS					
Hahnemann Med. Coll. and Hospital..	57	45	12	21.1	14
Illinois Medical College.....	33	25	8	24.2	9
Jenner Medical College.....	38	26	12	31.6	3
National Medical University.....	16	9	7	43.8	7
INDIANA					
Physio-Medical College of Indiana.....	5	4	1	20.0	2
IOWA					
Sioux City College of Medicine.....	20	16	4	20.0	4
KANSAS					
Kansas Medical College.....	17	12	5	29.4	6
KENTUCKY					
Louisville National Medical College.....	6	2	4	66.7	4
University of Louisville, Medical Dept.	119	84	35	29.4	26
LOUISIANA					
Flint Medical College.....	17	10	7	41.2	3
MARYLAND					
Atlantic Medical College.....	23	14	9	39.1	2
Baltimore Medical College.....	161	105	56	34.8	21
Maryland Medical College.....	53	29	29	50.0	15
Woman's Medical College of Baltimore.	9	6	3	33.3	4
MASSACHUSETTS					
College of Phys. and Surgs., Boston...	43	24	19	44.2	8
MINNESOTA					
Minneapolis Coll. of Phys. and Surgs..	46	32	14	30.4	1
MISSISSIPPI					
Mississippi Medical College.....	18	4	14	77.8	3
MISSOURI					
American Medical College.....	10	8	2	20.0	3
Barnes Medical College.....	95	68	27	28.4	20
Ensforth Medical College.....	33	23	10	30.3	5
Homeopathic Med. College of Missouri.	16	9	7	43.8	3
St. Louis College of Phys. and Surgs...	64	36	28	43.7	15
NORTH CAROLINA					
Leonard School of Medicine.....	67	44	23	34.3	12
North Carolina Medical College.....	13	8	5	38.4	4
OHIO					
Eclectic Medical Institute, Cincinnati...	30	24	6	20.0	11
OREGON					
Willamette University, Medical Dept...	20	7	13	65.0	4
University of Oregon, Medical Dept....	23	12	11	47.8	5
PENNSYLVANIA					
Western Pennsylvania Medical College.	74	59	15	20.3	6
TENNESSEE					
Chattanooga Medical College.....	38	20	18	47.3	9
Knoxville Medical College.....	6	2	4	66.7	3
Memphis Hospital Medical College.....	94	60	34	36.2	9
Meharry Medical College.....	125	62	63	50.4	17
Tennessee Medical College.....	23	17	6	26.1	6
University of Tenn., Dept. of Medicine	39	25	14	35.9	11
University of the South, Medical Dept.	41	22	19	46.3	14
Univ. of West Tennessee, Dept. of Med.	8	4	4	50.0	4
Totals	1797	1154	643	35.8	..

TABLE M.—REGISTRATIONS BY STATE BOARDS DURING 1908

States.	By Exam-ination.			By Reciprocity.	Without Written Exam. or Under Exemption.	Total Reg-istered.	States.	By Exam-ination.			By Reciprocity.	Without Written Exam. or Under Exemption.	Total Reg-istered.
	Graduates, 1903-1908.	Graduates, 1902 and Previous.	Non-gradu-ates.					Graduates, 1903-1908.	Graduates, 1902 and Previous.	Non-gradu-ates.			
Alabama	54	3	9			66	North Dakota	45	7		17		69
Arizona	22	14				36	Ohio	170	12		34		216
Arkansas	44	9	67		22	142	Oklahoma	29	5				34
California	115	30				145	Oregon	28	15				43
Colorado	48	4		150	1	203	Pennsylvania	466	19				485
Connecticut	60	7		2		69	Rhode Island	23	3	3			29
Delaware	8	3		3		14	South Carolina	46	1				47
District of Columbia	49	4				53	South Dakota	46	12				58
Florida	53	26				79	Tennessee	146	12	55	26		239
Georgia	143	7		33	3	186	Texas	102	41		83		226
Idaho	36	16				52	Utah	25	2		14		41
Illinois	622	24		45		691	Vermont	41	4		6		51
Indiana	163	9		24		196	Virginia	117	10	1	13		141
Iowa	136	3		56		195	Washington	130	52				182
Kansas	106	10		104	4	224	West Virginia	98	4				102
Kentucky	106	1		5	25	137	Wisconsin	65	15		39	1	120
Louisiana	138	7		4		149	Wyoming	6	1		14		21
Maine	90	2		3		95							
Maryland	130	2		22	8	162	Totals	5326	545	213	1092	134	7330
Massachusetts	211	22	5			238							
Michigan	104	9		54	9	176							
Minnesota	74	2		65		141							
Mississippi	60	5	73			133							
Missouri	176	5		14		195							
Montana	44	7				51							
Nebraska	90	13		79		182							
Nevada	9	8		15		32							
New Hampshire	35	2		4	3	44							
New Jersey	82	7		84		173							
New Mexico	19	11			108	138							
New York	627	52		72		751							
North Carolina	89	6		8		103							

This table shows the total number registered during 1908 in each state by the various methods. The first column shows the recent graduates registered, the second column, the old practitioners (graduates of 1902 and previous years), the third column the non-graduates, and the fourth column shows the number licensed through reciprocity. It is interesting to note that states which have registered large numbers through reciprocity have examined very few "old practitioners." The chief exception is New York, which has arranged reciprocal relations with only five other states. The fifth column shows those registered without written examination under various exemption clauses. The last column shows the total number of physicians registered in each state during the year.

TABLE N.—PHYSICIANS REGISTERED THROUGH RECIPROCITY BY STATE EXAMINING BOARDS DURING 1908

State Board of	Total Reg. Through Reciprocity by Each State.	Alabama.	Arizona.	California.	Colorado.	Connecticut.	Delaware.	Dist. of Columbia.	Georgia.	Idaho.	Illinois.	Indiana.	Iowa.	Kansas.	Kentucky.	Maine.	Maryland.	Massachusetts.	Michigan.	Minnesota.	Mississippi.	Missouri.	Nebraska.	Nevada.	New Hampshire.	New Jersey.	New Mexico.	New York.	North Carolina.	North Dakota.	Ohio.	Oklahoma.	Oregon.	Pennsylvania.	Rhode Island.	South Carolina.	South Dakota.	Tennessee.	Texas.	Utah.	Vermont.	Virginia.	West Virginia.	Wisconsin.			
Colorado	150	4	1	2		2	1	1		1	29	2	13	6	2	1	1	3	4		19	3	2		1	10			6	3	1	13	1		1	3	4	2	1	1	3	3					
Connecticut	2																																														
Delaware	3																																														
Georgia	33							4				1	1		4	1	1	2		5		1		3			1																				
Illinois	45											8	9	6					4	2		3					2																				
Indiana	24											4			5				5	1		1				1																					
Iowa	56											27		3	2				3	1		5	8																								
Kansas	104				3				1			34	7	13	14				3	1		19					1																				
Kentucky	5																																														
Louisiana	4																																														
Maine	3																																														
Maryland	22																																														
Michigan	54											2	1	1		2			1							1																					
Minnesota	65											21	2	2		1	1		1																												
Missouri	14											21	1	14	1	1	1		1			2																									
Nebraska	79												3		3	1	1																														
Nevada	15											21	3	21	12	1				4		10																									
New Hampshire	4											1	1	2		1			2																												
New Jersey	84																																														
New York	72																																														
North Carolina	8																																														
North Dakota	17																																														
Ohio	34											5	1			1			3	5																											
Tennessee	26											7	4			1	5		9																												
Texas	83											24	1	6					5	1		17	1																								
Utah	14											2	1	1	1				1	1																											
Vermont	6																																														
Virginia	13											2	1	1	1				1	2																											
Wisconsin	39																																														
Wyoming	14											2	1	4					2	4		1	3																								
Total received from each state through reciprocity..	1092	4	1	2	10	2	2	14	18	1	225	33	94	32	53	24	30	3	63	23	1	61	47	4	2	46	1	100	4	6	35	3	1	15	1	4	1	14	10	3	20	15	2	42			

This table shows the number of physicians registered by each state through reciprocity during 1908. "Reciprocity" is not the best term to use, however, since some states, Colorado for instance, register candidates who have satisfactory credentials including licenses, regardless as to whether the state issuing the original license reciprocates with those states or not. Taking New York as an example, reading from left to right, the table shows that New York registered a total of 72 applicants through reciprocity during 1908, of which number 13 came from Michigan, 40 from New Jersey, 9 from Ohio and 10 from Vermont. Reading from above downward, the table shows that 100 physicians left New York during 1908 and registered in other states under the reciprocity provision, of which number 10 registered in Colorado, 1 in Connecticut, 1 in Louisiana, 5 in Michigan, 1 in Minnesota, 73 in New Jersey, 1 in North Carolina, 6 in Ohio and 2 in Vermont. Colorado leads, having registered 150 physicians through reciprocity, followed by Kansas, which registered 104, New Jersey with 84, and Michigan with 83. It is interesting to note in what states the original licenses were issued. The table shows that of 1092 applicants registered through reciprocity, 225, or over 20 per cent., obtained their original licenses in Illinois, 100 in New York, 94 in Iowa, and 63 in Michigan. Altogether 1,092 licenses were issued through reciprocity in 1908, an increase of 103 over 1907, and 407 over 1906.

Marginal Number	NAME OF COLLEGE.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Marginal Number			
		Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan				
		I	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P				
1	ALABAMA.																						1			
2	Birmingham Medical College.—R.....	10	0							1	0							1	0				2			
	Univ. of Alabama, Med. Dept.—R.....	18	5							1	0															
3	ARKANSAS.																						3			
4	Coll. of Phys. and Surgs.—R.....			1	0																		4			
	Univ. of Arkansas, Med. Dept.—R.....																									
5	CALIFORNIA.																						5			
6	California Eclectic Med. Coll.—R.....				1	3																	6			
7	Coll. of P. and S., Los Angeles.—R.....		1	1	6	5																	7			
8	Coll. of P. and S., San Fran.—R.....				8	16																	8			
9	Cooper Medical College.—R.....				27	5																	9			
10	Hahnemann M. Coll. of Pacific.—H.....				3	3																	10			
11	Oakland Coll. of M. and Surg.—R.....				1	0																	11			
12	Univ. of Cal., Med. Dept.—R.....				15	3							1	0									12			
	Univ. of Southern California.—R.....		4	0	23	15																				
13	COLORADO.																						13			
14	Denver & Gross Coll. of Med.—R.....	1	0		1	0	1	0	21	4					1	0							14			
15	Denver Coll. of P. and S.—P.....								3	2													15			
	Univ. of Colo., Medical Dept.—R.....					10	0							2	0											
16	CONNECTICUT.																						16			
	Yale Medical School.—R.....				1	0		21	0												6	0				
17	DISTRICT OF COLUMBIA.																						17			
18	Geo. Washington University.—R.....								26	13			0	1	2	1	1	0			5	2	1	1	18	
19	Georgetown Univ. School of M.—R.....		1	0		1	0		7	1				1	0					4	0	2	1		19	
	Howard Univ., Med. Dept.—R.....	1	0		0	1		1	0	6	6		2	0	1	1				1	2	2	1			
20	GEORGIA.																							20		
21	Atlanta Coll. of P. and S.—R.....	1	0							4	0	24	0						2	0					21	
22	Atlanta School of Medicine.—R.....	2	6			0	1			6	0	36	4					1	0						22	
23	Georgia Coll. of Elect. M. & S.—E.....									0	1														23	
	Medical College of Georgia.—R.....			0	1					3	0	30	1					0	1							
24	ILLINOIS.																							24		
25	American Med. Missionary Coll.—R.....								1	0	2	0			8	0					1	1	9	0	25	
26	Bennett Coll. of Elect. M. & S.—E.....		1	0									0	1	21	4	1	0	1	0					26	
27	Chicago Coll. of M. and S.—R.....	1	0												66	3	4	0	2	0			1	2		27
28	Coll. of Med. and Surg.—Ph.M.....												2	2											28	
29	Coll. of Phys. and S.—R.....			2	0	4	0	0	1	0	1		2	0	5	2	103	10	5	0	1	1			29	
30	Hahnemann Med. Coll. & Hosp.—H.....	0	1	1	0	2	0		0	1			1	1	27	7	3	0	2	1			0	1	1	30
31	Hering Medical College.—H.....		1	0											12	1	2	0		1						31
32	Illinois Medical College.—R.....				0	1				1	0				16	6	4	0	0	1			1	0		32
33	Jenner Medical College.—R.....										1	0			25	11	0	1								33
34	National Medical University.—P.....			1	0							1	0	4	4							1	0			34
35	Northwestern Univ. M. School.—R.....		2	0		3	1	4	0				3	0	111	1	3	0	2	6						35
	Rush Medical College.—R.....		1	0	1	0	7	2			1	0			4	0	57	1	4	0	1	0				
36	INDIANA.																								36	
37	Ind. Univ. School of Med.—R.....																74	0								37
	Physio-Med. Coll. of Ind.—Ph.M.....			0	1												4	0								
38	IOWA.																								38	
39	Drake Univ., Coll. of Med.—R.....																24	5								39
40	Sionx City Coll. of Medicine.—R.....		1	0													9	1								40
41	State Univ. of Iowa, C. of M.—R.....				0	3											43	7								41
	State U. of Ia., Homeo. Dept.—H.....												1	0			8	1								42
42	KANSAS.																								42	
43	Kansas Medical College.—R.....					0						1	0	1	0											43
44	Univ. of Kan., School of Med.—R.....				1	0											14	0								44
	Western Elect. Coll. of M. & S.—E.....																10	1								45
45	KENTUCKY.																								45	
46	Louisville Nat. Med. Coll.—R.....			0	1										1	0			1	0	0	3				46
47	Southwestern Homeo. M. Coll.—H.....					1	1																			47
	Univ. of Louisville, Med. Dept.—R.....	1	0		3	0	0	1		1	0</															

R—Regular; H—Homeopathic; E—Eclectic; P—Panpathic; * One report not received.

[illegible]

Marginal Number	NAME OF COLLEGE.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Marginal Number	
		Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan		
		P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F		
	MISSOURI.																							
70	American Medical College.—E.....		1 0			1 0							2 4	33 11		1 1	3 0	1 1				0 1	1 0	70
71	Barnes Medical College.—R.....		2 0	5 1	0 1	1 0										0 1	15 5							71
72	Emsworth Medical College.—R.....			0 1													1 0							72
73	Homeopathic Med. Coll. of Missouri.—H.....												3 5	2 0		1 0	6 0							73
74	Kansas City Hahnemann Med. Coll.—H.....			1 0									1 1	43 1		1 1	1 0							74
75	St. Louis University, School of Med.—R.....			3 0									0 1	17 12	0 1									75
76	St. Louis Coll. of Phys. and Surg.—R.....		1 0	1 0	0 1	1 1																		76
77	University of Missouri, Medical Dept.—R.....		1 0		1 0									1 0										77
78	University Medical Coll., Kansas City.—R.....			1 0	1 1	1 0										37 1								78
79	Washington University, Med. Dept.—R.....			2 0	0 1					1 0			44 5											79
	NEBRASKA.																							
80	John A. Creighton Medical Coll.—R.....					0 1						6 6	1 0				2 0							80
81	Lincoln Medical College.—E.....					1 0																		81
82	Nebraska College of Medicine.—R.....																							82
83	University of Nebraska, Coll. of Med.—R.....																							83
	NEW HAMPSHIRE.																							
84	Dartmouth Medical School.—R.....						0 1			1 0			1 0	1 0				0 1	1 0		8 0	1 0		84
	NEW YORK.																							
85	Albany Medical College.—R.....				3 0		4 1			2 0	1 0							1 0		3 0		2 0	1 0	85
86	College of Phys. and Surg., New York.—R.....						1 0				1 0										1 0			86
87	Cornell Univ. Medical College.—R.....																							87
88	Eclectic Med. Coll. of City of New York.—E.....				1 0							0 1	1 0								0 1	2 0		88
89	Long Island College Hospital.—R.....				2 0																2 0			89
90	New York Homeo. Med. Coll. and Hosp.—H.....																							90
91	N. Y. Med. Coll. and Hosp. for Women.—H.....						1 0				1 0													91
92	Syracuse University, Coll. of Med.—R.....						3 0						1 0	1 0							4 0			92
93	Univ. and Bellevue Hosp. Med. Coll.—R.....																							93
94	University of Buffalo, Med. Dept.—R.....									1 0														94
	NORTH CAROLINA.																							
95	Leonard School of Medicine.—R.....	0 1							0 1		6 0							3 0		1 0				95
96	North Carolina Medical College.—R.....										1 0										1 1			96
97	Univ. of North Carolina, Med. Dept.—R.....									1 0														97
	OHIO.																							
98	Cleveland Coll. of Phys. and Surg.—R.....					1 0						1 0									1 0			98
99	Cleveland Homeo. Medical College.—H.....				1 0	0 1												3 1				0 1		99
100	Eclectic Medical Institute.—E.....				1 0	0 1				1 0		0 1	1 0	2 0				3 0						100
101	Medical College of Ohio.—R.....				2 2					1 0				3 0				1 0						101
102	Miami Medical College.—R.....												1 0											102
103	Pulte Medical College.—H.....																	1 0						103
104	Starling-Ohio Medical College.—R.....																							104
105	Toledo Medical College.—R.....				0 1										1 0						1 0			105
106	Western Reserve Univ. Med. Dept.—R.....																							106
	OREGON.																							
107	Willamette Univ., Medical Dept.—R.....												1 0											107
108	University of Oregon, Medical Dept.—R.....																							108
	PENNSYLVANIA.																							
109	Hahnemann Med. Coll. and Hospital.—H.....						1 0	1 0								2 0				1 0	1 0			109
110	Jefferson Medical College.—R.....	1 0	3 0	1 0	6 2		2 1	2 0	0 3	1 0		1 0	5 0	2 0		2 0		1 0	3 0	6 2	7 2	2 0		110
111	Medico-Chirurgical Coll. of Philadelphia.—R.....				1 2					1 0			1 0	1 0	1 0				1 0	1 0				111
112	Temple College, Medical Dept.—R.....																							112
113	University of Penn., Dept. of Medicine.—R.....		1 0		4 1			1 0	1 0			1 0	2 0		1 0	2 0					9 0	1 0		113
114	Western Pennsylvania Med. College.—R.....						0 1				1 0		2 0											114
115	Woman's Med. Coll. of Pennsylvania.—R.....								1 0			1 0						1 0		2 0	5 0	4 0		115
	SOUTH CAROLINA.																							
116	Med. Coll. of the State of So. Carolina.—R.....									4 0	2 0													116
	TENNESSEE.																							
117	Chattanooga Medical College.—R.....	0 4		0 1						2 0	6 0								1 0					117
118	Coll. of Phys. and Surg., Memphis.—R.....										2 0													118
119	Knoxville Medical College.—R.....									1 1								16 6						119
120	Memphis Hospital Medical College.—R.....	4 3		5 1						1 2	15 6		0 1		0 1	0 1	2 4	2 2						120
121	Meharry Medical College.—R.....	1 4		3 8						1 0														121
122	Tennessee Medical College.—R.....																							122
123	University of Nashville, Med. Dept.—R.....	3 5		2 0						3 0	4 0							1 0	1 1	1 0				123
124	University of Tennessee, Dept. of Med.—R.....	2 3	0 1	1 0						2 0	2 0							1 1	1 1	1 1				124
125	University of the South, Med. Dept.—R.....	1 1		1 0				1 0		5 0	1 0							1 3	1 1	1 1				125
126	University of West Tenn., Med. Dept.—R.....			0 1						0 1														126
127	Vanderbilt University, Med. Dept.—R.....	6 1		3 0								0 1						4 0			1 0			127
	TEXAS.																							
128	Baylor University, Coll. of Med.—R.....																							128
129	Fort Worth University, Medical Dept.—R.....		0 1																					129
130	Southwestern University Med. Coll.—R.....																							130
131	University of Texas, Dept. of Med.—R.....			1 0	1 0														1 0					131
	VERMONT.																							
132	University of Vermont, College of Med.—R.....				0 1		1 0													3 0		8 4		132
	VIRGINIA.																							
133	Medical College of Virginia.—R.....		1 0																0 1					133
134	University of Virginia, Dept. of Med.—R.....	1 0	1 0						1 0			1 0	1 0						1 0					134
135	University College of Medicine.—R.....							2 0		1 0	1 0										0 1			135
	WISCONSIN.																							
136	Marquette University, Med. Dept.—R.....												1 0											136
137	Wisconsin College of Phys. and Surg.—R.....																							137
138	Canadian Colleges.....		1 0		2 0	1 0	1 1	1 0		1 0			2 0	1 0	1 0	3 0	1 0			13 0		6 7	1 0	138
139	Foreign.....		1 0	1 0	3 2	1 0	1 2		1 0				1 0	6 1	1 0	1 0	1 1	1 0			2 7			139
140	Miscellaneous Medical Colleges.....		4 0	6 6	3 11	3 2	2 1		3 4	11 4	5 5	8 1	14 6	27 4	27 20	9 5	57 25	9 7	1 1	0 3	1 6	2 2		140
141	Undergraduates.....	9 27		67 63																	5 32			141
	Totals by States.....	132	40	205	241	66	88	11	89	89	164	68	742	179	182	134	168	174	103	203	340	119		
	Totals—Examined—Passed.....	66	36	120	145	52	67	11	53	79	150	52	646	172	139	116	107	145	92	132	233	115		
	Total—Examined—Failed.....	66	4	85	96	14	16	0	36	10	14	16	96	7	43	18	61	29	11	7				

R, Regular; H, Homeopathic; E, Eclectic; P, Panpathic.

* One report not received.

Margin Number	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	Totals	Examined— Passed	Examined— Failed	Percentage of Failures	No. States Ex. in	Margin Number
	Minnesota	Mississippi	Missouri	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma*	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming						
1	1	1	6	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11	9	2	18.1	4	70	
2	1	1	7	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	104	72	32	30.8	22	70	
3	1	1	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	36	25	11	30.6	8	72	
4	1	1	31	7	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18	10	8	44.4	4	73	
5	1	1	2	8	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	13	2	13.3	5	74	
6	1	1	10	7	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	100	87	13	13.0	11	75	
7	1	1	24	7	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	73	38	35	47.9	18	76	
8	1	1	12	5	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	14	1	6.7	6	77	
9	1	1	0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	82	70	12	14.6	11	78	
10	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	107	94	13	12.1	10	79	
11	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	64	49	15	23.4	13	80	
12	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20	18	2	10.0	5	81	
13	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	2	2	50.0	1	82	
14	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	33	32	0	0.	2	83	
15	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	23	19	4	17.4	12	84	
16	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	49	1	2.0	8	85	
17	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	124	118	6	4.8	19	86	
18	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	69	69	0	0.	8	87	
19	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7	0	0.	1	88	
20	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	105	97	8	7.6	8	89	
21	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	27	27	0	0.	4	90	
22	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	3	0	0.	1	91	
23	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	41	40	1	2.4	4	92	
24	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	94	92	2	2.1	8	93	
25	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	51	51	0	0.	5	94	
26	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	67	44	23	34.3	12	95	
27	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13	8	5	38.4	4	96	
28	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	14	1	6.7	2	97	
29	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24	24	0	0.	7	98	
30	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	15	1	6.3	6	99	
31	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	34	26	8	23.5	14	100	
32	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	43	38	5	11.6	14	101	
33	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32	26	6	18.7	10	102	
34	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8	6	2	25.0	6	103	
35	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	34	33	1	2.9	5	104	
36	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	5	1	16.7	4	105	
37	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	35	35	0	0.	6	106	
38	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20	7	15	35.0	4	107	
39	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24	13	11	45.8	5	108	
40	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	43	40	3	7.0	13	109	
41	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	232	212	20	8.6	33	110	
42	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	95	88	7	7.4	14	111	
43	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	9	8	1	11.1	1	112	
44	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	196	194	2	1.0	27	113	
45	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	76	61	15	19.7	7	114	
46	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	49	49	0	0.	14	115	
47	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	28	24	4	14.3	4	116	
48	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	44	25	19	43.2	11	117	
49	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13	11	2	15.4	3	118	
50	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	2	4	66.7	3	119	
51	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	111	72	39	35.1	9	120	
52	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	129	64	65	50.5	19	121	
53	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	28	19	9	32.1	8	122	
54	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	90	73	17	18.9	18	123	
55	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	54	33	21	38.9	16	124	
56	1	1	0	1	1	1	1	1	1</																									

R—Regular; H—Homeopathic; E—Eclectic; P—Panpathic; * One report not received.

Marginal Number	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	Totals	Examined — Passed	Examined — Failed	Percentage of Failures	No. States Ex- tended	Marginal Number
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
1																													11	11	0	0.	3	1
2			1	0					1	0																			19	15	4	21.1	3	2
3																													1	1	0	0.	1	3
4																													3	1	2	66.7	3	4
5																													10	6	4	40.0	2	5
6																													12	8	4	33.3	4	6
7																													24	22	2	8.3	1	7
8																													7	4	3	42.9	2	8
9																													2	2	0	0.	2	9
10																													14	11	3	21.4	1	10
11																													28	22	6	21.4	3	11
12																													21	18	3	14.3	4	12
13																													5	3	2	40.0	1	13
14																													11	11	0	0.	2	14
15																													25	25	0	0.	5	15
16																													34	25	9	26.5	9	16
17																													16	15	1	6.3	7	17
18																													20	15	5	25.0	9	18
19																													29	28	1	3.4	5	19
20																													53	44	9	17.0	7	20
21																													39	33	6	15.4	4	21
22																													3	3	0	0.	1	22
23																													27	23	4	14.8	3	23
24																													86	80	6	7.0	11	24
25																													2	1	1	50.0	1	25
26																													11	115	11	8.7	12	26
27																													43	35	8	18.6	8	27
28																													16	15	1	6.3	5	28
29																													25	18	7	28.0	5	29
30																													32	24	8	25.0	2	30
31																													3	3	0	0.	3	31
32																													128	124	4	3.1	15	32
33																													57	56	1	1.8	5	33
34																													71	71	0	0.	2	34
35																													4	4	0	0.	1	35
36																													28	23	5	17.9	1	36
37																													12	11	1	8.3	2	37
38																													50	44	6	12.0	2	38
39																													10	9	1	10.0	2	39
40																																		40
41																																		41
42																																		42
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Marginal Number	NAME OF COLLEGE.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Marginal Number						
		Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan							
	MISSOURI.																												
70	American Medical College.—E.....											2	1	32	9		0	1	1	0			70						
71	Barnes Medical College.—R.....		1	0	2	0										0	1	14	0				71						
72	Ensworth Medical College.—R.....												3	4	2	0							72						
73	Homeopathic Med. College of Missouri.—H.....															1	0	6	0				73						
74	Kansas City Hahnemann Med. College.—H.....			1	0							1	1	42	1	1	1	0					74						
75	St. Louis University, School of Med.—R.....			2	0								15	11									75						
76	St. Louis College of Phys. and Surg.—R.....				0	1																	76						
77	University of Missouri, Medical Dept.—R.....		1	0												32	0						77						
78	University Medical College, Kansas City.—R.....				1	1							40	4									78						
79	Washington University, Med. Dept.—R.....																						79						
	NEBRASKA.																												
80	John A. Creighton Medical College.—R.....												1	0		2	0						80						
81	Lincoln Medical College.—E.....															2	0						81						
82	Nebraska College of Medicine.—R.....																						82						
83	University of Nebraska, College of Med.—R.....																						83						
	NEW HAMPSHIRE.																				5	0	1	0	84				
84	Dartmouth Medical School.—R.....																												
	NEW YORK.																												
85	Albany Medical College.—R.....				1	0													3	0				85					
86	College of Phys. and Surg., New York.—R.....																							86					
87	Cornell University Medical College.—R.....																							87					
88	Eclectic Med. Coll. of City of New York.—E.....																							88					
89	Long Island College Hospital.—R.....				1	0																		89					
90	New York Homeo. Med. Coll. and Hosp.—H.....																							90					
91	N. Y. Med. Coll. and Hosp. for Women.—H.....						1	0			1	0												91					
92	Syracuse University, Coll. of Med.—R.....						2	0						1	0									92					
93	Univ. and Bellevue Hosp. Med. Coll.—R.....																							93					
94	University of Buffalo, Med. Dept.—R.....																							94					
	NORTH CAROLINA.								0	1		5	0						3	0		1	0		95				
95	Leonard School of Medicine.—E.....																							95					
96	North Carolina Medical College.—R.....										1	0												96					
97	Univ. of North Carolina, Med. Dept.—R.....									1	0	1	0											97					
	OHIO.																												
98	Cleveland College of Phys. and Surg.—R.....																							98					
99	Cleveland Homeo. Medical College.—H.....					0	1						1	0	5	0		3	1					99					
100	Eclectic Medical Institute.—E.....																	2	0					100					
101	Medical College of Ohio.—R.....																	1	0					101					
102	Miami Medical College.—R.....																							102					
103	Pulte Medical College.—H.....																							103					
104	Starling-Ohio Medical College.—R.....																							104					
105	Toledo Medical College.—R.....														1	0								105					
106	Western Reserve Univ. Med. Dept.—R.....																							106					
	OREGON.																												
107	Willamette Univ., Medical Dept.—R.....		1	0																				107					
108	University of Oregon, Medical Dept.—R.....																							108					
	PENNSYLVANIA.															2	0												
109	Hahnemann Med. Coll. and Hospital.—H.....				1	0	3	0		2				4	0		1	0		1	0	2	0	4	1	3	0	109	
110	Jefferson Medical College.—R.....	1	0					2	1																	110			
111	Medico-Chirurgical Coll. of Philadelphia.—R.....																		1	0	1	0			1	0	111		
112	Temple College, Med. Dept.—R.....																									112			
113	University of Penn., Dept. of Medicine.—R.....							1	0															7	0		113		
114	Western Pennsylvania Med. College.—R.....													1	0											114			
115	Woman's Med. Coll. of Pennsylvania.—R.....																			1	0	5	0	1	0		115		
	SOUTH CAROLINA.																												
116	Med. Coll. of the State of So. Carolina.—R.....										1	0	1	0												116			
	TENNESSEE.																												
117	Chattanooga Medical College.—R.....	0	4		0	1					1	0														117			
118	College of Phys. and Surg., Memphis.—R.....											1	0													118			
119	Knoxville Medical College.—R.....																		15	4						119			
120	Memphis Hospital Medical College.—R.....	3	3		3	1					1	2	9	0				1	4	1	0					120			
121	Meharry Medical College.—R.....	1	4		2	4					2	0	4	0												121			
122	Tennessee Medical College.—R.....																									122			
123	University of Nashville, Med. Dept.—R.....	3	5		1	0												0	1	7	1					123			
124	University of Tennessee, Dept. of Med.—R.....				1	0												0	1	1	0					124			
125	University of the South, Med. Dept.—R.....	0	1								1	0											1	1		125			
126	University of West Tenn., Med. Dept.—R.....											0	1													126			
127	Vanderbilt University, Med. Dept.—R.....	5	1		3	0												3	0							127			
	TEXAS.																												
128	Baylor University, College of Med.—R.....																									128			
129	Fort Worth University, Med. Dept.—R.....																									129			
130	Southwestern University Med. Coll.—R.....																									130			
131	University of Texas, Dept. of Med.—R.....				1	0																				131			
	VERMONT.																												
132	University of Vermont, Coll. of Med.—R.....																				3	0		3	0	132			
	VIRGINIA.																												
133	Medical College of Virginia.—R.....																									133			
134	University of Virginia, Dept. of Med.—R.....																									134			
135	University Coll. of Medicine.—R.....								2	0				1	0											135			
	WISCONSIN.																												
136	Marquette University, Med. Dept.—R.....													1	0											136			
137	Wisconsin College of Phys. and Surg.—R.....																									137			
138	Canadian Colleges.....		1	0			1	0		1	0												7	0		0	1	138	
139	Foreign.....				1	6	0	1					1	3	3	4	1	0	2	0	16	2	24	16	3	0	49	24	139
140	Miscellaneous Medical Colleges.....	1	1		1	6	0	1																			140		
	Totals by States.....	79	7	37	107	38	41	4	41	24	136	18	630	121	151	91	144	131	70	144	159	96							
	Totals—Examined—Passed.....	48	7	25	78	31	36	4	25	18	125	17	561	118	118	90	88	119	62	107	133	93							
	Totals—Examined—Failed.....	31	0	12	29	7	5	0	16	6	11	1	69	3	3	1	50	12	8	37	26	3							
	Percentage of Failures.....	39.2	0.	32.4	27.1	18.4	12.2	0.	39.1	25.0	8.1	7.7	10.5	2.5	21.9	1.1	38.9	9.2	11.4	25.7	16.4	3.1							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19</									

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Marginal Number.	NAME OF COLLEGE.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Marginal Number			
		Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan				
		P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F	P F				
1	ALABAMA.																						1			
2	Birmingham Medical College.—R.....	10	0							1	0							1	0				2			
3	University of Alabama, Medical Dept.—R....	13	4							1	0												3			
4	ARKANSAS.																						4			
5	College of Phys. and Surg., Little Rock.—R..			1	0																		5			
6	University of Arkansas, Medical Dept.—R....																						6			
7	CALIFORNIA.																						7			
8	California Eclectic Medical College.—R.....				0	3																	8			
9	College of Phys. and Surg., Los Angeles.—R..		1	1	6	5																	9			
10	College of Phys. and Surg., San Fran.—R....				7	14																	10			
11	Cooper Medical College.—R.....				27	5																	11			
12	Hahnemann Med. Coll. of the Pacific.—H....				3	3																	12			
13	Oakland College of Med. and Surg.—R.....				1	0																	13			
14	University of California, Med. Dept.—R....				15	3																	14			
15	University of Southern Cal., Coll. of Med.—R..		4	0	22	14							1	0									15			
16	COLORADO.																						16			
17	Denver and Gross College of Medicine.—R...	1	0		1	0	21	4				1	0										17			
18	Denver Coll. of Phys. and Surg.—P.....					3	2																18			
19	University of Colorado, Medical Dept.—R...					10	0					1	0										19			
20	CONNECTICUT.																						20			
21	Yale Medical School.—R.....				1	0		21	0												5	0	21			
22	DISTRICT OF COLUMBIA.																						22			
23	George Washington Univ., Dept. of Med.—R...								20	13		0	1	2	1	1	0				5	2	1	1	23	
24	Georgetown Univ., School of Medicine.—R...		1	0				1	1												4	0	2	1	24	
25	Howard University, Medical Dept.—R.....	1	0					1	0				6	6		2	0				1	2	2	1	25	
26	GEORGIA.																							26		
27	Atlanta Coll. of Phys. and Surg.—R.....	1	0							4	0	24	0							1	0				27	
28	Atlanta School of Medicine.—R.....	2	5			0	1			6	0	36	4							1	0				28	
29	Georgia Coll. of Eclectic Med. and Surg.—E..																								29	
30	Medical College of Georgia.—R.....			0	1					2	0	30	1							0	1				30	
31	ILLINOIS.																							31		
32	American Medical Missionary College.—R....								1	0												1	1	8	0	32
33	Bennett Coll. of Eclectic Med. and Surg.—E..		1	0										21	4	1	0	1	0						33	
34	Chicago College of Med. and Surg.—R.....	1	0											66	3	4	0	2	0						34	
35	College of Medicine and Surg.—Ph. M.....													2	2										35	
36	College of Physicians and Surgeons.—R....			1	0	3	0	0	1				5	0	101	10	5	0	1	1					36	
37	Hahnemann Med. Coll. and Hospital.—H....	0	1		1	0		0	1				1	1	27	6	3	0	2	1					37	
38	Hering Medical College.—H.....		1	0										12	1	2	0								38	
39	Illinois Medical College.—R.....				0	1								16	6	4	0	0	1						39	
40	Jenner Medical College.—R.....										1	0		25	11	0	1								40	
41	National Medical University.—P.....			1	0									4	4										41	
42	Northwestern University Med. School.—R...		2	0	3	1	4	0					1	0	110	1	3	0	2	0					42	
43	Rush Medical College.—R.....				4	1							1	0	57	0	2	0	1	0					43	
44	INDIANA.																							44		
45	Indiana University, School of Medicine.—R...													74	0										45	
46	Physio-Medical College of Ind.—Ph. M.....													4	0										46	
47	IOWA.																								47	
48	Drake University, College of Med.—R.....															24	5								48	
49	Sioux City College of Medicine.—R.....															9	1								49	
50	State University of Iowa, College of Med.—R..				0	1										43	7								50	
51	State Univ. of Iowa, Homeopathic Dept.—H...													1	0	8	1								51	
52	KANSAS.																								52	
53	Kansas Medical College.—R.....													1	0										53	
54	University of Kansas, School of Med.—R....															8	3								54	
55	Western Eclectic Coll. of Med. and Surg.—E..															14	0								55	
56	KENTUCKY.															10	1								56	
57	Louisville National Med. College.—R.....				0	1								1	0										57	
58	Southwestern Homeopathic Med. Coll.—H....					1	1											0	3						58	

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Marginal Number.	NAME OF COLLEGE.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Marginal Number					
		Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan						
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F					
	MISSOURI.																											
70	American Medical College.—E.....					1	0															1	0	70				
71	Barnes Medical College.—R.....		2	0	4	1	0	1					2	3	33	11								71				
72	Ensworth Medical College.—R.....				0	1																		72				
73	Homeopathic Med. College of Missouri.—H.....												3	4	2	0								73				
74	Kansas City Hahnemann Med. College.—H.....				1	0																		74				
75	St. Louis University, School of Med.—R.....				3	0						1	1	43	1									75				
76	St. Louis College of Phys. and Surg.—R.....					0	1	1	0			0	1	17	11	0	1							76				
77	University of Missouri, Medical Dept.—R.....		1	0											1	0								77				
78	University Medical College, Kansas City.—R.....				1	1	1	0								36	1							78				
79	Washington University, Med. Dept.—R.....			1	0	0	1			1	0			44	5									79				
	NEBRASKA.																											
80	John A. Creighton Medical College.—R.....					0	1					6	0	1	0		2	2						80				
81	Lincoln Medical College.—E.....																2	0						81				
82	Nebraska College of Medicine.—R.....																							82				
83	University of Nebraska, College of Med.—R.....																							83				
	NEW HAMPSHIRE.																											
84	Dartmouth Medical School.—R.....																		1	0		7	0	1	0	84		
	NEW YORK.																											
85	Albany Medical College.—R.....											1	0					1	0				1	0	85			
86	College of Phys. and Surg., New York.—R.....				1	0		2	0		1	0							3	0			2	0	86			
87	Cornell University, Medical College.—R.....						1	0			1	0										1	0		87			
88	Eclectic Med. Coll. of City of New York.—E.....																								88			
89	Long Island College Hospital.—R.....				1	0								1	0						0	1	2	0	89			
90	New York Homeo. Med. Coll. and Hosp.—H.....				1	0																1	0		90			
91	N. Y. Med. Coll. and Hosp. for Women.—H.....																								91			
92	Syracuse University, Coll. of Med.—R.....						1	0			1	0													92			
93	Univ. and Bellevue Hosp. Med. Coll.—R.....						3	0						1	0						3	0			93			
94	University of Buffalo, Med. Dept.—R.....																								94			
	NORTH CAROLINA.																											
95	Leonard School of Medicine.—E.....	0	1								0	1							3	0		1	0		95			
96	North Carolina Medical College.—R.....										1	0										1	1		96			
97	Univ. of North Carolina, Med. Dept.—R.....									1	0														97			
	OHIO.																											
98	Cleveland College of Phys. and Surg.—R.....											1	0												98			
99	Cleveland Homeo. Medical College.—H.....																								99			
100	Eclectic Medical Institute.—E.....					0	1						1	0	5	0		3	1				0	1	100			
101	Medical College of Ohio.—R.....														2	0			3	0					101			
102	Miami Medical College.—R.....				2	2									2	0			1	0					102			
103	Pulte Medical College.—H.....																	1	0						103			
104	Starling-Ohio Medical College.—R.....																								104			
105	Toledo Medical College.—R.....														1	0									105			
106	Western Reserve Univ. Med. Dept.—R.....																					1	0		106			
	OREGON.																											
107	Willamette Univ., Medical Dept.—R.....		1	0																					107			
108	University of Oregon, Medical Dept.—R.....													1	0										108			
	PENNSYLVANIA.																											
109	Hahnemann Med. Coll. and Hospital.—H.....						1	0	1	0						2	0			1	0				109			
110	Jefferson Medical College.—R.....	1	0	2	0	1	0	5	0		2	1	1	0	0	2	1	0		1	0	3	0	6	2	5	1	110
111	Medico-Chirurgical Coll. of Philadelphia.—R.....				1	2					1	0		1	0	1	0			1	0	1	0		1	0	111	
112	Temple College, Med. Dept.—R.....																									112		
113	University of Penn., Dept. of Medicine.—R.....				1	1			1	0	1	0										8	0			113		
114	Western Pennsylvania Med. College.—R.....						0	1							2	0										114		
115	Woman's Med. Coll. of Pennsylvania.—R.....								1	0								1	0		2	0	5	0	3	0	115	
	SOUTH CAROLINA.																											
116	Med. Coll. of the State of So. Carolina.—R.....									4	0	1	0													116		
	TENNESSEE.																											
117	Chattanooga Medical College.—R.....	0	4		0	1					2	0	3	0												117		
118	College of Phys. and Surg., Memphis.—R.....																									118		
119	Knoxville Medical College.—R.....																									119		
120	Memphis Hospital Medical College.—R.....	3	3		5	1				0	1								16	4						120		
121	Meharry Medical College.—R.....	1	4		3	8				1	2	10	0		0	1			2	4	2	2				121		
122	Tennessee Medical College.—R.....									1	0															122		
123	University of Nashville, Med. Dept.—R.....	3	5		2	0				3	0	4	0					1	0	0	1	9	1			123		
124	University of Tennessee, Dept. of Med.—R.....	2	3	0	1	1	0			1	0	2	0					1	1	1	0					124		
125	University of the South, Med. Dept.—R.....	1	1		1	0				0	1	0														125		
126	University of West Tenn., Med. Dept.—R.....				0	1					0	1														126		
127	Vanderbilt University, Med. Dept.—R.....	6	1		3	0												3	0			1	0			127		
	TEXAS.																											
128	Baylor University, College of Med.—R.....																									128		
129	Fort Worth University, Med. Dept.—R.....																									129		
130	Southwestern University Med. Coll.—R.....																									130		
131	University of Texas, Dept. of Med.—R.....				1	0																						

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Marginal Number	NAME OF COLLEGE.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Marginal Number		
		Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan			
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P		F	
ALABAMA.																									
1	Birmingham Medical College.—R.....																						1		
2	University of Alabama, Medical Dept.—R....	0	1																				2		
ARKANSAS.																									
3	Coll. of Phys. and Surg., Little Rock.—R....																						3		
4	University of Arkansas, Medical Dept.—R....																						4		
CALIFORNIA.																									
5	California Eclectic Med. Coll.—E.....				1	0																	5		
6	Coll. of Phys. and Surg., Los Angeles.—R....																						6		
7	Coll. of Phys. and Surg., San Francisco.—R...				1	2																	7		
8	Cooper Medical College.—R.....																						8		
9	Hahnemann Med. Coll. of the Pacific.—H....																						9		
10	Oakland Coll. of Med. and Surg.—R.....																						10		
11	Unlversity of California, Med. Dept.—R.....				1																		11		
12	Univ. of Southern Cal. Coll. of Med.—R.....				1	1																	12		
COLORADO.																									
13	Denver and Gross College of Medicine.—R...																						13		
14	Denver Coll. of Phys. and Surg.—P.....																						14		
15	University of Colorado, Medical Dept.—R....										1	0											15		
CONNECTICUT.																									
16	Yale Medical School.—R.....																				1	0	16		
DISTRICT OF COLUMBIA.																									
17	George Washington Univ., Dept. of Med.—R....				1	0							1	0									17		
18	Georgetown Univ., School of Medicine.—R....																						18		
19	Howard University, Medical Dept.—R.....				0	1							0	1									19		
GEORGIA.																									
20	Atlanta Coll. of Phys. and Surg.—R.....																	1	0				20		
21	Atlanta School of Medicine.—R.....	0	1																				21		
22	Georgia Coll. of Eclectic Med. and Surg.—E....									0	1												22		
23	Medical College of Georgia.—R.....									1	0												23		
ILLINOIS.																									
24	American Medical Missionary Coll.—R.....									2	0			1	0		1	0				1	0	24	
25	Bennett Coll. of Eclectic Med. and Surg.—E....											0	1										25		
26	Chicago Coll. of Med. and Surg.—R.....																						26		
27	College of Med. and Surg.—Ph.M.....																						27		
28	College of Physicians and Surgeons.—R.....			1	0	1	0		0	1		1	0		0	2	2	0					28		
29	Hahnemann Med. Coll. and Hospital.—H....		1	0	1	0									0	1					0	1	1	0	
30	Hering Medical College.—H.....																						30		
31	Illinois Medical College.—R.....									1	0												31		
32	Jenner Medical College.—R.....																						32		
33	National Medical University.—R.....																						33		
34	Northwestern University Med. School.—R....											2	0	1	0						1	0		34	
35	Rush Medical College.—R.....		1	0	1	0	3	1				1	0		3	0	0	1	2	0			1	0	35
INDIANA.																									
36	Indiana University, School of Med.—R.....																						36		
37	Physio-Medical Coll. of Ind.—Ph.M.....			0	1																		37		
IOWA.																									
38	Drake University, Coll. of Med.—R.....																						38		
39	Sioux City Coll. of Medicine.—R.....		1	0																			39		
40	State Univ. of Iowa, Coll. of Med.—R.....				0	2																	40		
41	State Univ. of Iowa, Homeopathic Dept.—H...																						41		
KANSAS.																									
42	Kansas Medical College.—R.....				1	0						1	0										42		
43	University of Kansas, School of Med.—R....				1	0																	43		
44	Western Eclectic Coll. of Med. and Surg.—E....																						44		
KENTUCKY.																									
45	Louisville National Med. Coll.—R.....																						45		
46	Southwestern Homeopathic Coll.—H.....																						46		
47	University of Louisville, Medical Dept.—R....				0								0	1	1	0		0	1				47		
LOUISIANA.																									
48	Flint Medical College.—R.....									1	0							0	2				48		
49	Tulane University, Medical Dept.—R.....			1	0													3	1				49		
MAINE.																									
50	Medical School of Maine, Bowdoin Coll.—R...				1	0																	50		
MARYLAND.																									
51	Atlantic Medical College.—P.....																						51		
52	Baltimore Medical College.—R.....										1	0									0	1	52		
53	Coll. of Phys. and Surg., Baltimore.—R....		1	0		1	0				1	1		1	0						1	0	53		
54	Johns Hopkins Medical School.—R.....																						54		
55	Maryland Medical College.—R.....																						55		
56	University of Maryland, School of Med.—R....						2	0	1	0											1	0	56		
57	Woman's Med. Coll. of Baltimore.—R.....																						57		
MASSACHUSETTS.																									
58	Boston University, School of Medicine.—H....						1	0															58		
59	College of Physicians and Surgeons.—R.....																						59		
60	Harvard Medical School.—R.....								1	0			2	0	1	0					1	0	60		
61	Tufts College Medical School.—R.....								0	1								0	1			1	0	61	
MICHIGAN.																									
62	Detroit College of Medicine.—R.....	1	0			1	0				1	0			1	0						1	0	62	
63	Detroit Homeopathic College.—H.....																						63		
64	Univ. of Mich., Dept. of Med. and Surg.—R...		1	0		3					1	0		1	0							1	0	64	
65	Univ. of Mich., Homeopathic Dept.—H.....														1	1						1	0	65	
MINNESOTA.																									
66	Unlv. of Minn., Coll. of Med. and Surg.—R...																				1	0	66		
67	Unlv. of Minnesota, Homeopathic Dept.—H...																						67		
68	Minneapolis Coll. of Phys. and Surg.—R.....																						68		
MISSISSIPPI.																									
69	Mississippi Medical College.—R.....																						69		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			

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Marginal Number	NAME OF COLLEGE.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Marginal Number		
		Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan			
	MISSOURI.																								
70	American Medical College.—E.....		1	0																			70		
71	Barnes Medical College.—R.....			1	0		1	0				0	1			1	0				0	1	71		
72	Ensworth Medical College.—R.....																						72		
73	Homeopathic Med. Coll. of Missouri.—H.....												0	1		1	0						73		
74	Kansas City Hahnemann Med. Coll.—H.....																						74		
75	St. Louis University, School of Med.—R.....																						75		
76	St. Louis Coll. of Phys. and Surg.—R.....		1	0	1	0		0	1				0	1									76		
77	University of Missouri, Medical Dept.—R.....				1	0																	77		
78	University Medical Coll., Kansas City.—R.....			1	0											1	0						78		
79	Washington University, Medical Dept.—R.....			1	0																		79		
	NEBRASKA.																								
80	John A. Cheighton Med. Coll.—R.....																						80		
81	Lincoln Medical College.—E.....					1	0																81		
82	Nebraska College of Medicine.—R.....																						82		
83	University of Nebraska, Coll. of Med.—R.....																						83		
	NEW HAMPSHIRE.																								
84	Dartmouth Medical School.—R.....						0	1		1	0		1	0	0			0	1		1	0	84		
	NEW YORK.																								
85	Albany Medical College.—R.....																						85		
86	College of Phys. and Surg., New York.—R.....				2	0		2	1		1	0										1	0		
87	Cornell Univ. Medical College.—R.....																						87		
88	Eclectic Med. Coll. of City of New York.—E.....																						88		
89	Long Island College Hospital.—R.....											0	1										89		
90	New York Homeo. Med. Coll. and Hosp.—H.....				1	0															1	0	90		
91	N. Y. Med. Coll. and Hosp. for Women.—H.....																						91		
92	Syracuse University, Coll. of Med.—R.....																						92		
93	Univ. and Bellevue Hosp. Med. Coll.—R.....												1	0							1	0	93		
94	University of Buffalo, Medical Dept.—R.....									1	0												94		
	NORTH CAROLINA.																								
95	Leonard School of Medicine.—E.....																						95		
96	North Carolina Med. Coll.—R.....																						96		
97	Univ. of North Carolina, Med. Dept.—R.....																						97		
	OHIO.																								
98	Cleveland Coll. of Phys. and Surgs.—R.....					1	0																98		
99	Cleveland Homeo. Med. Coll.—H.....																				1	0	99		
100	Eclectic Medical Institute.—E.....				1	0																	100		
101	Medical College of Ohio.—R.....				0	1				1	0		0	1	1	0							101		
102	Miami Medical College.—R.....									1	0					1	0						102		
103	Pulte Medical College.—H.....		1	1									1	0									103		
104	Starling—Ohio Medical College.—R.....																						104		
105	Toledo Medical College.—R.....				0	1																	105		
106	Western Reserve Univ., Med. Dept.—R.....																						106		
	OREGON.																								
107	Willamette Univ., Medical Dept.—R.....																						107		
108	University of Oregon, Medical Dept.—R.....																						108		
	PENNSYLVANIA.																								
109	Hahnemann Med. Coll. and Hospital.—H.....																			1	0		109		
110	Jefferson Medical College.—R.....		1	0		1	2		1	0	0	1			1	0	1	0			2	1	2	0	
111	Medico-Chirurgical Coll. of Philadelphia.—R.....																						111		
112	Temple College, Med. Dept.—R.....																						112		
113	University of Penn., Dept. of Medicine.—R.....		1	0		3	0						1	0						1	0	1	0		
114	Western Pennsylvania Med. Coll.—R.....										1	0											114		
115	Woman's Med. Coll. of Pennsylvania.—R.....											1	0								1	0	115		
	SOUTH CAROLINA.																								
116	Med. Coll. of the State of So. Carolina.—R.....										1	0											116		
	TENNESSEE.																								
117	Chattanooga Medical College.—R.....										3	0						1	0				117		
118	Coll. of Phys. and Surg., Memphis.—R.....																						118		
119	Knoxville Medical College.—R.....																						119		
120	Memphis Hospital Medical College.—R.....		1	0							1	0						0	2				120		
121	Meharry Medical College.—R.....															0	1	0	1				121		
122	Tennessee Medical College.—R.....																						122		
123	University of Nashville, Med. Dept.—R.....																						123		
124	University of Tennessee, Dept. of Med.—R.....																						124		
125	University of the South, Med. Dept.—R.....							1	0														125		
126	University of West Tenn., Med. Dept.—R.....																						126		
127	Vanderbilt University, Med. Dept.—R.....											0						1	0				127		
	TEXAS.																								
128	Baylor University, Coll. of Med.—R.....																						128		
129	Fort Worth University, Med. Dept.—R.....		0	1																			129		
130	Southwestern Univ. Med. Dept.—R.....																						130		
131	University of Texas, Dept. of Med.—R.....				1	0																	131		
	VERMONT.																								
132	University of Vermont, Coll. of Med.—R.....						1	0													1	2	132		
	VIRGINIA.																								
133	Medical Coll. of Virginia.—R.....																						133		
134	University of Virginia, Dept. of Med.—R.....																						134		
135	University Coll. of Medicine.—R.....																						135		
	WISCONSIN.																								
136	Marquette University, Med. Dept.—R.....																						136		
137	Wisconsin Coll. of Phys. and Surg.—R.....																						137		
138	Canadian Colleges.....		1	0		1	2		0	1		1	0			1	0			2	0		2	1	138
139	Foreign.....	1	0	3	0	1	0	2	8	1	2	1	1		4	6	7	1</							

[illegible]

Medicolegal

Effect of Injury on Capacity to Bear Children Proper for Consideration

The Second Appellate Division of the Supreme Court of New York holds, in the personal injury case of Devine vs. Brooklyn Heights Railroad Company, that evidence that the plaintiff's capacity to conceive would continue but that she would continually suffer the discomfort and pain of miscarriages, was competent on the question of damages, regardless of the question by which it came in, or of whether it cropped out. It is true, the court says, that the evidence could not be used as a basis for damages for pecuniary loss resulting from deprivation of future offspring, but it could be used as a basis for damages for pain and suffering, and was therefore material and relevant.

If the defendant's counsel feared that the jury might also make use of it to speculate as to how much pecuniary loss the plaintiff would suffer by having no more children to grow up and support and enrich her (after the manner in actions by next kin for deaths by negligence), it was for him to request the trial judge to charge the jury that such damages were not allowable.

It would not do to distort the charge of the trial judge on that head (to which there was no exception), namely, that the plaintiff was entitled to recover reasonable compensation for her pain and suffering, for the deprivation of her natural powers, for the loss of health which was due to this accident, if it was due to it. To say that she was entitled to damage "for the deprivation of her natural powers" was strictly correct, even if limited to a particular delicate meaning, which was not the case. That is true in the case of man or woman. But that is far from even intimating that damages may be given for pecuniary loss resulting from deprivation of future children.

Finally, it may be worth while to point out that the question itself was proper, namely, "What effect does it (the injury) have on her capacity to bear children?" It was just as proper as to ask what effect an injury has on the function, use or capacity of the arm, leg or stomach. The capacity may be made laborious, or painful, or destroyed. The degree of injury is competent to be shown. If the plaintiff were still able to conceive and bear children with regularity and certainty that would be evidence that her womb was not much injured or weakened, and that she could not do so would be evidence strong, corroborative evidence—that the physical condition testified to actually existed, namely, that the womb was retroverted and its ligaments greatly weakened.

Adulteration of Coffee with Lead Chromate

The United States District Court for the middle district of Tennessee, in the case of United States vs. 84 Sacks of Coffee, that coffee colored and coated with lead chromate, a poisonous and deleterious substance, whereby inferiority is concealed and the coffee rendered injurious to health, is adulterated within the meaning of the act of Congress generally known as the Food and Drugs Act of June 30, 1906, and that the coffee of that character seized should be destroyed by being burned.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

May 8

- 1 Ephraim McDowell, L. S. McMurtry, Louisville, Ky.
- 2 Pellagra. J. J. Watson, Columbia, S. C.
- 3 *Value of the Roentgen Rays in Thoracic Lesions. R. H. Boggs, Pittsburg, Pa.
- 4 Operation for Frontal Sinus Obliteration Avoiding Supra-orbital Deformity and Nasal Scar. A. E. Prince, Springfield, Ill.

3. Roentgen Rays in Thoracic Lesions.—Boggs says that out of a series of more than eighty patients whom he has exam-

ined for pulmonary tuberculosis, in whom the diagnosis has been confirmed either before or afterward by other methods, he feels justified in summarizing the following points:

1. The extent of the disease is more accurately determined by the x-ray than by the physical findings alone.
2. In doubtful cases the rays often afford sufficient information to make an accurate diagnosis.
3. The rays are a useful method of recording the lesions and of determining the progress made by treatment.
4. The rays in records nothing but variations in density and leaves the etiologic factors to be determined by other clinical methods.
5. Frequently, when physical signs were present in one side, the radiogram would show infiltration in both lungs.

The Roentgen rays afford also a valuable method of diagnosing mediastinal tumors.

Medical Record, New York

May 8

- 5 *Point of View in Medicine. B. Robinson, New York.
- 6 Re-educational Treatment of Locomotor Ataxia. J. R. Jacoby, New York.
- 7 Plea for the Establishment of Hospitals for the Rational Treatment of Inebriates. C. A. Rosenwasser, Newark, N. J.
- 8 Examination of the Lungs by Roentgen Rays. H. Hulst, Grand Rapids, Mich.
- 9 *Relation Between Aneurism of the Aorta and Tabes Dorsalis. P. H. Biklé, Philadelphia.
- 10 Eczema. S. Stern, New York.
- 11 *Cancer Treated with Trypsin. F. B. Golley, Milwaukee.
- 12 Wholesale Baby Washer. W. P. Northrup.

5. Point of View in Medicine.—Robinson cites instances to show the importance of keeping laboratory methods subservient to older and more reliable clinical methods. He insists on the importance of the art of medicine, which can not be based solely on the knowledge of the dead house or laboratory. In our efforts to get rid of tuberculosis, so praiseworthy and encouraging, we must not insist on foolish rules of prevention or cure, thus becoming absolutely cruel to those who most need our sympathy and support. He quotes the admirable counsels in this respect of the Massachusetts State Board of Health. He discusses alcoholism and prostitution, the relation of the general practitioner to the consultant, and the importance of trying to relieve symptoms of disease carefully and intelligently.

9. Aneurism of the Aorta and Tabes Dorsalis.—Biklé discusses the question whether the concurrence of these two affections in the same patient—which Lesser has shown to occur in approximately 20 per cent. of the cases of tabes dorsalis—is merely a coincidence, or whether we shall find in such cases tabes itself or a toxin peculiar to the two conditions to be the underlying cause of aneurism. There can be no doubt, he says, that syphilis is one of the most frequent causes of aneurism of the aorta as well as of tabes. He is inclined to believe that the association between the two diseases is merely accidental, and that in such cases each is a parasyphilitic disease independent of the other.

11. Cancer Treated with Trypsin.—Golley makes a further report on the two cases of cancer, formerly reported by him, in which the patients were treated with injections of trypsin. The first patient is in fairly good health and considers herself cured, although he suspects that she will have trouble in the future. At present she is free from pain, the surfaces are all healed and she is about her duties as though perfectly well. He describes the condition of the second patient from the fall of 1906 to the summer of 1908, when she died. Up to the last there was marked influence over the general physical condition whenever trypsin was used. The case was one of cancer of the large bowel. Three important points are, that it never became necessary to establish an artificial anus; that the disease changed from an active and rapidly progressive type to a slow and almost stationary one, not only prolonging life, but making it more bearable and wholesome by the formation of membrane over the raw surfaces; and that trypsin appears to exert some influence on the metabolic processes particularly, and to establish a resistance to the cell activity of malignancy.

Boston Medical and Surgical Journal

May 6

- 13 *Results of Operations for Cancer of the Tongue, Mouth and Jaw at the Massachusetts General Hospital, 1890, 1904. R. B. Greenough, C. C. Simmons, and R. M. Green, Boston.
- 14 Random Medical Notes of Travel. G. C. Shattuck, Boston.

- 15 Intermittent Hydrocephalus. Report of Four Cases (continued). D. F. Jones, Boston.
16 *Circulation of the Lobar Ganglia. J. B. Ayer, and H. F. Aitken, Boston.

13. Cancer of Tongue, Mouth and Jaw.—Greenough, Simmons and Green conclude their analysis as follows:

1. One hundred and seventy-two cases of cancer of the tongue, mouth and jaw appear in the records of the Massachusetts General Hospital in the years 1890-1904 inclusive. Of this number 112 patients were operated on, 50 were judged inoperable, and 10 refused operation.
2. Of the 112 operations of all varieties, 20 resulted in death within 60 days (17.8 per cent.).
3. Of cancer of the tongue and floor of mouth, there were 98 cases of which 62 patients were operated on and 36 cases were inoperable or the patients refused operation. Of the 62 patients operated on, in 58 (93.5 per cent.) the end-result is known; 62 cases of operation gave an operative mortality of 8, or 12.9 per cent. Of the 58 cases in which the end-result is known, 10 patients were free from recurrence 3 years or more after operation (17.2 per cent.). Of the 40 cases in which recurrence did take place after operation, in 38 death occurred before the lapse of 3 years after operation. Operations for cancer of the tongue involving section or resection of the jaw caused a much higher operative mortality and no greater percentage of cures than the intra-buccal operations.
4. Of cancer of the lower jaw, there were 40 cases: 28 operable, 12 inoperable. The operative mortality of 28 cases was 10, or 35.5 per cent. In 26 cases of operation the end-result is known, and in 5 cases (19.2 per cent.) the patients were free from recurrence 3 years or more after operation.
5. There were 14 cases of cancer of the upper jaw; 10 patients were operated on and 4 were not. The end-result is known in 9 of the 11 patients operated on, and in each of these 9, death occurred within 3 years, although there were no deaths as an immediate result of operation.
6. Cancer of the tonsil, soft palate, or fauces occurred in 11 cases, 8 of which were inoperable and 4 were submitted to operation. One patient was alive and well 7 years after operation (25 per cent.). There was no operative mortality.
7. Cancer of the cheek occurred in 9 cases, 1 of which was inoperable. Of the 8 patients operated on, 2 died of operation (25 per cent.) and none was cured.
8. For reporting statistics of the end-results of operations for cancer, a standard should be established, requiring the publication of reports of all consecutive cases entered in the hospital records. For the acceptance of percentages of cures pathologic proof of the existence of carcinoma should be presented, and no case should be considered in which the patient has not survived the arbitrary 3 year period.

16. Circulation of the Lobar Ganglia.—This is a supplement, consisting mainly of half-tone illustrations. Ayer's and Aitken's findings endorse those of Heubner concerning the anatomy of the circulation of the lobar ganglia—a point of great importance in regard to cerebral hemorrhage—which are at variance with those of Duret at present generally accepted. The essential differences from Duret's teaching are, that the present findings show that the middle cerebral artery has not plainly the predominant share in the circulation of this region; that the caliber of the anterior cerebral artery is not insignificant, but is equal to that of the middle cerebral artery; and that the posterior cerebral artery is not more important than the anterior cerebral artery. Further, the lenticulo-optic artery of Duret has not been found in either side of 45 brains (Heubner does not mention it after dissecting 30 brains). The choroid artery supplies the posterior third of the putamen slightly, the globus pallidus, and the inner part of the internal capsule.

Lancet-Clinic, Cincinnati

May 1

- 17 *Surgery of Venereal Diseases of the Rectum. G. B. Evans, Dayton, O.
18 Diagnosis of Diseases of the Accessory Sinuses of the Nose. W. E. Murphy, Cincinnati.
19 Improved Method for Preparation of Glycerin-Jelly for Macroscopic Specimens. G. I. Hogue, Milwaukee.

17. Abstracted in THE JOURNAL, Nov. 21, 1908, p. 1806.

Medical Fortnightly, St. Louis

April 26

- 20 *Suggestion Concerning the Increased Longevity of Life-Insurance and Policy Holders. B. Foster, St. Paul.
21 Sudden Blindness. P. I. Leonard, St. Joseph, Mo.
22 Neuritis. W. F. Waugh, Chicago.
23 Food Preservatives. H. L. Harris, New York.

May 10

- 24 Touring the Lands where Medical Science Evolved, Iberia and Lusitania. R. G. Eccles, Brooklyn, N. Y.
25 Removal of an Intrathoracic Osteosarcoma Involving Five Ribs. J. F. Menestrina, St. Louis.
26 Stenosis of the Esophagus. J. M. Bell, St. Joseph.
27 Surgical Eponyms. M. Hagen, Chicago.

20. Discussed editorially in THE JOURNAL, May 1, 1909, p. 1428.

Northwestern Lancet, Minneapolis

May 1

- 28 Conservatism in Traumatic Surgery. W. Courtney, Brainard, Minn.
29 Heredity. E. L. Murdy, Aberdeen, S. D.
30 Tuberculin Treatment of Tuberculous Glands of the Neck. M. M. Ghent, St. Paul.
31 Results of Pneumonia, Empyema, and Rib Resection. E. H. Bayley, Lake City, Minn.
32 *Diphtheria Involvement or Contamination of Wounds. E. L. Tuohy, Duluth.
33 Case of Foreign Body in the Trachea. D. W. Rudgers, Yankton, S. D.

32. Wound Diphtheria.—Tuohy reports two cases of wounds which have become infected with the diphtheria bacillus. One case was that of a finger, infected in the lumber woods, which had been opened and dressed, but refused to heal. When seen three months later, there was tremendous induration in the axilla, with three sinuses. Actinomyces was suspected, but pure cultures of the diphtheria bacillus were found on examination. Antitoxin treatment resulted in cure. The second case was a suppurative bunion that had been opened and drained. This also became chronic. When seen one month later investigation here also showed pure cultures of the diphtheria bacillus. A cure was effected in this case too by antitoxin injection. It was found that diphtheria cases were being treated in the town and in the hospital from which these men came at the time they were first under treatment. Tuohy suggests that cases of similarly persistent wounds that defy healing without any obvious cause after incision and drainage and under appropriate treatment, should be examined for the diphtheria bacillus, and if this is found, a prompt cure can be promised almost with certainty.

Virginia Medical Semi-Monthly, Richmond

April 9

- 34 *Typhoid Fever Diet. E. W. Robertson, Onancock, Va.
35 Surgical Treatment of Hemorrhoids. L. Elliot, Washington, D. C.
36 Tuberculin in Incipient and Concealed Tuberculosis. M. D. Hoge, Richmond.
37 Empyema of the Maxillary Sinus. C. P. Jones, Newport News, Va.
38 Some of the Difficulties in the Application of Eugenics to the Human Race. G. F. Lydston, Chicago.
39 Abdominal Gun-shot Wound with Intestinal Perforations, with Special Reference to the After-treatment with "Saline Drip." T. Maddox, Union, S. C.

34. Typhoid Diet.—Robertson summarizes the views of 13 prominent clinicians in reply to his inquiries practically as follows: The majority of his correspondents advocate liquids, milk and eggs as the chief dietary. One disapproves of milk on the ground of its causing tympany; but the majority of patients taking that diet with impunity as against the minority is obvious. The precautionary measure cited is to discontinue the milk in case of cruds, tympany, etc., but until these symptoms arise, so long as the patient is doing well and is nourished, it is useless to ignore such a valuable food stuff. Robertson supposes it could be shown that almost any other of the generally advocated foods listed could cause, seemingly, a disagreement with the digestion. Broths might act as a culture medium, eggs are regarded as suspicious sometimes, and we are advised to cut off nearly everything in tympany, etc. Even water is possibly taken to excess at times. He knows of but two guiding lines in typhoid fever diet, and they are, to nourish the patient and to have respect for the local conditions in the digestive tract. Finally, he believes that he would be safe in advancing this proposition: Give the patient a sensible nurse and an obtusely bent glass feeding tube, and tell the nurse to give the patient anything that may be easily taken through it; and if curds (when milk is the staple diet) occur, to cut off milk, using in its stead whey with essence of pepsin; or, to give even water only for a few days, should tympany, etc., arise. His correspondents show all these points.

Kentucky Medical Journal, Bowling Green

May 1

- 40 Bacteriology of Typhoid Fever. A Historical Review. J. W. Kincaid, Catlettsburg.
41 The Physician and Nostrums. W. C. Herman, Cincinnati, O.
42 Scarlet Fever. T. A. Frazer, Marion.
43 Some Cases I have Lost. U. L. Taylor, Columbia.
44 Some Things the General Practitioner Should Know About the Eye. W. R. Burr, Auburn.
45 Glaucoma. J. W. Conklin, Leitchfield.
46 Pneumonia. A. M. Zaring, Smithfield.
47 Treatment of Lobar Pneumonia. E. D. Turner, Sorgho.

- 48 Pneumonia. L. D. F. Whitaker, Maxwell.
- 49 Mistakes and Blunders of a Doctor. B. A. Caudle, Hopkinsville.
- 50 Colles' Fracture. C. A. Vance, Lexington.
- 51 Tuberculosis. W. L. Nuttall, New Castle.
- 52 The Choice of an Anesthetic. W. H. Smith, Danville.
- 53 Idem. S. Iglaue, Cincinnati, O.
- 54 Serotherapy. B. S. Rutherford, Bowling Green.
- 55 Placenta Prævia. J. H. Parker, Corbin.
- 56 Pulmonary Emphysema and its Relation to Tuberculosis. F. W. Lee, Olmstead.
- 57 Needs of the Medical Profession. B. F. Fyke, Springfield, Tenn.

Archives of Internal Medicine, Chicago

April

- 58 *Sarcosporidiosis. S. T. Darling, Ancon, Canal Zone.
- 59 Purpura Fulminans. C. A. Elliott, Chicago.
- 60 *Value of the Measurements of Chest Expansion and Lung Capacity. H. W. Goodall, and J. L. Belknap, Boston.
- 61 *Distribution of Tuberculous Lesions in Infants and Young Children. M. Wollstein, New York.
- 62 *Primary Portal Thrombosis. D. D. Lewis and E. C. Rosenow, Chicago.
- 63 Antitryptic Content of the Blood Serum in Malignant Disease. M. E. Roche, Baltimore.
- 64 Method for Estimating Blood Flow in the Arm. A. W. Hewlett, and J. G. Van Zwaluwenburg, Ann Arbor.
- 65 Primary Pulmonary Arteriosclerosis with Hypertrophy of the Right Ventricle. W. E. Sanders, Alta, Iowa.
- 66 Demonstration of the *Trichinella Spiralis* in the Circulating Blood in Man. W. W. Herrick, and T. C. Janeway, New York.
- 67 Meningococcus Septicemia, with Sterile Cerebrospinal Fluid; Iridocyclitis; Flexner's Serum; Recovery. D. Bovard, Jr., New York.

58. **Sarcosporidiosis.**—Darling reports a case of sarcosporidiosis occurring in a negro who passed through an attack of typhoid accompanied with necrosis and myositis of some muscles. Sarcosporidiosis in man is probably extremely rare and doubtless represents a chance infection, by one of the sarcosporidia whose customary habitat is one of the domestic animals. The author differentiates the sporozoon from that described by Baraban and St. Remy. These infections appear to give rise to little or no discomfort and the clinical conditions found are mainly attributed to the typhoid.

60. **Measurement of Chest Expansion.**—Goodall and Belknap arrive at the following conclusions:

The measure of chest expansion has no constant direct relation to the lung capacity, and by itself is of comparatively little value as one of the methods of physical examination. Large measures only indicate good development of the muscles which expand the chest. Owing to individual variations, normal standards can not be adopted. It is probable, however, that an expansion of from 2 to 2.5 inches will permit the maximum capacity under ordinary conditions of health.

In normal individuals the measure of lung capacity varies directly with the muscular development, provided the individual breathes properly. Erroneous conclusions may be drawn from spirometer readings unless special attention is given to the method of breathing. Capacities of 190 cubic inches, and possibly less, are consistent with normal lungs.

With both measurements large values only indicate good muscular development. Low values indicate inferior muscular development or improper breathing.

In suspected pulmonary disease, very little, if any, additional aid in diagnosis is obtained by these measurements. The only positive value of the measurements is the aid in determining whether or not the person is breathing properly, and whether or not the muscles of respiration are properly developed.

61. **Tuberculous Lesions in Infants.**—Wollstein summarizes her paper practically as follows:

Of 185 cases showing tuberculosis at autopsy there were 13 in which the tuberculous lesions were limited to the respiratory tract, and only 1 involving the intestines alone. The point of entrance for the tubercle bacillus in these 14 cases was clearly in the lungs 13 times and in the intestinal tract once.

In the majority of cases of extensively generalized tuberculosis in young children the exact point of entrance must remain in doubt. Although the lungs were involved more frequently than any other organ (in 96 per cent. of all cases), this proves their marked predisposition to tuberculosis rather than their primary infection.

This study shows how comparatively rare undoubted cases of intestinal tuberculosis were in this series of infants and children under 3 years of age; and how, even when due allowance has been made for all doubtful cases, tuberculosis of respiratory origin predominated over that due to ingestion of the bacillus in these subjects.

62. **Primary Portal Thrombosis.**—Lewis and Rosenow report a case, summarize the twenty cases from the literature, discuss the symptoms, diagnosis and treatment and draw the following conclusions:

1. A careful bacteriologic examination of the blood, using media which favor the growth of the highly parasitic bacteria, will establish the etiologic rôle that bacteria play in portal thrombosis.

2. It is impossible to differentiate between thrombosis of the mesenteric arteries and veins, but a probable diagnosis of circulatory ileus can be made if the history reveals some previous illness that is frequently associated with inflammatory changes in the arteries and veins.

3. The procedure to be adopted depends altogether on the conditions revealed by the exploratory operation. A record of four recoveries in twenty-one cases in which operation was performed, indicates that surgical intervention is not futile.

United States Naval Bulletin, Washington, D. C.

April

- 68 Treatment of Tuberculosis and the Results Observed During the Year 1908. B. L. Wright, U. S. Navy.
- 69 Laboratory Studies and Observations During 1908. A. B. Clifford, U. S. Navy.
- 70 Tonsillar Hypertrophy; A Menace to the Service. B. F. Jenness, U. S. Navy.
- 71 *The Ice-Bag in the Treatment of Typhoid Fever. G. T. Smith, U. S. Navy.
- 72 *Treatment of Typhoid Fever by Colon Irrigations. C. G. Alderman, U. S. Navy.

71. **The Ice-Bag in Typhoid.**—Smith speaks highly of a large abdominal ice-bag covering the whole area below the umbilicus and kept there constantly until the temperature falls to normal. A towel is used beneath the bag. The effect was markedly beneficial, no baths or spongings were required, no tympanites occurred, and there was no delirium or hemorrhage from the bowels.

72. **Colon Irrigations in Typhoid.**—Alderman reports the successful result in an epidemic of typhoid at the United States Naval Hospital, Las Animas, of a treatment previously unsuccessfully tried and discarded. If the patient is seen before the eighth day he is purged freely with calomel, 3 grains, sodium bicarbonate 5 grains, followed in three hours by half an ounce of magnesium sulphate. If seen after the eighth day the physician must exercise his judgment as to whether purging is safe. A low enema is given when a bowel movement is pending, and, immediately following, a high enema at 85 F. to flush the colon—between 1 and 2 quarts. Both enemas are of plain water. The next two enemas are to be given at a temperature of 80 F. and dropping to 70 F., at which temperature they will be continued. They are given at three-hour intervals so long as the temperature is above 100.6 F. Milk from 5 to 6 ounces is given every three hours with lime water; also all the water the patient wants to drink. Neither diarrhea nor constipation is a contraindication. He discusses the rationale of the process, and says that it is not plain that this treatment reduces the temperature after each enema, as baths do, but the fastigium is lower; and if any symptoms of septic absorption are present they are scarcely noticeable. No delirium is seen, nor is there the anxious look, the dull heavy eye, the muscular twitching, etc. The patient complains of no headache or other pain, has a bright appearance, and there is little or no tympany. The patient actually loses the so-called typhoid facies which every physician is accustomed to see.

Philippine Journal of Science, Manila

December

- 73 *Streptothricosis, with Special Reference to the Etiology and Classification of Mycetoma. W. E. Musgrave, M. T. Clegg, and M. Polk, Manila.
- 74 Trichocephalasis. W. E. Musgrave, M. T. Clegg, and M. Polk, Manila.

73. **Streptothricosis.**—Musgrave, Clegg and Polk remark on the confusion in nomenclature resulting from the transition from a clinical picture to an etiologic diagnosis, and to the discovery that to the same organism that produces Madura foot, lesions in the other parts of the body are found also to be due. They discuss the different methods of classification adopted by botanists, describe animal experiments, and review the literature of the subject with the following resulting conclusions:

There is in human pathology, a very important group of branching, filamentous micro-organisms which logically belong to a single genus. The generic name is variously given as *Streptothrix*, *Actinomyces*, or *Nocardia*; the last of these names is probably scientifically the most correct, but because of the present botanical confusion and uncertainty the first is here employed, because of its more general acceptance.

The following species, to judge from our work and from a study of the literature, are the most important and may be recognized as established. There are probably a number of others but the descriptions of many of them are too imperfect to allow of their recognition: *Streptothrix actinomyces*, Bostroem, 1890; *Streptothrix actinomyces*, Wolf and Israel, 1891, and Wright, 1905; *Streptothrix nocardii*; *Streptothrix madura*, Vincent; *Streptothrix capra*, Silberschmidt.

The disease caused by infection with these parasites is properly named streptothricosis, with actinomycosis and nocardiosis as synonyms. Other names, such as lumpy jaw, Madura foot and mycetoma, should be considered more as describing anatomic location,

rather than as designations relating to any special or specific cause of infection. Mycetoma might well be taken as the correct name for the group of infections if a strict interpretation of rules of nomenclature is followed, but usage renders it perhaps more desirable to retain the name as representing *Streptothricosis pedis*. If mycetoma is to be considered in any more comprehensive light than this, it should become another synonym for streptothricosis. It should not be considered a disease caused by organisms other than *Streptothrix*.

They then discuss streptothricosis (synonyms: actinomycosis, nocardiosis), which they define as an infectious disease of man and animals caused by one or more species of *Streptothrix*. They tabulate their experiments. As to treatment, potassium iodid in large doses over a long period is generally admitted to have a favorable influence on the course of the disease, and complete cures have been reported; locally, antiseptic dressings and the Roentgen ray, surgical measures, drainage, removal or amputation were employed, according to the locality and extent of the lesion. A combination of all these forms would seem to promise the most favorable opportunity for recovery.

Chicago Medical Recorder

April

- 75 *Advantages and Disadvantages of Cooperation and Business Partnership Among Medical Men. C. A. Wood, Chicago.
- 76 *Question of Division of Fees From the Surgeon's Standpoint. J. F. Percy, Galesburg, Ill.
- 77 Therapeutic Use of Solidified Carbon Dioxid. W. A. Pusey, Chicago.
- 78 *Renal Calculi. D. N. Eisendrath, Chicago.
- 79 *Thermic Crises in Locomotor Ataxia, with Report of a Case. G. Campbell, St. Louis.
- 80 *Rôle of the Free Dispensary in the General Crusade Against Tuberculosis. S. Klein, Chicago.
- 81 Unique Foreign Body in the Male Bladder and Removal by Suprapubic Cystotomy. H. O. White, and R. R. Duff, Chicago.
- 82 Papilloma of the Larynx with Extralaryngeal Operation. D. A. Vanderhoof, Rockford, Ill.
- 83 Are there Evil Effects from the Removal of the Faucial Tonsils? J. E. Rhodes, Chicago.

75, 76. Abstracted in Department of Medical Economics, THE JOURNAL, May 15, 1909.

78. Published also in *Southern Medical Journal*, February, 1909. This paper appears to be in the main identical with that read before the Western Surgical and Gynecological Association and abstracted in THE JOURNAL, Jan. 30, 1909, p. 413.

79. **Thermic Crises in Locomotor Ataxia.**—Campbell gives the history of a case supposed originally to be one of malaria, in which hard chill, followed by high fever, and later by sweating occurred at intervals; the highest temperature point recorded was 106.6 F. A striking feature was the lack of constitutional symptoms one would expect as an accompaniment of so high a body temperature. While Campbell can not assert positively that the high temperature attacks observed in his patient were tabetic crises, the facts that lead him to present them as probably of such a nature are:

1. Absence of any evidence of the usual causes that produce fever, either at the time of the attacks or after the attacks subsided; it appears very improbable that any of the usual causes apt to produce fever could produce such high temperature several times and yet leave the temperature as the only evidence of their presence.
2. The sharply paroxysmal nature of the temperature disturbance.
3. The fact that such occurrences, while very unusual, have been reported in the past.

80. **The Free Tuberculous Dispensary.**—Klein assigns the following as the functions of the tuberculous dispensary: To care for ambulatory cases, to refer incipient cases to sanatoria, to watch and supervise patients discharged from sanatoria, to examine other members of the family, to disseminate information, and to aid the health department. He discusses each of these points.

Wisconsin Medical Journal, Milwaukee

April

- 84 Partial Report of the Epidemic of Acute Anterior Poliomyelitis in Wisconsin During 1907-1908. J. Manning, Eau Claire.
- 85 Medical, Ethical and Forensic Aspects of Fatal Criminal Abortion. W. Becker, Milwaukee.
- 86 Surgical Treatment of Chronic Lachrymal Disease, with Report of Cases of Extirpation of the Lachrymal Sac. G. E. Seaman, Milwaukee.
- 87 Anaphylaxis. K. W. Smith, Madison.
- 88 *After-Care of Obstetric Cases in a Country Practice. M. V. de Wire, Sharon.

88. Abstracted in THE JOURNAL, Aug. 8, 1908, p. 523.

Buffalo Medical Journal

May

- 89 Improved Medical Course. I. N. Snively, Philadelphia.
- 90 Case of Pneumopericardium. J. Burke, Buffalo.

Journal Abnormal Psychology, Boston

April-May

- 91 Mechanism of Amnesia. I. H. Coriat, Boston.
- 92 *Rôle of Sensations and Feelings under Ether. C. H. Johnston, Ann Arbor.
- 93 Importance for Research and Treatment of Distinguishing Clinical Types Among the Psychoneuroses. T. A. Williams, Washington, D. C.
- 94 *The Unconscious (concluded). M. Prince, Boston.

92. **Sensations and Feelings Under Anesthetics.**—Johnston gives a study of the sensations and feelings under ether in the case of two brothers, which lead him to the conclusion that the data in hand are insufficient to enable one unprovisionally to conclude anything definite concerning the fundamental psychologic problem as to what is the most serviceable conception of the relationship of sensation and feeling or affection. The special sense organs become inactive long before general consciousness is lost. Vision and audition cease before touch and sense of position. A feeling (anguish or anger, etc.) is the most persistent mental state. In the process of gradual recovery of normal consciousness feeling is first reinstated. Purely intellectual activity, without images, is next in order. Vague tactual sensations, pressure, and sense of position return before sight and hearing. All these, together with partial restoration of inhibitory power, are not sufficient to enable one, however, to feel normal, to be an inhibiting individual, or to grasp one's characteristic relation to one's environment. Physical pain seems to be here one of the necessary mental conditions for this self realization. Due chiefly to this intense mental activity, sleep is induced with great difficulty. Finally there seems to be some evidence, from this "feeling one's self as a disembodied spirit," from this conviction that all sensation is for the time localized in the head, and from the absolute loss of all inhibitory power and of the experience of pain, that there may be such a physiologic situation in which some so-called higher centers work independently, paralleled by vivid, if not constructive, imageless, intellectual activities. In short, this field would seem to be a fruitful one for further and more comprehensive psychologic, as well as strictly neurologic, investigations. Such possible results might nicely supplement other at present more systematically directed methods into these as yet unexplained phenomena.

Legitimately, it seems, we may be inclined to justify the position of those psychologists, at present in the minority, who claim that there is no inseparable connection of sensation with feeling-tone.

94. **The Unconscious.**—Prince concludes his analysis of the unconscious by a consideration of the evidence from dormant complexes which never form a part of the experiences of the personal self inasmuch as they originated in dissociated states, such as hypnosis, alternating personalities, dreams, trance and other hysterical conditions, etc. The origin and even the existence of such complexes is necessarily unknown to the personal self. In the psychologic results of suggestion given in hypnosis, known as posthypnotic phenomena, we have perfect examples, not only of the experimental formation of dormant complexes, but of the influences of these complexes on the personal consciousness, and we can study the mechanism of this influence, which has not hitherto received the attention it deserves. In it, too, we can study the psychologic principle of psychotherapeutics; for every therapeutic suggestion given in hypnosis, if successful, clearly becomes a posthypnotic phenomenon. Taking the facts of experimental investigation as data, Prince suggests three methods by which dormant hypnotic complexes affect the personal consciousness and, in fact, the whole personality: 1. Through the formation of co-conscious ideas. 2. Through the persistence of the emotions created in hypnosis. Although the ideas giving rise to them disappear, the prevailing feelings, whether joyous or depressing, aroused in hypnosis remain,

wherefore it is important to take care before a subject is allowed to wake, that depressing ideas are removed and those with a healthy, invigorating, emotional tone implanted. The power of emotion in invigorating or depressing all vital processes according to its character is well known. Moreover, the persistence of the emotional tone after the rest of the complex becomes dormant is not peculiar to posthypnotic phenomena, but is observed in every-day life. The difference between them is that in one case we can, if we will, and in the other we can not recall the origin of the feeling, but in either case we do not. Dormant dream complexes may give rise to similar phenomena. 3. Suggestion in hypnosis gives rise to fixed ideas, which persist after waking as organized unconscious complexes. Then, as a result of stimulation by associated ideas from the environment acting as *points de repère*, these complexes become conscious again and interwoven with, and substituted for, the ideas which happen to be in the personal consciousness at any given moment. He discusses this subject at some length.

Louisville Monthly Journal of Medicine and Surgery

May

- 95 Ischemic Paralysis or Volkman's Contracture. W. O. Roberts, Louisville.
- 96 Prostatism. L. Frank, Louisville.
- 97 Physicians of Clark County, Ind. D. L. Field, Jeffersonville, Ind.

Archives of Diagnosis, New York

April

- 98 *Diagnosis of Intestinal Autointoxication. J. M. Anders, Philadelphia.
- 99 *Diagnosis of Smallpox. J. M. Armstrong, St. Paul.
- 100 *Diagnosis of Fibroid Degeneration of the Appendix. R. T. Morris, New York.
- 101 Differential Diagnosis in Cases of Appendicitis. J. J. McGrath, New York.
- 102 Errors in Abdominal Diagnosis. A. J. Walschied, Union, N. J.
- 103 *Early Allusion to Accurate Methods of Diagnosis. J. J. Walsh, New York.
- 104 *Significance of the Red Ring when Examining Urine by Nitric Acid Contact Test. R. H. M. Dawbarn, New York.
- 105 The Acetone Bodies in the Urine and the Ferric Chlorid Reaction. H. Stern, New York.
- 106 Multiple Sclerosis. Its Occurrence in Families. T. H. Weisenburg, Philadelphia.
- 107 Subdural Abscess Followed by Internal Hydrocephalus of Traumatic Origin. A. Gordon, Philadelphia.
- 108 *Acute Ascending Lethal Paralysis After Antirabic Treatment. J. R. Fabricius, New York.
- 109 Plastic Radiography. G. M. McKee, New York.

98. **Intestinal Autointoxication.**—Anders says that the disease is often attributable, not so much to microbic action as to the products of intestinal fermentation. There are three main factors: (1) Ingestion of excessive albuminous food; (2) certain intestinal lesions, including defective motility; (3) abnormalities of metabolism. From personal observation, Anders is also convinced that fat and sugar, taken in quantities above the physiologic capacity of the organism, are responsible in certain cases. When the eliminative processes are defective a marked predisposition to the condition exists. Cases should be subdivided etiologically into gastric and intestinal forms of chronic autointoxication. The great majority of cases, however, are of intestinal origin. He discusses the symptomatology and says that his personal experience indicates an increase in the elimination of indican in practically all cases. He has further demonstrated the fact to his own satisfaction, that indican is increased most decidedly in the cases showing marked residual accumulation throughout the colon. This urinary constituent, therefore, is of the utmost importance for both diagnosis and prognosis, and chemical examination of the urine. The microscopic urinary findings are unimportant. He has observed marked acetoneuria in the preponderating proportion of his cases of intestinal origin. The nervous system, more particularly the vasomotor tract, is decidedly affected by the irritant auto-toxins. It is exceedingly important, however, to distinguish between nervous disturbances induced by the absorbed toxic substances and those resulting from primary changes in the neuromechanism of the body. The diagnosis of this condition should always be made with caution and reserve. It is not permissible to regard the given case as one of chronic alimentary intoxication, retrospectively, merely because the symptoms have disappeared as the result of an eliminative plan of treatment, since this method also serves other dis-

posing and exciting causes. In connection with the principal causative factors—notably impaired metabolism, dietetic errors, and certain pathologic conditions of the intestinal tract, e. g., mucous colitis and chronic appendicitis—the following symptom group would suffice for an assured diagnosis: Heavily coated tongue, fetor of breath, indications of Rigg's disease, headache at intervals, insomnia, marked constipation, evidence of fecal accumulation in the colon, the elimination of an increased amount of indican and the frequent presence of acetoneuria. Though experimental evidence may be wanting to show that the development of gout, arteriosclerosis, nephritis, and other forms of degeneration is, in some instances at least, dependent on autointoxication, clinical experience and observation lend striking confirmation to this view.

99. **Smallpox.**—Armstrong states that the diagnosis of this disease must often rest wholly on the objective lesions of the skin.

1. Except in rare instances, and only in the presence of an epidemic, is the positive diagnosis of smallpox justified before the appearance of the skin lesions.

2. The history of pre-eruptive illness serves only to confirm the diagnosis as made by the senses of sight and touch.

3. The smallpox papule has characteristics which make a positive diagnosis possible within a few hours of its appearance.

4. The papules appear first on the exposed parts, particularly the forehead and flexor surfaces of the wrists. They are under the epidermis, hard, round, flat-topped, umbilicated, rose-pink, and waxy in appearance. All these characteristics are usually present.

5. In general, the entire course of evolution of the lesion from papule, vesicle, pustule, to scab formation is regular and characteristic.

6. The lesions vary in number. They may be few, or so numerous as to become confluent, but the individual characters of the lesion are present in all cases.

100. **Fibroid Degeneration of the Appendix.**—Morris gives the following as the salient diagnostic point in cases of fibroid degeneration of the appendix in the following order of importance:

1. Hypersensitiveness at the site of the right group of lumbar ganglia.

2. Distention of the cecum and ascending colon as far as the hepatic flexure, and this distended part of the bowel is filled with gas.

3. More or less persistent discomfort at the site of the appendix.

4. The presence of an intractable intestinal dyspepsia for which no other cause has been found.

5. Lastly, palpation of the appendix in many cases will bring out clear evidence of a small, hard, fibrous appendix.

103. **Medieval Laboratory Diagnosis.**—Walsh cites some interesting passages from the works of Cardinal Nicholas of Cusa, who lived in the middle of the fifteenth century, to show that he recommended the estimation of the pulse, and of the respirations by the clepsydra, or water clock, and also the application of the method of specific gravity to the urine and possibly the blood.

104. **The Red Ring in Heller's Test.**—Dawbarn calls attention to a diagnostic sign sometimes found in the urine. On contact with cold nitric acid, with or without the presence of the white line of coagulated albumin, there is to be seen, and far from rarely, a red line of varying width. It is never so sharply defined at its points of contact with the acid below, and the urine above, as is the line of albumin, but it is to be recognized with the utmost ease. When albumin is also present the red line in question will be found just above the albumin.

108. **Acute Ascending Paralysis Following Antirabic Treatment.**—Fabricius reports a fatal case of acute ascending paralysis following antirabic injections subsequent to the bite of a dog. Examination showed the dog not to have had rabies, and it is concluded that there was a causative relationship between the antirabic treatment and the disease.

Ophthalmic Record, Chicago

April

- 110 Herpes Zoster Frontalis Associated with Glaucoma. A. A. Bradburne, Southport, Eng.
- 111 Modification of Buller's Shield. B. J. Knapp, Evansville, Ind.
- 112 Improvement on the Cross-Cylinder. J. N. Rhoades, Philadelphia.

Archives of Ophthalmology, New York

May

- 113 Incision of the Eye, Especially Incisions for Extraction of Cataract and Relief of Glaucoma. W. E. McKechnie, Jullunder, Punjab, India.
- 114 Original and Absolutely Reliable Suture for Tucking or Shortening an Ocular Muscle. G. A. Saffa, Boston.

- 115 Congenital Connective Tissue Formation in the Vitreous, Probably Arising from the Optic Nerve. H. F. Hansell, Philadelphia.
- 116 Formation of Pupillary Membranes after Cataract Extraction. E. S. Thomson, New York.
- 117 Operative Treatment of Separation of the Retina. Reports of Cases Treated by Scleral Puncture. E. K. Ellis, Boston.
- 118 Scleral Collapse During Cataract Operation. J. S. Fernández, Havana, Cuba.
- 119 Paralysis of the Inferior Oblique Muscle of the Left Eye. M. Cohen, New York.

Montreal Medical Journal

April

- 120 *Pathology and Treatment of Diabetes Mellitus. Viewed by the Light of Present-Day Knowledge (concluded). F. W. Pavy, London, Eng.
- 121 *Anterior Metatarsalgia. A. M. Forbes, Montreal.
- 122 Diphtheritic Paralysis. A. H. Gordon, Montreal.
- 123 *Pathologic Discovery and Its Bearing on Preventive Medicine. J. G. Adami, Montreal.
- 124 Surgical Tuberculosis. E. M. von Eberts, Montreal.
- 125 *Organized Pleural Adhesions and Their Relationship to Tuberculosis. Based on an Analysis of 1,374 Consecutive Autopsies. A. R. Landry, and J. G. Adami, Montreal.

120. Published in the *Lancet*, Dec. 12, 1908.

121. **Anterior Metatarsalgia.**—Forbes discusses the literature and the history of this subject. Its causation he divides into general and specific. The general causes are general debility and excessive body weight in proportion to the strength of the foot. The specific causes are: 1. The use of too short or too narrow a boot causing extension of the proximal phalanges with flexion of the distal phalanges. This results in a depression of the arch as is clearly demonstrated in casts of feet in this condition. 2. The use of a boot with too high a heel throwing the body weight on the anterior arch. 3. The use of a boot with too thin a sole, which insufficiently protects the anterior arch. The symptoms are as follows:

1. Pain—either of a constant character or spasmodic, as described by Morton.
2. Tenderness—found on pressure from beneath over the heads of one or more metatarsal bones, or on lateral pressure in the region of the metatarso-phalangeal joint.
3. Swelling and edema—may be so severe as to simulate gigantism, erythromelalgia or acromegaly.
4. Extension of phalanges—often postural and accompanied by flexion of middle and distal phalanges. This may simulate deformities following anterior poliomyelitis.
5. Muscular spasm—usually of extensors of toes. It is reflex in nature and causes a deformity resembling the conditions in No. 4.
6. Callosities on sole—frequent, and adding to the pain of a mild case.

The diagnosis of anterior metatarsalgia requires its differentiation from: (1) The chronically strained posterior arch; (2) tuberculosis of the tarsus, rheumatism, the so-called rheumatoid disease, and gout; (3) gigantism, erythromelalgia or acromegaly; (4) postural deformities, and (5) deformities resulting from the paralyzes. The treatment naturally resolves itself into (1) protection against lateral pressure, and (2) the elevation or support of a depressed arch, with suitable protection of the plantar surfaces of the heads of the bones. The elevation of the forepart of the foot is also of importance. Operative treatment, as suggested by Morton, should be applied only in those chronic or resistant cases in which conservative treatment has failed. In certain cases characterized by great spasm of the extensors, causing extension of the toes, the transference of the attachment of these tendons to the dorsal aspect of the heads of the metatarsals may be considered.

123. Published in the *New York Medical Journal*, March 20, 1909; abstracted in *THE JOURNAL*, April 3, 1909, p. 1140.

125. Abstracted in *THE JOURNAL*, Oct. 24, 1908, p. 1449.

Maryland Medical Journal, Baltimore

May

- 126 *The Faculty and its Library. A. K. Bond, Baltimore.
- 127 Intestinal Obstruction. J. C. Bloodgood, Baltimore.
- 128 Claudius Galen. H. M. Cohen, Baltimore.
- 129 Hemiplegia as a Complication of Typhoid. J. B. Piggott, Baltimore.

126. Commented on editorially in *THE JOURNAL*, May 15, 1909, p. 1586.

Yale Medical Journal, New Haven, Conn.

April

- 130 Modern Treatment of Syphilis. R. A. McDonnell, New Haven.
- 131 Diagnosis of Diseases Affecting the Pylorus, Duodenum and Bile Passages. L. M. Gompertz, New Haven.
- 132 *Retinal Hemorrhages and Arterial Hypertension. E. M. Blake, New Haven.

132. **Retinal Hemorrhages.**—Blake says that the frequent association of retinal hemorrhages with disorders of the circulatory system emphasizes the close relationship between ophthalmology and internal medicine. The significance of a retinal hemorrhage extends beyond the disturbance of vision produced to some profound disturbance of the bodily function. The earliest definite signs which allow one to diagnose sclerosis are three: First, the corkscrew appearance of the small twigs at the macula and periphery; second, flattening of the veins by the arteries; and third, the dull red congestion of the nerve head. This last sign is thought by Reber to indicate a more advanced stage of the process. Retinal hemorrhage may be grouped into four types: (1) simple hemorrhage into the fiber layer of the retina; (2) hemorrhagic retinitis, that is, hemorrhage with some edema and exudates in the retina; (3) subhyaloid, a hemorrhage between the retina and the hyaloid membrane covering the vitreous; and (4) vitreous hemorrhage, an extravasation sufficient to burst into the vitreous humor. If a patient in middle life comes complaining of a blur of sudden onset, he should not be told that it is a trifling affair which will pass off, but a careful fundus examination should be made, best with a dilated pupil. If a little extravasation of blood or any evidence of vascular changes be found, which often can be detected in no other way in the early stage, the case should be thoroughly studied by the internist. The examination of the urine, blood, and especially blood pressure, which is so easily determined, may point to the necessity for medication and changes in the life habits which may spare the patient serious accidents and give him many years of life.

Detroit Medical Journal

April

- 133 Atypical Graves' Disease. C. G. Jennings, Detroit, Mich.
- 134 *Surgical Treatment of Genital Hernia. W. P. Manton, Detroit.
- 135 Mechanical Symptoms Produced by Enlarged Thyroid. A. McLean, Detroit.
- 136 Practice of Medicine. F. B. Tibbals, Detroit.

134. **Genital Hernia.**—After reviewing the history of the development of the surgical treatment of genital hernia and the operations used or suggested at the present time, Manton says that in all these operations we must depend largely on individual experience, rather than on accumulated hospital statistics; for, until a common standard of observation can be formulated, if such is possible, surgeons will differ in their opinions according to individual interpretation either of their own work or another's work.

St. Louis Medical Review

April

- 137 *Suggested Treatment of Leukemia Based on Clinical Observation and Animal Experiment. L. K. Baldauf, St. Louis.
- 138 *Danger of Laboratory Diagnosis. D. L. Harris, St. Louis.
- 139 *Interrelations of the Medical and Legal Professions. F. R. Fry, St. Louis.
- 140 Mild Myxedema of Long Duration. W. H. Rush, St. Louis.
- 141 Carcinoma of the Rectum. C. H. Dixon, St. Louis.

137. **Treatment of Leukemia.**—Baldauf suggests the injection of bacterial toxins in the treatment of leukemia. He bases his suggestion on certain observations of Dock and Longcope. The author's results in myelogenous leukemia, although not entirely satisfactory, give him reason to hope for much more from selected and more favorable cases with the use of Coley's fluid.

138. **Laboratory Diagnosis.**—Harris says that while the value of a laboratory report depends on the skill, experience, and intelligence of the laboratory worker, no amount of skill on his part will compensate for carelessness or ignorance on the part of the physician who secures the material. The laboratory report should be valued as only one link in a chain of evidence. A simple negative report is valueless unless it coincides with all the clinical manifestations. The microscopist should never be permitted to make the diagnosis; neither should he be expected to relieve the physician of the necessity of a thorough clinical study of the case.

139. **Interrelations Between Medical and Legal Professions.**—Fry points out the essentially different viewpoints in law and medicine, when it comes to the question of adjusting the rights and privileges of individuals and of society. He in-

stances the efforts to deal with the expert testimony question, and cites Godkin's remark, "the trouble with most of them is that they contravene one or all of the three fundamental ideas of our system of criminal trial, to-wit, that the judge alone is to be the judge of the law, that the jury alone is to pass on the facts, and that the accused shall be allowed to produce any relevant and competent evidence in his own behalf." This difficulty leads him to look for little improvement in this direction at present. He suggests taking up other and easier problems which will pave the way for more difficult ones; *e. g.*, supervision in discharging patients from insane asylums, separate institutions for criminal insane and other epileptics, etc. Work of this and similar character might in time pave the way for a general commission on insanity, from which experts could be selected, thus gradually and naturally accomplishing a reform that could not be obtained by more radical measures.

The Military Surgeon, Richmond

May

- 142 Modern Organization of the Medical Department of the U. S. Army in the Field and Its Application to One of the Battlefields of the Civil War. V. Havard, U. S. Army.
- 143 New Model Mine Ambulance. G. H. Halberstadt, Third Brigade, N. G. Pa.
- 144 Compulsory Prophylaxis against Venereal Disease. E. M. Brown, U. S. Navy.
- 145 Camp Sanitation. T. J. Kirkpatrick, U. S. Army.
- 146 Treatment of Gunshot Wounds of the Abdomen Advocated by French Military Surgeons. C. N. Barney, U. S. Army.
- 147 Litter Carrier for Transporting two Litters. M. A. Reasoner, U. S. Army.

American Medicine, New York

April

- 148 *Neglect of Medical Literature. B. Holmes, Chicago.
- 149 Therapeutics of Old Age. R. W. Wilcox, New York.
- 150 Gastropnoia. J. Merzbach, Brooklyn.
- 151 Nasal Obstruction in Children. O. Glogau, New York.
- 152 Pernicious Anemia, with Reference to Intestinal Auto-intoxication as a Causative Factor. G. R. Satterlee, and S. O. Sabel, New York.
- 153 Massage of the "Swell-Bodies." H. P. Smith, Pittsburg, Pa.
- 154 Meralgia Paresthetica, Recurring with Repeated Pregnancies. G. E. Price, Philadelphia.
- 155 *False or Psychic Gastropathies. T. A. Williams, Washington, D. C.
- 156 Operation in Old Fractures. Case of Deformed Forearm from Fractures of Both Bones, Treated by Osteotomy and Plating. A. McGlannan, Baltimore.
- 157 Epilepsy and the Bromides. W. Lesem, New York.

148. Neglect of Medical Literature.—Holmes complains that in our medical schools which have libraries, the medical library is not used as an engine of education. There are no theses, no journal clubs, no investigations of the literature of any medical or surgical subject. The consequence is that the student accepts his instructor as infallible and his text-book as complete and final. If the library had been used during the medical course the student would early learn the place, not only of his text-book, but of his teacher as well.

155. Psychic Gastropathies.—This paper appeared under another title in the *Old Dominion Journal of Medicine and Surgery*, November, 1908, p. 365, and was abstracted in *THE JOURNAL*, Jan. 23, 1909, p. 331. It is also practically identical with a paper by the same author in the *Journal of Abnormal Psychology*, February, 1909.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

April

- 158 Graduated Outdoor Labor in Pulmonary Tuberculosis. G. Hinsdale, Hot Springs, Va.
- 159 *Syphilis in Its Relation to Nervous and Mental Diseases. A. Gordon, Philadelphia.
- 160 Tuberculosis of the Ovary treated with Tuberculin. C. C. Browning, Monrovia, Cal.
- 161 *Adrenal Extract in Addison's Disease. C. E. de M. Sajous, Philadelphia.
- 162 Tinea Versicolor. J. V. Shoemaker, Philadelphia.
- 163 Thyrotomy for Tumor of the Left Vocal Cord and Excessive Mobility of the Tongue. R. H. Johnston, Baltimore.
- 164 The Cancer Problem. J. A. McGlenn, Philadelphia.
- 165 Prophylaxis of Gonorrhea. T. W. Ross, Astoria, Ore.

159. Syphilis and the Nervous System.—Gordon discusses cerebrospinal syphilis, and syphilis and the spinal cord, peripheral nerves, and mental disease, and concludes that an individual who has once contracted syphilis, is always predisposed to its assaults on his nervous system. But there are individuals who escape this calamity. The specific poison makes a special selection among all varieties of nervous con-

stitutions, particularly those who by reason of special hereditary or acquired influences, neuropathic so to speak, are attacked by syphilis. When confronted with such cases, therapeutic effort must be directed, not only to advice as to the mercurials and iodids, but also and especially to a special mode of living, surrounded by all precautions in regard to excesses of all sorts, to the use of alcohol, to the proper hygiene and proper diet—and this advice must hold good for years and never cease. It is preventive medicine that we must practice, as this is the most rational and the most effective method. Too much reliance must not be placed on the two great remedies which, however, have no equal in therapeutics, are admirable remedies, but are far from being infallible in syphilitic nervous diseases. On the other hand, when, in addition to mercury and iodids, we submit our patients to a most rigorous hygienic mode of living we can expect satisfactory results.

161. Adrenal Extract in Addison's Disease.—Sajous analyzes 120 cases and says that a number of cases are on record in which, after apparent recovery, the patients died suddenly, soon after ceasing the use of adrenal preparations. It is evident that even the possibility of curing the morbid process in the adrenals does not replace the destroyed adrenal tissue. It is here that grafting would be of curative value, but only provided small fragments of adrenal tissue be inserted, and gradually increased in number until the temperature and pulse indicate that compensation for the functionless areas in the adrenals has been effected. The 120 cases analyzed show, and his own experience has demonstrated, that what is generally known as "adrenal extract," but which in reality, is the desiccated adrenal gland (the glandulae suprarenales siccae of the U. S. P.) is by far the most satisfactory agent to use.

Archives of Pediatrics, New York

April

- 166 *Hard Curds of Infant Stools: Their Origin, Nature and Transformation. T. S. Southworth, and O. M. Schloss, New York.
- 167 *An Inquiry into the Status of the Kindergarten. I. A. Abt, Chicago.
- 168 *Congenital Hypertrophic Pyloric Stenosis. J. F. Bell, Englewood, N. J.
- 169 Partial Pylorectomy for Fibromyoma in an Infant Nine Weeks Old. B. F. Curtis, New York.

166, 167. Abstracted in *THE JOURNAL*, July 18, 1908, p. 247.

168. Pyloric Stenosis.—Bell is in full accord with the classification of Koplik regarding pyloric obstruction. While it seems impossible arbitrarily to outline each condition as entirely distinct and separate from others, it nevertheless gives us a clearer understanding of the conditions and reconciles the apparently discordant and contradictory reports thus far made. Bell's case reported must fall into Koplik's third division of congenital hypertrophic pyloric stenosis. The symptomatology and physical signs, operative findings, and final results, fully confirm diagnosis and justify the treatment. The general and popular notion that infants do not bear surgical operations well should be modified. Starved, atrophic, and partially moribund infants are not favorable surgical cases. Degrees of stenosis not promptly and entirely relieved by conservative treatment should be operated on before the child is too reduced to endure surgical treatment.

Journal Indiana State Medical Association, Fort Wayne

April

- 170 *Intrasigmoid Disease. G. W. Combs, Indianapolis.
- 171 Penetrating Abdominal Wounds. P. F. Martin, Indianapolis.
- 172 Sketches of the Medical History of Indiana (continued). G. W. H. Kemper, Muncie.
- 173 Psoriasis, or Tropical Sprue. R. Hessler, Logansport.
- 174 Responsibility in Mental Disease. H. R. Lowder, Bloomfield.
- 175 Etiology and Treatment of Hemorrhoids. H. H. Wheeler, Indianapolis.

170. Intrasigmoid Disease.—Combs considers the following reasonable assumptions:

1. Angulation and ulcer in the sigmoid are frequently associated, the usual sequence being ulcer and angulation.
2. Clinically, ulcer is the medium ground between benign, inflammatory and malignant disease in the sigmoid, and is the only pathology recognized that harmonizes our present knowledge as intermediate, resultant from the anatomy and function and antecedent to carcinoma.
3. The presence of the non-recognized sigmoidal factor in pelvic disease may account for obscure postoperative pain which occurs in some cases with faultless technic and the removal of the pathology of the oviductal tract.

4. The relation of ulcer and carcinoma in the sigmoid is analogous to that in the gastric and other abdominal regions, where late investigation is demonstrating that ulcer is essential to the growth of cancer.

5. The syndrome of sigmoid disease is so frequent as to indicate that the sigmoid segment is the one of predilection for benign disease in the colon.

6. The absorption of toxins in the saccharobutyric and indolic types of chronic excessive intestinal putrefaction from the anaërobic is greatly increased in sigmoid disease, resulting in irritability, quick fatigue, depression, pronounced melancholia and sometimes the picture of pernicious anemia.

7. The general impression of the sigmoidal factor, either as concomitant or etiologic, in relation to rectal disease is inadequate.

He arrives at the following conclusions:

1. Favorable conditions exist in the anatomy and physiology of the sigmoid for the production of ulcer, the most frequent pathology of the organ.

2. Realizing in the sigmoid the maximum density and infection of the feces, here are also realized the maximum mechanical and chemical effects on the mucosa, with stercoral sigmoiditis, typical spasm from hyperesthesia, troublesome constipation and neurasthenic reflexes as results.

3. Much sigmoid disease results through trauma from the dorsal surface of the psoas muscle.

4. Distention of the colon, discharge of blood or mucus, or both, constipation, left iliac pain, or pain along the course of the sigmoid, or obscure abdominal pain, hypochondriasis, or melancholia, gastric disorders, obscure pelvic pains, symptoms indefinitely referable to the urinary tract, pain while feces are passing through the sigmoid, are some of the conditions that indicate sigmoid involvement and in which an examination with the sigmoidoscope should be made.

5. Whether sigmoid disease is produced by pathogenic bacteria, constipation, pressure of hardened feces, hyperacid condition, angulation, irritable sphincters, or other rectal disease, by accumulations of feces in acquired diverticuli which occur oftener in the sigmoid than in any other part of the intestinalis, or by trauma from the psoas, our duty lies in the recognition of the seriousness of its terminal and the manifestations of its early pathology. Action in keeping with this conviction, when intra-sigmoid therapy is ineffectual, will contribute largely to surgery in the production here of a low mortality.

Mississippi Medical Monthly, Vicksburg

May

176 *President's Address: Medical Affairs in Mississippi. J. W. Gray, Clarksdale.

176. Abstracted in THE JOURNAL, May 8, 1909, p. 1533.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

April 24

1 *Movable Kidney with Details of an Operation for Fixing the Kidney. Sir W. W. Cheyne.

2 Rheumatic Fever and Valvular Disease. N. Moore.

3 *The Blood in Rickets. L. Findlay.

4 Metrorrhagia at an Advanced Age not Due to Malignant Disease. A. H. N. Lewers.

5 Enormous Fecal Tumor in a Girl with Congenital Abnormalities of Her Pelvic Viscera. H. B. Butler, A. F. Hertz, and W. A. Lane.

6 Delayed Delivery in a Case of Central Placenta Prævia. N. I. Spriggs.

7 Termination of the Thoracic Duct. F. G. Parsons and P. W. G. Sargent.

8 *Epsom Salts as a Poison. C. Fraser.

9 Anomalous Edema with Bright's Disease. R. W. S. Walker.

1. **Movable Kidney.**—Cheyne discusses the various explanations of movable kidney and eliminates all as unsatisfactory except two, viz.: that it is in part at least of congenital defect, and that it is due to mechanical causes. With regard to its appearance suddenly under trauma or strain, he suspects that in many cases in which there is a history of sudden development of symptoms that have led to the discovery of a movable kidney, the kidney has been movable beforehand without symptoms. In most cases, the kidney does not undergo any marked alteration as the effect of mobility. The symptoms occur in three groups: The first group consists of indefinite symptoms, giddiness, faintness, anemia, palpitation, neurasthenia, etc., and particularly neuralgia; the second group of symptoms consists of those due to involvement of the intestinal tract, either reflexly or by pressure; the third consists of those due to twisting or obstruction of the pedicle. He discusses these groups. Treatment is non-operative and operative. The best form of apparatus in his experience is an especially constructed corset which keeps up the entire contents of the abdomen and is reinforced by an air-pad in the right iliac fossa. It must be put on in the recumbent posi-

tion. Operation is demanded in cases in which harm is being done—kinking of the pedicle, intermittent hydronephrosis or pressure on the duodenum or common bile duct. Operation is doubtful when the condition is associated with enteroptosis, also when it is accompanied by marked neurasthenia, which frequently is not benefited by operation. C. W. Suckling has reported a series of cases in which insanity appears to have been dependent on movable kidney, for it improved under Goëlet's operation. The failure to benefit neurasthenia Cheyne regards as possibly due to the operation performed having been the posterior operation, which he considers unsatisfactory. Another reason for failure is that the kidney may again become loose. He urges the importance of fixing the kidney as far as possible in its normal condition, to avoid outside pressure and kinking. The tendency is to fix it too low down and too far away from the spine. He describes in detail an operation devised by him to obviate this difficulty. It is performed through an incision along the edge of the ribs and an inch below them, beginning at the edge of the latissimus dorsi and carried forward for three or four inches. The transversalis fascia is not divided, but is pushed toward the middle line, carrying peritoneum, fascia and kidney with it. He describes the method of clearing away the fat, stripping off the capsule and placing the kidney in desired position, where it is fixed by strong catgut stitches. A great advantage of his operation is that it is possible to ascertain whether other organs are partly at fault for the symptoms, and thus to remedy them. The four chief things are gallstones, duodenal ulcer, movable liver and enteroptosis and appendicular trouble. With Cheyne's incision it is possible at the time of operation to investigate these parts, and in some cases to remedy defects. He has performed his operation in many cases and is well satisfied with the results.

3. **The Blood in Rickets.**—Findlay summarizes, in the following conclusions, the investigations that he records:

1. In active and uncomplicated rickets anemia is not the rule but is to be regarded as exceptional, and, when it occurs, as due to adventitious causes.

2. On the contrary, in rachitic children the amount of hemoglobin and the number of red cells in the series examined are notably in excess of the normal average.

3. The red blood corpuscles, as a rule, vary more in size than in normal individuals of similar ages, but otherwise there is no abnormality.

4. Nucleated red cells, polychromatophiles, and myelocytes are of the rarest occurrence.

5. In rickety subjects there is little characteristic change as far as the leucocytes are concerned. They may be normal, slightly increased, or even diminished in number. The mononuclears more frequently than the polymorphs show an absolute increase in number per cubic millimeter.

8. **Magnesium Sulphate as a Poison.**—Fraser reports a case of poisoning of a boy 3½ years of age, who took a heaped-up spoonful of Epsom salts, thinking it to be sugar. He washed the salts down with milk on finding out his mistake. A few minutes later he was found suffering pain in the stomach with nausea and retching, thirst and vomiting. When seen 25 hours later he was critically ill, lying on his back, the face pinched, eyes sunken and skin pale. The mind was perfectly clear. There were intermittent colicky attacks, temperature 100.5, pulse 160 and small, tongue dry with prominent papillæ, thirst intense and the bowels had not acted. Half an ounce of urine had been passed in 24 hours. The abdomen was distended and rigid, and the skin was markedly hyperæsthetic. The catheter withdrew half an ounce of dark, muddy, very acid urine, containing no albumin. The symptoms getting worse and suggesting acute peritonitis, the child was removed to the hospital and laparotomy was performed. About 2 pints of blood-stained serum subsequently found sterile were withdrawn. Green matter similar to his vomit was visible through the small intestines. No cause for obstruction was found. For 48 hours the child seemed moribund, the pulse becoming practically uncountable. Subcutaneous saline injections were made, and half a grain of calomel was given every hour. Finally flatus and feces passed, the bowels opened and recovery ensued. Fraser discusses the case and summarizes the six previously recorded cases, five of which were fatal. He discusses the theory of the action of this drug, particularly in relation to the use of salts for their paralytic effect in the treatment of tetanus.

British Medical Journal, London

April 24

- 10 *General Principles in the Treatment of Diseases of the Heart. Sir J. Barr.
- 11 Heart Block, with Fibrous Degeneration and Partial Obliteration of Bundle of His. B. Bramwell.
- 12 Pulsus Bigeminus. E. E. Laslett.
- 13 Ineffectiveness of Calcium Salts and of Citric Acid as Used to Modify the Coagulation Time of the Blood for Therapeutic Purposes. T. Addis.
- 14 Typhoid Complicated with Staphylococcal Septicemia. N. E. Roberts and E. E. Glynn.
- 15 *How Much Fluid does the Body Require? A. Haig.
- 16 *Occurrence of Tubercle Bacilli in the Blood in Tuberculosis. C. E. P. Forsyth.
- 17 Chronic Nephritis Terminating with Hemorrhage from the Bowel and Perforation of the Bowel. L. G. J. Mackey.
- 18 Roentgen Cinematography and Its Importance in Medicine. F. M. Groedel.
- 19 Tetanic Spasm. W. S. Stevenson.
- 20 Histology of Egyptian Mummies. M. A. Ruffer.

10. **Treatment of Heart Disease.**—Barr says that there are very few chronic diseases so amenable to treatment and so compatible with a long life of comfort, if judiciously handled, as those of the heart. Rheumatism holds the first place in its causation. In rheumatic fever there is a marked increase of sarcolactic acid, therefore all foods, such as starch and milk, which give rise to formation of lactic acid, should be omitted. There is also a tendency to fibrin formation, so that everything containing lime, *e. g.*, milk, and its preparations, cheese, gelatin, and animal jellies, should be interdicted. Also, lime raises the blood pressure. An excellent diet for rheumatic fever consists of plenty of hot water, mincemeat and poached eggs, pounded chicken, steamed sole, and other nitrogenous foods. If a carbohydrate is required, well-boiled porridge may be given. Oranges and lemons may be freely used, and later, a fair amount of farinaceous food with plenty of fruit and vegetables, but no milk. Patients with mitral lesions should drink as little fluid as possible, not more than two pints a day, and should be kept on a light dry diet. Alcoholic drinks should be interdicted, tea and coffee with cream may be taken. Lemon squash is a good drink. Tobacco should be forbidden, and in any tendency to edema salt should be eliminated from the diet. Barr then discusses the hygiene, particularly recommending the morning bath from 60 to 90° F., followed by coarse friction. He goes at length into the questions of rest, exercise, and medicinal treatment, under which last head he particularly warns against excessive lime salts in the blood. There is no condition of the heart in which alcohol is beneficial, save spasmodic affections, and in these nitroglycerin, morphin and atropin are better remedies. Patients with heart disease do better without tobacco. By the method of treatment he details—which should be read in its entirety—Barr asserts that not only may the progress of degenerative heart lesions be stayed, but often their onset may be prevented.

15. **The Intake of Fluids.**—Haig holds that the amount of fluid usually taken is more a habit than a necessity. Most patients can reduce their fluid intake with benefit to 30 ounces a day, and with the help of fruit to 25 or 20 ounces. Salts, salines, and diuretics call for more fluids. By diminishing the fluids the blood pressure can be lowered 20 or 30 mm. of mercury, thus enabling some high pressure cases to turn the balance. The gain to a diseased or dilated heart is obvious. The objections to be considered are the retention of urates and constipation; but in cases of heart disease these are secondary considerations and may be dealt with by other means, *e. g.*, a purin-free diet for the urates, and laxatives for the constipation.

16. **Tubercle Bacilli in the Blood.**—Forsyth says that tubercle bacilli may commonly be found in the blood of tuberculous patients. Using Rosenberger's method (*American Journal Medical Sciences*, February, 1909), he examined the blood in 12 cases of pulmonary tuberculosis, in 10 of which there were distinct physical signs, with tubercle bacilli in the sputum. All showed tubercle bacilli free in the blood. They were few in number, not grouped, and found with difficulty. In one case phagocytosis was noticed, in only one was there evidence of mixed infection in the blood. Forsyth points out that if it be completely proved that living tubercle bacilli

occur in the blood of practically every tuberculous patient, no matter how early or circumscribed the lesion appears to be, without doubt our ideas as to the use of tuberculin must be considerably modified. The method of examination is as follows: The skin of the front of the forearm is thoroughly cleansed with liquid soap, alcohol and ether. A tourniquet is applied, and with a sterile syringe fitted with a platino-iridium needle, previously flamed, about 5 c.cm. of blood are drawn from any convenient vein. The blood is at once mixed with about an equal volume of sterile citrated salt solution. The mixture is placed in a swift running centrifuge for twenty minutes, and some of the deposit taken up on a slide to form a thick film. This is dried in an oven at 60° C., and is then placed in sterile distilled water to lake the blood. Thereafter the film is fixed and stained in the usual way.

Medical Press and Circular, London

April 21

- 21 Renal Calculus. A. Fullerton.
- 22 *Treatment of Labor in Contracted Pelvis. F. Schauta.
- 23 Primary Carcinoma of the Vagina. G. W. Fitzgerald.
- 24 Oxalate of Cerium. J. C. McWalter.

22. **Contracted Pelvis.**—Schauta describes the development of the principles governing the treatment of labor in cases of contracted pelvis. He divides the operation into three main groups: indicated measures, prophylactic operations and surgical operations. The first includes those operations indicated, not so much by the pelvic contraction, as by complicating anomalies of labor. They are the application of the forceps with the head in the pelvis, turning from a transverse presentation, breech extraction, craniotomy on the dead child, and decapitation. The prophylactic operations are interruption of pregnancy and prophylactic version. Some place the application of forceps above the brim in this group. The surgical operations sacrifice the integrity of the mother's tissues in favor of the child by widening the pelvic space—symphyseotomy or hebotomy; or by providing an artificial channel—Cesarean section. He discusses how far, in cases of contracted pelvis, we can count on spontaneous birth. It affords by far the best solution of many complicated problems and is more frequently possible than appears from statistics. By premature interference many cases of labor are directed into a wrong course and result in great injury to mother and child. At Schauta's clinic about 80 per cent. of the births with narrow pelvis actually occur spontaneously, taking into account only full-term births. The expectant treatment gives by far the best results for the mother, as regards both mortality and morbidity. He does not find that the prophesied evil consequences occur. With regard to Cesarean section, he holds that while we must not perform any operation without the consent of the patient, assuming this general consent, the choice of the operation should be left in all its details to the operator. It is high time that we should break with the tradition of the time when Cesarean section was a deadly operation. It is the habit of making an emergency operation of it that is the cause of such troubles and dangers as occur—insufficient preparation of patient, instruments and physician's hands, and a patient already exhausted and possibly septic. The idea that the country practitioner should not perform Cesarean section will disappear when he is trained to that as he is trained to the use of the forceps, etc. Reviewing his experience he says the management of labor in contracted pelvis will shape itself in the future in the following simple manner, provided it is carried out from the very commencement in a skilful manner and in an institution under strict asepsis. In patients with a conjugate above 8 cm. there is a possibility of spontaneous birth, and therefore expectant treatment is to be adopted. In women under 8 cm., Cesarean section is to be kept in view. In cases bordering on the above, *i. e.*, a conjugate of from 8.5 cm. to 7.5 cm. hebotomy is to be considered. This operation in a conjugate of from 8 cm. to 8.5 cm. would be an alternative operation to spontaneous birth; in a conjugate of 7.5 cm. to 8.5 cm. an alternative to Cesarean section. The choice would be determined by the size and hardness of head, the strength of labor pains, the voluntary efforts and general condition of the patient.

This method of treatment should be looked on in the future as typical. All other methods hitherto used in the treatment of labor in contracted pelvis should be looked on as non-typical.

Clinical Journal, London

April 21

- 25 Some Useful Prescriptions in the Practice of Gynecology. V. Bonney.
- 26 Results of Nasal Obstruction. S. Hastings.
- 27 Autovaccination Versus Heterovaccination in the Treatment of Established Infection (continued). E. C. Hort.

Journal of Tropical Medicine and Hygiene, London

April 15

- 28 Hemogregarines and Parasitology. L. W. Sambon.
- 29 Blackwater Fever. J. G. St. G. Queely.

Practitioner, London

April

- 30 Local Anesthesia in Regard to Causation of Idiopathic Paralysis and Dilatation of the Urinary Bladder. F. P. Weber.
- 31 Treatment of Extroversion of Bladder by Implantation of the Ureters into the Rectum. C. A. Ball.
- 32 *Increased Death Rate from Diabetes, and the Possibility of Preventing the Disease, or of Postponing its Onset. R. T. Williamson.
- 33 Cancer of Tongue. A. Don.
- 34 Treatment of Ischio-rectal Abscess and Fistula. P. L. Mummery.
- 35 Considerations Involved in the Treatment of Mental Disease. C. H. Fennell.
- 36 Acute Infective Osteitis. H. W. Kaye.
- 37 Rhinologic Treatment of Consumptives. W. C. Rivers.
- 38 Diagnosis and Treatment of Gonorrhea. J. E. R. McDonagh.
- 39 *Chronic Infantile Paralysis Diagnosed as Morbus Coxæ. F. Hernaman-Johnson.
- 40 Operative Technic of a General Practitioner. A. J. F. Clarke.

32. Death Rate of Diabetes.—Williamson says that the death rate from diabetes mellitus in England and Wales is steadily increasing. He discusses the etiology in reference to age, heredity, race, occupation and social position, sexual relations, diet, the use of alcohol and sweet beverages, psychic conditions, physical overwork and overstrain, pregnancy and external injuries, and also its association with other diseases, obesity, gout, acromegaly, and occasionally the climacteric. "But," he says, "whatever may be the pathogenesis of diabetes, the previous history of clinical patients shows that certain antecedents of the disease are common, *i. e.*: (1) Mental anxiety, shock, overstrain; (2) excess of alcoholic beverages; (3) excess of sweet foods, or beverages containing sugar." Also, in many cases—at least 22 per cent.—there is a family history of the disease. Preventive treatment should be instituted when the onset of diabetes may be considered likely from family history, in Jews suffering from overstrain, obesity, excessive food and little exercise, in women with grape sugar in the urine during pregnancy, in all cases of gout, acromegaly and obesity, in men of 40 or 50 who have suffered prolonged mental strain, in very stout women after the climacteric, after an acute illness or examination for life-insurance when temporary glycosuria has been found, and in all cases of slight permanent glycosuria. In all cases the following precautions should be taken: All articles of diet or drinks containing sugar should be avoided. A moderate amount of starchy food is permitted unless glycosuria has been detected. Sugar is more powerful than starch in producing glycosuria. Excess of food should be avoided. Sufficient out-door exercise is necessary. Dyspepsia and constipation should be treated. If possible an occupation should be chosen that reduces mental worry, anxiety, etc., to a minimum.

39. Chronic Infantile Paralysis.—Hernaman-Johnson records two cases of chronic infantile palsy, both treated and diagnosed as tuberculous disease of the hip. Both these conditions are amenable to treatment, but of a diametrically opposite nature, in the one case, stimulation and exercise being called for, in the other physiologic rest. The importance of diagnosis is therefore insisted on, and after a discussion of the case the author sums up the diagnosis as follows: In cases of general weakness of a lower limb in children, with symptoms referred chiefly to the hip, do not be over-ready to diagnose morbus coxæ. If possible, conduct the physical examination before hearing anything of the history, either personal or family. If aware of the existence of tuberculous diathesis, be on your guard.

1. Pain.—Examine for this by (a) striking the heel in a direction perpendicular to the leg, the patient lying down and holding the limb out stiffly; (b) jamming together the trochanters with both hands; (c) likewise the iliac crests. Next, manipulate the ankle, knee, and hip joints in all directions, at the same time noting any limitation of movement. Apply Thomas' test to detect permanent flexion of the thigh. Do not ask the child if these things hurt, but watch for wincing or expression of pain in the face. If all these tests are negative, the presumption against the existence of morbus coxæ is very strong indeed.

2. Paralysis.—Find out how far voluntary movement can be carried out. Especially look for weakness of the extensors of the foot. A tendency to foot-drop without contractures is almost diagnostic of infantile palsy. If retraction of the calf muscles exists, the evidence is of less value. The application of the faradic current to the muscles is of use in investigating a case; a feeble or absent response indicates nerve lesion.

3. Tumor.—Remember that when the glutei are markedly flattened, the trochanter may stick out, giving the appearance of a tumor. Careful comparison with the sound side will reveal the fact that the enlargement is apparent only. In case of doubt, a radiograph should be obtained.

4. Symptoms.—Not till the physical examination has been completed, should symptoms be inquired into. Pain is generally complained of, but always as the result of exertion. In some cases of infantile palsy, a walk of 100 yards may cause aching of the limb for hours, often spoiling a night's sleep. The pain, however, is not acute, being always described as of an "aching" or "dragging" character; it is not brought on by an accidental knock or jar; and never takes the form of "night starts." The general condition in cases of infantile paralysis is often as bad as, or worse than, in tuberculous hip; poor nutrition, bad appetite, and digestive troubles being the rule.

5. History.—Parents nearly always attribute these afflictions of the lower limbs to a fall in infancy or early childhood. Such statements are generally to be regarded as valueless, except in so far as they help to fix the date when the disease was first noticed. A history of extreme chronicity, from five to ten years without much alteration in the condition, is strongly against the existence of tuberculous disease.

British Journal of Children's Diseases, London

April

- 41 Medical Inspection of Elementary School Children. G. Carpenter.
- 42 Origin of the Feeble-Minded (concluded). W. A. Potts.

Australasian Medical Gazette, Sydney

March

- 43 Roentgenography in Urinary Surgery. L. H. Harris.
- 44 Whole-Time Medical Officers of Health. J. A. Thompson.
- 45 The Presystolic Murmur. J. M. Gill.
- 46 Plea for Mercurial Inunction in Syphilis. J. L. Gibson.
- 47 Epidemic of Pneumonia. R. E. Shuter.
- 48 Surgical Emphysema—Aërodermectasia. T. Flaschi.
- 49 The Buttercloth Method of Ether Anesthesia. A. J. Turner.
- 50 Varicocele. J. H. Channey.
- 51 Congenital Malformation of the Esophagus. J. A. Cameron and G. S. Lightoller.
- 52 Endothelioma of the Neck. C. MacLaurin.

Annales de l'Institut Pasteur, Paris

March, XXIII. No. 3, pp. 177-271

- 53 Amebic Dysentery in Cochin China. (Recherches sur la dysentérie amibienne en Cochinchine.) F. Noc.
- 54 Physiologic Study of Papain. E. Pozerski.
- 55 Treatment of Trypanosomiasis in Horses by Orpiment, alone or with Atoxyl. A. Thironx and L. Teppaz.
- 56 Trachoma in Algiers. (Histoire pendant un an, du trachome dans une agglomération algérienne.) E. Sergent.
- 57 Presence of an Intestinal Emulsion in the Higher Animals. P. Thomas and A. Frouin.

Archives Générales de Chirurgie, Paris

March, III, No. 3, pp. 221-330

- 58 *Postoperative Embolism in the Lung. C. Lenormant.
- 59 *Perineal Prostatectomy by the Ischio-bulbar Route. Soubeyran.

58. Postoperative Embolism in the Lung.—Lenormant has observed four cases of lung complications after laparotomies or removal of the breast, a proportion of 0.5 per cent. of 792 operations during the last four years. He ascribes the thrombosis to infection, not necessarily occurring during the operation but possibly traceable to the paralysis of some part of the digestive tract with absorption of septic matter. He reviews the literature on the subject, and states that in 233 cases on record the embolism proved fatal in 106. The only treatment is by prevention, and he advocates digitalis or other suitable drug when, before the operation, the pulse is small and the heart action weak and irregular, and also in case of large abdominal tumors. In the same way injections of salt solution are indispensable, he believes, before attempting any operation when the patient is anemic from profuse hemorrhage or the arterial tension is much reduced, and the anesthesia should be as brief as possible. Ranzi advises preliminary scopolamin-morphin to reduce the amount of chloroform; Witzel prefers ether, as it is less depressing for the heart. In operating, the veins must be managed care-

fully to avoid injuring them; it is preferable to ligate the veins separately rather than in a bunch, if of any size. In abdominal operations, injury of the epigastric veins must be especially avoided. After the operation stimulants for the heart, saline infusion and copious intake of fluids combat the thickening of the blood. Some recommend an early purge to counteract the tendency to stasis in the intestines, and all agree that the patient should not be allowed to lie perfectly still, as this favors the production of thrombosis, although Lenormant does not approve of allowing patients to get up early. When signs of embolism develop, the most daring measures are justified if they are logical and the surgeon feels capable of carrying them through. The few attempts of this kind on record have not given any actual success to date, but some of them confirm the possibility of success under favorable conditions. In the nine cases in which the artery was incised for removal of the clot, other clots were found lodged in inaccessible parts of the artery in five cases, but the partial successes realized by Sievers and Trendelenburg in the four others should encourage surgeons to renewed efforts.

59. Ischio-Bulbar Perineal Prostatectomy.—Soubeyran reviews the various technics for prostatectomy and then describes two cases in which he removed the prostate through an incision extending from the tuberosity of the ischium to the symphysis pubis, along the ischiopubic ramus. The incision commences just below the root of the scrotum, slanting outward and terminating a few inches on one side of the anus. The ischio-cavernosus and the bulbo-cavernosus muscles are spread apart with the finger or a blunt instrument, leaving a space between them, the ischio-bulbar space, which allows ready access to the prostate after severing the middle perineal fascia and the deep transversus perinei. The advantages of this technic, which he explains with five illustrations, are the facility and rapidity of the operation, not interfering with the muscles of the anus, the slight and easily arrested hemorrhage, and the fact that the rectum does not come into the field of operation and thus has no chance to be injured. In considering the indications for the various technics, infection of the bladder renders the high operation more dangerous and the perineal technic is preferable, as also when the general condition is bad and there is obesity or special danger from pulmonary complications.

Archives Générales de Médecine, Paris

March, LXXXIX, No. 3, pp. 129-192

- 60 *Familial Nervous Diseases. (Maladies nerveuses familiales.) M. Massalongo.
61 *Bubonic Plague. (Récentes acquisitions sur la pathogénie et l'étiologie de la peste.) V. Belleli.

60. Familial Nervous Diseases.—Massalongo classifies the familial nervous affections in nine groups, the syndromes respectively, with ataxia, with convulsions, amyotrophy, myoclonia, paralysis, trophovasomotor or sensory disturbances and the syndrome with neuroses or psychoses. The various familial nervous affections show more than anything else the power, the despotism of heredity in pathology, and he approves of Galton's suggestion that the state should favor the union of individuals endowed above the average, awarding premiums to facilitate their union under advantageous conditions. He thinks that this "engamy" would be of inestimable advantage, not only financially but as a means of educating the public, an education absolutely indispensable for the more radical reforms.

61. The Plague.—Belleli is director of the sanitary service at Port-Said, Egypt, and he here reviews some of the conclusions from his experience. He states that the plague bacilli are found in the blood from the start in fully 45 per cent. of the cases of bubonic plague, even the mildest forms. The bubo is the manifestation of secondary infection of the lymphatic system. The malaise and fever may have been evident for six or seven days before there is a sign of a bubo. It seems that the bacilli are held in the lymphatic glands after primary infection of the blood, and the secretions destroy the bacilli if they are not very virulent, the bubo resulting. In more serious infection the defensive action on

the part of the lymphatics is not strong enough to arrest the infection and secondary septicemia results. He is convinced that when the plague localizes in the lung there is mixed infection with the pneumococcus, the latter preparing the soil and facilitating rapid infection of the lung by the plague bacilli. It seems probable that the bacilli may become less virulent after a time so that they are unable to infect man, while rats, being more susceptible, still contract and die of the disease. This would explain the experiences at Port-Said where, since the extensive human epidemic of 1900, plague rats have been found in great numbers, especially in the spring, while only a few human cases have occurred and only at long intervals. The rat flea is apparently the intermediary between rat and rat and between rat and man, but it seems evident that multiple passages from man to man are necessary for the virus to become sufficiently virulent to engender extensive human epidemics. While still endeavoring to exterminate rats, prompt isolation of human cases, to prevent the passage of bacillus from man to man and thus prevent the enhancing of its virulence, is the essential factor in prophylaxis. As this is now systematically done in most civilized countries, plague does not get a foothold, and no epidemic results from the isolated imported cases.

Bulletin de l'Académie de Médecine, Paris

April 13, LXXVIII, No. 15, pp. 427-442

- 62 *Progressive Dilatation of Stenosis of the Larynx after Laryngostomy. Sieur and C. Perier. Id. Progressive Dilatation of Spasmodic Constriction of the Esophagus. Guisez Delherm, and C. Perier.

62. Dilatation of Stenosis of Larynx and Esophagus.—Sieur's two patients were young soldiers requiring an emergency tracheotomy, the first for fracture of the larynx from the bite of a horse, the other for phlegmasia of typhoid origin, with prolonged suppuration and necrosis of cartilage, which did not heal for eighteen months. The progressive dilatation with red rubber drains after laryngostomy finally proved successful in each case. Success depends on going ahead very slowly after the subsidence of all inflammation; there is danger of bronchopneumonia if this rule is transgressed. He changes the drain every second day to insure its elasticity. It should reach from the upper part of the larynx, leaving the epiglottis free, down to the tracheotomy tube, its slanting lower end fitting between the top of the tube and the posterior wall of the trachea. Guisez and Delherm state that esophagoscopy revealed the absence of the assumed cancer in 18 patients out of 220 examinations made with the esophagoscope. The spasmodic constriction is seen like a narrow slit or in the shape of a deep funnel with a punctiform opening below which resists the passage of a sound. The aspect is so characteristic that it can never be taken for cancer when once seen. The diagnosis once established, the first indication is to introduce a sound to permit the patient to be fed, and then to dilate the constriction and by removing the obstacle allow the distended part of the esophagus above to regain its elasticity. Rinsing out the esophagus with a slightly alkaline fluid hastens the cure by attenuating the reflexes. They have thus cured eleven patients, including nine with great distention of the esophagus above the spasmodic constriction. The esophagoscope confirms the diagnosis and permits the introduction of a sound under direct inspection which otherwise it seems impossible to introduce. Perier comments that the introduction of a stiff tube is liable to do injury unless oversight of the conditions is obtained beforehand by radioscopic examination.

Archiv für Gynaekologie, Berlin

LXXXVIII, No. 1, pp. 1-215. Last indexed April 17, p. 1298

- 63 Premenstrual Changes in the Epithelium of the Glands in the Uterine Mucosa. (Die Drüsenepithelveränderungen der Uterusschleimhaut im Intervall und Prämenstruum.) R. Schröder.
64 *Tuberculosis of the Female Genitalia. (Ueber Tuberculose des weiblichen Genitalapparatus.) M. Simmonds.
65 *Convulsions in the New-Born Infant. (Ueber Krämpfe bei Neugeborenen.) P. Esch.
66 Congenital Displacement of the Heart. (Ectopia cordis congenita.) A. Rieländer.
67 "Milk Glands" in the Axilla. (Die sogenannte Achselhöhlenmilchdrüse und deren Genese.) L. Seitz.
68 Bacteriologic and Clinical Research on Efficiency of Anti-streptococcus Serums. T. Heynemann and C. Barth.

69 *The Syndrome in Fatal Tardy Chloroform Poisoning. (Ein typisches Krankheitsbild von protrahiertem Chloroformtod.) A. Sippel.

70 Ovarian Tumor. (Zur Lehre von den Lymphangioendotheliomen des Eierstocks.) H. Eymmer.

64. **Tuberculosis of Female Genitalia.**—Simmonds states that he found 80 cases of tuberculosis in the female genitalia among 6,000 female cadavers. This is a proportion of 1.33 per cent. of all the female cadavers, the percentage being highest in the second decade. In 87 per cent. the tubes and in 76 per cent. the uterus was affected, and old tuberculous lesions elsewhere in the body were the rule. The tubes are most frequently the primary seat of the genital tuberculous lesions. In some cases the earliest phase of the tuberculous process in the tube is merely a bacillary catarrh with tubercle bacilli in the lumen, without changes in the walls. A pregnancy may continue even with extensive genital tuberculous lesions, but it hastens the development of the latter; even extrauterine pregnancy may occur. He never encountered any evidences of spontaneous healing of a tuberculous process in the female genital organs, but has noticed that the course is extremely slow in some cases, particularly in elderly women, in whom a tuberculous pyometra may persist for many years without change. In a number of cases the microscope was the only means of determining the tuberculous nature of the endometritis. He suggests the advisability of microscopic examination of scrapings of the uterus in all cases of tuberculous peritonitis. Operative removal of the focus is the only treatment if the general condition permits; tuberculous lesions in the lungs and tuberculous peritonitis are liable to be arrested or to heal, while the genital tuberculous affection otherwise continues an irresistibly progressive course.

65. **Convulsions in New-Born Infants.**—Esch discusses the functional and organic convulsions in new-born infants, citing some statistics from French clinics showing a percentage of from 0.18 to 2.69 per cent. in the maternities with from 600 to 5,078 deliveries. The mortality ranged from 25 to 100 per cent. In 49 cases the convulsions were ascribed to umbilical infection in 5, to edema and asphyxia in 3 each, and to inherited eclampsia and syphilis in 1 each. In one case personally observed the symptoms of general pressure on the brain, evidently due to some "supratentorial hemorrhage," persisted for three days and then subsided. Delivery had been normal and brief, with normal pelvis, so that mechanical injury seems out of the question. The various organic affections liable to induce convulsions in the new-born are reviewed. Treatment should aim to avoid excitation from without, bright light, change of temperature, etc., with small doses of bromids and chloral by the rectum and, possibly, lumbar puncture with measures to aid the elimination of autotoxins.

69. **Tardy Chloroform Intoxication.**—Sippel calls attention to the remarkable coincidence that in the dozen cases of "tardy chloroform death" on record the operation had been undertaken twice on account of torsion of the pedicle of an ovarian cyst and twice on account of large irreducible hernia of the omentum. A causal connection seems unmistakable, and he thinks it probable that certain toxins were produced by the interference with the circulation in these cases, which had a special injurious action on the parenchyma, and on the parenchyma of the liver in particular. In another case the thigh had been exposed to the Roentgen rays just before the operation. Toxins may have been generated in this and the other cases which conferred on the parenchyma cells a special affinity for the chloroform, thus interfering with the elimination of the anesthetic. He gives the details in full of nine cases, including one from his own experience. His patient was a young woman, healthy, except possibly for a tendency to chlorosis, requiring correction of torsion of a large ovarian cyst, which was removed under chloroform, about 60 gm. of which was used. The operation proceeded smoothly and the patient seemed to bear the anesthetic so well that ether was not substituted toward the last as is usually the custom. There were no disturbances afterward and she seemed to be convalescing smoothly when late the next day she began to be restless, vomited, the pulse became soft and rapid, the

abdomen being still flat and non-sensitive except a little tenderness in the liver region. The eyes showed a tendency to jaundice and the catheter urine contained much albumin, while the patient rapidly presented the appearance of severe intoxication as in the stupor of eclampsia. The coma became deeper the next day and vomiting of a thin, blood-stained fluid was almost incessant, the jaundice becoming more intense, with anuria and heart failure in 68 hours after the laparotomy. Autopsy revealed entire absence of peritonitis and of inflammatory reaction in the field of operation, but the typical pronounced fatty degeneration in the liver confirmed the diagnosis made during life, the clinical and pathologic picture being the counterpart of the cases on record of this tardy fatal chloroform intoxication. Forty articles from the literature on the subject are reviewed and the practical conclusion emphasized that every effort must be made not to allow the blood to become too concentrated before the operation, but rather to dilute it, as this favors the ready elimination of the anesthetic by the lungs. Another conclusion is that the glycogen content of the liver cells must be kept at or above par, as glycogen is such an important factor in burning up the fat. The patients must be supplied with adequate amounts of carbohydrates long enough before the operation to insure the possibility of ample production of glycogen in time. This conclusion is based on Rosenfeld's experimental research on the rôle of glycogen in the oxidation of fat. The autopsy histologic findings of the personal case reported are shown in a large colored plate.

Archiv für Verdauungs-Krankheiten, Berlin

April, XV, No. 2, pp. 161-324

71 *Intermittent Gastrosuccorhea. (Der intermittierende Magensaftfluss.) E. Allard.

72 *Extra-anal Non-operative Treatment of Hemorrhoids. (Eine neue unblutige Behandlung der Hämorrhoiden.) I. Boas.

73 Clinical Import of Gastric Hypersecretion and Hyperacidity. (Zur Beurteilung der Hypersekretion und Hyperacidität des Magens.) J. Forsbach.

74 *New Method of Estimating the Permeability of the Pylorus and an Attempt at Testing the Pancreatic Function Directly. M. Einhorn (New York).

75 Theoretical Study of Saline Cathartics. (Zur Lehre von den Abführmitteln. IV. Zur Theorie der Bitterwasserwirkung.) H. Ury.

76 *Early Diagnosis of Gastric Carcinoma from Cytologic Examination of the Rinsing Water. (Diagnose des Magenkarzinoms auf Grund der cytologischen Untersuchung des Spülwassers. Normaler und pathologischer Zelleninhalt des Magens.) G. Marini.

77 *The Work of the Stomach Glands and Pancreas on a Fish and Meat Diet. (Arbeit der wichtigsten Verdauungsdrüsen bei Fisch- und Fleischnahrung.) W. N. Boldyreff. Commenced in No. 1.

71. **Intermittent Gastrosuccorhea.**—Allard concludes from the clinical experiences related and study of the literature that intermittent excessive production of gastric juice is always a symptomatic phenomenon, secondary to some primary cause within or without the stomach.

72. **Extra-Anal Non-Operative Treatment of Hemorrhoids.**—Boas describes a new method of treatment which is directly contrary to the teachings of ages that hemorrhoids should be returned into the bowel. He has sometimes found empty hemorrhoid sacs, evidently nodules which had been gradually obliterated by a more or less gradual expression of their contents. This natural healing must have occurred as the result of a process directly the reverse of what the text-books teach in regard to keeping the hemorrhoids in the bowel. He has imitated this natural process in eight cases of hemorrhoids during the last few months and has been surprised at the uniformly favorable results. The hemorrhoids are pushed outside the anus by the patient's straining, supplemented by the use of a suction apparatus if necessary, to draw all the nodules outside. That is all; the patients lie down for the first three or four days or not, as desired. A ring of edema forms around the anus, which gradually shuts off the nodules from the circulation. The edematous ring may be tender and the distended nodules grow more and more turgid at first, then they gradually turn gray and shrivel, with sometimes a little ulceration. By the end of a week they are only half their former size and the smaller ones have entirely disappeared; the others gradually grow paler and paler and finally subside completely. The course of treatment required only

one or two weeks in the majority of his cases. When the pains were severe during the first two or three days, as in a few cases, he inserted a suppository of morphin or codein with belladonna, but a dressing of aluminum acetate was generally sufficient and even this was not necessary in some cases. In others slight cauterization with silver nitrate or dusting with calomel or bismuth may have hastened the healing of the ulcerations.

74. Summarized in THE JOURNAL, July 4, 1908, p. 73.

76. **Diagnosis of Gastric Cancer from Cytologic Examination of the Rinsing Water.**—Marini gives an illustrated description of the characteristics of the tumor cells found in the rinsing water in 37 cases of gastric cancer, comparing them with the epithelial cells found in the stomach content in health. He urges that search for tumor cells in the water after lavage of the stomach is the easiest, simplest and most reliable diagnostic measure at our command and may reveal the existence of carcinoma even in its incipency. His illustrations show that the structure of the cells may indicate even the shape of the carcinoma, its location and other features. He is convinced of the diagnostic importance of even isolated tumor cells in the rinsing water, and relates the details of several cases in which the course of the affection later confirmed the diagnosis based on this finding.

Berliner klinische Wochenschrift

April 5, XLVI, No. 14, pp. 625-668

- 78 *Suture of Lung in Gunshot Wounds. (Lungennaht bei Schussverletzungen.) M. Borchardt.
 - 79 Differentiation of Tubercle Bacilli by Antiformin. (Die Brauchbarkeit des Antiformins zum Nachweis von Tuberkelbacillen.) O. Seemann.
 - 80 Chemical and Microscopic Study of Fatty Degeneration of the Kidneys. (Nierenverfettung.) E. Kuznitzky.
 - 81 *Relations between the Hypophysis and the Ovaries. (Beziehungen zwischen Hypophysis und Eierstöcken.) L. Thumim.
 - 82 Technique and Indications for Operative Treatment of Retroflexion, especially by Vaginal Fixation of the Uterus. J. Sonnenfeld.
 - 83 *Streptococci in Children's Diseases and Serotherapy. J. Ritter.
 - 84 *Pyelocystitis in Children. (Die Pyelocystitis des Kindesalters.) F. Göppert.
 - 85 *Electric Cautey in Treatment of Hypertrophy of the Prostate under "Irrigation Urethroscopy." (Galvanokaustische Eingriffe in die Urethra.) H. Goldschmidt.
 - 86 *Local Electric Light Baths. (Ein handlicher Universalapparat zur Licht- und Wärmestrahlung.) Buttersack.
- April 12, No. 15, pp. 669-716
- 87 Placental Origin of Eclampsia. R. Freund.
 - 88 Catatonic Psychosis as Manifestation of Sinus Thrombosis. G. Stertz.
 - 89 *Antistreptococcus Serum. H. Aronson.
 - 90 Immunity to Syphilis and Syphilitic Infection of Testicles in Monkeys. (Zur Frage der sogenannten Syphilisimmunität und der syphilitischen Hodeninfektion bei Affen.) A. Buschke and W. Fischer.
 - 91 Mineral Water and Uric Acid. (Das Karlsbader Wasser und die Harnsäure.) A. Rosenthal.
 - 92 Eye Diseases and Gynecology. (Augenkrankheiten in ihren Beziehungen zur Gynäkologie.) E. Runge.

78. **Suture of the Lung.**—Borchardt has recently operated in two cases of injury of the lung, and this experience in addition to study of the literature has convinced him that it is not necessary to attempt to suture the lung except when there is primary excessive acute or subacute hemorrhage, extensive pneumothorax or cellular emphysema or when the walls are much infected with a wide gaping wound. Except in these rare conditions it is wiser not to expose the patients to the dangers of an unnecessary operation.

81. **Relations Between Hypophysis and Ovaries.**—Thumim has made a special study of the relations between the ductless glands, and recently reported a case in which a tumor in the suprarenals was accompanied by atrophy of the ovaries and male characteristics in respect to growth of hair, bass voice, etc. In a case here described in detail, the loss of ovarian functioning coincided with the development of a tumor of the hypophysis and development of acromegaly. The patient had passed through a normal puberty, had married at 21 and soon after this the menses became irregular and finally ceased altogether, probably as the tumor in the hypophysis began to develop. The first sign of trouble was hoarseness; in a few months vision grew defective and Roentgen examination confirmed the assumption of a tumor in the hypophysis. The symptoms continued a progressive course under hypophysis tablets, but after a few months they seemed to be arrested

and the patient has remained in comparatively fair condition during the few months since, and refuses to allow any operation. It seems evident, Thumim thinks, that ovarian, rather than hypophysis treatment is indicated in this and similar cases, and the assumption seems plausible that disturbances resulting from excessive ovarian functioning, such as excessive menstrual hemorrhage, nymphomania and other psychoses, might be combated by hypophysis tablets. The pineal gland must also be considered in connection with the relation between the glands with an internal secretion. Not merely for organotherapy, but also for physiology and pathology these interrelations will surely prove a fruitful field for research.

83. **Streptococci in Children's Diseases.**—Ritter found streptococci on the tonsils almost constantly in 300 cases of tonsillitis, but only in 33 out of 117 cases of acute articular rheumatism. Streptococci were also present in the majority of cases of pemphigus and impetigo and in 23 of 100 cases of aphthous ulcerative stomatitis. In diphtheria in particular the presence of streptococci is the criterion of the imminence of the danger. In 100 cases of scarlet fever streptococci were found in only a few and none in the rapidly fatal ones. In all these affections, however, the streptococcal invasion was always secondary; in erysipelas alone the streptococci seem to be the causal primary germs, and they also seem to be the first on the spot in recent suppurations and acute infections of wounds, although they may be accompanied by staphylococci. The streptococci in all these affections are practically identical and their varying virulence depends on the soil. Examination of 16 patients with frequently recurring erysipelas, showing a peculiar affinity for this streptococcal affection, disclosed an abnormally small proportion of white corpuscles—below 4,000 and 5,000. This suggests that the blood of these patients is incapable of interposing an effectual resistance to the invasion of the streptococci. Antistreptococcus serum was injected in 22 severe cases of erysipelas, with good results. The tabulated findings show that in every case without exception the process was promptly arrested and subsided, in marked contrast to 87 other cases in which the serotherapy was not applied. In 19 cases of scarlet fever with streptococcus invasion 10 of the patients recovered under serotherapy. In 14 cases of diphtheria of the severest type the diphtheria antitoxin was supplemented by antistreptococcus serum and 6 of the patients recovered, all of whom he is confident would have been doomed without the serum.

84. **Pyelocystitis in Children.**—Göppert remarks that from 1.1 to 1.2 per cent. of the children brought to his office are suffering from pyelocystitis; he has notes of 130 such cases and here describes a few clinical types. The outcome depends on early appropriate treatment; fully 20 per cent. of his little patients succumbed, as medical aid was not sought until the affection was far advanced. Without treatment, all the severer cases in children under eighteen months inevitably terminate fatally, either during the acute attack or from chronic debility. A complete cure under suitable treatment may be anticipated, even when there are evidences that restitution is not complete for a year or two. Chronic trouble may persist and explain certain cases of menstruation pyelitis and pregnancy pyelitis in later years. Even in the most favorable cases a recurrence in the first two months may be expected in about 20 per cent. Subjective improvement may be counted on in two or three days under appropriate treatment and complete recovery in from ten to thirty days in infants, and more rapidly still in older children. The aim in treatment is to rinse out the kidneys by copious intake of fluids; infants require this even more than adults as they suffer so readily from lack of water. In case the symptoms are severe he advises pouring into the stomach, through a catheter introduced through the nose, from 150 to 200 gm. Carlsbad Mühlbrunnen water at a temperature of 40 or 41 C. (104 F.). In less serious cases he injects into the rectum two or three times a day a pint of warm Carlsbad water or lime water diluted to one-half. The transformation of the acid into an alkaline reaction in the urine hastens recovery, unless there is ammoniacal decomposition, in which case the

urine should be rendered acid. He found cranberry juice most effectual for this. His experience has further confirmed the benefit from salol or other drugs to attenuate the virulence of the bacteria. During the acute phase he gives from 0.05 to 0.2 gm. salol five or eight times a day to children from two months to three years old. Improvement is generally manifest in thirty-eight hours, but a copious supply of water must be kept up or further trouble is inevitable.

85. Irrigation Endoscopy and Galvano-Cauterization of the Urethra.—Goldschmidt's method of direct visual inspection when the urethra is distended with water has been described in these columns. He here gives eight views of the enlarged prostate seen by this means, the findings explaining the mechanism of retention of urine and the easiest way of restoring permeability. A needle or small knife can be inserted in the protuberant lobe of the prostate and the resulting shriveling opens the passage for the urine. Not the depth of the incision but its being carried throughout the entire length of the lobe is the main factor in the success. This method of treating enlarged prostate is indicated only in the early stages and does not attempt to compete with prostatectomy.

86. Electric Apparatus for Local Application of Heat.—The apparatus is shaped like a drum but opens sideways into two parts, each half containing three incandescent electric lights. The opened drum fits over the shoulder, leg or any part desired and the heat can be graduated at will.

89. Antistreptococcus Serum.—Aronson has been experimenting on monkeys, mice and other animals with antistreptococcus serum. Among the results obtained he mentions success in saving monkeys by means of immune horse serum from the effects of streptococcus peritonitis, otherwise fatal in eighteen hours at latest. He urges the authorities to make arrangements for further studies of this kind in the tropics where the anthropoid apes can be procured at less expense for research on serum prophylaxis and treatment of tuberculosis, leprosy, syphilis and cancer, besides the streptococcus affections.

Deutsche medizinische Wochenschrift, Berlin

April 15, XXXV, No. 15, pp. 657-696

93 *Gout and Rheumatism. W. His.

94 *Therapeutic Action of Fibrin. (Wirkungen des Fibrins.) S. Bergel.

95 *Serodiagnosis in Postconceptional Syphilis. (Postkonzeptionelle Syphilis und Wassermannsche Reaktion.) Wechselmann.

96 Simplified Procedure for Serodiagnosis of Syphilis. (Vereinfachtes Verfahren der Serumdiagnose bei Syphilis.) N. A. Tschernogobow.

97 *Cerebrospinal Fluid with Postdiphtheric Paralysis. (Zur Klinik postdiphtherischer Pseudotabes.) L. Roemheld.

98 Treatment of Laryngeal Tuberculosis with Marmorek's Antituberculosis Serum. B. Jereslaw.

99 *Superheated Air in Treatment of Pleuritic Effusion. (Behandlung des pleuritischen Exsudates.) L. Fellner.

93. Gout and Rheumatism.—His emphasizes the frequency of groups of symptoms in gout which certainly have no connection with uric acid, mentioning among them dyspepsia, skin diseases, myalgia and neuralgia, arteriosclerosis and granular atrophy of the kidney. These and other phenomena observed suggest that the disturbance in the purin metabolism is not the true essence of gout but is merely one symptom of a more general disturbance. A number of cases encountered in the last few months confirm his idea that in rheumatism, aside from all the cases with known or probable etiology, such as trauma, inflammation, acute rheumatism and infections, there are a large number of cases in which the arthritis must be regarded as the manifestation of some general cause not localized in the joints. This applies particularly to Heberden's nodes, whose connection with gout and diabetes has long been known, although they may develop without either. This characteristic form of arthritis is so unmistakably independent of external causes that some endogenous injury must be accepted for all cases. Some typical examples are related of the many different ways in which chronic arthritis may be connected with an endogenous or familial predisposition to disease; they also demonstrate its close connection with gout. The disturbance in the purin metabolism is peculiar to gout and has nothing to do with chronic arthritis. It is important to differentiate the two, and Roentgen ex-

amination may aid, especially when the joints are deformed; gouty tophi cast no shadow. In dubious cases the criterion is the elimination of purin or examination of the blood for uric acid after four or five days of purin-free food. This differentiation is important on the practical grounds that severe chronic arthritis induces a tendency to cachexia and phthisis. It is purposeless and harmful to restrict such patients to a purin-free diet. Restriction to a milk-vegetable diet is imperative only in case of certain gout, or when the arthritis develops with other signs of an inherited taint. The gouty diathesis is liable to manifest itself in some other form than defective uric acid metabolism, while certain non-gouty forms of chronic arthritis may develop on a predisposing diathesis, although the purin metabolism may not be disturbed.

94. The Therapeutic Action of Fibrin.—In this communication from Bier's clinic Bergel relates experiments which show that fibrin plays in the body the part of a protecting and healing substance. It possesses leucotactic, hyperemic and fermentative properties while stimulating the production of granulations and connective tissue and checking the growth of bacteria. He says that it is the fibrin which stimulates wounds to heal, thrombi to become organized, transplanted tissue to heal into its new bed, and callus to form after a fracture. Fibrin supplied from without displays all these properties as in the natural processes, and hence he advises the local application of a sterile, durable, pulverized fibrin as a physiologic aid to promote the rational healing of wounds.

95. Serodiagnosis of Postconceptional Syphilis.—Wechselmann affirms as the conclusion of his research that the newborn require antisiphilitic treatment when a positive Wassermann reaction is obtained and that, in case of negative findings, the test should be repeated now and then. If the reaction gives the same response in both mother and child, she can be allowed to nurse it, while a negative reaction compels repeated clinical and serodiagnostic control. A child giving a negative response should not be nursed by the mother giving a positive response. He is convinced that syphilis may exist for years exclusively in the interior of the body without the slightest signs or symptoms to reveal its presence. This is particularly liable to occur in women infected by their husbands in a late phase of syphilis, the virus probably being much attenuated. The complement-fixation test is the only means at our disposal that allows us insight into these occult cases.

97. Cerebrospinal Fluid in Postdiphtheritic Paralysis.—Roemheld reports a case in which diphtheria in a merchant of 30 was followed by paralysis involving the muscles of accommodation, the palate and the legs. The cerebrospinal fluid contained an abnormal proportion of albumin which gradually subsided as the patient improved under treatment. In another case in a child the paralysis had subsided but the patient became imbecile; the proportion of albumin in the fluid at 18 was exceptionally large. These findings suggest that prolonged postdiphtheritic paralysis may be the result of changes in the central nervous system as well as of a peripheral neuritis.

99. Treatment of Pleuritic Effusion.—Fellner applied superheated air to one-half of the thorax in the effort to induce absorption of an effusion which had for months resisted all other measures. The heat was at first 80 and 100 C. (176 and 212 F.), increasing later to 120 and 140 (248 and 284 F.). The sittings were at first 15 and later 30 minutes long, given every second day at first, then for 2, 3, and 4 days at a time. Prompt benefit followed; after 35 applications all signs of inflammation had vanished and the patient felt better than for years.

Medizinische Klinik, Berlin

April 11, V, No. 15, pp. 529-566

100 *Action on Circulation of Various Hydrotherapeutic Measures. (Ueber die Kreislaufwirkung kalter und warmer Wasserapplikationen sowie verschiedener Medizinalbäder.) O. Müller.

101 *Tuberculosis of the Kidneys. (Nierentuberkulose.) V. Blum.

102 *Further Experience with Scopolamin in Obstetrics. (Weiterer 600 Geburten im Skopolaminindämmerschlaf.) J. A. Beruti. Commenced in No. 14.

103 Functional Diagnosis of the Heart. (Zur funktionellen Herzdiagnostik.) E. Herzfeld.

- 104 Strengthening Action of Scopolamin on Morphin, and Means to Combat Morphinism. (Verstärkende Wirkung des Morphinums durch Skopolamin nebst einem Vorschlag zur Bekämpfung des Morphinismus.) A. Friedländer.
- 105 Treatment of Ankylosis with the Bier and Tyrnauer Apparatus. (Behandlung von Gelenksteifigkeiten mittels Bierscher und Tyrnauer Apparat.) Immelmann.
- 106 *Simple Method of Treating Dislocation of the Shoulder. (Einfache Behandlungsmethode der Schultergelenksluxationen.) G. Schichhold.
- 107 Questions of Climate in Balneology. (Klimatische Fragen in der Balneologie.) Dove.

100. **Effects on Circulation of Hydrotherapy.**—Müller has studied the effects on the heart action of various hydrotherapeutic measures, both in health and disease. His conclusions show the physiologic bases for the action of hot, cold and carbonated baths. With failing compensation the blood pressure drops in response to cool carbonated baths, which thus do more harm than good. When the compensation is good the response is similar to that in health, and great benefit may be derived from these measures along the lines of this physiologic reaction.

101. **Tuberculosis of the Kidneys.**—Blum reviews the experiences at the Vienna polyclinic with tuberculosis of the kidneys, his conclusions all being in favor of radical surgical intervention. Even in the early cases there is absolutely no justification for internal medicinal, climatic, specific or physical therapy. They are only a waste of time, he asserts, and reduce the chances for a successful operation. The possibility of spontaneous recovery is so slight that it should not be taken into account at all.

102. **Scopolamin-Morphin in Obstetrics.**—This communication adds 600 more to the 1,000 cases of delivery in the scopolamin "twilight sleep" previously published from Krönig's clinic at Freiburg. The conclusions are about the same as those of Gauss in the former series. Measurement of the amount of blood lost in 497 cases showed an average of 382 gm., fully 95.16 per cent. of 571 deliveries being accompanied by merely moderate loss of blood. There was no morbidity in 536 cases, while in 17 there was some febrile disturbance of puerperal origin in 6, afebrile in 1, and non-puerperal in the 10 others, the total morbidity being 4.68 per cent. Of the 609 children, 7, that is 1.14 per cent., were still-born, while 10 were non-viable. About 5.14 per cent. of the 609 children (31) were in asphyxia and 9 of these children died within three days. In 2 cases death occurred from aspiration of amniotic fluid. Three children died between the third and ninth day, but 581 of the 588 children born alive left the clinic in good condition, that is, 98.8 per cent.

106. **Simple Method of Reducing Dislocation of the Shoulder.**—The forearm is held between the physician's thighs as he stands in front of the seated patient. The arm is held firm by the adductor muscles and strong pressure can thus be brought to bear as the physician pulls back while holding the shoulder with his hands. The downward pressure thus exerted overcomes the action of the antagonist muscles and stretches the capsule and ligaments until reduction is easily done. Schichhold has applied this method in many cases during the last forty years and with satisfactory results. The chief advantage of this technic is that he can regulate, himself, the force of the traction exerted to the exact amount required for reduction, as he grasps the neck of the humerus with one hand and with the other presses the head into place, both hands being free for the manipulation of the joint. The only assistance required is some one to hold the patient firm in the chair, one arm around his neck and the other in the axilla. This technic allows rapid reduction of even old dislocations without anesthesia, assistance or apparatus.

Monatsschrift für Geburtshilfe und Gynäkologie, Berlin

April, XXIX, No. 4, pp. 405-552

- 108 Volvulus of Sigmoid Flexure in Gynecology and Pregnancy. R. Lampe.
- 109 Polyp of the Vaginal Portion of the Uterus. (Ueber Polypen der Portio vaginalis.) K. Pronal.
- 110 *Intraperitoneal Shortening of the Round Ligaments. (Zur intraperitonealen Verkürzung der Ligamenta rotunda.) M. Stolz.
- 111 *Operative Treatment of Complicated Retroflexion of the Uterus. (Zur operativen Behandlung der komplizierten Retroflexio uteri fixata unter Mittheilung eines Verfahrens mittelst ankerförmiger Schnittführung.) H. Palm.
- 112 *Alexander-Adams Operation. W. Lesse.

- 113 *Permanent Results of Conservative Treatment of Inflammation of the Ovaries and Fallopian Tubes. (Dauererfolge der konservativen Behandlung chronisch entzündeter Gebärmutteranhänge.) L. Prochownick.
- 114 *Treatment of Rupture of Uterus. (Zur Behandlung der Uterusruptur in Anschluss an sechs eigene Fälle.) G. Petren. Commenced in No. 3.

110. **Operative Treatment of Retroflexion of the Uterus.**—Stolz gives an illustrated description of his intraperitoneal method of shortening the round ligaments and compares it with similar technics that have been published. He has applied it in seven cases in the clinic with good results. Its principal feature is the intentional antelexion and elevation of the uterus by suture of the round ligaments slanting across the lower wall of the uterus. Movable backward displacement of the uterus was the indication for the operation in most of his cases.

111. **"Anchor Incision" for Uterine Retrodisplacement.**—Palm applies the term "anchor incision" to a curving transverse incision, with perpendicular median incision, for the second step of the Alexander operation. He has had occasion to operate by this technic in seven cases of complicated retroflexion with extensive and solid adhesions and other lesions requiring ovarietomy, myomectomy or other comparatively serious operation. Four of the patients have borne children since without disturbance, twins in one case in which the patient had had bilateral femoral hernia, prolapse of the vagina and inflamed adnexa on one side with two myomas. He adds that the idea is the same as that of Kreutzmann, published six months later than the description of Palm's first operation by this technic.

112. **The Alexander-Adams Operation.**—Lesse has applied this technic in 175 cases and expresses satisfaction with it, notwithstanding that there was recurrence in 2.5 per cent. of 83 women whose later history is known. Thirty-five of the women have passed through normal pregnancy since, including 7 who had the operation done to cure sterility. In 3 other cases of this kind conception has not occurred to date.

113. **Remote Results of Conservative Treatment of Inflammation of the Adnexa.**—Prochownick discusses the limitations for conservative treatment, on the basis of 160 patients thus treated between 1892 and 1905, and recently re-examined. When recurrence took place it was during the first three years in 95 per cent. of the cases and in the majority at the beginning of the second year. It seems evident, therefore, that three years is long enough to estimate the ultimate outcome of treatment; 55 per cent. of the women were cured by a single course and 15 per cent. by a second course, of from four to six weeks. The patients at first remain in bed, with local ice applications, changing to moist heat, then to superheated air or local electric light baths, with hot vaginal douches, sitz and full baths, the mercury colpeurynter for from two and a half to three hours every day, and a hard rubber stretching cylinder introduced at night to act on the indurations and cicatricial tissue in the pelvic connective tissue; general massage is begun as early as possible, and the patient is allowed gradually to get up. At four or five day intervals ichthyol glycerin or tannin glycerin is applied locally on gauze, never stronger than 5 per cent., and all other measures are omitted on the days of the local treatment and all measures during the menses. At the slightest rise in temperature—taken four times a day—the patient must stay in bed. Abscesses are opened and drained, into the vagina if possible. In 48 of the 160 cases the conservative measures proved ineffectual and surgical intervention was required. The improvement in the subjective symptoms under complete repose was in marked contrast in these 48 women to the persistence of the objective findings; the prognosis was particularly grave in the cases in which there was not even subjective improvement and the affection recurred more severe after the first course of conservative treatment. When the first course failed to show marked improvement, the second and third courses merely postponed the inevitable surgical intervention and rendered the conditions less favorable for it. He regards it as the greatest progress in gynecology that more than half of all the chronic inflammatory affections of the adnexa can be permanently cured with patience and simple measures.

but, on the other hand, it is important to recognize early the cases for which conservative measures are not adapted so that surgical intervention can be promptly applied.

114. Rupture of the Uterus.—In addition to the 6 personal cases described, Petren tabulates the details of 754 cases of rupture of the uterus which he has been able to find in the literature of the last thirty years. Of these 754 women, only 238 survived, including 140 out of 501 treated by conservative measures and 82 out of 174 by a laparotomy. The statistics to date are thus in favor of laparotomy in treating rupture of the uterus, the organ being removed as a rule, and always if there are signs of infection. The general practitioner hesitating to undertake such an extensive operation had better summon the specialist to the house or have the patient taken to the hospital, where this operation is no more dangerous than operation for ruptured extrauterine pregnancy. Laparotomy was done in 10 of the cases in the statistics after the patient had thus been sent to the hospital, and with successful outcome in 6.

Münchener medizinische Wochenschrift

April 6, LVI, No. 14, pp. 697-744

- 115 Technik to Insure Penetration of Roentgen Rays. (Zur Tiefenbestrahlung mit Röntgenstrahlen.) Dorn.
- 116 *Effect of Specific Treatment on Sero-Reaction in Syphilis. (Wie wirkt die spezifische Therapie auf die Wassermann-A. Neisser-Brucksche Reaktion ein?) R. Pürckhauer.
- 117 Antitrypsin Content of Blood Serum during Pregnancy. (Der Antitrypsingehalt des mütterlichen Bluteserums während der Schwangerschaft.) E. Gräfenberg.
- 118 Auscultation Method of Determining the Blood Pressure. (Auskultatorische Blutdruckmessung.) P. Schruppf and B. Zabel.
- 119 *Diagnosis and Treatment of Pancreatitis. Dreesmann.
- 120 Graded Light for Medical Purposes. (Wie man ein wissenschaftlich bestimmtes Licht darstellen und zu ärztlichen Zwecken verwenden kann.) J. Pick.
- 121 Tar Baths. (Einfaches Verfahren zur Herstellung von Teerbädern.) K. Taegle.
- 122 Scarlet Fever and the Serodiagnosis of Syphilis. (Scharlach und Wassermannsche Syphilisreaktion.) W. Holzmann.
- 123 *Etiology of Postoperative Pulmonary Complications. A. v. Lichtenberg.
- 124 Atrophy of Optic Nerve under Arsacetin Treatment. (Fall von Sehnervenerkrankung nach Arsazetininjektionen.) Ruete.
- 125 Spirochetes in Gonorrheal and other Lesions during Latent Syphilis. (Verdeckte Syphilisstellen.) F. Wanner.

116. Influence of Specific Treatment on Serodiagnosis of Syphilis.—In this communication from Neisser's clinic at Breslau the findings of the complement-fixation test as applied in 5,200 cases of syphilis are tabulated and compared. The findings were positive in inverse proportion to the number of intermittent courses of treatment that had been applied in the individual cases. This connection is seen most strikingly in the old latent cases; with a single course of treatment the positive and negative findings were each found in 50 per cent. of the cases while the findings were negative in 90 per cent. of the cases in which there had been eight or more courses of treatment. The more energetic the treatment the smaller the proportion of positive responses. This was observed even in cerebrospinal syphilis, negative results being obtained in 5 out of the 11 cases in which thorough treatment had been given. A single course of treatment does not seem to have much effect on the findings with the test, but the general impression is all in favor of the efficacy of thorough treatment in the first months and years after infection. After the disease has become once firmly lodged in the system the chances for complete cure seem to be much less. The drugs administered may not make their effect felt in the complement test until months afterward. In time we may be able to distinguish two groups of syphilitics, those with positive findings at first and then a constantly negative response later, showing that the disease has been actually stamped out, and those who respond positively all the time or intermittently, showing a peculiarly refractory form of the disease and the necessity for continued treatment. Until we have learned to classify patients thus beyond possibility of mistake, it is wisest to treat them as energetically and as early as possible after the diagnosis is once established, and to repeat the courses as energetically as possible during the first years after infection, regardless of the manifestation of symptoms or their absence.

119. Pancreatitis.—Dreesmann has observed six cases of acute and three of chronic pancreatitis confirmed by operation during the last year, and discusses the diagnosis and the imperative surgical treatment. He is convinced that many cases of supposed recurrence of gallstone trouble are in fact merely cases of pancreatitis. The pain is generally referred to the stomach region and is severe and persisting, usually spreading along the left side and up or down or sometimes localized in the region of the cecum; in one case it exactly simulated sciatica. The pain increases during digestion and movements, and there is tenderness in the stomach region or over the gall bladder and sometimes in the lumbar region. Syncope, collapse and cramps may be the first symptoms or large amounts of bile may be vomited. Fecal vomiting is rare, but the expression is characteristic, differing from the facies hippocratica as the complexion is grayer, possibly from loss or destruction of blood. In the 118 operations on record 8 patients died of the 40 treated by tamponing of the pancreas, and 53 after other operative measures, a total mortality of 55 per cent.

123. Etiology of Postoperative Complications in Lungs.—Lichtenberg reports two cases of croupous pneumonia occurring after herniotomy, confirming his conception as to the origin of this complication in an infectious embolism.

Virchows Archiv, Berlin

April, CXCVI, No. 1, pp. 1-192

- 126 Kupffer's Stellate Cells in the Liver. (Zur Morphologie, Biologie und Pathologie der Kupfferschen Sternzellen, besonders der menschlichen Leber.) V. Schilling.
- 127 Changes in the Suprarenal Medulla after Nephrotomy and Nephrectomy. (Ueber Veränderungen des Nebennierenmarks nach Nephro- und Nephrektomien.) T. Nakahara.
- 128 Cancer in Male Bladder Resembling Chorionepithelioma. (Chorionepitheliomähnlicher Harnblasenkrebs mit gleichartigen Metastasen bei einem Manne.) F. Venulet.
- 129 Tumor from Filaria Volvulus. (Histologische Untersuchungen einer durch Filaria volvulus erzeugten subkutanen Wurmgeschwulst.) E. Hoffmann and L. Halberstadter.
- 130 Cause of Sudden Death from Intravenous Injection of Alien Blood Corpuscles. (Die Ursache des plötzlichen Todes bei intravenöser Injektion artfremder Blutkörper.) A. F. Coca.
- 131 *Enlarged Thyroid in Domestic Animals. (Ueber Vergrößerung der Schilddrüse bei Haustieren.) P. N. Woudenberg.
- 132 Malformations of the Heart. (Herzmissbildungen.) O. Wenner.

131. Enlarged Thyroid in Domestic Animals.—Woudenberg gives an illustrated description of adenomatous struma found in calves and pigs, horses, dogs and a goat and cat, with colloid goiters from pigs and cancer of the thyroid in horses and dogs, with a sarcoma in the thyroid of an old dog.

Wiener klinische Wochenschrift, Vienna

April 8, XXII, No. 14, pp. 477-514

- 133 Extraperitoneal Cesarean Section. (Der extraperitoneale Kaiserschnitt.) W. Latzko.
- 134 Importance of Intestinal Tract in Origin of Anthracosis of Lungs and Abdomen. (Welche Bedeutung kann dem Darmtraktus bei Entstehung der Lungen und Bauchorgananthrakose zugeschrieben werden?) A. Maciesza.
- 135 Two Unusual Cases of Acute Leukemia. A. Herz.
- 136 Portable Apparatus for Ozone Purification of Water. (Ueber einen tragbaren Apparat zur Ozonierung von Wasser.) E. Wiener.

Zentralblatt für Chirurgie, Leipsic

April 3, XXXVI, No. 14, pp. 481-520

- 137 *Restricted Localized Action of Toxic Drug. (Experimentelles zur Einführung von Novokain in abgeschnürte Körperteile.) N. N. Petrow.

April 10, No. 15, pp. 521-552

- 138 *Access through the Throat to the Sphenoidal Sinus and the Sphenoid Segment of the Base of the Brain. (Freilegung der Keilbeinhöhle und des sphenoidalen Abschnittes der Hirnbasis vom Rachen aus.) L. Löwe.

137. Restricted Localized Action of Drug.—Petrow reports extensive research on rabbits in which a drug was injected after the part of the body involved had been shut off by a constricting band from the rest of the circulation. The mode of diffusion of the drug was instructively studied on the rabbit ear injected in the marginal vein with a weak solution of a stain which could be seen diffusing through the tissues as the ear was held up to the light. The tint grew less intense in the vein in a minute or two and by the fifteenth to the twentieth minute the stain had diffused entirely through the surrounding tissue. This interval of twenty minutes suffices

for diffusion of the injected drug and nothing is gained by waiting longer. A stronger solution is no more toxic than a weaker concentration. It is possible that the stronger solution passes more completely through the vessel walls and enters into a more stable combination with the tissues so that it is not yielded up to the circulation so readily as the weaker solutions. Addition of adrenalin did not seem to reduce materially the toxic action of the drug injected, but the symptoms of intoxication were apparently a trifle milder than without the adrenalin.

138. Access to Base of Brain Through the Nasopharynx.—Löwe apologizes for adding another to the twenty-one methods on record for exposing the base of the brain, but he justifies his proposed technic by stating that it is much simpler than any of the others; only local anesthesia is required for it, and no incision is made in the face, while the nose is left intact. All that is necessary to have ample access to the optic chiasma, the hypophysis and the anterior pons region is to open up the sphenoidal sinus and this is easily done through the roof of the nasopharynx, pushing mucosa and periosteum apart, the incision in the median line, and opening a passage through the body of the sphenoid. Before the operation a strip of cambric is passed through each nostril and out through the mouth and tied around the ears, thus holding the soft palate out of the way. The tongue is held down by a strip passed in through the pharyngotomy incision and out through the mouth, the ends tied tight together over the chin. The instruments used have to have rather longer handles than usual and be a little stronger to work at the depth required. He describes the technic in detail and mentions a number of anatomic points useful to bear in mind in operating in this region.

Zentralblatt für Gynäkologie, Leipsic

April 3, XXXIII, No. 14, pp. 473-504

- 139 Spontaneous Tearing of the Umbilical Cord during Delivery. (Spontane Zerreißen der Nabelschnur intra partum.) F. Unterberger.
 - 140 Transverse Incision for Shortening Round Ligaments in Retroflexion of the Uterus. (Zur Kombination des Pfannenstielschen Querschnittes mit Verkürzung der runden Mutterbänder bei der operativen Behandlung der komplizierten Retroflexio uteri.) R. Werth.
- April 10, No. 15, pp. 505-552
- 141 *Treatment of Placenta Prævia. B. Krönig.
 - 142 Bacteriologic Diagnosis of Puerperal Fever. W. Sigwart.
 - 143 *Local Anesthesia in Dilatations of, and Operations on, the Cervix. (Zur Lokalanästhesie bei der Dilatation des Cervicalkanals und Operationen an der Portio.) O. Henrich.
 - 144 Transmission of Syphilis to the Child, and Latent Syphilis in Women. (Das Problem der Luesübertragung auf das Kind und die latente Lues der Frau im Lichte der modernen Syphilisforschung.) H. Bab.

141. Treatment of Placenta Prævia.—Krönig protests against the rose-colored statements of various recent writers that hemorrhage from placenta prævia can be readily controlled by version or the metrenrynter. To show the contrary, he summarizes the details of twenty cases of placenta prævia at the Freiburg clinic in which the women were under the most favorable conditions in regard to medical supervision in a clinic, asepsis, etc., from the start. Version arrested the hemorrhage during delivery in every instance without fail, but the metrenrynter failed occasionally and can not be relied on. The chief danger in placenta prævia is from the recurrence of hemorrhage an hour or so after expulsion of the child or placenta, and the hemorrhage stops then only when the patient collapses so that the blood pressure drops too low for the blood to flow. The bleeding is from the isthmus, as a rule, which explains the failure of tamponing in these cases and the objection to the metrenrynter as it stretches the isthmus still further. Four of the twenty patients bled to death and another succumbed to sepsis, and yet the conditions were exceptionally favorable for all. Those who survived suffered long from severe anemia. The more advanced the pregnancy the greater the tendency to hemorrhage. The conclusions from this series of cases are that the results of treatment of placenta prævia are so disappointing by the present methods that it is incumbent on us to seek for improved methods of treatment. He has been looking over the records of the 34 cases of placenta prævia received at the clinic since 1904, in which the date of the first hemorrhage is

mentioned; in every instance a warning hemorrhage had occurred during the last few days or weeks before the childbirth. The physician summoned merely ordered the patients to bed and the hemorrhage stopped with the bed rest. These warning hemorrhages recurred three or more times before labor came on, and the physician would have had ample time to send the patient to the clinic if the warning of these premonitory hemorrhages had been heeded. The obstetrician is able to save the mother with contracted pelvis by perforation during delivery in the home, but with placenta prævia both mother and child succumb in 15 or 20 per cent. of the deliveries in private houses. Even in the clinics the mortality is still from 5 to 8 per cent. at the best.

143. Local Anesthesia for the Uterine Cervix.—Henrich reports favorable experiences at Freund's clinic at Strasburg with local injection of a solution of 1 part beta-eucain; 0.6 parts sodium chlorid; 8 parts of a 1 per thousand solution of adrenalin, and water to 100 parts. The fluid is injected at four points, directly into the cervix, using about 1 or 2 c.c. It renders the cervix absolutely insensible, doing away with reflex spasmodic contraction and allowing dilatation and incisions without resistance or pain.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 30, XXX, No. 38, pp. 401-408

- 145 Deformity of Skull and Atrophy of Optic Nerve. Two Cases. R. Migliaccio.
- 146 New Clinical Tests for Dosage of Pepsin. (Dosamento della pepsina.) E. A. Fubini.
- 147 *Albuminuria in Aseptic Fevers. S. Lavagna.
- 148 *The Central Vein in the Brow as Means of Identification. (La vena centrale frontale. Indice di identificazione nerale.) A. Tamassia.

147. Albuminuria in Aseptic Fever.—Lavagna's research on rabbits demonstrated that simple hyperpyrexia alone is unable to induce albuminuria. In infectious processes the albuminuria seems to be the result of the toxi-infection acting on the finer structure of the kidney.

148. Frontal Vein as Means of Identification.—Professor Tamassia of Padua suggests that the variations of the frontal vein from the median line are peculiarly individual and characteristic and might well be utilized as a means of anthropomorphic identification. The course of the vein is recorded on a diagram like an anchor, a curved line for the bottom of the brow with a dotted median line from the glabella to the center of the curved line.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE INFLUENCE OF SODIUM BENZOATE ON THE NUTRITION AND HEALTH OF MAN. U. S. Department of Agriculture. Report No. 88. Paper. Pp. 784. Washington: Government Printing Office, 1909.

LIFE'S DAY. By William Scaman Bainbridge, A.M., M.D. Cloth. Pp. 308. Price, \$1.35. New York: Frederick A. Stokes Co.

WRITING THE SHORT STORY. By J. Berg Esenwein, A.M., Lit.D., Editor of Lippincott's Monthly Magazine. Cloth. Pp. 441. Price, \$1.25. New York: Hinds, Noble & Eldredge.

MENDEL'S PRINCIPLES OF HEREDITY. By W. Bateson, M.A., F.R.S., V.M.H., Fellow of St. John's College. Cloth. Pp. 396. with illustrations. Price, \$3.50. Cambridge: The University Press, 1909.

FOURTEENTH REPORT OF THE BOARD OF HEALTH OF THE TOWN OF MONTCLAIR, NEW JERSEY. 1908. Paper. Pp. 53.

SIXTIETH ANNUAL REPORT OF THE CENTRAL INDIANA HOSPITAL FOR INSANE. Indianapolis, Ind., 1908. Paper. Pp. 65.

ANNUAL REPORT OF THE BUREAU OF HEALTH FOR THE PHILIPPINE ISLANDS. 1908. Paper. Pp. 182. with illustrations.

BLUTUNGEN UND AUSFLUSS AUS DEM UTERUS: IHRE URSACHEN UND BEHANDLUNG. Von Hofrat Dr. A. Theilhaber. Paper. Pp. 87. with illustrations. Price, 2.50 marks. München: Verlag von Ernst Reinhardt, 1909.

DIE STRUKTUR UND DIE PATHOGENESE DER GALLENSTEINE. Von Dr. med. I. Boysen, in Kolding (Dänemark). Mit einem Vorwort von Prof. Dr. Th. Rovsing, in Kopenhagen. Paper. Pp. 127. with illustrations. Price, 4 marks. Berlin: S. Karger, 1909.

HEMORRHAGE AND TRANSFUSION. By George W. Crile, A.M., M.D., Professor of Clinical Surgery, Western Reserve Medical College. Cloth. Pp. 560. with illustrations. Price, \$5.00. New York: D. Appleton & Co., 1909.

DIE BEHANDLUNG DER GEBURTEN BEI ENGEN BECKEN. Von Dr. E. Scipades, Assistenten der Klinik. Paper. Pp. 246. Price, 7 marks. Berlin: S. Karger, 1909.

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Address

THE RESISTANCE OF THE HUMAN BODY TO CANCER *

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CHICAGO

After many years of careful and painstaking work by the surgeons, during which the radical operative methods have been developed to a high degree of perfection, we are still forced to admit that as yet the results of surgical intervention in cancer are anything but satisfactory. The most skilful operators can claim at the best but about 40 per cent. of recoveries in cancer of the female breast,¹ while in cancer of the cervix of the uterus recovery without subsequent recurrence is an exceptional result of even the most radical pelvic operations. Martin² gives 10 to 20 per cent. of such patients free from recurrence after five years. Pylorectomy has but occasional isolated recoveries to its credit and even in the least malignant form, carcinoma of the skin of the face, recurrence follows in about 40 per cent., while with carcinoma of the lip success is even less common,³ and Butlin⁴ reports a three years' cure in but 31.4 per cent. of his operations for cancer of the tongue. Probably we have nearly reached the extent of our possible progress in the direction of operative skill, at least so far as extensiveness of removal of tissue is concerned, and consequently the surgeons feel that the only possible direction for improvement is in early diagnosis. Admittedly there is room for great improvement in this respect, and with the rapid bettering of the conditions of medical education it is to be hoped that soon a larger proportion of practicing physicians will be able to recognize even deeply hidden cancers at least as early as the best trained men now can. But while earlier diagnosis and operation in carcinoma will undoubtedly bring up the percentage of complete cures, yet even under the best of conditions the mortality will still be high. How often, if ever, can a surgeon feel certain after he has removed even the earliest cancer of the uterus or of the breast, that recurrence will not follow? Even with the relatively slow-growing and easily diagnosed carcinomas of the face and lips recurrence frequently follows early and radical operation; while with melanosarcoma of the chorioid or iris, which

is frequently diagnosed when extremely minute on account of the early effect on vision, operative removal of the entire eye almost never prevents the development of secondary tumors in other organs, although the primary growth may be smaller than a split pea when the eye is taken out. Therefore, no matter how skilful we may become in diagnosis, and however radical our operative procedures may be, malignant neoplasms will still remain a dreaded and fatal affliction for which some other cure than surgery must be sought. But in the face of the many years of failure in this research, the question forces itself on us, have we any right to expect that a specific cure for cancer ever will be found? Is there any good reason for hoping that a method of curative treatment can ever be devised, or must we be resigned to accept the best possible results of surgery as the only goal towards which we can direct our efforts?

While a few years ago the average pathologist expressed himself as very dubious as to the prospect, at the present time there seems to be growing a belief that the hope of a specific treatment for cancer is not unreasonable; not simply from the standpoint of a general optimism which believes that everything good is possible, but because of certain facts in the biology of tumor growth which afford a substantial basis for believing that malignant tumors are not essentially incurable.

If we wish to find a specific therapy for an infectious disease we have two methods available: Either we may stumble on a cure by purely empiric methods, as was done with malaria and syphilis, or we may study the manner in which the body defends itself against the disease, and endeavor to heighten, supplement, substitute or even to initiate this natural method. Perhaps we may consider as in a class by itself the method of therapeutics that is now being developed in Ehrlich's laboratory, in which by more or less empiric methods a substance is found that has some favorable influence on an infection, and then guided by experimental results this influence is enhanced by addition of various and sundry radicals to the nucleus furnished by the original substance. Likewise in the search for a specific therapy for cancer we have the same three methods available, since we must look on cancer as an infectious disease, whether we believe with some that it is due to invasion by a parasite coming from without, or accept the opinion that seems to be held by the majority of pathologists, namely, that in cancer the parasite is the cancer cell itself, and that no extraneous organism whatever is concerned in the disease.

Empiricism has had its chance for centuries without success, and although anything may happen, yet we can certainly have little reasonable hope for any results from this source. As for the synthetic method of Ehrlich, this is yet too young to hazard prophecies;

* An address before the Academy of Medicine of Toronto, April 6, 1909.

* From the Pathological Laboratory of the University of Chicago.

1. Mumford: Boston Med. and Surg. Jour., 1907, clvii, 638.

2. Martin: Deutsch. med. Wchnschr., 1907, xxxiv, 89.

3. Meller's statistics show 50 per cent. of cancers of the head, neck and face free from recurrence three years after operation. (Ztschr. f. Krebsforsch., 1907, vi, 64.)

4. Butlin: Brit. Med. Jour., Jan. 2, 1909.

results that seem to be of value have been obtained with certain of the trypanosome infections; there is ground for hope that the long-desired substance which will kill bacteria without harming the host may eventually be found by this method, and therefore if cancer is due to extraneous parasites it may come under the influence of parasiticide substances. This much can be said for these two possible sources of cures.

But at the present time we are inclined to believe that the most logical way to find a specific remedy for an infection is to learn how the body cures itself when natural recovery takes place, and then, if possible, to enhance these natural defenses of the body. Before we can do this in the case of cancer, however, we must first satisfy ourselves as to whether the body has any means of defense against malignant growths; for there is a wide-spread opinion that no such natural defense exists and that spontaneous healing can not or does not take place. My purpose in this paper is to point out the evidence that the human body does have some means of natural defense against cancer, which commonly appears to check all tumors to a certain extent, which sometimes impedes their progress greatly, and which very rarely indeed may entirely overcome the malignant growth and lead to complete healing.

It is through the establishment of these facts that we are entitled to hold a reasonable hope that malignant neoplasms will not necessarily always be incurable; and it is through study of the processes which come into play in this natural defense that we may look for the road to therapeutic progress.

We may start out at once with the assumption that no malignant neoplasm ever succeeds in growing to the extent to which its innate proliferative ability entitles it. Ehrlich has calculated from studies of the rate of growth in experimental mouse cancer that if a single cancer graft started proliferating at the usual rate observed in one of his experimental series, and if every descendant graft was implanted into other mice and the process repeated as fast as the tumor reached a size of 1 c.c., leaving out of consideration all difficulties in the way of space and nourishment, at the end of one year the total production of tumor tissue would form a mass, which, if cubical, would have an edge one thousand billion kilometers long and would require a ray of light 105 years to travel the length of one edge of the cube.⁵ Such unlimited proliferation would make short work of a mere man, but it can not occur if for no other reason than that the supply of nourishment is bound to be inadequate, and there is no danger that the fear expressed by a medical humorist will ever be realized, namely, that at this rate of growth of mouse cancer and the rapid multiplication of institutions for cancer research, there will soon be danger that all the available nitrogen will be fixed in the form of experimental tumors on mice. One of the commonest occurrences in malignant growths, especially in carcinoma, is necrosis or less extreme retrogressive changes, due to lack of blood supply, which in the main result either from the pressure of the peripheral parts of the growth shutting off the blood supply to the more central portions, or from the tumor cells growing away from their blood supply until they are insufficiently nourished, just as the surface epithelium of the body normally grows away from its supply until the surface cells die

and drop off.⁶ Again, the rate of growth of a tumor is very decidedly influenced by the nourishment of the patient as a whole; in young, well-nourished persons the rate of growth is usually rapid, and recurrence follows promptly upon operation; in the senile and in the diseased and feeble, tumors grow slowly, and at times seem to remain stationary. The patient suffering from cancer cachexia often lingers on and on with the tumor remaining practically stationary; the development of intercurrent infections notoriously impedes the progress of neoplasms; severe hemorrhages from cancers have been repeatedly observed to be followed by an improvement in the conditions of the growth and an abatement in the progress of the disease, and in the senile a cancer may scarcely influence the health and duration of life at all. On this same principle is based the treatment of inoperable cancer by ligating the vessels that supply it, and also the "hunger cure" of cancer that was once in vogue, not to mention medieval practices of phlebotomy and the production of chronic ulcerations on the extremities of cancer patients "to let the cancer humours escape." In general the rate of growth of cancer is in direct proportion to the nourishment and vitality of the patient, quite the opposite from the relation in the infectious diseases. This is a fact, it seems to me, which may well be advanced among the many arguments that are presented against the parasitic origin of cancer. These various nutritional impediments to tumor growth, while undoubtedly important in retarding the course of malignant disease, have little bearing on our subject of cancer therapy, since they represent entirely non-specific and purely adventitious influences. In the same category may be placed the influence of infection, which, when general, may impair the rate of tumor growth,⁷ and when local may destroy more or less of the tumor tissue, including a few isolated cases in which an entire growth is said to have been thus destroyed.

Of more interest to us in our search for natural means of defense are the instances in which malignant tumors show healing changes independent of such merely accidental influences as those cited above. These healing changes may consist of (1) spontaneous local inhibition or temporary retardation of growth, or (2) of retardation of recurrence after removal, or (3) of retrogression of secondary growths after removal of the primary tumor, or (4) of disappearance of portions of tumor tissue left at an incomplete palliative operation,

6. Since this article was written there has been published the very interesting lecture by Handley (Brit. Med. Jour., March 6, 1909), on the "Natural Cure of Cancer." Handley's studies on the method of extension of cancer, which have been of such inestimable value in influencing surgical methods of treatment, have yielded some interesting results as to the healing processes that are constantly going on in every cancer. The permeation of lymphatics by cancer cells is followed normally by a process of fibrosis, and, in cases of cancer of the stomach, by the use of specific mucin stains, traces of the mucin left by destroyed cancer cells may be found in the fascia of the abdominal wall when nothing else whatever remains of the original cancer cells, thus showing how complete the local healing of cancer extension may be. Macroscopically, also, if one studies carefully from time to time the location of disseminating cancer, it may be found that many of the nodules disappear, while further away from the primary growth new nodules are springing up. Handley has come to the conclusion that "the progress of a cancer is normally accompanied by retrogressive or curative processes; that the recorded cases of natural repair of cancer, far from being anomalous and exceptional, merely illustrate more strikingly than usual the natural laws which govern every case of the disease." He also propounds the following as a law of cancerous growths: "Every aggregation of carcinoma cells has a definite life-cycle, and, after increasing in size for a varying period and at a varying rate, tends spontaneously to undergo degenerative and fibrotic changes. These changes extend from the center of the mass centrifugally to its periphery, lead to its shrinkage, and terminate in the replacement of the aggregation of cancer cells by a fibrous scar." Handley's account of the processes of cancer extension should be read by everyone who is interested in understanding the principles of cancer growth.

7. For review of relation of erysipelas to cancer see Bolognino: Ztschr. f. Krebsforsch., 1908, iv, 261.

5 Ehrlich: Berl. klin. Wchuschr., 1905, xlii, 873.

or even (5) of spontaneous healing of a primary tumor without any operative intervention whatever. Cases and discussions purporting to illustrate all these different degrees of healing changes may be found reported in many places, and I shall not attempt to compile here the entire literature of the subject, but shall only refer to such instances as apply conveniently to the topic under consideration.

Total healing without operative interference of any kind, and without recurrence, is practically unknown. This does not necessarily mean, however, that such a thing does not occasionally occur, for it can be readily understood that a small malignant tumor coming under the observation of a physician competent to diagnose it would almost certainly be removed, while patients with tumors more advanced, in which operation can not be undertaken, can not be expected to recover spontaneously. In favor of the possibility of such spontaneous healing without operation is the case reported by Senger⁸ in which a woman forty-two years of age developed a tumor opposite the stump of a molar tooth. The irritating stump was removed, and part of the tumor excised for microscopic examination, which revealed a carcinoma; nevertheless the remainder of the tumor gradually disappeared and no recurrence followed. Crosbie⁹ describes a similar case in a young man with an ulcerating lesion of the lower lip associated with an eczematous inflammation. Part of the ulcerated area was examined and pronounced carcinoma by the pathologist, and although the rest of the growth was but partially removed the entire process healed up leaving only a little cicatricial tissue.

These and other similar cases suggest that when cancer follows chronic trauma the defensive mechanism of the body may be able, in the early stages, to overcome the cancerous proliferation if only the irritant which stimulates the malignant growth is removed soon enough.

Mohr¹¹ has described a case of carcinoma of the mouth which arose at the site of a carious tooth, grew slowly and at the end of four years began to show involvement of the regional glands. After reaching a very serious condition it began to improve and at the end of two and one-half years seemed to have disappeared entirely. Unfortunately in this case no microscopic examination was made, but the clinical findings were apparently quite typical.

Rotter¹² records a case of malignant adenoma of the rectum that ran a malignant course for some time; the recurrent growth that developed after an incomplete removal later healed spontaneously. Death occurred some three years later from metastases that had formed in the right iliac bone, and the portion of the bowel at the place where the recurrence had been showed only smooth scar tissue.¹³

Von Hansemann¹⁴ saw a similar case which at first developed progressively, but by the end of eight years had disappeared entirely.

Mohr also has collected from the literature a few cases of healing of superficial carcinomas, of which he speaks as follows:

Complete healing may occur in rare cases through calcification of an epithelioma. A few rare instances of complete or almost complete calcification and spontaneous healing of epitheliomas have been reported by Förster, Denecke, Stieda, Linser and others. Förster, for example, observed an epithelioma, the development of which was checked by complete calcification of all elements. In Stieda's cases a sharply limited connective tissue capsule with greatly calcified alveoli was present. . . . According to some authors (Dubreuil, Butlin, Bowen) it happens that in rare cases superficial epitheliomas of the skin, especially rodent ulcer, may entirely cicatrize and atrophy. . . . According to Krebig, the epithelial tumors that appear in xeroderma are relatively benign; they may spontaneously become largely replaced by granulation tissue and partly or entirely heal.

Jacobsthal¹⁵ has described an interesting case of extensive spontaneous healing of a carcinoma of the skin of the temple of a man, aged 49, only a narrow zone of proliferating tumor cells persisting about the periphery. Here the healing seemed to be accomplished by the ensnaring and invasion of the cancer cell nests by fibrous tissue, much as Exner¹⁶ has described the processes of healing that take place in cancer under the influence of radium. Similar destruction of cancer tissue by overgrowth of elastic tissue has been observed by von Saar¹⁷ who found accidentally, while studying the effects of age on the mammary gland, a minute (*linsen-gross*) carcinoma which seemed to be undergoing strangulation by elastic tissue, and he states that, in general, epithelial growth in the mamma leads to a local hypertrophy of elastic fibers which sometimes results in the degeneration of the epithelial elements. As a rule, however, the elastic tissue disappears early and permanently from the tissues in the vicinity of advancing carcinomas of the skin.¹⁸

Martin¹⁹ records the only case of spontaneous healing of uterine cancer that occurred in his large experience, in the following words:

In the year 1872 a woman, 40 years old, was brought to me with a scirrhus ulcer of the cervix uteri and of the vault of the vagina. The diagnosis was established microscopically and an operation was refused. The symptoms were slight. Her family physician gave her condurango preparations. This physician reported to me after twenty-two years that the woman still lived; he himself has died since then, and I have not seen the patient again.

Besides this very unimposing array of more or less questionable cases in which carcinoma seems to have undergone spontaneous healing, there are several in which sarcomas and endotheliomas²⁰ have also disappeared, but as in these the question of differentiation from inflammatory growths is so often difficult they will not be discussed in detail. Frank J. Hall²¹ has also observed what appears to have been an example of spontaneous healing of a hypernephroma, which was found encapsulated and entirely necrotic within the substance of the kidney. The chorion epithelium tumors offer by far the largest number of cases of spontaneous healing, Gaylord and Clowes having collected seven, but these tumors seem to be in a class by themselves; at times benign, at times extraordinarily malignant, they not rarely start out with every evidence of malignancy, invading the surrounding tissues and possibly producing

8. Senger: Verhandl. d. deutsch. Gesellsch. f. Chir., 1894, i, 171.

9. Crosbie: Brit. Med. Jour., Feb. 11, 1899, p. 338.

11. Mohr: Therap. Monats., 1903, xvii, 553.

12. Rotter: Arch. f. klin. Chir., 1899, lviii, 357; 1901, lxi, 881.

13. This case is also discussed by Orth, who studied the tissues. (Ztschr. f. Krebsforsch., 1904, i, 399.)

14. Von Hansemann: Mikroskopische Diagnose bösartiger Geschwülste, Berlin, 1902. Cited by Mohr, Therap. Monatsh., 1903, xvii, 553.

15. Jacobsthal: Arch. f. klin. Chir., 1907, lxxxiv, 325.

16. Exner: Wien. klin. Wchnschr., 1904, xvii, 181.

17. Von Saar: Beitr. z. f. klin. Chir., 1908, lvii, 231.

18. Bonney: Lancet, London, May 16, 1908, p. 1389.

19. Martin: Deutsch. med. Wchnschr., 1908, xxxiv, 89.

20. Randolph: Am. Jour. med. Sc., 1905, cxxix, 74.

21. Arch. Int. Med., 1908, ii, 360.

even deeper metastases, and then for no evident reason their growth ceases and all signs of the tumor disappear.²²

The evidence concerning the healing of portions of carcinomas left after operation is far better than that offered as proof of spontaneous healing of growths on which no operation has been done. It has repeatedly happened that surgeons, having found tumors inoperable, have performed palliative operations, and assured the relatives that death would be only a matter of a few months, only to be surprised by having the patient live for years, in many instances dying not from the primary growth but from remote metastases when the original tumor had been quiescent or even retrogressive for a long time. In other cases the microscope has shown that the surgeon's incision in removing a tumor has passed through cancerous tissue, and yet, in spite of this, local recurrence had not taken place. Such happenings as these can be found scattered about in the literature, and they are undoubtedly far from rare; but often they have been misinterpreted, for the unexpectedly favorable outcome of the case has led to the suspicion in the first class of cases that the diagnosis may have been incorrect, and in the instances in which local recurrence has not appeared in spite of incomplete operation it has been thought that the remaining cancer cells were perhaps snared off by the ligature, or destroyed by a stitch abscess, or something of the kind. Apropos of the cases of improvement of primary growths which sometimes lead to withdrawal of the diagnosis of malignancy, I may recount the history of a patient in whom I was personally interested. In 1893 this patient, a man aged 63, was operated on for what seemed to be a recurrent appendicitis with abscess formation. On opening the abdomen, however, the supposed abscess was found to be a gelatinous mass of tissue, which was said by the operating surgeon to be a colloid cancer; the wound was closed except for drainage, and an unfavorable prognosis given. In spite of the development of a fecal fistula the condition of the patient began to improve after a short time, and a year after the first operation he underwent a second laparotomy for the purpose of closing the fistula. The surgeon who performed this operation found what was probably a small calcified mass from an old appendiceal abscess, attached to the bowel; although there were numerous adhesions he was able to remove this calcified plaque and closed the fistula. The patient made an excellent recovery, gained strength and weight, and resumed a very active life for a man of his years as stock raiser and farmer. Of course the first diagnosis of cancer was discarded and it was held up as a grave error on the part of the surgeon who had made it. It was not until 1905, twelve years after this first diagnosis had been made, that the patient began to be again troubled with abdominal symptoms, chiefly tympany with accompanying discomfort, in the course of a year developing into severe attacks of intestinal obstruction that eventually required operation for the relief of the obstruction. An extensive colloid carcinoma involving the abdominal viscera was found, apparently beginning in the vicinity of the cecum where there was a large tumor mass; smaller growths were found everywhere in the omentum, mesentery, and in the wall of the intestine. An anastomosis of the ileum to the colon was made to

relieve the obstruction caused by the large mass in the cecum, but the patient, aged 76, lived but a few days.

In this case it is impossible to learn further details about the first two operations, for the reason that the patient, although given up as the victim of an inoperable cancer of the cecum, outlived by several years the three surgeons in whose charge he was. Therefore I do not know whether the original diagnosis was confirmed by the microscope or not; but there can be little doubt that it was correct, for the operator was a surgeon of considerable experience and he defended his diagnosis with great positiveness, stating that there could be no doubt that the patient had a colloid carcinoma of the cecal region, which was in an inoperable condition. Apparently, following the operation the primary growth subsided rapidly, so that a year later another surgeon noticed nothing but abundant adhesions and a diseased and calcified appendix from which had resulted a fecal fistula; not until some eleven years after this second operation had the growth developed enough to cause symptoms. Its colloid nature, and its evident origin in or near the cecum, substantiate the long discredited diagnosis at the time of first operation.

Czerny²³ discoursed interestingly on this topic at the conference for the investigation of cancer in 1907, recounting various instances from his own rich experience and from the literature. He speaks of intestinal cancers as being especially likely to show the late return after palliative operation, as in the above case, recounting the following instances in his own practice:

A physician came to him for operation for a rectal carcinoma, and the carcinoma, together with a cancerous inguinal gland, was removed; yet after this obviously incomplete operation the patient was able to resume practice for seven years, and then died of a diffuse recurrence in the peritoneum.

A woman was operated on for a large carcinoma of the sigmoid flexure, of at least two years' duration, which was adherent to a loop of the small intestine. Although this certainly was not completely removed, yet after four years she was still free from evidences of recurrence.

In another case of resection of a carcinomatous sigmoid flexure the pathologist found that the line of incision had passed through cancer tissue, and yet five years later the patient showed no signs of recurrence.

He also referred to the frequent observation that after a palliative gastrotomy an esophageal cancer may so improve that swallowing again becomes possible, and to the decrease in size of inoperable rectal carcinomas which may follow colostomy, so that they sometimes become operable. These instances are probably related to the cases described previously in which removal of local irritation has been followed by retrogression of cancers (cases of Senger, Mohr, Proescher). Likewise after gastroenterostomy inoperable carcinomas of the stomach sometimes improve greatly, and Daneel has collected from the records of Czerny's clinic no less than eleven cases in which after gastroenterostomy for inoperable cancer the patient has been found to be well from two to fourteen years later. Although the possibility of incorrect diagnosis in these cases exists, since no microscopic examination was made, yet it is not often that a surgeon of Czerny's experience fails to recognize a cancer that is exposed to direct examination. There is also Beck's case, reported by Petersen and Colmers.²⁴

22. Literature given by Gaylord and Clowes: *Surg., Obst. and Gynec.*, 1906, li, 633; Schmauch, *ibid.*, 1907, lii, 259; Teacher: *Jour. Path. and Bacteriol.*, 1908, xii, 487.

23. *Ztschr. f. Krebsforsch.*, 1907, v, 27.

24. Petersen and Colmers: *Beitr. z. klin. Chir.*, 1904, xliii, 159.

which seems to be beyond criticism. A colloid cancer of the pylorus was resected, but several cancerous glands were left behind along the lesser curvature; that they were cancerous was shown conclusively by the fact that a few which were removed were found to be involved. Three years later the patient was operated on for an umbilical hernia, and examination of the stomach showed no signs of local recurrence or of cancerous glands. One-half year later the patient died from intestinal obstruction, and at autopsy the only cancer found was a metastasis in the center of a uterine myoma and another in the sigmoid flexure; the cancerous lymph glands left behind at the time of operation had disappeared, and there was no recurrence in the stomach.

Gould²⁵ describes an interesting case in which two years after removal of a typical scirrhus carcinoma of the breast, the axillary glands became enlarged and were removed, only to be followed two years later by extensive recurrence in the scar, development of dyspnea, and later apparent involvement of the axillary and cervical glands, the left femur and right lung. Nevertheless these various recurrences and metastases subsided later, after the woman had been desperately sick for some time, and health was largely restored with none of the palpable tumors remaining. Even the crippled femur became repaired enough so that the patient could walk on it. Osler, Vulpian and others have reported similar cases.

Lomer²⁶ has made an extensive compilation of the cases in which palliative operations on cancer of the uterus have been followed by freedom from local recurrence for two years or more, and collected reports of 213 cases of this kind. Although he accepts cases that a less enthusiastic partisan might not consider well substantiated (notably ninety recoveries claimed by one American author), yet undoubtedly there are many of these reports that are correct, and there seems to be a remarkably large proportion of success among the cases persistently treated for each recurrence with the actual cautery, a point on which Czerny seems to agree. Perhaps the best authenticated of these is the one reported by Ziemssen, who examined at autopsy the body of a woman who had been operated on seventeen years before death for uterine carcinoma; local recurrence had developed after the operation, which was treated by cauterization, and yet no signs of malignant growth were found at the autopsy. Lomer himself had a patient who showed no evidences of recurrence ten years after an incomplete operation for carcinoma of the uterus. More recently Weindler²⁷ reports three cases of recovery for over five years of patients with inoperable cancer of the uterus treated by local cauterization.

Fleischmann²⁸ also has observed three cases in which, in spite of apparently very incomplete extirpation of uterine carcinoma there was no recurrence eleven, ten and eight years after the operation. On the other hand, so experienced an operator as Martin,²⁹ who has similarly treated inoperable uterine cancers by local cauterization, has had in his Greifswald clinic but one such patient live as long as twenty-three and one-half months, and one four and one-half years; 70 per cent. died in the first year.

There are numerous other isolated instances³⁰ indicating more or less healing of incompletely removed carcinomas, not to mention an even greater number of sarcomas, among which the giant cell sarcoma of bone especially may not recur after mere local curetting and other conservative methods, as Bloodgood,³¹ in particular, has emphasized. Of the other forms of sarcoma, lymphosarcoma seems most likely to show retrogressive and latent periods,³² but here especially errors of diagnosis are easily made.

From the evidence in these cases it would seem that in some rare instances the local forces, whatever they may be, which hold in check a malignant tumor, may succeed in overcoming it entirely, especially in certain cases when part of the tumor is removed. Ehrlich³³ has advanced an idea, as the outcome of his experiences with the transplantable cancer in mice, which may account for some of these cases. Observing that after an implanted cancer has once begun to grow vigorously it is almost impossible to plant another graft successfully elsewhere in the same animal, he suggests that some peculiar foodstuffs which exist in limited amount in the body may be necessary for cancer growth, and that when cells with a high avidity for this substance are actively growing they may accumulate all that is available and leave none for newly implanted cells.³⁴ Such immunity to inoculation is referred to as "atreptic" by Ehrlich. This hypothesis reminds one of the "exhaustion theory" of immunity advanced by Pasteur, and may seem rather fanciful, but it illustrates a general principle which often manifests itself, namely, that when a tumor produces abundant and vigorous metastatic growths the primary growth may sometimes cease active increase, and may even retrogress to a considerable extent. An interesting case in point is reported by Freeman,³⁵ as follows: A man aged 35 years, had a small indurated, crusted sore on the right side of the lip, which persisted for about one year, and then disappeared leaving a small scar. Less than one year later, and nearly two years from the beginning of the disease on the lip, a glandular swelling was observed in the right submaxillary region which was removed after about nine or ten months later; local recurrence took place and developed rapidly until a fatal carcinoma of the neck and face caused death. This growth, which apparently came from the submaxillary glands, was a squamous-celled carcinoma, indicating that the growth which had disappeared from the lower lip was a primary carcinoma.

Jacobsthal³⁶ mentions a very similar case in which a patient with carcinomatous submaxillary glands showed no other primary growth than a healed scar on the lower lip, where an ulcer had been which healed three-fourths of a year previously.

Seven cases of cancer of the breast, in which the primary growth slowly decreased until it had almost entirely disappeared, while at the same time secondary growths were appearing, are cited by Williams.³⁷ In all these the secondary growths proved fatal, although

30. Several of these have been collected by Gaylord and Clowes, *Surg., Gynec. and Obst.*, 1906, II, 633.

31. Bloodgood, Joseph C.: *Conservative Operations on Bone Tumors*, *THE JOURNAL A. M. A.*, Feb. 1, 1908, I, 325; *Johns Hopkins Hosp. Bull.*, 1903, xlv, 134; *Progressive Med.*, December, 1902, p. 150.

32. See Ruff: *Wien. klin. Wchnschr.*, 1906, xix, 528.

33. *Verhandl. d. deutsch. path. Gesellsch.*, 1908, xii, 13.

34. It should be mentioned that a number of investigators in other laboratories have not found this inhibiting influence of growing tumors upon secondary implantations, as described by Ehrlich.

35. Freeman, Leonard: *Spontaneous Disappearance of Carcinoma of the Lip*, *THE JOURNAL A. M. A.*, 1901, xxxvi, 1309.

36. Jacobsthal: *Arch. f. klin. Chir.*, 1907, lxxxiv, 333.

37. *Twentieth Century Practice*, 1898, xvii, 394.

25. *Tr. Clin. Soc.*, 1897, xxx, 205.

26. *Ztschr. f. Geburtsh. u. Gynäk.*, 1903, I, 305.

27. *Zentralbl. f. Gynäk.*, 1907, xxxi, 632.

28. *Wien. klin. Wchnschr.*, 1908, xxi, 1492.

29. *Deutsch. med. Wchnschr.*, 1908, xxxiv, 89.

at the time of death there remained practically nothing of the tumor in the breast, which might be considered as a form of atreptic process, the secondary growth withdrawing all the suitable nutriment from the primary growth. Osler and others have described similar examples of this sort of retrogression of primary tumors.

Another set of cases to which I particularly wish to refer are those in which operative removal of the primary growth leads to disappearance of, or healing changes in, the already present secondary growths. The case of Beck, cited above, is one of this sort, and there are others in the literature. I have had the good fortune to study a remarkably clear case of this type, thanks to the kindness of Dr. Alexander Harvey, in whose practice it occurred, and who has supplied me with his notes on the case.

History.—The patient was a woman, about 40 years of age, who had previously been operated on for the purpose of performing a ventrofixation of the uterus. In December, 1905, she complained of neuralgic pains in the facial, cervical, intercostal and sciatic nerves; on examination a tumor was found in the left breast, which was removed by operation on Dec. 20, 1905. After the operation there was considerable pain in the left arm and cervical region, and in the operation



Fig. 1.—Gross appearance of the liver. The depressed scars near the lower edge of the right lobe and on the anterior surface of the left lobe are the sites of islands of contracted scar tissue, which have replaced almost totally the tumor metastases that had formed here.

wound; these pains continued for the following eighteen months, although until nearly the end of this time her general health was good. In March, 1907, the patient reported suffering with severe occipital headache, loss of 20 pounds in weight, and polyuria. The urine showed a few hyaline and granular casts and a trace of albumin, specific gravity, 1.003, total amount in twenty-four hours as high as 90 ounces, but without the presence of sugar. She suffered from insomnia, severe headaches that could not be controlled by medication, and periodic vomiting; interstitial nephritis was suspected. Later the patient developed slight coma, with ammoniacal breath, dry skin, accentuated second aortic sound. She was removed to the Baptist Hospital, where she died in coma that had lasted two days, with several minor convulsions just preceding death, which occurred on June 15, 1907.

Autopsy.—The body was slender, but not emaciated. The left mammary gland was the site of a scar, which extended into the axilla, but there was still enough fatty tissue present to preserve the outline of a fairly developed breast. There could be found no induration about this scar, and no signs of tumor tissue could be found by dissecting up the tissue beneath the scar. The axillary glands were not enlarged, and the right breast was normal. In the abdominal cavity the uterus was found adherent to the scar of a median laparotomy wound, and attached to it by a silkworm-gut suture. The left tube and ovary were missing, and about one-fourth of the right ovary only remained, with the normal right tube. In the

lower end of the ileum was a hard white nodule, about 5 mm. in diameter, situated in the wall of the bowel 50 cm. above the ileocecal valve; the mucosa was not ulcerated over this nodule. In the mesentery of the upper jejunum were found about a dozen indurated lymph glands, containing an abundance of firm white tissue, and averaging about 3 mm. in diameter; there was also one hard and slightly enlarged retropancreatic lymph gland. The lower retroperitoneal lymph glands were not enlarged. The thoracic viscera showed no similar nodules or other changes of interest. The liver was found to be slightly smaller than normal, and dark in color. Just above the gall-bladder notch was a striking area of depression, due to a wide white scar several millimeters beneath the surface of the liver; the margins of this scar consisted of a narrow zone of what seemed to be tumor tissue infiltrating the liver for a short distance, and giving it a whitish appearance. In the anterior surface of the left lobe were two similar areas near together, one 15 mm. in diameter, the other 25 mm. (Fig. 1). In the stomach there were no evidences of carcinoma, but beneath the serosa, especially in the pyloric region, were numerous small subserous nodules, white and the size of a pin-head. The pancreas and right adrenal showed no changes, but the left adrenal was firm, white on the cut surface, and in the middle was a small nodular indurated area. The kidneys showed no gross changes, and there were no other findings of interest, except the presence of a few gallstones. Unfortunately the brain and meninges could not be examined.

Anatomic Diagnosis.—Old amputation of left breast; secondary carcinoma nodules, with fibrotic changes in liver, mesenteric glands, adrenal and ileum; old laparotomy wound with adherent omentum; old ventral fixation of uterus with amputation of left ovary and tube and part of right ovary; slight congestion of liver, kidneys and spleen; adhesive fibrous pleuritis, edema of lungs; calcified nodule in lung; cholelithiasis.

Histologic Examination.—Mesenteric Lymph Glands: The largest, 3 to 5 mm. in diameter, had been almost entirely replaced by carcinoma cells and fibrous tissue, the latter predominating. In the main the tumor cells were much compressed between dense bands of fibrous tissue, had deep staining nuclei and little cytoplasm, and their arrangement was in long strands with a tendency to tubule formation when not too much compressed. In a few places about the edge there seemed to be invasion of previously uninvolved lymphatic tissue where the cancer cells were not compressed, but even here no mitotic nuclei could be found. There was no evidence of necrosis or of giant-cell formation. Some of the smaller glands showed isolated groups of cancer cells infiltrated by lymphoid cells; others showed small areas of hyaline substance, and still others had an overabundance of fibrous tissue, suggesting that possibly there might have been a period when cancer cells were present in these glands, but that they had been replaced by hyaline material and fibrous tissue.

Adrenal: This organ was extensively infiltrated with carcinoma cells, peculiar in that the adrenal tissue was merely replaced without alteration in the size or shape of the organ. Both cortex and medulla were involved, but the growth was checked by the capsule. In many places, especially near the center of the adrenal, there was an abundance of fibrous tissue compressing the carcinoma cells, which tended to be arranged in tubules and in the outer edges of the carcinoma was frequently found an extensive round-cell infiltration. Where the amount of fibrous tissue was least mitotic nuclei could occasionally be found; they were also present in tumor thrombi found in the larger vessels of the medulla. There seemed to be two periods of growth represented here; one in which the carcinoma cells were partly replaced by scar tissue, and one in which the growth was now active.

Nodule in Ileum: This consisted of fibrotic tumor tissue having its center in the submucous connective tissue, but infiltrating into the serosa and mucosa. In the latter region the cells seemed to be growing freely without much connective tissue about them, but everywhere else there was much fibrous tissue which compressed the cancer cells. Mitoses were very scanty. Eosinophiles were abundant in the mucosa.

Stomach: The subserous nodules described at the autopsy were found to be small, well-developed lymph glands, located in the serosa, and showing no tumor cells.

Liver: (Figs. 2 and 3). The depressed scars were composed of a uniform mass of scar tissue, poor in vessels, and with only an occasional group of cancer cells at the edges. This scar tissue, devoid of cancer cells, measured about 15 mm. across, while the zone of actively proliferating cancer cells outside it measured about 2 to 3 mm. The scar tissue passed quite abruptly into the cancer tissue and gave the impression that the healing changes had been rather suddenly terminated and active proliferation had begun not long before death. The proliferating cells were in columns and tubules, showed many mitotic nuclei, and a moderate amount of round-cell infiltration, but the free margin seemed to be invading the liver tissue without inciting any considerable reaction.

To recapitulate this case, we have to do with a woman who remained in fair health for nearly eighteen months after the removal of a carcinoma of the breast, and without recurrence in the scar or in the regional glands. The patient died, after a brief illness, with symptoms resembling those of uremic coma and accompanied by polyuria, very probably from cerebral or meningeal metastases, although this could not be determined, as we were not permitted to examine the head. The condition of the secondary growths that were found in the adrenals, mesenteric glands, ileum, and liver, especially the latter, indicated very clearly that, although active proliferation had been going on just before death, yet there had been an interval in which healing changes had predominated, so that in the liver nearly all the cancer tissue had been replaced by scar tissue, causing cicatricial depressions in the liver such as are commonly found in syphilis. Apparently on removal of the primary tumor growth had been temporarily checked in the secondary nodules then existing, and healing processes had made away with almost all the cancer tissue in the metastases in the liver. It must be that the conditions obtaining in those cases in which deep-seated metastases first make themselves known many years after the removal of a tumor are similar to those observed in this case.

Cases of similar nature have been described by others, and even with complete healing of the metastases; of these one of the most striking is that of Schuchardt.³⁸ In a patient on whom he operated for advanced carcinoma of the stomach were found large numbers of metastases on the peritoneum. Two and one-half years later the patient died from pleuritis, and at autopsy nothing remained of the peritoneal metastases and there was no recurrence in the stomach. Unfortunately in this case no microscopic examination of the nodules

was made, therefore the possibility of a combination of gastric carcinoma and peritoneal tuberculosis cannot be excluded.

Roux³⁹ also had a similar case, in which at a resection of a gastric carcinoma general carcinosis of the diaphragm was found, yet three years later the patient was still in good health.

Graham⁴⁰ has reported a case from the Pathological Laboratory of Rush Medical College of a woman who was operated on in June, 1897, for scirrhus carcinoma of the breast, which showed no signs of recurrence. In 1903 she became sick with diabetes insipidus, and died on Nov. 8, 1903. At the autopsy there were found no evidences of local recurrence in the breast, but fibrous cancer nodules were found in the pleura, liver, pancreas and adrenals. These nodules were either entirely encapsulated with scar tissue, which also intersected the tumor tissue, and when not encapsulated with scar tissue the tumor nodules were surrounded with young granulation tissue. In addition to these features the presence of pseudo-giant cells, the appearance of atrophied and

necrotic epithelial cells in portions of some of the tumors, and the absence of mitotic figures all pointed to a healing process which had checked the growth of these tumor metastases, which must have been in existence since, over six years before, when the breast tumor was amputated.

These cases all seem to indicate very clearly that the primary growth exercises in some way an influence on the secondary growths. Very frequently the sequel of an operation on a primary tumor is the rapid spreading and increase in size of metastases, so that the removal of a slowly

growing scirrhus cancer may be followed in a few weeks by death from an enormously rapid and abundant development of secondary growths. On the other hand, it occasionally happens, as in the cases cited above, that after the removal of the primary tumor the secondary growths seem to lose their power of proliferation, so that they may either become entirely replaced by fibrous tissue, or they may retrogress for a time and then begin to take on renewed activity of growth, as in my own case. Undoubtedly many of the instances of late recurrence belong to this last class. Labhardt⁴¹ has collected and reviewed the records of many cases of late recurrence of carcinoma, and found that of 2,142 cases of mammary carcinoma with recurrence, in 3.7 per cent. recurrence followed at a period of over three years after operation, and of 257 recurrences of carcinoma of the rectum 9 per cent. were after the three-

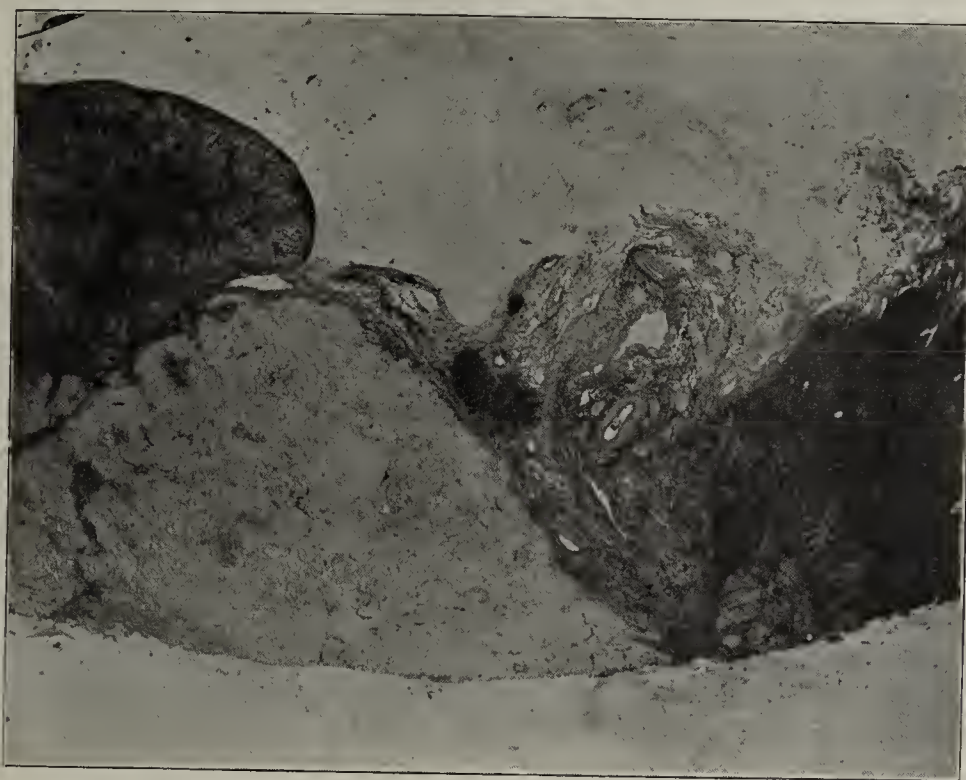


Fig. 2.—Low-power view of a cross-section of the large mass of scar tissue above the gall-bladder notch. The large, light-colored area represents the island of hyaline tissue which replaced the cancer growth. About this is a mass of vascular scar tissue and fibrous adhesions, not yet contracted.

39. Cited by Mohr: *Therap. Monatsh.*, 1903, xvii, 553.

40. *Tr. Chicago Path. Soc.*, 1907, vii, 8.

41. Labhardt: *Beitr. z. klin. Chir.*, 1902, xxxiii, 571.

38. *Zentralbl. f. Gynäk.*, 1901, p. 664.

year limit, and 9 per cent. of 373 recurrences following 1,300 operations for lip and face carcinoma appeared after the third year. Hirsch⁴² found that of 371 cases of recurrence of mammary carcinoma after operation 109 (29.3 per cent.) appeared between the fifth and fourteenth years after operation. Bircher⁴³ found records of about fifteen cases in which recurrence was first observed after operation for mammary carcinoma during the second and third decennium, of which one was in the twenty-ninth year and another in the thirtieth year. Cameron⁴⁴ also describes a case in which recurrence was observed beneath the pectoral muscle twenty-seven years after amputation of the breast for cancer. In these cases it would seem that cancer cells must have lain dormant for all these years, perhaps undergoing partial replacement by connective tissue but with a few cells remaining viable to start up proliferation again when the necessary conditions were present. Such facts make us wonder if most of our operative cures of cancer may not depend on spontaneous retrogression of metastases present at the time of operation, rather than on the absence of such metastases, which we have always assumed must account for all successful results.

Just how the removal of the primary growth causes this inhibitive influence on existing metastases is an interesting problem. It may be imagined that the primary tumor supplies some element which either stimulates the secondary growths or so injures the normal tissues that the secondary growths are not impeded. As supporting the first hypothesis to some extent may be mentioned the observation of

Leo Loeb⁴⁵ that pieces of benign tumors may be transplanted into another place in the same animal in which they have arisen, and remain alive throughout, whereas when implanted into a different animal of the same species they become necrotic in the center or throughout. Apparently an animal in which such a tumor exists has something in its blood or tissues that favors the growth of this tumor and of secondary growths of the same tumor. An adenoma of the mammary gland of a rat that was transplanted into another part of the body of the same rat was observed to enlarge simultaneously with the swelling of the mammary gland that accompanied a pregnancy. Here, it would seem, is evidence of a stimulus that may incite tumor cells to multiply, and which is, perhaps, different from the substances that merely permit the transplanted tumor cells to live.

A possible explanation of the retrogression of metastases after operation which I would suggest is

autoimmunization. During operative manipulation a considerable amount of cancer juice and cancer tissue is forced into the circulation; ordinarily, as we too frequently observe, this results in a rapid and wide-spread recurrence, but it may happen that under certain circumstances these cancer products stimulate the reactive forces of the organism and lead to an active immunization. In support of the view that such immunization by cancer products is possible I would recount the very important case described by Mackay.⁴⁶ The patient, a woman of 37, was operated on for a scirrhus carcinoma of the breast, but recurrence after thirteen months was so extensive that operation was impossible. Twenty-one months after the operation there developed a bilateral pleurisy with large amounts of bloody effusion, apparently carcinomatous, and by the end of four months the patient seemed to be almost in extremis; suddenly the fluid in the chest cavity began to subside, coincident with which the patient's general condition improved rapidly, and the recurrences, so far as they were visible, disappeared in a remarkable way. This

disappearance is described (in a personal letter) as follows: "I described the changes as if the tumors had withered. A closer description would be to say that it looked as if the tumors had dissolved, and so dissolved, had become absorbed, leaving nothing but the covering of skin." Apparently the serum from the cancerous pleura, on being absorbed, either itself attacked the existing growths, or else, which seems to me more probable, it stimulated the resisting powers of the organism and led to

the development of cytolytins for the cancer cells which caused the rapid retrogression of the cancer tissue.* Ribbert⁴⁷ has reached a similar conclusion from his studies of the local reaction that occurs about carcinomas. In the early stages of the growth of a carcinoma the surrounding connective tissue is frequently stimulated to proliferate, so that the growth is at first walled off; later this reactive proliferation becomes less and less until it ceases entirely, and the carcinoma then advances unimpeded. Therefore, he thinks that in the case of spontaneously developing tumors there is no process of immunization, but rather the development of habituation of the tissues to the tumor, and the only prospect of immunization con-

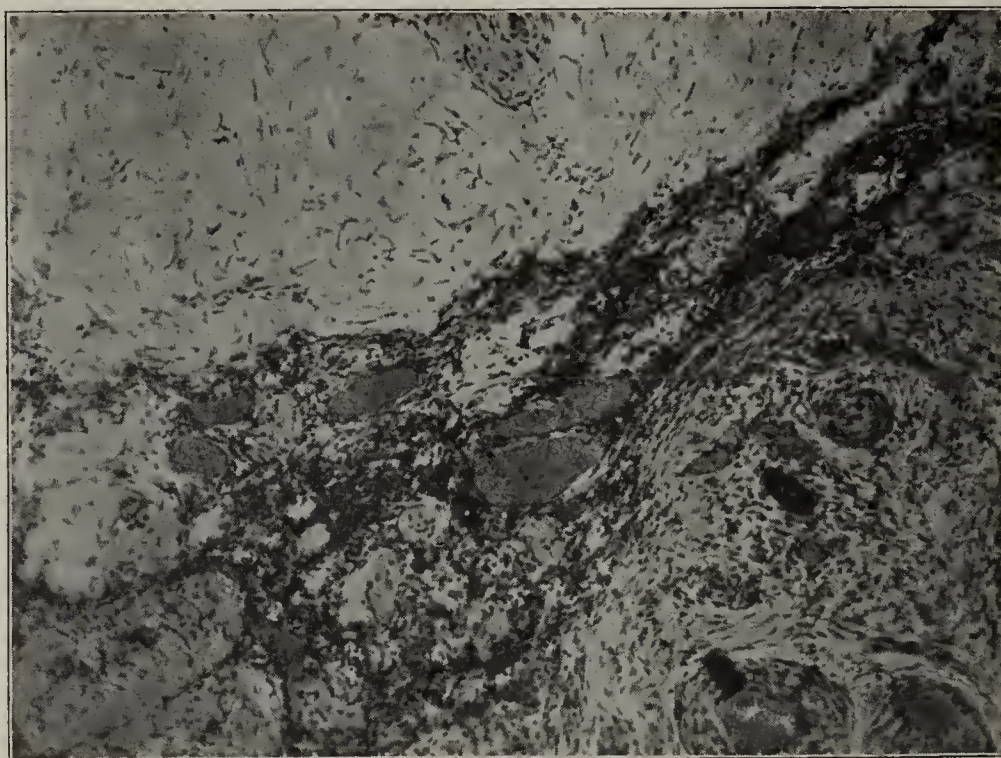


Fig. 3.—Higher-power view of the junction of the hyaline scar tissue and vascular, cellular scar tissue. No cancer cells whatever are present in this scar tissue.

46. Brit. Med. Jour., July 20, 1907, p. 138.

* Dr. Mackay informs me by letter that his patient lived only a few months after this fortunate relief from her symptoms. He says: "My patient, I am sorry to say, died some five weeks after I had read my paper. [This would make the day of death about fourteen weeks after the events referred to.] She had gone through a very great amount of suffering under circumstances of excessive mental strain, and she died of exhaustion. So far as we could make out clinically the disease had absolutely left her. Whether, if she had lived, it would have recurred, is another matter."

47. Deutsch. med. Wchnschr., 1906, xxxii, 1693.

42. Dissertation, Freiburg, 1904.

43. Bircher: Zentralbl. f. Chir., 1907, xxxiv, 756.

44. Brit. Med. Jour., March 6, 1909, p. 577.

45. Loeb and Leopold: Jour. Med. Research, 1907, xvii, 299

sists in the sudden overwhelming of the organism with cancer substance which would stimulate an energetic production of antibodies, just as appears to have occurred in Mackay's case. Ribbert suggests that possibly injection of extracts of a cancer immediately after its removal by operation might induce an active immunity sufficient to destroy hidden metastases and cells left behind in the operation; a suggestion, which, in the light of the observations recorded above, seems well worthy of trial.

Finally, as another source of evidence of resistance of the body to malignant growths, may be mentioned the conditions under which metastases are formed. There seems to be prevalent an impression that the escape of cancer cells from the primary growth necessarily means the formation of secondary growth where these cells lodge, which is, fortunately, very far from the truth. In all probability only an extremely small proportion of the tumor cells that become scattered about the body ever succeed in multiplying, for otherwise nearly every malignant tumor would develop metastatic secondaries almost at its very start. It is by no means uncommon, for example, to find a hypernephroma growing into the renal vein as a soft friable tumor thrombus, from which cells must be continually breaking away, yet without having produced metastases. In primary carcinomas of the liver there have frequently been found hepatic veins containing tumor thrombi, and yet no secondary growths could be found in the lungs or elsewhere. Furthermore, we have a very excellent example of local susceptibility and local resistance to tumor growth in the well-known tendency of chorioidal melanosarcoma to produce metastases chiefly in the liver. The cells which escape from the primary growth in the eye must first pass through the lungs, and then be distributed all over the body in the systemic blood, of which the liver gets only a relatively small part through the hepatic artery besides what has passed through another capillary filter in the intestines and entered the portal vein; yet not infrequently in such cases the liver is found riddled or solidly infiltrated with melanosarcoma while the lungs and the rest of the body are almost entirely free from metastases. Evidently many tumor cells which have been lodged in the lungs and other tissues of the body must have been destroyed, while those that lodged in the liver found a fertile soil or a lack of local resistance. Other examples of this sort of local immunity could be cited in great variety.

Cohnheim, indeed, believed that the entire matter of metastatic growths, and, by the same token, the entire malignancy of cancer, depended, not on any peculiarity of the cancer cells, but on the degree of local power to destroy these cells. This view was based on his experiments with periosteum, which, when injected intravenously in small fragments, lodged in the lungs and formed by proliferation nodules of bone; but after a short time these nodules became absorbed. Lubarsch believes that the local resistance to tumor growth is much modified by the poisons which are secreted by the primary growth. M. B. Schmidt⁴⁸ has shown that by careful examination of the lungs of patients dying from abdominal cancer, emboli of cancer cells may be frequently found, (in fifteen of his forty-one cases) showing all stages of disintegration or organization, and others have repeatedly observed the same thing in mouse cancers. Similarly, degenerating cancer cells may be found in non-cancerous regional lymph glands of pa-

tients with cancers, or in the lymph sinuses about the glands, while hyaline and other degenerative changes may be found in a large proportion of such glands even when there is no bacterial infection to which they might be ascribed.⁴⁹ On account of these facts Lubarsch⁵⁰ suggests that cancer cells must first be repeatedly set free and destroyed in the regional glands until the poisonous materials thus liberated have so overcome the cells of the glands that they can no longer successfully resist the cancer cells. Similarly the regional glands, and also more remote tissues, may be prepared for invasion by cancer cells through the action of injurious materials discharged from the primary tumor. As Petersen expresses it, carcinoma cells can not flourish at once in remote tissues, because the soil is not fertile for them; they can grow only in soil that has been first thoroughly "manured" (*gedüngt*) with epithelial toxin brought by the lymph stream.

In any case, from the behavior of secondary growths after their formation as well as from the conditions that are necessary in order that secondary growths may occur, we obtain evidence that the tissues or the body fluids are enabled to defend the body to a very considerable extent against the cells of malignant tumors. The mechanism of this defense is not understood. One thinks at once of cytotoxicity, knowing that immunization to any given type of cells seems to lead to the production of more or less (generally less) specific cytolytic substances. In the cases in which healing changes have been studied, however, there have not been found good evidences of cytolytic changes, and Gaylord and Clowes state that there is no histologic evidence of cytolytic action in experimental tumors of mice undergoing spontaneous recovery. Sometimes the fundamental change seems to be a loss of the proliferative power of the cancer cells, so that the surrounding proliferating connective tissue now grows more rapidly than the cancer cells, strangling and destroying the latter through starvation. Becher, Schwartz, Petersen, and others have considered that in the healing of superficial carcinomas phagocytic giant cells are active destructive agents, but Borrmann,⁵¹ after a study of 265 cutaneous carcinomas, concludes that these giant cells attack only hornified and dead epithelial cells, and never the living, proliferating cells. On the whole the evidence seems to be in favor of the view that it is simply a decrease in proliferative power that leads to the spontaneous healing or to long periods of latency. Gaylord and Clowes conclude from the histologic findings in tumors that are undergoing resolution either spontaneously or under the influence of *x*-rays, that it seems plausible "that both the *x*-ray and the immune forces in spontaneous retrogression act in opposition to some stimulus which causes the limitless proliferation of the cancer cell." One can imagine a lack of the hypothetical *attractins* which B. Fischer's⁵² experiments have suggested act as stimulants to epithelial proliferation, or, possibly, as Graham has mentioned, antiattractins may be formed. Certainly it is fundamentally important that this mechanism of defense should be most thoroughly worked out, for in it lies what seems at the present time to be the key to the solution of the problem of the specific therapy of cancer.

49. Fromme (Ztschr. f. Krebsforsch., 1907, v. 39) considers that mast cells play an important part in the defense of the lymph glands against cancer.

50. Ztschr. f. Krebsforsch., 1907, v. 114.

51. Deutsch. med. Wchnschr., 1904, xxx, 1267.

52. München. med. Wchnschr., 1906 lili, 2042.

48. Verhandl. d. Gesellsch. deutsch. Naturforsch., 1898, p. 11.

Just now our chief hope lies in the experimental work that is being done in numerous laboratories with the transplantable tumors of the lower animals. Not infrequently more or less retrogressive changes occur in these experimentally produced tumors, sometimes leading to definite healing of the new growths. Gaylord and Clowes⁵³ have observed healing of implantation tumors of mice that had begun to grow, in no less than 101 of 711 inoculations, but of these in only 11 had the tumor reached a diameter of 1 cm. or more. Other experimenters have not observed healing of successful grafts in nearly so large a proportion of their cases. It is well known that animals are immune to the majority of tumors with which inoculation is attempted, and even with the most readily transplanted tumors a considerable proportion of the inoculated animals do not develop tumors, indicating a very high degree of natural resistance. Also, susceptible animals in which inoculated tumors are growing rapidly are usually immune to inoculations.

But besides this natural, congenital immunity it has been found possible to obtain a varying degree of acquired immunity, both active and passive, in experimental animals. This fact offers us certainly the greatest encouragement in our search for means of checking malignant growth, and the evidence so far collected may be summarized briefly as follows:⁵⁴ Immunization against transplantable tumors was first demonstrated in mice by Jensen, in dogs by Stickler, and in rats by Leo Loeb. It was found that animals which had recovered spontaneously from transplanted tumors were quite immune to subsequent implantations of tumors, and that they might also be made immune without having to be actually infected with tumor growths. Stickler found that living tumor cells (sarcoma in dogs) injected directly into the circulating blood do not give rise to tumor growth, but, on the other hand, render the animal immune to subsequent inoculation. Ehrlich rendered mice immune to transplantable carcinoma by previous injection of benign mouse tumors, while Bashford found that the same result could be obtained with repeated injections of mouse blood, and Schöne immunized successfully by repeated injections of mouse embryos and various tissues of mature mice. On the other hand, immunity can not be produced by injection of tumor cells killed by chloroform, by heat or by cold.

Apolant⁵⁵ has also observed a form of healing of mice carcinoma that has never been observed in human carcinoma, namely, reversion of typical carcinoma to a benign adenomatous structure.⁵⁶ The change of adenomas and other benign tumors in man into malignant tumors has been observed frequently enough, but never the reverse change from malignancy to benignancy. This phenomenon occurred in experimental cancer only in animals that had previously been partially immunized against mouse carcinoma, which would seem to indicate that the resistance of the organism determines the nature of a tumor, just as the same factor seems to determine the starting of the new growths.

Passive immunity seems as yet not to have been so successfully produced as active immunity, nevertheless

there is evidence that the blood of animals spontaneously recovering from tumors may sometimes cause retrogression and even healing of tumors in inoculated animals, as well as render animals more or less resistant against implantation of tumors.

Also we have the "atreptic" immunity of Ehrlich, which has been previously mentioned, the fundamental manifestation being that animals with rapidly growing malignant tumors show themselves absolutely or relatively immune to subsequent inoculation with tumor tissue in some other part of the body,⁵⁷ an observation which has not been altogether confirmed by other investigators. Gay⁵⁸ has observed a somewhat related phenomenon in rats with transplantation tumors. In the strain of tumors studied by him there seems to be a "premetastatic period" of about thirty days, during which period only could evidence of the presence of antibodies for the tumor tissue be found by the fixation test. If during this premetastatic period, while the animal is still able to react to the implanted tumor by forming antibodies, a second implantation is attempted, in many cases not only does the second tumor fail to grow (atreptic immunity of Ehrlich), but the first tumor may disappear entirely or retrogress and undergo fibrosis.

Such observations accumulating within the few years during which systematic investigations of tumor transplantation have been in progress, give much hope that eventually something may be done for the cancer patient besides radical operation. How much we are entitled to transfer results of experiments with the transplantable tumors of lower animals to our pathology of human cancer is still a debatable question, but I trust that the human cases that I have collected and discussed will indicate that there also exist in man natural forces that tend to cause healing of malignant tumors, and that the possibility of augmenting these forces is before us and should encourage us to constant effort toward this end.

A Plea for a Wider and Better Extension of the Knowledge of Sanitary Science.—W. P. Mason in *Science*, April 23, 1909, says that this has been called an age of hygiene. The statistics and records of health departments show that the reduction in the death rate, etc., in many of the contagious and infectious diseases, justify the term. Still, a better knowledge of sanitary science should be extended to all classes of people. The sanitary instruction received in the schools is too often of an inferior quality, and there is too little of it given. Militia and army officers and all men who have charge of large bands of laborers should have enough knowledge of sanitary science to enable them to protect not only their own men, but also the communities in the neighborhood of their camps, from contagion and epidemics. "Of all the members of a community the physicians are the ones towards whom we most quickly look for instruction in matters sanitary;" then "it is pertinent to inquire if the medical schools provide such instruction as will place their graduates in position to properly meet their double responsibility. Such a question must too often be answered in the negative." Likewise, trained nurses are too often lacking in sanitary information. Too few of them know "why corrosive sublimate is not uniformly a good disinfectant for tuberculosis sputum." Sanitation in the matter of air and water is particularly considered. It is shown why careful supervision of water supply is demanded, and why more stress should be laid on the quality of the air we breathe. Although surprising, "the cold fact remains that bad air is responsible for more deaths than alcohol."

53. Surg., Obst. and Gynec., 1906, ii, 633; also Seventh Ann. Rep. Cancer Lab. New York State Board of Health, 1905-6.

54. For summary see Sticker: Immunität und spontane Heilung der Krebskrankheit, Ztschr. Krebsforsch., 1908, xii, 55.

55. München. med. Wchnschr., 1907, liv, 1720.

56. Orth (Centralbl. f. Path., 1908, xix, 449) takes exception to Apolant's view that the adenomas thus formed should not themselves be considered carcinomas rather than benign tumors.

57. For discussion of this topic see report of the symposium on cancer research in the Verhandlungen d. deutsch. pathol. Gesellsch., 1908, xii, 13.

58. Jour. Med. Research, 1909, xx, 175.

Original Articles

PRIMARY CARCINOMA OF THE LIVER

WITH REPORT OF A PATIENT WHO REMAINED WELL OVER TWO YEARS AFTER OPERATION

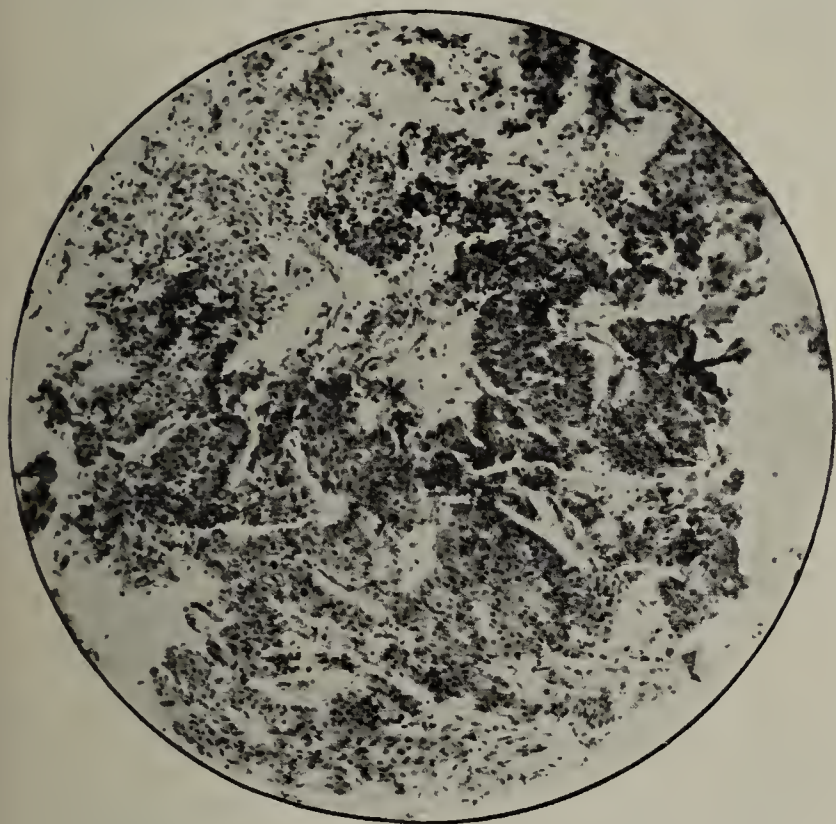
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Primary carcinoma of the liver is a rare affection. The literature on the subject consists mainly of reports of individual cases and consequent limited experience.

White¹ states that in 11,500 autopsies at Guy's Hospital during the years 1870-93, there were 11 (i. e., about 1 in 1,000) cases of primary carcinoma of the liver, and that but 7 such cases were reported in the Transactions of the Pathological Society of London during twenty sessions.

According to Eggel² of Munich, who has studied the subject exhaustively from the standpoint of pathology, primary carcinoma of the liver occurs about once in each 2,000 cases of all fatal ailments coming to autopsy. He tabulates 163 primary cases, of which 117 are de-



Photomicrograph of section of primary carcinoma of liver.

scribed microscopically, 100 being of liver-cell origin and 17 of the bile-duct variety. The others showed metastases or infiltration, malignant in character. Ewing³ affirms this classification and states that "primary carcinoma of the liver does not necessarily exhibit a single characteristic structure."

Contrary to formerly accepted views, Eggel's findings establish the frequency of metastases (66 per cent.) from primary hepatic carcinomata and shows their tendency to form tumor thrombi in large vessels. In his cases, metastases involved the following structures singly or in combination: veins (59 times), glands (38 times), lungs (17 times), gall bladder (7 times), kidneys (5 times), bones (4 times), peritoneum (4 times), spleen, pancreas and pleura (twice each), thyroid, esophagus and heart (once each).

William J. and Charles H. Mayo⁴ report that clin-

ically primary carcinoma of the liver "appears in several forms: (a) massive development, which involves a large section of the liver and has a well-marked line of differentiation from the sound tissue; (b) infiltrating; (c) nodular growth, usually one primary growth with secondary nodules." This corresponds to Eggel's macroscopic findings, the growth in 104, or 64.6 per cent., of his cases being of the nodular form, 37, or 23 per cent., of the massive type, and 20, or 12 per cent., of the diffuse variety.

ETIOLOGY

Its etiology is obscure. It seems to occur later in life in the primary than in the secondary growths. According to Eggel, the fifth decade is the period of predilection, but cases are recorded at all ages from the third to the seventy-sixth year. There was a history of hereditary carcinoma in 4 of Eggel's cases, of alcoholism in 30, gallstones in 14 and lues in 4. Trauma was apparently a direct factor in 7 cases.

The relation of cirrhosis to carcinoma of the liver is debatable. Some degree of cirrhosis was present in 85.4 per cent. of Eggel's series. There were, however, in the 163 reported cases but 69 which showed well-developed cirrhosis, nearly all of which were of the atrophic type. In these 69 cases there was a history of alcoholism in 30 only and of lues in 2. With our present knowledge of the origin of primary carcinoma in solid viscera it can be stated only that cirrhosis and carcinoma may coexist without causal relation in most cases; cirrhosis may precede or follow the growth, each process developing independently, or the same process that produces the one may cause the other.

Peabody⁵ observes that the increase in connective tissue in secondary hepatic carcinomas "is limited to the proximity of the new growth."

SYMPTOMS

The growth may run its course without a single symptom before death, which may be due to a fatal hemorrhage, as in Ewing's case,³ or to some intercurrent disease. This, however, is exceptional. As a rule, there is disturbance of digestion as the first and almost constant symptom. The clinical histories in 147 of Eggel's cases showed the presence of icterus in 61 per cent., ascites in 58.5 per cent., edema of extremities in 41 per cent., enlarged spleen in 32 per cent., and fever in 14 per cent. Anemia, emaciation and cachexia come on apace. The duration from the appearance of the first symptoms is three or four weeks to two and a half years. In the latter the early symptoms are doubtless due to the cirrhosis, which may argue for this being a precursor of the cancer in certain cases. The average duration after development of the cancer proper is about six months.

DIAGNOSIS

"Diagnosis is difficult and experience fallacious." The symptoms above noted are common to a number of conditions, and the physical signs may lead us astray. Our examination should, therefore, include especially the uterus and adnexa, rectum and colon, as most probable sites of the primary growth. Atrophic cirrhosis may obscure a primary carcinoma, unless it be massive, the liver to physical examination being actually smaller than normal.

1. White, Hale: Allbutt's System of Medicine, 1903.

2. Eggel, Hugo: Beitr. z. path. Anat. u. z. allg. Path. (Ziegler's), 1901, xxx, 506.

3. Ewing, James: Proc. New York Path. Soc., January, 1907

4. Mayo, William J. and Charles H.: Keen's Surgery, 1908, p. 966.

5. Peabody, G. L.: Am. Med., 1904, viii, 320.

6. Keen, W. W.: Pennsylvania Med. Jour., October, 1897, p. 198.

According to Keen,⁶ the diagnosis is usually wrong. In his observations the tumors of all varieties which proved to be hepatic were usually supposed before operation to have their origin from the colon, omentum, mesentery, kidney, ovary or abdominal wall. It is of diagnostic significance that in many cases there was an area of tympany between the tumor and the hepatic dulness. We are also to suspect the liver as the seat of the tumor if it rises and falls with the respiratory movements of the diaphragm.

CASES IN LITERATURE

Authentic cases of primary carcinoma of the liver in which operation has been done are very rare, indeed. Kehr found only one cancer suitable for operation in 800 operations on the liver. Tumors of the liver are common enough, as syphiloma, adenoma, angioma and cysts, but the malignant growths are usually secondary. Keen⁷ reports 76 cases of resection of the liver for hepatic tumors, including three of his own, and Willy Anschütz⁸ has collected reports of several addi-

had been killed in an accident. The patient was married when 15. Menstruation began when 16; always regular, but painful. She had leucorrhœa, dating from marriage; and menstrual pains were present until the cervix was dilated and uterus curetted at the New York Hospital seven years after her marriage. While there a benign cyst was removed from beneath her tongue. The patient had typhoid fever when she was 24, nine years after her marriage; when she was 32, she had double salpingitis and local peritonitis, accompanied by severe gastritis, from which she recovered with local treatment. Prior to this peritonitis she suffered from occasional "bilious" attacks, but subsequent to it they became frequent (two or three a week), consisting of nausea, vomiting of food and bile, headache and general prostration. These attacks persisted intermittently for a year; then at times she noticed distention (gaseous) and had some pain in the right hypochondrium. The pressure of her clothing was distressing and excited vomiting. During 1905-6 she had frequent "sinking" spells when reclining. There were no chills, rarely fever, and never any jaundice. The bowels were regulated with laxatives. The distention increased slowly and weakness was progressive, although combatted by various methods, including anti-luetic treatment.

TABULATED SYNOPSIS OF CASES OF PRIMARY CARCINOMA OF THE LIVER IN WHICH OPERATION WAS DONE

Author.	Sex	Age.	Duration of Disease.	Size of Tumor.	Anteopera- tive Diagno- sis.	Method of Removal.	Result.
Jacobs: Rev. de Chir., 1896, No. 12.	F.	50	Several yrs..	Orange.....	Fibroma, ; abd. wall.	Thermocautery and drain- age.	Recovery; recurrence, 7 months.
Lapointe: Bull. Med., 1897, p. 883.	F.	34	Metrorrha- gia, 1 year.	2 tumors, each larger than 2 fists.	Uterine fi- broid.	Pedicle clamped and di- vided.	Death; third day.
Lücke: Centralbl. f. Chir., 1891, No. vi, p. 115.	F.	31	2 years..	Fist. ....	.....	Elastic ligature and cau- tery.	Death 8 years later from recur- rence (?); gumma.
Tippilini (1901): Reported by Anschütz.	....	....	.....	Occupied most of left lobe.	.....	Elastic ligature; resection two days later.	Healed; recurrence and death in two months.
Keen: Ann. Surg., Septem- ber, 1899.	M.	50	3 months....	14 × 11 × 7.5 cm. Weight 21 oz.	.....	Thermocautery; entire left lobe.	Recurrence and death in 5 mos. (Personal communication.)
Hochenegg (Anschütz)....	F.	58	.....	.....	.....	Excised and stump fixed in abdominal wound.	Patient well 3 years later: car- cinoma?
L. Freeman: Am. Jour. Med. Sc., 1904, p. 611.	M.	27	1 year.....	Fist.	Gallstones...	Tumor isolated by gauze strips through liver sub- stance.	Operation Jan. 20, '03; excellent health Aug., 1906; presumably well at present. (Personal com- munication, Dr. Freeman.)
Schrader: Deutsch. med. Wchnschr., 1897, No. 11. p. 173.	F.	30	Uncertain...	4 × 3.5 cm.....	.....	Excised; wound cauterized and fixed in abdominal wound.	Operation Apr. 25, 1890; patient alive and well March, 1897.
Roux: Rev. méd. de la Sui-se rom., 1897, No. 2.	M.	54	.....	Pedunculated tumor of right lobe, colon ad- herent.	Carcinoma; transverse colon.	Excised; bleeding controll- ed by suture through liver.	Recovery.

tional cases in an excellent monograph, treating the subject from the operative standpoint.

Keen concludes that "only single and primary growths should be attacked. When malignant disease is secondary or exists as multiple tumors, it should be let alone. If we may cure 50 per cent. of cases of cancer of the breast and over 50 per cent. of cases of cancer of the rectum, why should we not get equally good results at least in those cases of cancer of the liver which are well limited and with little or no lymphatic involvement. Every case, therefore, save those manifestly beyond relief, should be explored and the later steps determined by what is found." From these and other sources I have been able to collect reports of only 9 cases of primary carcinoma of the liver in which operation was done. These are here given in tabulated form:

REPORT OF CASE

To these I add the following case of my own:⁹

History.—The patient, Mrs. J. A., aged 37, was a housewife. Her parents and one sister were alive and well. One brother

General Examination.—Sept. 15, 1906. The patient had the general appearance given by much suffering; her skin was muddy; the conjunctiva, clear and pale; the tongue coated; the chest negative. Urine: Sp. gr. 1016, turbid, acid, trace of albumin, indican normal, no sugar, microscopic negative.

Owing to a misunderstanding of the house surgeon no leucocyte count was taken.

Abdomen: To inspection there was a marked prominence in the right hypochondrium. On palpation a firm oval tumor was felt extending from the right costal margin downward an inch below the naval and slightly beyond the mid-line, moving with respiration. On percussion flatness was present over the area occupied by the tumor, but there was a zone of tympany just below the costal arch. The upper line of liver dulness was normal. A tentative diagnosis of tumor of the kidney or liver was made.

Operation.—Sept. 17, 1906, at the Polyclinic Hospital. Gas and ether anesthesia. A vertical incision was made from tip of eighth right rib to level of umbilicus. A tumor presented so large that its limit could not be defined without enlarging opening by a transverse incision from its center to the right mid-axillary line. It was now evident that the tumor was in the right lobe of the liver. The fundus of the gall bladder felt normal, but the size of the tumor precluded palpation of the bile ducts. The surface of the tumor was markedly congested and traversed by a network of large veins. One spot imparted the feel of a tense cyst, confirmed by the aspirating needle withdrawing bloody fluid. The peritoneum was then pro-

7. Keen, W. W.: Boston Med. and Surg. Jour., April 28, 1892; Ann. Surg., September, 1899.
8. Anschütz, Willy: Samml. klin. Vortr. Chir., 1903, No. 99.
9. Case reported and patient shown before the Surgical Section of the New York Academy of Medicine, Dec. 4, 1908.

ected by gauze pads and the tumor incised, about twelve ounces of bloody, odorless fluid escaping. Many trabeculae were broken down with the hand, and great quantities of soft, degenerated tissue removed with a dull spoon from the walls of the cavity, which was about the size of a large grape-fruit. Rubber drainage-tubes were inserted and the cavity loosely packed with gauze. The vertical wound was closed with through and through sutures of silkworm gut. Time of operation forty minutes. The patient was returned to her room in fair condition.

Postoperative History.—The same evening she suffered from shock, and her condition was critical the following three or four days, owing apparently to a profound sapremia. The temperature rose at once, reaching 104 F. in twenty-four hours. During the next ten days it varied from 101 F. to 104 F., whence it gradually receded to normal. The discharge from the wound was very large in amount, dark and offensive, containing much detritus (necessitating many irrigations daily), and soon assumed the offensive permeating odor characteristic of cancer. After the tenth day the discharge slackened quite abruptly, and the patient was removed to her home on the eighteenth day; the sinus closing four weeks later. Since the operation, now over two years, the patient has enjoyed excellent health. Previous to the operation her weight was 110 to 120 pounds, but during the six months thereafter it rose to 150, and the past year and a half has remained between 140 to 150 pounds. Her complexion is ruddy and her skin fair. There is an occasional dragging pain at the site of the wound, presumably due to adhesions, and a hernia admitting three fingers, readily kept in place by ordinary corsets. By deep pressure over the wound the hand detects a hard nodular painless mass, moving with the liver in respiration. This has remained the same size for the past year, and doubtless is the cicatrix in the liver.

Pathologic Examination.—Dr. F. M. Jeffries, of the Polyclinic Laboratory, mounted sections of the tissue from the wall of the cavity and reported Sept. 22, 1906: "The tissue from the liver of Mrs. A. received from you the 19th inst. is carcinoma. It is largely necrotic and, I should judge, of a considerable degree of malignancy." Prof. James Ewing, of Cornell, examined the same slides and wrote as follows: "The tumor in the case of Mrs. A. has all the histologic characteristics of a malignant tumor, belonging in the general class of carcinoma. It has some of the structural features of perithelioma or hypernephroma, but I am unable to state its exact origin or nature."

The illustration is from a photomicrograph made by Dr. Frederic E. Sondern from one of the slides.

The case is reported as a contribution to a subject the literature of which is, of necessity, very meager. The operation as performed presents no special features. The questions of interest are: 1. Is the process carcinoma? 2. If so, what was the rationale of the recovery? for it is still too early to state that we may not yet have a recurrence, in view of the postoperative histories of the cases cited. The pathologists' report, with the characteristic odor while healing, answers the first question in the affirmative. A reply to the second is more difficult and largely speculative in our present chaotic knowledge of the pathology of carcinoma.

Roger W. Williams¹⁰ has covered the natural history of cancer to date most ably. He states:

The biology of cancer, like that of normal parts, is conditioned mainly by the inherent properties of their constituent cells; and, in a less degree, by their blood supply. Hence, the same elementary pathologic disturbance may be witnessed in them as in the normal parts—e. g., congestion, inflammation, suppuration, gangrene, necrobiosis, ulceration and the degeneration metamorphoses. The most frequent anatomic cause of congestion and inflammation of cancer is obstruction to their venous circulation, which so often happens during the progress of their growth.

Eggel's findings are in accord with this view, 51 of the 163 cases showing "degeneration metamorphoses" of one kind or another, as softening, cheesy or necrotic changes, or fatty degeneration.

The cavity in my case was filled with bloody fluid, and its walls and trabeculae composed of tissue largely necrotic.

Williams¹⁰ further states:

Indications are not wanting of occasional spontaneous retardation and arrest of the disease, and even of its retrogression; but I can not cite a single instance of its complete spontaneous cure. In the penultimate stage of the cancerous cachexia and in most illnesses causing great wasting and exhaustion (e. g. phthisis), cancerous growths may become stationary and retrogressive.

Brooks H. Wells¹¹ reports a most interesting case, illustrating calcareous degeneration and spontaneous retrogression of a carcinoma, in a woman, aged 33, on whom he operated in 1898.

He found extensive carcinosis (confirmed by the microscope) of the pelvic organs, intestine and glands, and, considering the condition unsuitable for operation, he closed the wound. Four years later a palliative operation was done *per vaginam*, by another surgeon. At the patient's death in 1905, the autopsy revealed absence of any large tumors, all peritoneal and vaginal surfaces smooth except for numerous hard white particles, varying in size from a mustard seed to a bean. These, when decalcified, showed glandular carcinoma, as did the sections taken eight years before.

Czerny¹² reports a number of cures (?) following apparently inadequate operations, and Wells has seen several such instances.

Maurice H. Richardson¹³ says: "I am convinced that a considerable number of tumors pronounced malignant, and in fact malignant, disappear under local or systemic conditions which are artificially produced."

In view of these citations and the operative findings, I venture to suggest that in my case there were several processes at work to effect the result, viz.:

1. Venous obstruction by the growth as it enlarged resulted in congestion and inflammation at its periphery and degeneration of the major part of the tumor into a soft pulsatous mass.

2. This prevented invasion of healthy tissues by the carcinoma.

3. Bodies absorbed from the fluid material tended to immunize the system.

4. Infection, already present or accidental, as shown by the postoperative temperature, may have played an important rôle; compare Richardson's case.

5. The incision was made at the opportune moment; i. e., when the entire tumor had undergone softening and was ripe to be cast off as soon as a vent was provided.

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Breach Against Good Literary Manners.—The *Deutsche med. Wochenschrift* states that two articles were recently received for publication without notification that they had been published elsewhere, notwithstanding that the writers must be aware that it is not considered good form in Germany to publish the same article in more than one journal. The editor states that in future he will charge the expense of publication to such authors.

10. Williams, Roger W.: *Natural History of Cancer*, William Wood & Co., 1908.

11. Wells, Brooks H.: *Am. Jour. Obst.*, 1908, p. 403.

12. Czerny (cited by Wells): *Ztschr. f. Krebsforsch.*, v, 23.

13. Richardson, Maurice H.: *Ann. Surg.*, 1898, p. 742.

PAINLESS AND PAINFUL ANGINA PECTORIS *

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Eleven years ago I presented¹ a paper to the California Academy of Medicine entitled "Cases of Angina Sine Dolore, Due to Disease of the Right Ventricle." The matter gave rise to some discussion at the time but dropped out of sight until within the last few months when Dr. Jellinek and Dr. Cooper advanced the same idea without being aware of the existence of my earlier contribution. It is possible that further investigation may be encouraged by a report of some of the cases that suggested such a hypothesis, together with conclusions reached from personal observation.

Confusion may be avoided by making the preliminary statement that while all the cases mentioned in this paper are examples of angina sine dolore associated with disease of the right ventricle I must not be understood as asserting that the painless variety is the only form of angina associated with disease of the right heart. Furthermore it is suggested that the painless angina attack is the sudden and temporary failure of a weak or diseased right ventricle, which, for the time, is unable to maintain the pulmonary circulation; while painful angina is due to the sudden obstruction of some part of the coronary circulation, either organic or spasmodic in character. I have suggested that cardiac asthma is an indication of disease of the right ventricle but I do not say that it is limited to cases in which the right ventricle alone is affected; on the contrary it is very frequently found in cases in which both ventricles are involved, as in patients in the last stages of mitral incompetence after failure of compensation has taken place; but the presence of the symptom under such circumstances signifies that the right ventricle is seriously diseased as well as the left.

As the phenomenon of cardiac asthma in relation to diseases of the right ventricle will be more easily studied where it was the only symptom present, the following cases with the reports of the autopsies are presented for consideration.

CASE 1.—A mechanic, aged 24, rather under the average weight, of good habits, complained of pain about the precordia. The family physician failed to find any sign of heart disease and attributed the discomfort to strain caused by playing on the cornet. He therefore forbade the use of the instrument, and prescribed a tonic treatment, under which he improved for several months; but the distress recurred, and on one occasion he had an attack which his friends said was "something like a fainting fit," but he asked for fresh air and appeared to be perfectly conscious. When I saw him soon afterward he appeared to be in his usual health. About thirty-six hours later, while eating supper, he experienced another seizure, which he at once realized to be fatal, and in little more than thirty minutes he died, after showing signs of gradually increasing heart failure. I was not present at the autopsy, but the family physician told me that there was marked fatty degeneration of the right ventricle.

CASE 2.—A lawyer, aged 40, was suffering from intermittent fever which had lasted for several months, and also from an acute orchitis. It was nearly five weeks before he was well enough to be pronounced convalescent. In the hope that it would hasten his recovery, he decided to take a trip east, but, before leaving, he called at my office and asked me to examine his heart, as he had a feeling of oppression over his chest and a constant desire to take a long inspiration. Careful examination of the pulse and chest failed to reveal any signs

of disease, and the patient was dismissed with the assurance that it was simply a temporary weakness resulting from his long illness. Next morning I was surprised to learn that he had been found dead in bed. The coroner's autopsy showed the left ventricle to be healthy in every respect; but through the entire thickness of the wall of the right ventricle there was a band of fat nearly one inch in width, and in the cavity of the ventricle there were two white clots, one lozenge-shaped, measuring about one by one and a half inches, and a second, about seven inches long and as thick as a lead pencil, extending from the ventricle into the pulmonary artery. Evidently the streak of fat in the ventricular wall had prevented a complete systole, so that the ventricle never was perfectly emptied, and the clots were permitted to form during his prolonged rest in the recumbent position.

CASE 3.—A merchant, aged 63, suffered with precordial anxiety and slight attacks of dyspnea. The pulse was good and the area of cardiac dulness normal, but there was a slight musical intonation of the second sound in the aortic area, so that instead of the usual "lubb tup," we heard "lubb toomp." There was also slight edema of the feet. The autopsy showed that the left ventricle was healthy, but that there was considerable fatty degeneration of the right ventricle and atheroma at the base of the aorta.

CASE 4.—Another case very similar to the preceding was seen on several occasions in consultation with Dr. Henry Gibbons. The patient was an elderly man and was subject to attacks of cardiac asthma that would come on without any special cause; some occurred in the evening on different occasions when he was quietly seated with the family and others woke him up during the night. The radial pulse was small and quick during the attacks but so surprisingly good between them that we searched for some explanation beyond the cardiac condition. The patient died during a seizure and autopsy showed a degenerated right ventricle.

CASE 5.—A physician, who was present when my original paper was presented to the academy, on many subsequent occasions remarked that he was suffering from painless angina, but as examination failed to reveal any valvular trouble or signs of circulatory weakness, and as the attacks were very transient, much of his distress was attributed to his highly emotional temperament. It was, therefore, with considerable shock that I learned of his sudden death about 3 o'clock in the morning nearly three years later. An autopsy showed atheroma at the root of the aorta, the cardiac muscle in apparently good condition for a man of his years, but the right heart dilated so as to press on the vena azygos and produce a moderate degree of hydrothorax on the right side.

Other cases of cardiac asthma in which autopsy revealed disease of the right ventricle could be reported, but enough have been mentioned to illustrate the frequency with which angina sine dolore and diseased right heart are associated.

The type of breathlessness met under such circumstances is altogether different from ordinary cardiac dyspnea; it is a suffocative paroxysm that may follow exertion or emotion but just as frequently may occur without any evident cause. It does not present the same signs as spasmodic bronchial asthma, as the air enters the lungs freely and there is no indication of obstruction in the bronchi except in those cases in which complete cardiac failure is associated with sudden edema of the lungs or in which the paroxysm comes on as an occasional feature in patients in whom compensation has failed and pulmonary changes have already existed. The attack is simply a paroxysm of air hunger which the patient tries to satisfy by quick and deep inspirations. Instead of the quick forcible inspiration with prolonged expiration that is characteristic of bronchial asthma we have a forcible inspiration with a quick and frequently a gasping expiration. It has not been my experience to find any increase in the ten-

* Read before the San Joaquin County Medical Society, Feb. 26, 1909.

1. Occidental Medical Times, May 1898.

sion of the pulse during these attacks of painless angina; on the contrary it is a rapid pulse, small and of diminished force, but it is frequently a matter of surprise to observe how quickly the pulse will recover after the paroxysm has passed.

In these cases three features were noticed particularly: 1. There were changes in the wall of the right ventricle. 2. During the attack the pulse was small and feeble. 3. After the attack was over and between the various seizures the radial pulse was of good quality. With these facts, the following explanation of the seizure is possible.

The condition to start with is a right ventricle in a state of malnutrition as a result either of defective coronary circulation or of impaired metabolism. Such a muscle has very little reserve force and its assimilative powers are diminished so that it is easily exhausted either by a demand for sudden effort or by any interference with its blood supply. The conditions under which cardiac asthma is most frequently observed, apart from sudden effort to which the heart is unable to respond, are when the patient is resting after mental or physical fatigue, also during the early hours of sleep, and occasionally after a heavy meal or one that is slow of digestion, especially if the patient goes to sleep before digestion is completed. The improved methods for observing blood pressure that have been devised during the last few years show that these are exactly the conditions under which lowering of the aortic and consequently of the coronary blood pressure is sure to be found. All observers are agreed that exertion of any kind at first induces a rise in pressure, but that if prolonged it may ultimately be accompanied and invariably is followed by a fall. Also during the first hours of sleep the pressure is very low and rises gradually toward the time of waking. The results of observations during digestion are somewhat conflicting and possibly depend to some extent on the character of the food and the assimilative powers of the patient. The majority of investigators, however, report a fall during digestion and attribute it to dilatation of the splanchnic area.

Physiologists tell us that muscle fatigue is simply due to the accumulation of the products of activity in the muscle acting as poisons on its protoplasm, and that we must depend on the activity of the circulation for their removal and the reconstruction of the tissues. If, therefore, the coronary circulation becomes depressed in a cardiac muscle that is already deficient in reserve force and recuperative power it need not occasion surprise if at times the muscular contractions are not sufficiently strong to discharge their physiologic function and that corresponding symptoms should manifest themselves. It is important that this should be recognized in regard to treatment because the injudicious use of vasodilators, such as nitroglycerin, will still farther reduce the aortic pressure and aggravate the condition.

If the disease be limited to the right ventricle we can easily understand how the radial pulse improves so rapidly when the seizure is over, but in cases in which the asthma is simply intercurrent on the symptoms of general cardiac disturbance such as failure of compensation in long-standing cases of mitral incompetence such improvement is not found and should not be expected.

It is impossible to explain the absence of angina sine dolore in some cases of dilated or fatty heart, unless it be that sufficient healthy muscular fibers remain to

produce a complete systole, or that the exciting causes, such as emotional disturbance and physical or mental strain, have not been out of proportion to the capabilities of the heart. That extensive degeneration may exist without producing any symptoms to awaken suspicions of heart disease is a well-established fact; indeed, we frequently hear that some man, who never was supposed to be the victim of cardiac disturbance, has died suddenly after some strain or excitement, and that autopsy has shown degeneration of the heart muscle. In a number of such cases inquiry will ascertain that death was ushered in by an attack of the peculiar form of dyspnea that has been described as angina sine dolore.

Painless angina is much more common than one would suppose it to be from the infrequency with which it is mentioned; but, in all probability, the disease is not always recognized, and the patient's sufferings are attributed to hysteria or some reflex disturbance. When the symptoms are accompanied by a dilated right heart or distinctly atheromatous changes the diagnosis is easy, but when physical signs are absent it is difficult to arrive at an absolute opinion. If, when free from the paroxysms, the patient continually suffers from a feeling of weight or distress over the precordia, and has a tendency to take occasional deep inspirations, there is a strong probability that the right ventricle is affected: and this amounts to certainty if the symptoms are invariably produced or aggravated by exertion.

This form of angina is entirely different from the painful variety and in many instances demands a diametrically opposite treatment. The cause of angina pectoris is still a matter for discussion, but in all probability it is due to some local obstruction in the coronary circulation which may be organic, spasmodic, or a combination of both. The fact that the radial pulse varies in different cases, the pressure being sometimes high and at other times low, indicates that the attacks can not invariably be attributed to increased resistance in the peripheral circulation. It has been suggested that angina pectoris is due to strain on the heart by obstruction in the arterial system and that while in certain cases the vascular pressure may be actually low, nevertheless it may be too high for the capabilities of the myocardium. I have seen a very large number of patients with weak and dilated hearts who under varying conditions were subjected to considerable increase in peripheral resistance and suffered precordial pain and distress in consequence, but the proportion of those in whom a typical angina attack ensued was infinitesimal. Such an experience leads to the conclusion that the explanation of the symptoms characteristic of angina pectoris must be sought elsewhere than in the condition of the cardiac muscle.

One can hardly witness an attack of angina without thinking of the extreme pain that is produced in other parts of the body as a result of sudden anemia following embolism, vasomotor spasm or some other cause, and this, together with the fact that postmortem examination so frequently shows disease of the coronary arteries, either in their main trunks or in their smaller muscular branches, forcibly suggests the idea that this malady may be due to ischemia from some form of obstruction in the coronary circulation, and that the myocardial changes can be attributed to the same arterial disturbance, the muscular degeneration being an associated lesion but having no causal relation to the

intensely painful seizures. The causes of the obstruction are not the same in every case. It may be that the lumen of the arteriole is narrowed from disease so that under exertion some part of the heart muscle does not obtain a sufficient supply of blood and therefore an ischemia is established; or we may have a rise in blood pressure during which the coronaries participate in the general arterial contraction, but this contraction may be sufficient to obliterate the stream in one of the cardiac branches which is already narrowed by disease. It is perfectly possible that some of the attacks are due to very minute emboli or sclerosis permanently obliterating a small vessel. The rapidity with which in many instances an attack yields to vasodilators such as nitroglycerin or amyl nitrite has for many years warranted the belief that vascular spasm plays a very prominent part in the production of the pain, but the fact that general high blood pressure is present in some cases of angina pectoris, absent in others, and present in a very large number of people who never suffer from angina pectoris inclines me to the belief that spasm of the coronary arteries is the essential feature in producing the attack and that the relief that follows the administration of such substances as nitroglycerin is due to the relaxation of the coronary spasm which would take place independently of any fall in general blood pressure; in short, that in those cases in which the blood pressure is high the pain is due to overcontraction of some coronary branch and not to pressure exerted on the ventricular cavity on account of increased peripheral resistance. Such a hypothesis explains the existence of angina irrespective of high or low blood pressure; it explains those cases, sometimes described as spurious angina, in which patients have suffered from a typical seizure consequent on errors in digestion and metabolism; it explains the improvement in those patients who at one time could not walk across a room without provoking a seizure but who as a result of appropriate treatment are able to walk two or three miles without difficulty.

This local vasomotor spasm is nothing new in medicine. In Raynaud's disease we can observe it in the finger, on the body surface, or on some part where it may persist with such intensity as to terminate in multiple gangrene or pass away and leave the patient with very little evidence of the attack. Transient loss of consciousness and brief hemiplegias in the course of the disease indicate that not even the cerebral vessels are exempt from the spasmodic contraction. It is therefore perfectly possible that similar local spasm may affect the vessels of the heart.

It seems, therefore, that with our present knowledge we are warranted in believing that angina pectoris is due to some form of obstruction in the coronary circulation; that the changes in the peripheral blood pressure are coincidences rather than causes of the attack; and that the degeneration of the cardiac muscle may be the consequence of the impaired coronary supply but not the cause of the painful seizure.

The treatment of those two forms of angina will be entirely different during the seizures, but as a rule it is identical between the paroxysms. Since cardiac asthma is due to failure of the right ventricle rapidly acting stimulants, such as caffeine, camphor, or strophanthus, will be indicated for the relief of the paroxysm; while angina pectoris, on account of the coronary spasm, will call for vasodilators such as nitrite of amyl, nitroglycerin or morphin. It not infrequently

happens that the subject of coronary spasm is also suffering from a weak heart and under such circumstances a combination of heart stimulant and antispasmodic is demanded.

Between the attacks the treatment is that which has been recommended in cases of chronic myocarditis and arteriosclerosis. The regulation of diet, in regard to both variety and quantity, so that the circulation never will be overloaded with food or waste material, is of the greatest importance. Avoidance of mental and physical strain and the regulation of exercise in accordance with the capabilities of each individual case must be carefully observed. The administration of arsenic and the prolonged use of iodids in small doses for a period of several months will be found in many instances to have a very beneficial effect on both the cardiac muscle and the blood vessels. And last, we never should neglect the judicious use of remedies which will aid in eliminating by their natural channels all toxic substances resulting from physiologic activity or food metabolism.

2605 California Street.

A NEW METHOD FOR THE TRANSFUSION OF BLOOD

AN EXPERIMENTAL STUDY *

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AND

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A method of transfusion by means of a vascular bridge, composed of a fresh animal blood vessel, interposed between the artery of the donor and the vein of the recipient, was described in a preliminary communication¹ some months ago. Since then further experiments have been carried out in order to find means of preserving ready for use the vascular bridge, which, for the sake of brevity, will be called simply the "link" throughout the rest of the paper.

It is not our purpose to discuss when and where transfusion is indicated. The future alone can show whether the present enthusiasm is justified, and whether transfusion is here to stay. That, however, direct transfusion is being quite largely practiced is readily seen by the numerous modifications of the technic constantly appearing in the literature, and by a recent discussion held at the meeting of the New York Academy of Medicine, Surgical Section, Jan. 8, 1909. Dr. Hartwell, in connection with a paper he then read² on a new method of transfusion by means of direct intubation of the artery into the vein, referred to forty-one cases of transfusion done with the aid of various cannulae (chiefly by Crile's technic) which he had collected through private communication with eighteen surgeons of New York City. In this series twenty technical failures were recorded. It has been our privilege to witness personally twelve transfusions on the human subject. In all of these the exposure of the artery proved tedious and in some cases difficult, chiefly because of numerous minute side branches which required ligation. If these branches are seen before they are cut

* From the Pathological Laboratory, College of Physicians and Surgeons, Columbia University.

1. Frank: New York Med. Jour., Nov. 28, 1908.

2. Hartwell, John A.: A Simple Method of Blood Transfusion without Cannula. THE JOURNAL A. M. A., Jan. 23, 1909, lii, 297; Am. Jour. Surg., March, 1909.

across, ligation is not difficult; if on the other hand, as not infrequently happens, they are torn, annoying bleeding occurs, to stop which it may be necessary to apply lateral ligatures on the artery, thus partly occluding its lumen, either through actual constriction or through the resulting parietal thrombus. Another difficulty is encountered in the choice of the cannula; if it is too small the vessel is constricted, if too large cuffing will prove difficult or impossible. This difficulty is to some extent prevented by the use of either the Elsberg³ or Levin⁴ instrument. Again when the final union of artery and vein is undertaken, the operator is obliged to work in a cramped space at great disadvantage. In consequence of these difficulties it requires from twenty to forty-five minutes to establish union between artery and vein, if everything goes smoothly, while double that length of time is not unusual. Such prolonged exposures necessarily produces contraction of the radial artery with consequent im-

ately a considerable diminution in caliber was caused by the contraction due to the elastic tunica, which served to shorten and at the same time thicken the vessel wall, thus producing a constriction of greater or lesser degree within the cannula. All these faults are overcome by means of the following method of preparation.

2. *Formalinized Links*.—Fresh carotids are obtained from medium-sized dogs, immediately after death, carefully washed out with cold normal salt solution, and stripped of any surrounding connective tissue. The adventitia at both ends is drawn over the cut end of the artery and snipped off. A Crile, or other tube of appropriate size, is selected, the artery pushed through the tube and by means of two eye forceps cuffed and secured with a fine silk ligature tied in the groove nearest to the handle. The opposite vessel end is similarly cuffed over another Crile tube, care being taken to have the handles pointing approximately in the same direction transverse to the long axis of the link in order to avoid torsion subsequently. The completed link is now stretched and kept stretched by means of a

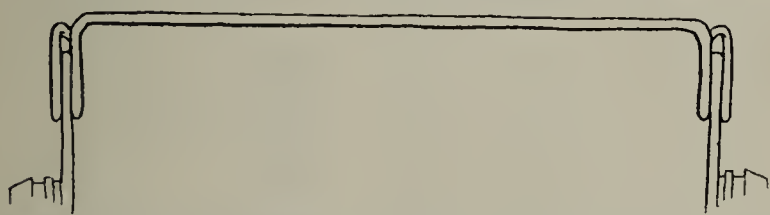


Fig. 1.—Wire frame used to stretch the link during preservation, with cannulae in position.

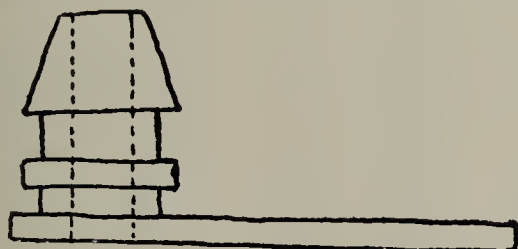


Fig. 2.—Crile cannula slightly modified in shape. The end is more pointed and the grooves for ligatures are farther removed from the opening. This favors easier introduction.



Fig. 3.—Link ready for use, in sealed test-tube, immersed in paraffin oil.

pairment of the flow of blood, and greatly favors clotting, especially if all the safeguards so necessary in vascular surgery are not scrupulously observed.

ADVANTAGES OF THE LINK

The use of the link offers the following advantages:

1. A sufficient length of vessel is obtained without extensive dissection of the artery of the donor or the vein of the recipient.

2. The link as now prepared by us has lost some of its elasticity and is well stretched, so as to afford an unobstructed lumen within the cannulae.

3. The technic is familiar to every surgeon from its similarity to that used in intravenous infusion.

FORMS OF LINKS

1. *Fresh Links*.—The fresh links, as first suggested, required preparation immediately before they were needed, which entailed obtaining a dog of suitable size, aseptic removal of its two carotids, etc. It was also found that unless the carotid fitted the cannula acen-

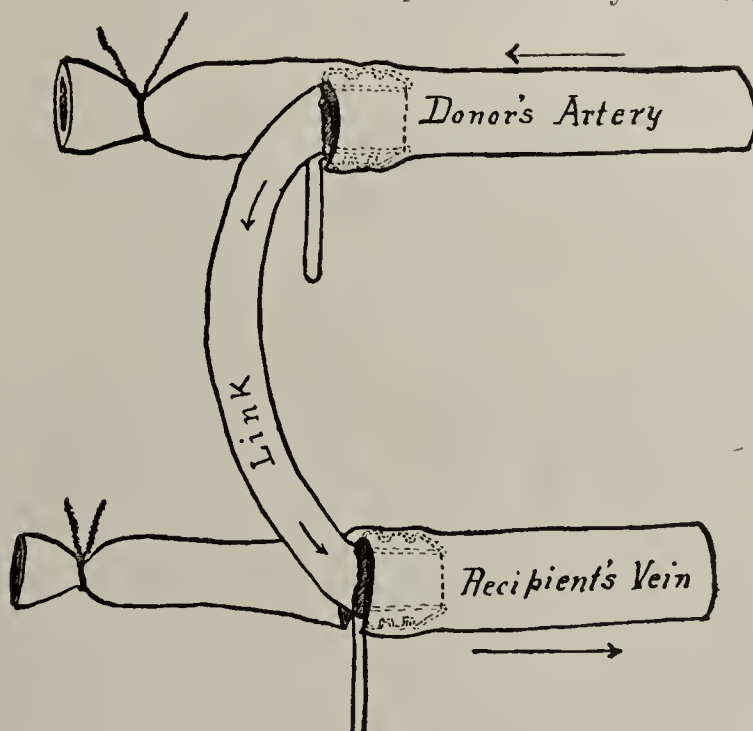


Fig. 4.—Schema of transfusion.

small frame readily improvised of soft brass wire (Fig. 1) which serves to keep the cannula sufficiently far apart to thin the walls of the link and thus afford a wide lumen within the cannula. The tension should not be so excessive as to flatten the link at its central portion.

All the steps just enumerated may be taken without aseptic precautions. The link, stretched on its wire frame, is now placed in a wide test-tube, containing freshly prepared formalin of 2 per cent. strength (2 c.c. of chemically pure formalin of 40 per cent., in 98 c.c. of water) and well stoppered with a thick cotton plug. After twenty-four hours, using the usual bacteriologic technic, to avoid contamination, the link is transferred into a tube of sterile normal salt solution and after one-half to one hour transferred to a similar tube for the same period. These two changes serves to remove any excess of formalin, which if left, in time renders the links brittle and useless. Finally, the link is preserved for future use in sterile paraffin oil, the end of the test-tube being sealed with a blow-pipe flame (Fig. 3). The method of preservation serves to impair the resiliency of the link sufficiently to keep the lumen well open and to increase the distance between the cannula permanently, even after the wire frame is

3. Elsberg, Charles A.: A Simple Cannula for the Direct Transfusion of Blood, *THE JOURNAL A. M. A.*, March 13, 1909, III, 887.

4. Levin: *New York Med. Jour.*, Oct. 3, 1908.

removed. The optimum time in formalin has been found to be twenty-four hours, but fairly effective links were obtained up to forty-eight hours. Links used direct from the formalin, or from the salt solution produces no clotting, showing that the paraffin oil is not essential. This fluid was chosen because it helps to soften the tissues, is bland, and later proves useful at the transfusion. Links kept by this method for ninety days were pliable and as elastic as thin rubber tubing.⁵

3. *Dried Links*.—We have lately tried another method of preserving the links, suggested by Dr. Carrel.⁶ As applied to our work the steps enumerated in obtaining and preparing the links are the same as those previously described up to that of the placing them in the formalin solution, except that the fresh link should not be as tightly stretched. Instead of being placed in

the cannula, as is the case with freshly obtained vessels.

4. *Glass Tubes*.—Before describing the application of the links, it may prove of interest to mention that during the course of the experiments we attempted to use glass tubes, carefully coated inside and out with hard paraffin. In only one instance out of five did clotting fail to occur within twelve to seventeen minutes. Dr. Alexis Carrel, in a private communication, informed us that he also found glass tubes unreliable for the same reason.

The appended summary of experiments shows that of twenty-six transfusions performed with prepared links, but one failed. In this instance (experiment 15) the link had been kinked during preparation and therefore did not permit the blood to pass through at all.⁷ It is now our custom to test the permeability of the link before using, by means of a small syringe filled with salt

EXPERIMENTS IN USE OF VASCULAR LINK FOR TRANSFUSION OF BLOOD

Experiment.	Method of Preparation of Link.	Days Kept.	Duration of Transfusion. Min.	Results and Remarks.
1	Fresh.	0	45	Good.
2	Fresh.	0	45	Good.
3	Fresh.	0	45	Good.
4	Fresh.	0	45	Good.
5	Fresh.	0	30	Good.
6	Fresh. Kept at 33 C. in NaCl solution.	10	45	Good.
7	Fresh. Kept at 33 C. in NaCl solution.	7	45	Good.
8	Fresh. Kept in paraffin oil at room temperature.	14	25	Good.
9	Fresh. Kept in paraffin oil at room temperature.	14	25	Good.
10	Fresh rabbit's aorta used on dog.	0	60	Good.
11	In 2 per cent. formalin ½ hour. Kept in oil.	3	60	Good.
12	In 2 per cent. formalin ½ hour. Kept in oil.	7	35	Good.
13	In 2 per cent. formalin 2½ hours. Kept in oil.	11	35	Good.
14	In 2 per cent. formalin 24 hours. Kept in oil.	60	35	Good.
15	In 2 per cent. formalin 48 hours. Kept in oil.	20	..	Lumen not patent.
16	In 2 per cent. formalin 36 hours. Kept in oil.	20	30	Good.
17	In 2 per cent. formalin 36 hours. Kept in oil.	20	35	Good.
18	In 2 per cent. formalin 48 hours. Kept in oil.	60	35	Good.
19	In 2 per cent. formalin 48 hours. Kept in oil.	12	30	Good.
20	In 2 per cent. formalin 24 hours; 2 changes of NaCl solution. Kept in oil.	19	30	Good.
21	In 2 per cent. formalin 24 hours; 2 changes of NaCl solution. Kept in oil.	19	30	Good.
22	In 2 per cent. formalin 24 hours; 2 changes of NaCl solution. Kept in oil.	19	30	Good.
23	In 2 per cent. formalin 24 hours; 2 changes of NaCl solution. Kept in oil.	23	30	Good.
24	In 2 per cent. formalin 24 hours; 2 changes of NaCl solution. Kept in oil.	90	30	Good.
25	In 2 per cent. formalin 48 hours; 2 changes of NaCl solution. Kept in NaCl sol.	15	30	Good.
26	In 2 per cent. formalin 2½ hours; 2 changes of NaCl solution. Kept in NaCl sol.	14	20	Good.
27	In 2 per cent. formalin 48 hours. Kept in NaCl.	14	35	Good.
28	In 4 per cent. formalin 48 hours. Kept in oil.	5	35	Good.
29	In 4 per cent. formalin 19 days; used direct from formalin.	19	15	Clotted after 15 minutes.
30	In 2 per cent. formalin 10 days; used direct from formalin.	10	30	Good.
31	In 2 per cent. formalin 48 hours. Kept in oil.	12	30	Good. Tied off, no clotting.
32	Dried 24 hours, heated 12 minutes at 100 C. Kept sealed.	5	40	Good.
33	Dried 48 hours, heated 15 minutes at 100 C. Kept sealed.	5	30	Good.
34	Dried 48 hours, heated 15 minutes at 105 C. Kept sealed.	3	30	Good.
35	Dried 48 hours, heated 15 minutes at 105 C. Kept sealed.	60	30	Good.
36	Dried 48 hours, heated 15 minutes at 105 C. Kept sealed.	60	30	Good. Cat's carotid used on dog.
37	Dried 24 hours, heated 12 minutes at 105 C. Kept sealed.	5	30	Good. Tied off, no clotting.
38	Glass tube coated with paraffin oil.			Clotted in 5 minutes.
39	Glass tube coated with hard paraffin inside and out.		20	Ran fairly well.
40	Glass tube coated with hard paraffin inside and out.			Clotted in 17 minutes; ran poorly after 5 minutes.
41	Glass tube coated with hard paraffin inside and out.			Clotted in 15 minutes; ran poorly after 5 minutes.
42	Glass tube coated with hard paraffin inside and out.			Clotted in 15 minutes; ran poorly after 10 minutes.
43	Dog's carotid, formalin 2 per cent. for 2 hours; oil 10 days; in Arnold steam sterilizer 30 minutes.			Lumen not patent. Shrunken and distorted.

formalin the link is dried for twenty-four to forty-eight hours over fresh anhydrous calcium chlorid in the ordinary chemical drying chamber. By this time it looks dry, shriveled and brittle as parchment. It is now placed in a sterile test-tube and heated for twelve to fifteen minutes at 100 to 105 C in the dry sterilizer. The tube is then sealed. About an hour and a half before the dried link is to be used it is placed in sterile salt solution or Lock's fluid. At the expiration of that time it will have regained its normal appearance and elasticity. This method has proved excellent and has but one drawback, namely, that the great elasticity of the vessel serves partially to occlude the lumen inside

solution, in order to assure ourselves that the lumen is unobstructed and in order to wash out the paraffin oil. To favor clotting, the blood current was repeatedly interrupted. In two experiments, links inserted in the carotid artery were tied off and the blood allowed to remain within the lumen of the link for fifteen and thirty minutes without resulting thrombus formation.

TECHNIC OF TRANSFUSION BY THE USE OF VASCULAR LINKS

About one inch of the artery of the donor, in man the radial, is exposed under local infiltration anesthesia without the use of adrenalin), no great care being exercised in freeing the vessel from its sheath. Two

5. It has been found necessary to have both the cannulae of the wire frame gold-plated (silver-plated might do as well), as an electrolytic reaction is set up, if two different metals are used, which causes a deposit of copper on the surface of the link, thus favoring clotting.

6. Carrel: Proc. Phil. Soc. Philadelphia, Nov. 6, 1908.

7. An attempt to sterilize a link in the Arnold sterilizer proved a failure. In one experiment in which the link was kept for nineteen days in 4 per cent. formalin and used direct from this, clotting occurred.

ligatures are passed around the artery, the distal one being applied as far peripheral as possible and tied, the proximal left loose. A vein of fair size in the recipient is similarly exposed (in infants the femoral must be used), and the ligatures passed, the distal one again being tied. On both artery and vein a serre-fine is applied proximal to the loose ligature in order to stop the circulation temporarily.

The link is emptied of the paraffin oil and placed in salt solution to be ready for use. The artery is pulled out of the wound by means of the ligature and with a snip of the scissors a small transverse slit is made into its lumen. The edges of the slit are grasped on either side with two fine eye forceps and drawn apart. Through this aperture the one end of the cuffed link is introduced toward the heart (the handle of the cannula being steadied with an artery forceps) and the loose ligature tied in the first groove of the cannula. The vein is treated similarly, the opposite end of the link being inserted toward the heart, and the ligature tied. (It is well to make the slit in the vein near the distal angle of the skin wound in order to have a portion of the vein visible and palpable, as this enables the operator to see and feel the pulsation and thus control the transfusion, or at once to recognize a stoppage of the flow.) The serre-fines are now removed, the one on the vein first, and the exchange of blood allowed to proceed (Fig. 4). Throughout the manipulation both wounds should be kept well moistened with salt solution. During the transfusion the link should be supported by a gauze sponge saturated in salt solution and covered by another moist compress.

When enough blood has been obtained both artery and vein are tied off, the small injured part of the vessels being excised. The skin wound is then closed.

This technic closely resembles that so familiar in intravenous saline infusion, the infusion cannula being represented by the cuffed link. Should the opening in the artery prove too small, a very fine blunt artery forceps or scissors may be inserted closed, and then opened in order to stretch the lumen.

For adults, carotids obtained from medium-sized dogs should prove the proper size, as they are easily cuffed on the large or medium Crile tube. If a smaller cannula is desired, a cat's carotid is available, though of course much shorter in length. The stretched dog's vessel is three and one-half to four inches in length, the cat's half that. The hypothesis that clotting is due to an alien blood vessel has been disproved by the work of numerous investigators. We also have used rabbits' and cats' vessels on dogs with complete success.

TESTS OF THE STERILITY OF PREPARED LINKS

A series of links were prepared, without aseptic precautions and immersed for two to eight hours in 2 per cent. and 4 per cent. formalin. This entire series proved sterile. A similar series of links were infected with the spore-bearing *Bacillus anthracoides*, incubated for forty-eight hours, immersed for one to thirty-six hours in 2 per cent. formalin and then tested after thorough removal of the formalin. No growth took place in the tubes subjected to formalin for more than ten hours. Numerous control experiments showed abundant growth.

SUMMARY

1. The links are prepared by cuffing dog's carotids at both ends over Crile's tubes, stretching them on a wire frame and fixing them for twenty-four hours in

2 per cent formalin. The formalin is removed by two changes of sterile salt solution (thirty to sixty minutes each), and the links permanently preserved in sterile paraffin oil.

2. Of twenty-six transfusions performed by means of prepared links, but one failed (owing to kinking of the vessel during its preservation).

3. The method of preservation kills bacteria, including spore-bearers.

4. The technic of transfusion corresponds closely to that used in intravenous saline infusions.

As far as can be predicted, the use of the prepared links affords a simpler and easier method than those hitherto described, and it is hoped that it will soon receive trial on the human subject.⁸

In conclusion we desire to express our obligations to Dr. T. Mitchell Prudden for extending to us the courtesies of the laboratory, to Dr. Carrel for his kindness in permitting us to use his method of preparing vessels before he had published it, to Dr. H. Zinzer for supplying us with test cultures, and to Dr. Simons for assistance in the bacteriologic tests.

983 Park Ave.

THE INCUNABULA IN THE SENN COLLECTION AT THE JOHN CRERAR LIBRARY *

AKSEL G. S. JOSEPHSON

Cataloguer, the John Crerar Library
CHICAGO

The most interesting part of the Senn collection is undoubtedly the library of Professor Wilhelm Baum, of Göttingen, which Dr. Senn purchased at auction in 1885. Professor Baum was one of the most learned surgeons of his time and exercised a wide influence on succeeding generations of students and physicians, both as a teacher and practical surgeon, although he wrote practically nothing after receiving his degree in 1822. From 1829 to 1842 he was the head of the city hospital in Dantzic, and from 1842 to 1875 held positions as professor of surgery, first at Greifswald, afterward at Göttingen. After his retirement in 1875 he spent his leisure in collecting material for a history of surgery, though he never came so far as to write any part of it. Dr. Baum was a book collector all his life, and he placed his library most generously at the disposal of other students; it is a working scholar's library, not a bibliophile's; there are no tall copies in it, no books printed

8. Through the kindness of Dr. A. V. Moschcowitz we have recently had the opportunity of performing a transfusion on a human being by our method. Technically the operation was as simple as when performed on animals. The blood ran freely for six minutes and then ceased to flow. During this short time the hemoglobin rose from below 10 per cent. on the Sahli scale to 20 per cent.; next day it was found to be 27 per cent.

From this single trial we have learned that the method proposed is as devoid of danger as other methods. We have found that a cannula corresponding to the outside diameter of the radial artery is readily introduced into this elastic vessel, and that the link may be advantageously reduced to a length of two or two and a half inches.

The stoppage of the flow was due to a small clot at the venous end of the link, within the vein; for when the cannula was withdrawn from the vein, the blood spurted freely through the link. The only partial success of the trial was, in our opinion, due to the deposit of a copper salt on the surface of the link. This may be avoided (as mentioned in Note 5) by using cannulae and wire frame both gold-plated.

* Read at a regular meeting of the staff of the John Crerar Library, March 24, 1909; also at the annual meeting of the Chicago Chapter of the Bibliographical Society of America, April 29, 1909. The historical data in this paper have been taken chiefly from Puschmann's "Handbuch der Geschichte der Medizin," Gurlt's "Geschichte der Chirurgie," and Sudhoff's "Tradition und Naturbeobachtung in den Illustrationen medizinischer Handschriften und Frühdrucke."

on vellum, comparatively few remarkable for rarity. The auction catalogue contains over 3,000 numbers, of which 894 come under the head of surgery, 434 under pathology, 270 under anatomy, physiology, etc., 122 under history and bibliography. Early medical and surgical writers are very largely represented, both in early and modern editions; the catalogue contains under this head about 600 numbers, and 15 or 16 of these were printed in the fifteenth century.

The object of the earliest printers was to reproduce manuscripts. If we keep this in mind, we shall better understand two peculiarities in which the incunabula and other early printed books differ from those of more modern times. It had not been the custom of the scribes to use a whole sheet of paper or vellum for a title-page; the material was much too expensive for such waste; and they were not in the habit of signing their names at the end of the manuscripts. The development of the title-page in the early printed books is an interesting chapter, but it would carry us too far to go into that subject now; as to the adding of the printer's name at the end of the book, in the colophon, I only wish to call attention to the fact that, while the scribe did not put his name at the end of the manuscript, the rubricator did, and the first book that contains in the colophon the name of its printer, the celebrated 1457 *Psalterium*, is particularly remarkable for its beautiful illuminated initials which were not painted by hand, but printed in colors from type, and to this fact the printers, Johann Fust and Peter Schöffer, call particular attention in the colophon.

The oldest book in Dr. Baum's library was printed in 1487, in Venice, by Baptista de Tortis. It has no title-page, nor is there anywhere in the book an indication of what its title might be; the first page is blank, the second contains the table of contents, which fills the whole page. The third page begins: "Incipit isagoge Joannitii ad tegni Galieni." i. e., "Here begins Johannitius' introduction to Galen's *Microtechnē*," which latter is the first work contained in the volume. As a matter of fact, the volume is a collection of medical treatises, translated from the Greek into Arabic by the above-mentioned Johannitius, or Hunain ibn Ishāk, and from Arabic into Latin by Gherardo of Cremona. Other editions of the collection give it the title "*Articella*." Hunain ibn Ishāk was the most famous of those Arabic translators who did so much to preserve Greek literature during the middle ages. He was born in the year 809 and studied under the celebrated Mesuē in Bagdad, in which city he, after having spent some years in travel, settled as physician to the khalif; the latter encouraged him particularly in his translating the works of Greek medical writers into Arabic.

Bound with "*Articella*" is a copy of Avicenna's "*De anima*," the only edition of this work that was printed alone in the fifteenth century; the date of printing is not given, but it is probable that it was printed about the same time as the "*Articella*"; the printer was Antonio Careano of Pavia. The two books are bound together in wooden boards covered by pressed leather with metal corners and clasps, though the main parts of the clasps have been broken off. On the outside of the front cover is a piece of vellum pasted on to it, with the inscription in medieval hand: "*Articella Avicenna de anima*."

An editio princeps of interest is the 1492 edition of John of Gaddesden's "*Rosa Anglica*," printed also in

Pavia, by Leonardo Gerla, for Giovanni Antonio Birreta, whose mark we find on the last page. It was the 1502 edition of this book that, on account of its somewhat peculiar, though perfectly correct imprint date, caused some bibliographers and librarians to record an edition of 1516, as Mr. B. A. Finney has told.¹ The author of this book is mentioned in Chaucer's "*Canterbury Tales*," and it has been suggested, it would seem with good reason, that he was the model for the "doctor of phisicke" of whom Chaucer says that "in all this world ne was ther none him like"; he was certainly one of the best known medical men of his time, and his book supplies much information as to medical practice and custom during the fourteenth century.

A book that is of interest on account of its publisher, as well as the author of the first work printed in it, is a collection of surgical treatises, beginning with Guy de Chauliac's "*Chirurgia magna*," or, as the author himself called it, "*Collectorium artis chirurgicæ medicinalis*." Guy de Chauliac was, from the year 1342 to his death, some time in the decade beginning 1360, physician to the popes in Avignon and a friend of Petrarch, though the latter otherwise was not favorably inclined toward the medical profession, and particularly not friendly to the physicians attached to the papal court. The "*Collectorium*" is, as its name implies, a compilation, but is of more value than most books of its kind and time, and served as a text-book of surgery as late as in the eighteenth century; the introductory chapter contains a short history of surgery, and we find also in the work an eye-witness' account of the Black Death which ravaged Avignon during his residence there. In this book we have an example of an embryonic title-page which briefly enumerates the titles of the work contained in it. It is printed by Simon of Lovere in Venice, in 1499, for Andrea Torresano, whose daughter Maria this same year married the elder Aldus Manutius; after Aldus' death and during the minority of his sons, Torresano was the manager of the Aldine press. This copy has a beautifully illuminated initial on the first page and a miniature in the margin of the same page.

Giovanni Michele Savonarola, grandfather of Girolamo Savonarola, is the author of two books bound together in pressed pig skin. He was born in Padua, where he received his degree of Doctor of Medicine and later became professor at the university. His "*Practica de ægritudinis*," the book bound first in the volume (the second being his "*Canonica*"), is a general handbook of medicine, based on his observations and experience, and is regarded as one of the best medical works that have come down to us from the middle ages. Both of these books were printed by Bonetus Locatellus for the publisher, Octavianus Scotus.

Two other books were issued by the same printer and publisher—the "*Practica*" of Yuhanna ibn Sarapion, a Syrian, by some called Janus Damascenus, but not to be confused with the elder Mesuē, who is also known by that name; and Pietro di Argellata's "*Chirurgia*," in which the author, who was professor at Bologna, quite frankly acknowledges mistakes in his practice and discusses them as warnings to his students.

Another printing-press in Venice which is represented here is that of the brothers Giovanni and Gregorio di Gregorii, from which several medical works were issued, both during the fifteenth century and the beginning of the sixteenth. Four books under consid-

1. Papers and Proc. Bibliograph. Soc. of America, I, 71-74. Also Dock, George: Janus, Harlem, 1907, xii, 425-435.

eration were printed by them: Alessandro Benedetti's "Collectiones medicinæ," a small pamphlet without place, date or printer and by Mlle. Pellechet ascribed to Aldus, though Robert Proctor has since shown that the book was printed from types that belonged to the Gregorii; Bernard de Gordon's "Lilium medicinæ," highly valued for its clearness and conciseness, and which gives a good idea of the standpoint of medicine in the thirteenth century; its author was professor at Montpellier from 1285 and dictated the present work to his students in the year 1305; the book has a wood cut on the title-page to the index, that to the work itself being quite plain.

"Theierisi," or "Altheisir," is the title of the third book in this group; it has for its author Avenzoar, the latest of the great Arabian physicians.

The fourth book, called "Fasciculum Medicine," is of interest on account of its illustrations, which are the earliest examples of anatomic drawings reproduced in wood cuts, though the present edition, printed in 1500, is not the first (the first edition was printed in 1491); the author of the book, Johannes Ketham, was a German physician, living in Italy, but of whom nothing further is known; it should be said, though, that the illustrations are not original with him; some of them are of interest for the student of the history of costume and furniture.

Mondino da Luzzi's "Anathomia" is one of the three books in the collection that were printed in Germany. It has neither place, date nor name of printer, but it was printed with the same types with which Martin Landsberg printed in Leipsie after 1492, and has, therefore, been assigned to this printer; it was printed before 1500. Mondino was the first anatomist since the time of the Ptolemys to dissect human bodies, and his book was intended as a handbook for anatomic exercises. From 1290 to his death in 1326 he was a teacher at the university of Bologna.

The other two books printed in Germany are bound together; they are not medical in character, though one of them, Bartholomæus Anglieus (or Glanvilla's) encyclopedia, "De proprietatibus rerum," contains a good deal of medical information. It was printed with types used by a printer in Heidelberg whose name is not known, but who is commonly spoken of as "the printer of Lindelbach," after the title of one of his books. The work bound together with this, Werner von Rolewinck's "Fasciculum temporum," was one of the most popular books of its time. Leo Baer, in his work, "Die illustrierten Historienbücher des 15. Jahrhunderts," enumerates not less than thirty-four editions of it printed before the year 1501; the first two editions were printed in the same year, 1474, both in Cologne, but by different printers; the present edition is one of several printed by Johannes Prüss in Strassburg in the decade beginning 1490; but it does not bear his name nor is it dated. The author of this work was a Carthusian friar and inmate of the St. Barbara monastery in Cologne, where he died in 1502, 77 years of age. He was the author of several books, both historical and theological.

One volume still remains to be mentioned, though it is likely that it should not have been classed among the incunabula. It is an anonymous edition of the "Regimen Sanitatis Salernitanum," with Arnoldus de Villanova's commentary, a versified essay on hygiene prepared by the physicians connected with the famous school of Salerno for the benefit of Duke Robert of

Normandy, who in 1096 visited his relative, Duke Rugiero of Salerno, on his way to take part in the first crusade. Hain, Mlle. Pellechet and other bibliographers count this edition among incunabula, but Robert Proctor does not include it in the first part of his "Index to Early Printed Books in the British Museum," but merely refers to it as being "not fifteenth century." For my part, I have not been able to come to any definite conclusion, but have followed the lead of the majority in assigning to it tentatively the date 1500; I may say, however, that I have not been able to identify the type with which it is printed with any of those described in Haebler's "Typenrepertorium der Wiegendrucke"; when the section for Italy of the second part of Proctor's "Index" appears we shall probably be able to determine the date of the book; it is also probable that a closer study of the wood cut on the title-page will help to solve the problem.

STREPTOCOCCIC INFECTIONS OF THE THROAT *

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During the past few months a great deal of attention has been attracted to the subject of streptococcic infections of the throat, and there have been two contributions to the literature of the subject which are of more than ordinary interest. At the Chicago meeting of the American Medical Association last June, Dr. Alice G. Bryant, of Boston, read a paper¹ describing a series of cases in which the infection fastened on the so-called adenoid tissue found in the pharynx, and in which there were marked symptoms of infection, with temperature ranging from the neighborhood of 100 to 104 F., and at times a free discharge from the nose of a creamy consistency, masses of adenoid tissue sometimes being found in this discharge. Bacteriologic examination of the discharge in the cases reported by Dr. Bryant showed streptococci in abundance.

By far the most interesting article that I have seen on the subject, however, is that by J. O. Hollick,² Medical Officer to the Midland Counties (England) Idiot Asylum, in which is reported an epidemic of streptococcic or "septic" throats which prevailed in the asylum during April of last year, also a similar epidemic in his private practice. The first outbreak was thought to be due to the Klebs-Loeffler bacillus, but bacteriologic examination showed an absence of diphtheria and diphtheroid bacilli, with a plentiful growth of both streptococci and staphylococci. The epidemic occurred first among the nursing staff, and then spread to a number of the inmates. The general symptoms are summarized by Hollick as follows: malaise and pains in the back and neck were prominent, and violent headache in a few cases; no vomiting or other abdominal symptoms. Evening temperature often rose to 104, morning temperature 100 Fahrenheit. Slight soreness existed on one or both sides of the throat and difficulty in swallowing; the submaxillary and glands adjacent to the angle of the jaw and in the triangles of neck enlarged and tender. One or both tonsils showed creamy

* Read before the Memphis and Shelby County Medical Society, March 2, 1909.

1. Streptococcic Infections of the Pharyngeal Adenoid Tissue in Adults, THE JOURNAL A. M. A., June 13, 1908, 1, 1963.

2. Lancet, London, Dec. 19, 1908.

white secretion, with angry-looking areola of inflammation extending to the anterior pillar of the fauces, and the uvula was often swollen and intensely edematous. There were no points of follicular exudation on tonsils. Urine febrile, and in some cases slight traces of albumin. The exudation rarely extended beyond the anterior pillars of the fauces to the front, or beyond the posterior pillars behind, but much mucopurulent secretion was observed to exude from the lymphoid follicles over the vault of the pharynx, and signs of nasal obstruction pointing to a general engorgement of the lymphoid tissue around the posterior nares and extending through the nares anteriorly were often evident. The exudate in no case extended over the soft palate or uvula. In from two to four days, according to the severity of the infection, the symptoms and local signs decreased, glandular swelling and tenderness remaining for some days or weeks after clearing up of the other symptoms. A tendency to relapse was shown in several cases after subsidence of the temperature.

No sooner had this epidemic abated than one of a similar but severer character occurred in Hollick's practice at a private preparatory school in the same neighborhood. There was a history, before the beginning of the epidemic, of one boy returning to school who had had a sore throat which had imperfectly cleared up. In two or three weeks later a boy was seized with convulsions, and when Hollick saw him after the abatement of the seizure, his temperature was 103 F.; he complained of no sore throat, but his cervical glands were enlarged and tender. When seen next day he had a creamy secretion over both tonsils, but not extending onto the palate, uvula, or faucial pillars. There was much angry congestion over the latter, and he now complained of much difficulty and pain on swallowing. Four other boys on this day were put to bed with rise of temperature, tenderness over the cervical glands, headache, malaise, and some pain on one or both sides on swallowing. One of these showed much cervical glandular enlargement and had a more suspicious look about his fauces and tonsils than the rest. A swab from his throat showed Klebs-Loeffler bacilli. He was treated with 4,000 units of antitoxin. It proved to be a severe case of diphtheria of the fauces and nares, with marked heart and kidney trouble, and the patient succumbed fourteen days after onset of symptoms of cardiac failure.

Swabs from other throats showed Hoffman's diplococci and streptococci but no diphtheria bacilli. Boys fell down like ninepins, says Hollick; in all thirty cases developed, but only in one other of these was the specific bacillus found, this case proving, however, to be very mild.

Hollick calls attention to the well-understood possibility of a "diphtheritic" supervening on or accompanying a "diphtheroid" infection, or of a streptococcal infection going hand and hand with both and gaining sometimes the upper hand.

My reason for quoting so freely from Hollick's article is that he very accurately describes a condition which has prevailed during the past winter to no little extent in Memphis, and also in the surrounding country, and because his experience has been similar to a recent one of mine.

Recently I have had a number of cases of mixed streptococcic infection of the throat to deal with, and the severity of the symptoms in these cases has at times

corresponded with some of the cases reported by Hollick. I shall here report more or less in detail some of the cases that have come under my observation.

CASE 1.—*History*.—Lavina M., aged 7, seen through the courtesy of Dr. J. A. Crisler, of this city, was brought to my office on November 1, 1908, with a history of having had a severe headache and fever about a week before, since which time her nose had been stopped up and she was unable to breathe through it at all, especially at night. She had been complaining of sore throat for several days, and the mother stated that while she had no thermometer, she was convinced that the child had been having fever. In the meantime, distressing to relate, the child had been going to school.

Examination.—This revealed a confluent pseudomembrane on both faucial tonsils, and extending back onto the pharynx, involving the lateral pillars. Both nares also were filled with this pseudomembrane. There was considerable glandular enlargement on each side of the neck. There was no elevation of temperature (axilla). On removal of portions of the pseudomembrane from the tonsils and pharynx a bleeding surface was left. Swabs and pieces of membrane were immediately taken from the throat and also from the nose, and culture tubes inoculated. Repeated examinations made from these tubes revealed no diphtheria bacilli, but streptococci were found in abundance associated with staphylococci.

I did not see the child again, but heard later that she was entirely well.

As an infection-carrier this patient certainly was a good example, and the anomalous condition of a pseudomembrane, but no diphtheria, was present.

CASE 2.—*History*.—Charles M., aged 12, was seen by me at his home Dec. 30, 1908. The child had a sore throat and headache, with high fever, for a day or two, accompanied by a purulent discharge from both nares. There was a very disagreeable odor to the nasal discharge, which was detected immediately on entering the room.

Examination.—The boy's throat showed a creamy exudate on either tonsil, without any extension to the soft palate or pharynx. There was a similar creamy discharge from both nares. There was no membrane whatsoever. The submaxillary glands on both sides were considerably enlarged. Temperature at this time was 101.4 F., pulse 102 and very full.

Course of Disease.—The opinion expressed by me to the boy's mother was that the case was very suspicious of faucial and nasal diphtheria, and instructions given to isolate the patient. The next morning at 9 o'clock the temperature was 99, pulse 90, and the child much better. Convalescence was uninterrupted. Cultures made from swabs taken from both nose and throat revealed almost pure streptococci, diphtheria bacilli not being found on repeated examinations.

CASE 3.—Corinne M., aged 5, sister of previous patient, developed a sore throat, running nose and considerable fever January 9.

Examination.—When seen by me on the 10th the faucial tonsils showed some creamy exudate, with no extension from the tonsils, temperature 102 F., and some enlargement of the submaxillary glands. There was also the same discharge from nares as seen in the previous case, accompanied by the same odor. Swabs were immediately taken from the nose and throat. When the patient was seen next morning the temperature was the same—102 F., pulse 104, and submaxillary glands somewhat more swollen. Bacteriologic examination of spreads from cultures showed a mixed infection of streptococci and staphylococci, the former in great majority, no Klebs-Loeffler bacilli being found in the cultures grown from the swabs taken from either the nose or the throat. On this second morning I suggested antitoxin, but the mother was prejudiced against this agent, saying that she was more afraid of antitoxin than diphtheria, and despite some suspicious symptoms at this time, I did not feel that in the face of this prejudice and the negative bacteriologic report I should urge the use of the serum. Inasmuch as I was very suspicious of the condition of this second child, I repeatedly called for reports from the cultures, but frequent examinations, and these made by several competent physicians, failed to reveal Klebs-Loeffler bacilli.

Course of Disease.—The next morning the child's temperature was normal, pulse 102. The following morning the mother telephoned me that the temperature was 102, and in the afternoon 100 F. At 8 o'clock in the evening the child began to bleed freely from the right naris, and after ineffectual attempts on the part of the mother to control this I was called and reached the house at 11 o'clock. I soon succeeded in controlling the hemorrhage, which I judged was septic in character. The next day, the 13th, not being satisfied with the condition presenting, I again asked for a bacteriologic report, and was told then that a few Klebs-Loeffler bacilli could be found in one of the cultures. The child was immediately given 5,000 units of antitoxin and such supportive treatment as was regarded necessary. The urine was found to contain considerable albumin. The morning of the 15th 3,000 units more of antitoxin were given. Temperature at this time (rectal) was 101.6 F., and pulse 76. The child raised herself up about 12 o'clock that day, collapsed and died.

CASE 4.—Miriam M., aged 14, schoolgirl, sister of the previous two patients, developed sore throat and temperature of 102 F. the night of January 14. The next morning a creamy exudate was found on both tonsils, with considerable faucial congestion, but no extension to surrounding parts. The exudate on the tonsils in this, as in the previous cases, had nothing characteristic of diphtheria about it. Five hundred units of antitoxin had been given the child the night before, and 3,000 units additional were now given her. There was no nasal discharge. Cultures from the child's throat showed an abundance of streptococci with some staphylococci, but positively no diphtheria bacilli. Swabs were taken morning and evening, thus giving a control. There was no albumin in the urine.

This case ran practically the same course as that of the boy Charles, who had received no antitoxin; and this patient (Miriam M.) was apparently free from the effects of the disease forty-eight hours afterward. Repeated examinations of the cultures grown in this case made by several competent men showed an entire absence of diphtheria bacilli.

This series of cases in one family had some very peculiar features. Every effort was made to ascertain the presence of diphtheria bacilli, and the cultures were made from swabs vigorously rubbed over the exudate in all the cases, and grown on Loeffler's blood serum mixture. Dr. B. W. Fontaine, who very kindly grew the cultures and made the bacteriologic examinations in his laboratory, was not contented merely with his examinations, but had several other men to study the slides with him. The case last reported ran the same course as that of the first case in the family, and the antitoxin could not be said to have exerted any influence on the course of the disease, for the duration of this case was no shorter than that of the boy who was not given antitoxin. In the case of the child who died, there was an entire abatement of the symptoms for one day, and it seems as though in this case the mixed infection here presented was characterized by an inhibition of the growth and effects of the diphtheria bacilli due to the preponderance of streptococci. This has been observed in other cases, and it has been my experience, and I am sure that of others, that where we have this virulent type of mixed infection a fatal termination is almost inevitable, and antitoxin given even in the earliest stages lacks the potency which seems to be associated with its use in infections with the pure Klebs-Loeffler bacillus. Kyle³ says, "The presence of streptococci, in addition to the *Bacillus diphtheriae*, augurs ill for the patient, because to their effects are due the complications of the more malignant character." The fatal termination in this case was probably further assured

by the violent septic hemorrhage, which doubtless weakened the child considerably, although this was not shown by the condition of her pulse the next day. Considering the readiness with which diphtheria bacilli are grown on proper culture media, the ease with which they are isolated, and also the repeated examinations of the cultures in these cases, there could be no question of faulty technic causing failure to find the specific bacillus in those cases here reported as failing to reveal this. Furthermore, there was nothing characteristic of diphtheria in the tonsillar exudate, and the clinical course of the disease in all but the fatal case was unusually short, while the temperature ran much higher than commonly is found in diphtheria, and in none of these cases was there any membrane whatsoever, nor extension from the tonsils, features diagnostic of diphtheria. The diphtheria infection in the case of Corinne M. probably was secondary in its effects to the streptococcus infection, and the virulent mixed infection very likely would have been fatal under any circumstances.

Before passing from this series of cases, I should also mention that a young nurse, probably 19 or 20 years of age, who, for about forty-eight hours, was with the patient who died, was taken sick the night that she left the house, and the following morning had an exudate on her tonsils similar to that of the cases reported. The serum tube inoculated by me from her throat grew immediately a culture of streptococci with a few diphtheria bacilli. This girl received, I believe, about 800 units of antitoxin, but was practically over the attack in forty-eight hours.

CASE 5.—R. T. C., male, aged 34, came to my office with temperature of 100 F., a slight exudate on both tonsils, and some glandular enlargement. Culture showed streptococci and staphylococci, the former predominating. This patient did not stop work, and was free of fever in about two or three days after I first saw him.

The next case is more interesting.

CASE 6.—*History.*—Miss Virginia G., aged about 30, seen through the courtesy of Dr. Edward D. Mitchell, began to have severe sore throat about a week previous to the day that I first saw her. She had some pain in the right side of her chest a week before this, but no symptoms of pneumonia. Her fever had been running as high as 104 F. in the afternoons, but was usually lower in the mornings. The throat pain was quite severe, being more pronounced in the right side, and reflected to the ear. The back of the head and neck on this side were very tender.

Examination.—This showed considerable faucial congestion, with some edema of the soft parts—edge of velum palati, etc. There was no exudate on the tonsils at all. The right cervical glands were enlarged and tender, and the least pressure seemed to cause excruciating pain. The temperature at the time that I first saw the patient was 102 F.

Course of Disease.—Ice to the back of the neck and a fever mixture were ordered, and the next morning the temperature was normal and the patient felt decidedly better. The following day, however, I received a message that she was suffering greatly, even more than she had at any time previously. On calling at the house I found the throat in the same condition of congestion as before, and the glands just as swollen and painful. Her temperature was 101 F. While there was nothing showing in the throat other than congestion, I swabbed the affected side and inoculated a culture tube. The same treatment as previously advised was continued. The next day the patient was decidedly better, and convalescence was uninterrupted. The culture showed a mixed growth of streptococci and staphylococci.

3. Diseases of the Nose and Throat, 1907, p. 488.

Marschik⁴ recently reported from Chiari's clinic a case of septic hemorrhagic pharyngitis occurring in a man 54 years of age, which ended fatally in fourteen hours, and in which the streptococcus was found in almost pure culture. While ordinarily we do not expect a streptococcus infection of the throat to terminate fatally, yet we are not justified, apparently, in giving a favorable prognosis in any of these cases, since we can not determine when the condition may assume a malignant type. Bearing this statement out is the history of a case recently seen by me in consultation.

CASE 7.—History.—On March 10, 1909, I was asked by Dr. E. M. Holder to see Mrs. P., aged about 32, who had been under his care for about three weeks. Dr. Holder stated that when Mrs. P. came to him at first she had an eruption over her body which he regarded as a possible lues, and for which he gave her mixed treatment. There were also some rheumatic symptoms. This eruption disappeared, and a short while afterward the patient developed considerable glandular enlargement of the left side of the neck, there subsequently being some soreness of the throat. This enlargement was at first confined to the glands, but later involved the periglandular tissue, until it resembled an acute phlegmon. The patient had been having some fever and was flighty at times. She was sent to the Presbyterian Hospital the morning of the day that I saw her, and an incision was made by Dr. Holder through the most boggy portion of the involved area, but pus was not found. A few days prior to this a clear blister resembling pemphigus was noticed on one finger, but no other blebs were found. The patient was very much depressed, and seemingly in a grave condition from the sepsis.

Examination.—I found Mrs. P. in a lethargic, almost stuporous condition, but mentally clear. Her temperature was 99.4 F., with small, fast pulse. There was a large and brawny swelling of the glands and periglandular tissues of the left side of the neck, especially marked low down toward the clavicle. No fluctuation was detected anywhere. The throat showed no distinct peritonsillar swelling, and there was no exudate on the tonsil, although there was some edema of the uvula. I inoculated a culture tube with a swab which had been rubbed over the peritonsillar region of the left side of the throat, and the next morning received a report of a rich growth of streptococci.

Course of Disease.—This patient was being given supportive treatment by Dr. Holder, and nothing else was regarded as advisable. The case went on to a slow recovery. The prostration in this case was very marked, and an excellent illustration of the virulency of the infection.

Memphis Trust Building.

ADVERTISING BY PHYSICIANS*

JOSEPH GRINDON, M.D.

ST. LOUIS

A discussion of the ethics of advertising may at first seem superfluous to the respectable physician, or, at least, not to interest him personally. "A gentleman," he will say, "knows how to conduct himself without consulting a written code. Reputable physicians do not advertise, and therefore nothing more need be said on the subject." But we are sometimes called on to pass judgment on the acts of others, and then the dictates of a sound conscience, which are sufficient to determine one's own conduct, require to be formulated into rules, in order that we may proceed with that order essential to justice. But, besides, is it true that reputable physicians do not advertise? Is it not rather true that all physicians, consciously or unconsciously, willingly or unwillingly, advertise and are advertised?

Is the trail of the serpent, then, over us all? Not at all. For there is objectionable advertising and unobjectionable advertising, differing in form, but still more in intent, and the gulf between the charlatan and the true physician exists, not from the fact that the one advertises and the other does not, for both do, but from the kind of advertising practiced by each.

I can almost see the hot wave of anger mounting to the faces of some of my honest friends at these words, while they can hardly suppress the vigorous protest rising to their lips. But, my dear doctor, have you never had a card printed with your name, address and office hours? I admit that it was not intended for advertising purposes, but is it not at least potentially an advertisement? Do not your name, occupation and address appear in the city and telephone directories? That, you say, is merely for the convenience of your patients, but, none the less, there it is, plain for all men to see. Have you no sign on your door or window? You don't mean it as an advertisement, maybe, but it is one, all the same. And your biggest and best paying advertisement is your title of "Doctor" by which you are everywhere addressed.

Let us then consider what is proper in the way of advertising, and what is not. And first let us see in what set terms the wisdom of our profession in this country has from time to time expressed itself on this subject. It will be useful not only to cite the text of the national pronouncement now recognized, but also from codes and similar formulas in force in earlier times and in various parts of the land, inasmuch as we wish to know not only the written law which can be invoked to-day, but the sentiment of the American profession on this subject from its earliest expression. We need not be surprised if we find the oldest and the newest in close accord.

The earliest dictum on this subject I have found is one by the New York State Medical Society. On Feb. 27, 1823, "A System of Medical Ethics" was reported to that body by a committee appointed for that purpose, and was adopted.¹ We read under heading "Quackery," Division II, Section 6:

Public advertisements or private cards, inviting customers afflicted with defined diseases; promising radical cures; engaging for no cure, no pay; offering advice and medicines to the poor, gratis; producing certificates and signatures even from respectable individuals in support of the advertiser's skill and success, and the like, are all absolute acts of quackery, which medical institutions should always repress and punish by the rejection or expulsion of those who commit them.

The American Medical Association, at its first annual session, in May of 1847, adopted a "Code of Ethics,"² which continued as its formal expression until superseded by the "Principles of Ethics" in 1903. We read in the "Code," Article I, Section 3:

It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor gratis, or promising radical cures, or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics and are highly reprehensible in a regular physician.

1. Tr. Med. Soc. State of N. Y., Volume for 1807-1831, p. 233. Reprinted 1861, p. 282.

2. First published in the Transactions xviii, 523. Before that it appeared in a small pamphlet.

4. Monatsschr. f. Ohrenh., xliii, No. 1.

* Read before the St. Louis Medical Society, Feb. 6, 1909.

The Code of Ethics was adopted by the St. Louis Medical Society June 18, 1850.

The Massachusetts Medical Society, Feb. 4, 1880, adopted a Code of Ethics.³ Its provisions on the subject of advertising are very brief and concise:

He (the physician) should not . . . advertise himself or his practice in public print.

In 1882 the Medical Society of the State of New York adopted a code of its own, varying from the code of the American Medical Association in some important particulars, chief among which was the matter of consulting with irregular practitioners. This "New Code," as it came to be called, was adopted February, 1882, by a vote of 52 to 18. That year the delegates of the state society were refused admission to the American Medical Association by the Judicial Council, and remained out until 1906. This led to the formation of the New York state and county medical associations in affiliation with the American Medical Association.

In the matter of advertising, however, the New Code was, if anything, more stringent than the old. I reproduce the section in question, placing in italics the words not found in the old code. The final sentence of the latter, beginning, "These are the ordinary practices of empirics," was omitted from the New York document:

It is derogatory to the dignity and interests of the profession for physicians to resort to public advertisements, private cards or handbills, inviting the attention of individuals affected with particular diseases, publicly offering advice and medicine to the poor, *without charge*, or promising radical cures, or to publish cases and operations in the daily prints, or to suffer such publications to be made; *or through the medium of reporters, or interviewers or otherwise, to permit their opinions on medical or surgical questions to appear in the newspapers;* to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform other similar acts.

The American Medical Association adopted, March 28, 1891, certain "ordinances" supplementary to the code, and binding equally with the original document. Among these were the following:⁴

Resolved, That it shall not be proper for specialists publicly to advertise themselves as such, or to assume any title not specially granted by a regular chartered college.

Resolved, That private handbills, addressed to members of the medical profession, or by cards in medical journals, calling attention of professional brethren to themselves as specialists, be declared in violation of the Code of Ethics of the American Medical Association.

These ordinances, now superseded by the Principles of Ethics, have been widely disregarded, as is evidenced by the frequent use of the words "practice limited to" such a specialty on the cards of men generally and properly rated as in good standing.

At the meeting of the American Medical Association at Saratoga Springs in 1902, a resolution was offered in the House of Delegates⁵ to the purpose that the revision of the code approved by the council of the New York State Medical Association (in affiliation with the American Medical Association) be examined by a committee and reported on in 1903. The resolution being adopted, a report was accordingly submitted the year following, differing widely in some particulars from the letter, although not from the spirit of the old code. The report says:⁶

The caption, "Principles of Medical Ethics" has been substituted for "Code of Medical Ethics" . . . the committee deemed it wiser to formulate the principles of medical ethics without definite reference to code or penalties. Large discretionary powers are thus left to the respective state and territorial societies to form such codes . . . as they may consider proper, provided, of course, that there shall be no infringement of the established ethical principles of this Association.

These "Principles" were unanimously adopted by the House of Delegates, at New Orleans, on May 7, 1903. The language of the principles in reference to advertising is as follows:

ART. 1. SEC. 7. Advertising methods to be avoided.

It is incompatible with honorable standing in the profession to resort to public advertisements or private cards inviting the attention of persons affected with particular diseases; to promise radical cures; to publish cases or operations in the daily prints, or to suffer such publications to be made; to invite laymen (other than relatives who may desire to be at hand) to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to employ any of the other methods of charlatans.

The St. Louis Medical Society, besides subscribing from the first and ever since to the Code, Ordinances and Principles of the American Medical Association, has from time to time enacted by-laws of its own, prohibitive of advertising and related methods. Thus we read in the "Constitution and By-laws," published in 1896, as follows:

BY-LAWS, ART. 1, SEC. 13: No person holding any patent, or part thereof, for medicines or secret remedies for disease, or who shall, by publication in newspapers or otherwise, announce his pretensions to superior qualifications in any particular disease or diseases; or who shall resort to public advertisements, or private cards or handbills, inviting the attention of individuals affected with particular diseases; or publicly offer advice or medicine to the poor, gratis; or promise radical cures, or publish cases or operations in the daily prints, or suffer such publications to be made, or invite laymen to be present at operations, or adduce certificates of skill and success, or perform any other similar acts, shall be eligible to (or) retain membership in this Society.

In 1900 (By-laws, Art. XXIV, Sect. 2) the above language was repeated almost exactly, and there was added to the list of reprehensible practices "the announcement of the use of secret methods of cure" and "paying or offering any salary, bribe or commission in return for patients procured, or accepting the same, or employing others to do any of these things, shall, among other things, be considered gross misconduct in the sense of the preceding section."

Our present by-laws (adopted October, 1907) do not enumerate various forms of misconduct, but specifically endorse the Principles of Ethics of the American Medical Association in the following language:

BY-LAWS, CHAP. 1, SEC. 5. Misconduct.

Any member guilty of gross misconduct, either as a physician or a citizen, or of violating any of the provisions of this Constitution and By-laws, or the Principles of Medical Ethics of the American Medical Association, shall be liable to censure, suspension or expulsion.

Having thus reviewed the letter of the law as formulated in various times and places, let us seek to penetrate its true spirit, and thus learn in what ways it is proper, if any, for the physician to bring himself to the attention of the public.

physician to the public, may be divided into five classes.

Advertisements, or let us say notices, addressed by the

3. *Bost. Med. and Surg. Jour.*, 1880, cli, 256.

4. *Tr. A. M. A.*, 1869, xx, 28.

5. *THE JOURNAL A. M. A.*, 1902, xxxviii, 1649.

6. *THE JOURNAL A. M. A.*, 1903, xl, 1379.

1. Those which are not only uncondemned by the Principles of Ethics, but which are in use everywhere and by the most conscientious physicians. These consist of signs usually not exceeding a foot or two in length, in modest colors, suspended in front of the office, or affixed to a wall or door, or inscribed on a window, setting forth the doctor's name, sometimes with the addition of his hours; and of cards similarly modest in appearance and statement, such cards never to be promiscuously distributed. Even such cards are employed rather as convenient memoranda of the physician's address and hours than as advertisements, although they may unquestionably be applied to the latter purpose by overzealous friends and admiring patients into whose hands they fall.

2. Those not condemned by the Principles of Ethics and in use in certain communities and by certain individuals of unquestioned respectability, while avoided by others. They consist of simple business cards inserted in lay publications, containing the same matter as the ordinary office card. Such announcements were in general use in this country a generation or two ago, are still in common use by practitioners in the smaller towns and in many large cities by practitioners having a foreign-speaking clientele. They are virtually obsolete among English-speaking metropolitan physicians. It might be said of these that they are rather intended as memoranda of address, hours, etc., to those already secured as patrons than to attract new practice. The use of such announcements in certain places and under certain circumstances may be indiscreet, but does not call for formal condemnation.

3. Those not specifically condemned by the Principles of Ethics, but manifestly in contravention of its spirit, and as such universally deprecated by consistent and worthy physicians. Such practices come under the general condemnation of the Principles of Ethics, being included within the meaning of the closing phrase of Art. 1, Sect. 7, "any of the other methods of charlatans." The distributing of cards on the street or from door to door, the use of very large or very showy signs, or the distributing of reprints of medical articles to prospective patients or other laymen might be cited as examples, although the last-named practice will often come directly under the condemnation of "boasting of cures and remedies."

4. Advertisements, veiled in form, oftenest consisting of accounts of cures, operations, alleged discoveries, and so forth, ostensibly written by newspaper reporters, but really furnished by the physician, verbatim or in substance. These are condemned by the Principles of Ethics, are the most dangerous and vicious of all forms of advertising, and arouse the disgust and contempt of all honest men, whether in the medical profession or out of it, inasmuch as they necessarily contain an element of untruth, seeking to conceal their true character, and to secure for their perpetrators the wages of prostitution, while striving to shield them with a cloak of respectability.

Another class of newspaper articles may be mentioned in this connection, varying widely in their true nature and intent, and ranging all the way from some which are not only proper but deserving of commendation, down to those which narrowly escape an infraction of the bare text of the law.

We refer to articles in the lay press dealing with topics of medical interest, or presumably written from a medical standpoint. The subject is a delicate one, for,

while it is usually easy for the discerning reader to discover the true animus of an article, whether, on the one hand, inspired by a genuine desire to instruct and benefit, or, on the other, designed to impress the reader with the writer's attainments and thus secure him as a possible patient, it none the less remains difficult to define each sort in categorical terms. Sometimes the diagnosis is made clear by the presence of pathognomonic symptoms of moral malignancy, such as a more or less flattering half-tone of the eminent professor, a list of his titles and honors, references to his performances and achievements, or again by the frequent recurrence of the first person singular. These characteristics are, however, avoided by the shrewder veiled advertisers.

Rules of general application in deciding as to the true character of such productions may perhaps be deduced from a classification according to their subject-matter.

Articles and interviews by physicians in the lay press, apart from accounts of cases and operations, which need not further detain us, are usually of one of three kinds:

1. Those containing advice.
2. Those discussing scientific points.
3. Those discussing the diagnosis or treatment of some individual case which has gained notoriety.

The advice imparted in the first class of articles may be such as any one easily can and therefore should, if need be, obtain from his regular adviser, and which therefore should not be distributed gratis and unasked. As examples we may cite such titles as "How to Reduce Your Weight" and "What to Do When Baby Has the Measles."

Or the advice may be so generally applicable as to possess real value, and at the same time be such as the reader would probably not obtain from his regular attendant, because he would not think of applying for it. As examples we may cite articles on preventive medicine, such as the prophylaxis of tuberculosis or typhoid, the precautions to be observed in times of epidemic or during extremes of heat and cold, the importance of vaccination, and of the medical inspection of schools; instruction as to first aid in drowning, heat-stroke, poisoning and the like; as to the dangers attendant on the habitual use of alcohol and other drugs, and, again, the exposing of dangerous charlatans and nostrums.

It seems evident, therefore, that of the class of articles conveying advice, some, as those of the sort first mentioned, are, to say the least, open to grave suspicion, while others, such as were last enumerated, may be of great benefit to the community, be purely altruistic in purpose, and therefore should receive the hearty commendation of the profession. This is especially true when they are written by one who is well informed in the matter, and with the ability to put his thoughts on paper, whose recognized position in the profession is such as to lend weight to his utterances, and who has already attained to such honors and rewards as to lift him above any suspicion of harboring sordid motives. The giving of instruction to the public is, indeed, specifically insisted on by the old "Code" and the "Principles" in almost identical terms.

The Principles of Medical Ethics says:

CHAPTER 3. The duties of the Profession to the Public.

Sec. 1 [in part]: They [physicians] should also be ever ready to give counsel to the public in relation to subjects especially appertaining to the profession, as on questions of sanitary police, public hygiene and legal medicine.

Sec. 2 [in part]: It is the province of physicians to enlighten the public in regard to quarantine regulations, to the location, arrangement and dietaries of hospitals, asylums, schools, prisons and similar institutions; in regard to measures for the prevention of epidemic and contagious diseases.

Sec. 4. It is the duty of physicians who are frequent witnesses of the great wrongs committed by charlatans, and of the injury to health and even destruction of life caused by the use of their treatment to enlighten the public on these subjects, and to make known the injuries sustained by the unwary from the devices and pretensions of artful imposters.

Contributions of the second class, those, namely, discussing scientific matters of general interest, are unobjectionable unless so written as to direct attention to the writer rather than to the subject-matter.

Articles falling within the third class, namely, those discussing the diagnosis or treatment of cases which have become notorious, or which affect eminent personages, will, as a rule, deserve the censure of the judicious, for it can not be urged that they serve any useful purpose. The discussion, if proper at all, should be reserved for the medical press, and is out of order in a lay publication, lying, as it does, outside of the sphere of the audience which it addresses. It is difficult even for the charitable-minded to see any purpose in such effusions, except the aggrandizement of the writer.

An opinion on an illness or injury, expressed by a physician who was at no time connected with the case, is not justified by the circumstance that the sufferer is a prominent personage, or that he lives in a distant place. Such public discussion of the diagnosis or treatment adopted for the patient of another practitioner, besides being necessarily based on incomplete and uncertain information, is in itself grossly indelicate and in violation of common justice and common courtesy. These latter considerations are perhaps not germane to the subject of this paper, but it may well be suspected that a public deliverance so unnecessary and so indefensible is prompted by selfish motives. Some of my older hearers may recall certain peculiarly revolting examples of this particular brand of indecency in connection with the sufferings of the lamented President Garfield.

To this same class belong expressions in the public prints as to the sanity of noted criminals. To say nothing of the crying injustice of trying men for their lives in the columns of a daily journal, a casual glance at such learned (?) pronouncements will usually show them to be either garbed in polysyllabic technicalities unintelligible to the non-medical reader, or to deal with matters concerning which the lay mind can not correctly judge, since no subject within the periscope of our science is so difficult, so involved, so beset with subtleties and uncertainties, and so purely a matter for the specialist, as is that of psychiatry. The least grave charge that can be made against "interviews" of this sort is that they argue a weak yielding to the importunities of a reporter and to the alleged curiosity of the public as to matters which are none of their concern, inasmuch as they lie beyond their powers of comprehension. As a matter of fact, however, such articles are generally "interviews" in name only, having been carefully written out by the learned expert who hopes thus to keep within the limelight.

Another debatable form of publicity is that of the *autemortem* biographical notice, often accompanied by a portrait, appearing in bound collections of sketches of "distinguished" citizens, or perhaps in the Sunday edition of a metropolitan paper.

If it concern some individual of such real eminence that his personality has become a thing of interest to the intelligent public, such publication may be excusable, inasmuch as its real and its avowed purpose are then the same. Such a notice is not an advertisement, because it does not seek to create notoriety, but is its consequence. If such notoriety be the unsought fruit of genuine achievement of great value, the publication of a notice or picture may be beyond cavil. Often, however, names and faces so paraded have little claim to distinction.

It may be impossible here in every case to draw a hard and fast line between what is allowable and what is not. Practically, however, if the truth can be learned, the question may be settled, at least in the affirmative, by a simple test: Was the insertion contingent on the payment of a fee, direct or indirect? If so, it is an advertisement, although perhaps not actionable under the letter of our law. The latter point is debatable. The unworthy character of the act is not debatable. It does not follow from what was said above that a notice inserted free of charge is, therefore, not an advertisement.

5. Last among the classes of advertisements by physicians, using the last term somewhat loosely, are the flagrant, undisguised, paid advertisements, generally displaying an alleged picture of the "doctor," his chin either concealed by a patriarchal beard or appearing as a naked plain flanked by flowing side-whiskers; or the portrait may be that of a victim; the accompanying text may be simply mendacious, or again obscene or criminal. These we need not discuss, further than to say that there is something about their boldness which begets a feeling distantly allied to respect, which the more covert performances of their timid admirers and would-be imitators could never do, just as there is a lurid halo about the memory of Jesse James or of Billy the Kid, which is not shared by the Sicilian *ladrones* who picked the pockets of the dead at Messina.

It will be noted that in the foregoing attempt at an analysis of the subject, I have taken the term "advertising" in a somewhat restricted sense, namely, that of reading-matter of one sort or another addressed to the public. I realize that there are many other things, spoken words and actions, which are in a sense advertisements, but apart from the necessity of fixing certain bounds to a subject, and limiting its discussion within these, I feel that a classification of the wider sort mentioned into its orders, families, genera and species, would involve a dissertation on the whole moral law, and is made unnecessary by the commandment, "Thou shalt love thy neighbor as thyself."

I have also left untouched the matter of advertisements of the physician's learning and skill addressed to and intended for the profession. This subject is a very difficult one, while the evils it includes are not of the sort which cry to Heaven, for this reason, if no other, that the medical audience addressed is better able to take care of itself than is the lay public.

To sum up, we may conclude that any notice emanating from a physician which seeks to secure for him an unfair advantage over his fellows, or which departs so widely from established usages as to compromise his dignity, is an objectionable advertisement, and that the greater the pains taken to conceal its true character the deeper is its damnation.

3894 Washington Boulevard.

Clinical Notes**A CASE OF UNDIAGNOSTICATED BRAIN
ABSCESS ***

AUGUSTUS A. ESHNER, M.D.

PHILADELPHIA

Abscess of the brain is not a common affection and it is not rarely overlooked. It is almost invariably secondary to suppuration elsewhere, although it may be a sequel of direct injury to the head. Inflammatory disease of the middle ear is probably the most common causative factor. The symptoms are essentially those of a tumor of the brain plus those of a toxic-infective process. The diagnosis may be exceedingly difficult, if not impossible, without a knowledge of the etiologic agency. In the case to be reported it should have been possible to recognize the condition and to afford relief through surgical measures.

History.—A woman, aged 35, was admitted to the nervous ward of the Philadelphia General Hospital, Feb. 5, 1909, complaining of headache, pain in the back and legs and abdomen, with nausea, vomiting and pain in the left ear. The illness was said to have been of two weeks' duration and to have set in with headache, pain in the lower extremities and back, together with nausea and vomiting. There had also been diarrhea and chills, fever and sweating. The patient went to bed for a day, then arose, and again had to go to bed two days before admission to the hospital. There had been a discharge from the left ear for three months. On entrance into the hospital the temperature was 97 F., the pulse 70, the respiration 25. The temperature soon rose to 102, but it gradually declined to the normal, while the pulse at no time rose above 88 and the respiration above 25. The patient complained of headache and suffered from nausea and vomiting.

Examination.—The pupils were contracted and equal and reacted to light and in accommodation. The ocular movements were well performed and there was no nystagmus. The activity of the facial muscles was preserved and alike on the two sides except that the creases produced on wrinkling the forehead were more pronounced on the right side than on the left. The knee-jerks were slightly increased, but the remaining reflexes, as well as sensibility and the action of the sphincters, were normal. There was no noteworthy abnormality of the thoracic or abdominal viscera. There was no discharge from either ear. There was some mental confusion. The urine contained a trace of albumin and a few hyaline casts. On suspicion that the case was one of typhoid fever the patient was transferred to the medical ward, where she complained of intense headache and insomnia and exhibited marked restlessness. Intelligence was obtunded. On examination no discharge from either ear was found, nor was there tenderness over the mastoid process, even on strong percussion. The urine contained albumin and hyaline and granular casts. The hemoglobin percentage was 85 per cent., the number of red corpuscles 4,800,000, and the number of leucocytes was 10,000 in the cubic millimeter. The agglutination test for typhoid fever was made twice, and in each instance yielded a negative response.

Course of Disease.—On February 11 the patient stated that her headache was less severe than it had been and that she was resting better. On February 12 drowsiness developed, with irritability, the patient resenting interference. On February 14 she complained of nausea and on two occasions vomited a considerable amount of greenish, watery, sour-smelling fluid. The drowsiness increased, while the headache persisted in undiminished degree. Death took place abruptly early on the morning of February 16.

Autopsy.—A large amount of turbid, greenish pus of foul odor, together with a small amount of diffuent brain tissue, escaped when the calvarium was removed and the adherent dura on the left side incised. The middle and lower temporal convolutions of the left cerebral hemisphere were the seat of an

abscess communicating with a sinus in the petrous portion of the adjacent temporal bone, and this in turn was the continuation of a larger abscess in the middle ear. The bony portion of the internal ear was also involved in the destructive process. The kidneys were the seat of acute inflammation; the myocardium was involved in fatty infiltration and fatty degeneration, and the liver was the seat of fatty infiltration.

The case was at the beginning supposed to be one of typhoid fever, but the early decline of the temperature, together with the absence of the specific agglutinating reaction, negatived such a diagnosis. The absence of pain, tenderness and swelling about the ear and of discharge, as well as of cerebral symptoms of a localizing character, especially when taken in conjunction with the slight changes in temperature, pulse and respiration, diverted attention from the head, although the persistent and intense headache, the nausea and vomiting, the inequality in action of the two sides of the forehead, and the mental impairment, especially in conjunction with the leucocytosis, the history of previous ear disease and of chills, fever and sweating, should have awakened suspicion of the real condition. The state of the urine also contributed to the confusion, as uremia had to be considered as a possible cause. It is to be regretted that an examination of the eyegrounds was not made, as a unilateral lesion would have been a most significant finding.

1019 Spruce Street.

**A DELICATE TEST FOR BILE IN THE GASTRIC
CONTENTS**

ALBERT WOLDERT, M.D.

TYLER, TEXAS

In making chemical analyses of the gastric juice siphoned off one hour after a test meal, I have frequently observed that the specimen before and after filtration would have a decided greenish tint, suggesting either bile or *gastrosia fungosa* (mold in the stomach) and on testing some of this filtered gastric juice for bile by the nitrous acid method, I have often been surprised that no reaction would be given.

On April 17, 1909, after siphoning off the gastric contents from a patient I observed that the specimen had a grass-greenish tint. I allowed the gastric contents to pass through some ordinary white filter-paper, and on testing this filtered gastric juice for bile by the nitrous acid test I obtained no reaction. The filter-paper, especially the upper edge, was stained quite green in color, and I could not persuade myself that bile was not present, or else that the case was one of *gastrosia fungosa*. The filter-paper was removed from the funnel, and that portion of the gastric contents, consisting of mucus and remnants of test breakfast, which did not pass through the paper was scraped off. This filter-paper was laid aside to dry during a period of several days. Four days later, on April 21, this dried filter-paper still had a greenish appearance, especially around the edges. On moistening these greenish areas with nitrous acid I observed the play of colors characteristic of the bile reaction, the green color first changing to a faint reddish tint, which lasted a few seconds, then being followed by blue, and after two to five minutes changed to a brownish tint. Thinking that the same reaction could be perhaps obtained by using the filtered gastric contents, I then passed some of it back through another piece of white filter-paper, and, when it was thoroughly dry, applied the nitrous acid test as before, but obtained no reaction, owing, no doubt, to the fact that the viscid

* Read before the Philadelphia Neurological Society, April 23, 1909.

bile had not passed through the filter-paper in sufficient quantity to respond to the nitrous acid test.

In testing the gastric contents for bile, one should allow the gastric juice to pass through white filter-paper, and when it has become dry one should then apply the nitrous acid test to this filter-paper, instead of testing the filtered gastric contents; otherwise bile in the stomach may escape detection. This reaction is best observed in a somewhat shaded portion of the room.

HAT-PIN IN THE MALE URETHRA

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The report by Dr. B. Clark Hyde in *THE JOURNAL*, March 12, 1909, p. 885, of a case of shawl-pin in the male urethra reminds me of a similar case which happened in my practice in 1886.

Mr. —, aged about 40, married, came into the office stating that he was carrying a hat-pin about in his urethra. Examination demonstrated that something was there. He admitted that he had been masturbating with the hat-pin when it escaped his grasp and got away. He had consulted several physicians; the result was considerable laceration of the urethra, a meatus enlarged by incision, quite a bit of swelling and some hemorrhage. The bead end could be felt in the membranous urethra and the sharp end had engaged in the upper urethra, about an inch from the meatus. Realizing the futility of fishing for it with forceps, I at first introduced a small pipette into the penis, hoping to maneuver so as to engage the sharp end of the pin and so remove it. This I was unable to do, possibly because I did not persist in trying, as a simpler method suggested itself, nearly the same as that pursued by Dr. Hyde. I bent the penis at a right angle to the direction of the pin, thrust the sharp end of the latter through the urethra and skin, then drew it out until the bead stopped it. Reversing the direction, the bead end was pushed out through the meatus and the pin easily withdrawn. The patient did not return, so I can not state the later history.

Therapeutics

SCIATICA

The sciatic nerve is one of the frequent locations of nerve pain, and is perhaps more frequently the location of a neuritis or a perineuritis than any other nerve of the body. All possible causes of the condition must be sought for and found or excluded, and before a general condition, or a condition of the blood, is decided to be the cause of the neuralgia or inflammation, all local reasons should be excluded.

A frequent cause of sciatica in women is pressure on the nerve in the pelvis, either from uterine displacements, uterine enlargements, tumors or inflammation that has extended and caused pressure.

Constipation, with fecal matter remaining long in the lower bowel, is also a not infrequent cause of sciatica, and such a condition of the loaded sigmoid is a not uncommon cause of left-sided sciatic pain.

Gout and rheumatism certainly are many times the cause of sciatic neuritis.

Exposure to wet and cold, especially when the feet become wet and chilled, or sitting on cold stones, or long sitting on hard-bottomed chairs may be the initial cause of a sciatic neuritis.

Pain in the lumbar muscles, lumbago or lumbar myalgia, is often followed by pain in one or the other, or both sciatic nerves; or both conditions may be present at once. In fact, frequently when there is no evident abdominal or pelvic excuse, a lumbago is followed

by pain in a sciatic nerve. A not infrequent cause of a lumbago is too lax springs and a too comfortable bed. This is especially true when the person is of heavy weight. A stiffening of the bed springs and a straightening of the bed will often be sufficient alone to stop this kind of pain which is so frequent, and also so frequently extends to the sciatic nerves.

A weakening of the plantar arch and an attempt of the person involuntarily so to step and stand as to relieve the ache in the ankles and feet will cause abnormal muscle tension, even of the thighs, and a sciatic pain can be caused from this reason, to say nothing of the frequent pain in the knees from this cause.

Uricacidemia, and even an increased acidity of the urine, with bladder irritability, is often a concomitant condition with sciatica. The sluggish circulation due to an imperfect heart action or to a varicose condition of the leg may be a predisposing cause of sciatic pain. It is hardly necessary to mention the occasional causes of sciatica, as diabetes, malaria, syphilis and hip-joint or knee-joint disease.

Consequently, before beginning any local or general treatment for sciatica, the patient should be carefully examined and any local cause found, the circulation investigated, the urine analyzed, and the intestinal digestion and activity learned. It should also be determined whether the pain is due to neuralgia, i. e., a simple irritation of the sciatic nerve, or whether there is an actual neuritis or perineuritis, which may be determined by excessive tenderness, pain on stretching the nerve (as by thoroughly extending the leg) or by a beginning anesthesia in any part of the distribution of the nerve.

It is not necessary to urge the necessity for removing local pressure, if such has been found, before it could be expected that the sciatica or the neuritis could be made better. Free elimination from a calomel, castor oil, or saline purgative, and subsequent daily free movements of the bowels is certainly a large factor in the successful treatment of sciatic trouble. The character of the diet should be determined by the condition of the patient. If the patient needs nutrition, the most nutritive diet possible should be given, and, in fact, perhaps hyperalimentation given. On the other hand, if the patient is plethoric, has been a high liver, eating largely of proteids, especially meats, a vegetable and limited diet for a time, at least, is the best. If the circulation is impaired, it should be aided. If the circulation is good, plenty of water should be given to aid the eliminative process by the kidneys. Hot daily tub baths, a Turkish bath twice a week, or a body hot-air treatment twice a week, are all adjuvants in the treatment of sciatic inflammation that are far ahead of medicinal treatments. The body hot-air treatment is most efficacious when rheumatism is the cause of the condition, and no treatment is perhaps more successful. This is also especially true when there is kidney insufficiency. The promotion of the circulation in the skin and the increase of the excretory ability of the skin is a large factor in the benefit derived from such treatment.

Occasionally the attack of sciatica comes on suddenly, but generally it is gradual in its development, and the longer it has persisted the more difficult is it to cure; consequently, sciatica, even in mild form, should not be neglected.

It is probable that the shooting pains down the sciatic nerve, momentary perhaps in their duration, are caused by contractions of the pyriformis muscle, which compresses the sciatic nerve. It is also probable that

this muscle sometimes becomes irritated and inflamed and keeps up, by its contractions, pressure on the sciatic nerve. If such pressure is more or less continuous, sciatic neuritis could be caused. This condition being surmised or suspected, local treatments aimed at relieving the spasm of this muscle should be instituted. Among such measures may be included static wave currents, mechanical vibration and sparks from a static machine locally applied to the region of the foramen through which the sciatic nerve leaves the pelvis. Also sometimes beneficial is the application of dry heat to this part, and perhaps best by the reflected heat and light of a strong electric light.

Sometimes counter-irritation along the course of the sciatic nerve by momentary localized applications of the galvanic electric current with the positive pole active, or painting along the course of the nerve with iodine, or electric light bath treatment to the whole course of the nerve, or dry cupping along the course of the nerve and repeated on successive days, will abort a beginning neuritis. In an ordinary case of sciatic neuralgia, if the cause is removed, the neuralgia will cease.

If beginning neuritis or perineuritis is suspected or diagnosed, absolute rest of the limb on a level, hard bed, with electric light applications or dry heat applications, with the administration of alkalies or salicylate, and the general management of the bowels above outlined, may still abort the inflammation.

If, on the other hand, an actual neuritis is present, there is nothing that will shorten an attack so much as a long splint from the axilla to the heel, to give permanent fixation and rest. If a splint is used for this purpose, the bandage which binds it should be removed at least once, and perhaps better twice, a day and the limb gently flexed once or twice so that the joints will not become stiffened. The length of time such a splint should be used is determined by the amount of pain and the rapidity with which the inflammation improves. No fixed rule can be established. Another method of fixing and treating a limb so affected is by long sand bags, which may be put into the oven and rendered very hot, and changed as often as they become cool. Such applications give rest to the limb and constant dry heat. If such heat is not applied, the limb should be swathed in cotton and bandages, as warmth is very essential in all cases of neuritis.

When the pain is intense, and especially if periodical contractions of the muscles occur (which, however, are best prevented by the long splint), injections of morphin must be given. But perhaps nothing will prevent the necessity of such injections more than the ability to give the leg perhaps, but better the whole body, hot-air treatment, which, of course, can only well be done in an institution. The amount of morphin that is needed and the frequency depends on the pain. Such frightful pain can not be endured, and, if not stopped by other means, must be stopped by morphin.

Sometimes the injection of cold water or of a small dose of cocaine directly into the nerve sheath in the region of the sciatic notch will cause almost instant cessation of the pain. If cocaine is used hypodermatically, the dose would be from 0.008 to 0.015 gram ($\frac{1}{8}$ to $\frac{1}{4}$ of a grain), but it should not be often repeated, and it does not seem to be very advisable treatment. If cold water is used and reaches the sheath of the nerve and distends it in this region, of course, it will stop the sensations below, and such treatment sometimes precludes the necessity of the administration of morphin.

The coal-tar analgesics are only of temporary benefit in mild cases, are never of benefit when there is severe pain, and, as the need for an analgesic is so frequent in sciatic neuritis, great debility would be caused by such repeated use of them. Ordinarily, therefore, they should not be used in sciatic neuritis.

There is no really good reason for using atropin hypodermatically in sciatic neuritis. The pain of neuritis comes from the main trunk of the nerve and is distributed more or less to all its branches. Atropin only dulls nerve pain when that pain is due to peripheral irritation. If atropin is used in conjunction with morphin it does nothing but inhibit the narcotic and quieting effects of the morphin, and more morphin is required. Also, if the dose of morphin must be repeated for severe pain, the discomfort of the patient is increased, the restlessness is increased, and the secretions are decreased by the frequent repetition of atropin.

Osmic acid has been used subcutaneously in sciatica to the amount of 1 c.c. (15 minims) of a 1 per cent. solution. Perhaps the best method is to dilute the 1 c.c. (15 minims) of the 1 per cent. solution with sufficient water to allow of a series of injections, from five to ten, into the nerve trunk throughout its course, a few drops being instilled into the nerve sheath at each puncture. This method is, of course, painful, although it may be followed by good results, but the favorable action is possibly largely due to the "acupuncture" treatment and to the distention of the nerve sheath (nerve pressure) from the water. Therefore, if the sheath of the nerve is to be pierced at all, it would seem best to do this at the sciatic notch and instill sufficient water to produce anesthesia below.

It should be understood that a sciatic neuritis is like any other neuritis, and, therefore, will first grow worse, reach its acme, and then gradually and slowly become better, with anesthetics, pain, and more or less paralysis. The patient should be told that a long, tedious process is before him, and that no exact time limit to the duration of the inflammation can be promised.

After the acute condition is past, massage, possibly gentle counter-irritation, faradic stimulation of the muscles, or other electric or hydrotherapeutic measures may be used to bring the leg back to normal function.

It should be again emphasized that probably the most efficient means of shortening the inflammation in the nerve and hastening recovery is by the hot-air treatment.

As soon as the active symptoms have ameliorated, and especially if there is chronic sciatic pain, thermocautery treatment along its course, and repeated once in five days, causes efficient counter-irritation and frequently a cure.

Paralyzed muscles should be treated with such electric and massage treatments as is usual in other paralyses.

If the cause of the cured neuritis was a systemic one, such treatment should be carried out and persisted in as would tend to prevent a recurrence.

Tonics, especially iron, are indicated; fresh, warm air, if possible, and a convalescence long enough to restore complete health to the injured leg, are aids to a permanent cure.

As above stated, too much care can not be taken to positively cure an inflammation such as sciatic neuritis, which tends to recur and often causes permanent disability.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1909," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(Continued from page 1499)

FORMIC ACID—*Acidum Formicum*.—*Acidum formieicum* (Pharm. Helvetica, edit. 4; Pharm., Germ. edit. 4).

Formic acid is a liquid containing 24-25 per cent. of anhydrous formic acid (HCOOH).

Formic acid is a clear colorless liquid possessing a sharp acid odor and taste. It has a specific gravity of 1.058-1.061. With lead acetate, formic acid produces a white crystalline precipitate. On warming with silver nitrate a gray turbidity and with mercuric chloride a white turbidity is produced. A solution (1-10) after the addition of a few drops of nitric acid should yield no precipitate with silver nitrate or barium chloride; and after neutralizing with ammonia water calcium chloride or hydrogen sulphide should produce no precipitate. If 1 Cc. formic acid is mixed with 5 Cc. water and 1.5 Gm. mercuric oxide (yellow) and heated on the water bath there will follow an evolution of gas leaving a mixture which when filtered will yield a filtrate which should not react acid (acetic acid). Five Cc. formic acid should require 27.6 Cc. to 28.8 Cc. normal alkali for neutralization, denoting a content of 24-25 per cent. by weight of 254-265 Gm. anhydrous formic acid per liter. The titrated solution should yield no burned or sharp odor (Pharm. Helv. and Pharm. Germ.).

Action and Uses.—The actions resemble those of acetic acid, but it is more volatile, more irritant and more antiseptic. Formic acid is much more resistant to oxidation, in the body, than the other organic acids, and is therefore excreted to a large extent as formates, in the urine. These have an irritant action on the kidneys and urinary tract, and are diuretic. Large doses cause methemoglobinemia, but the toxicity is quite low. It has no effect on the general circulation or on the motor system, as has been claimed. It has been lauded in a great variety of disorders, but there is no good evidence that its internal use produces any benefits other than psychical. Its external use as a counterirritant is rational, but it possesses no special advantages.

Dosage.—Internally, 1-20 drops of the 25 per cent. acid, largely diluted; or 0.1-0.25 Gm. ($1\frac{1}{2}$ -4 grains) of sodium formate. Externally usually in a solution containing 1 per cent. of the absolute acid in alcohol or diluted alcohol.

BERBERINE HYDROCHLORIDE—*Berberinae Hydrochloridum*.—The hydrochloride, $\text{C}_{20}\text{H}_{17}\text{NO}_4\text{HCl} + 2\text{H}_2\text{O}$, of an alkaloid obtained from *Hydrastis canadensis* and *Berberis vulgaris*.

Berberine hydrochloride occurs as bright yellow acicular crystals or amorphous powder, slightly soluble in alcohol to which it imparts a deep yellow color. It is soluble in 300 parts cold water, but dissolves more easily in hot water.

An aqueous solution of berberine or its salts treated with chlorine or bromine water produces a blood red color. Bromine water in excess precipitates the reddish-brown berberine tetrabromid-hydrobromide— $\text{C}_{20}\text{H}_{17}\text{NO}_4\cdot\text{Br}_4\cdot\text{HBr}$, which is converted by washing with alcohol or heating to 100° to the yellow-brown berberine dibromide-hydrobromide $\text{C}_{20}\text{H}_{17}\text{NO}_4\cdot\text{Br}_2\cdot\text{HBr}$.

Ammonium sulphide precipitates from an alcoholic solution of berberine sulphate the polysulphide $(\text{C}_{20}\text{H}_{17}\text{NO}_4)_2\text{H}_2\text{S}_5$ which crystallizes in brown-black needles.

Berberine solutions even if very dilute when treated with potassium iodide solution yield a yellow precipitate of berberine hydroiodide.

Action and Uses.—Given by mouth, it acts as a bitter stomachic. Very large doses, although not fatal, cause diarrhea, tremors, general weakness, low blood pressure (from depression of vasomotor center and of cardiac muscle), rapid pulse (depression of vagus endings) and respiration. Recovery is slow. Nephritis may be present. Subcutaneous injection kills by paralysis of respiration, with symptoms of asphyxia and paralysis. It has been used as a bitter tonic, against diarrhea and the vomiting of pregnancy and as a febrifuge.

Dosage.—0.06 Gm. to 0.3 Gm. (1 to 5 grains). As much as 20 grains have been taken without obvious effects besides a loose stool.

EMETINE HYDROCHLORIDE—*Emetinae Hydrochloridum*.—*Methyl-cephaeline*. The hydrochloride, $\text{C}_{15}\text{H}_{22}\text{N}_2\text{O}_2\cdot\text{HCl}\cdot 3\text{H}_2\text{O}$, of a base found together with cephaeline in *Cephaelis Ipecacuanha*.

Emetine hydrochloride occurs as a white crystalline powder, soluble in water and alcohol. A freshly prepared concentrated solution of ammonium molybdate in concentrated sulphuric acid is colored brown by emetine; this color changes to violet when a drop of concentrated hydrochloric acid is added. The general alkaloidal reagents precipitate emetine, even from dilute solutions. Alkalies precipitate emetine from aqueous solutions of its salts.

Action and Uses.—Similar to Ipecac, but relatively more nauseant and less emetic, and causing relatively somewhat less renal irritation, but more cardiac depression.

Dosage.—Expectorant, 0.005-0.01 Gm. ($1/12$ - $1/6$ grain). 0.01-0.02 Gm. ($1/6$ - $1/3$ grain) causes emesis, but cephaeline is preferred as an emetic.

KERATIN—*Keratinum*.—A proteid substance which forms the chief part of horns, hoofs, feathers, wool, etc.

To prepare keratin horn shavings are macerated for some days in a mixture of equal parts of ether and alcohol, decanting the liquid and washing the residue with warm water. The washed shavings are then treated with an acid solution of pepsin at 40°C . (104°F). After further washing with water the residue is dried and powdered.

Keratin occurs as a brownish yellow powder or in transparent white or grayish white scales, tasteless and odorless. It is soluble in concentrated acetic acid, caustic alkalies and ammonia, but insoluble in water, alcohol, ether, dilute acetic acid or acid pepsin solutions. It is decomposed by long boiling under pressure forming a turbid solution with the liberation of hydrogen sulphide. Boiling with dilute sulphuric acid converts it to leucine, tyrosine and other products. On ignition it emits the odor of burning feathers and the remaining carbon is very difficultly burned. On complete combustion the ash should not exceed 1 per cent. 24 hours' digestion with 15 times its volume of ammonia or glacial acetic acid solution at 25° - 40°C . (77° - 104°F .) should not leave more than 0.3 per cent. insoluble matter.

Uses.—For coating pills to pass the stomach unchanged.

RED GUM—*Eucalypti Gummi*.—*Eucalyptus gum*. *Eucalyptus Kino*.

Red gum is an exudation from the bark of *Eucalyptus rostrata*, *Schlecht*, and other species of *Eucalyptus*.

Red gum occurs in small dark reddish brown opaque and more or less dusty pieces which yield a pale red powder. It is usually collected from artificial incisions. When chewed it is tough, and colors the saliva red. Water dissolves 80-90 per cent. Its chief constituent is tannic acid, to the extent of 47 per cent.

Action and Uses.—Red gum is an active astringent. It is used as an active astringent in sore throat, diarrhea and in catarrhal affections of various mucous membranes. Largely used in the form of lozenges where an astringent is needed in throat affections.

Dosage.—0.1 to 0.3 Gm. (2 to 5 grains).

SODIUM OLEATE¹—*Sodii Oleas*.—Sodium oleate, $\text{NaC}_{18}\text{H}_{33}\text{O}_2$, is the sodium salt of oleic acid.

Sodium oleate is obtained by neutralizing sodium hydroxide with oleic acid.

Sodium oleate is a white solid, which crystallizes from absolute but not from aqueous alcohol. When heated it melts and burns leaving a residue of sodium carbonate. It is soluble in about 10 parts of water, in about 20 parts of alcohol, and in about 100 parts of boiling ether. When dissolved in water it is partly decomposed (hydrolysed) into oleic acid and sodium hydroxide; hence its aqueous solution has an alkaline reaction to phenolphthalein; its solution in strong alcohol is neutral to this indicator. It is precipitated from its aqueous solution by saturation with sodium chloride.

Acids separate from its aqueous solution oleic acid, which collects at the surface of the liquid, in an oily layer. If a solution of 5 Gm. of sodium oleate, in 50 Cc. of water be mixed with 3 Cc. of tenth-normal oxalic acid solution, the subsequent addition of a few drops of phenolphthalein test solution should not produce a pink coloration.

An aqueous solution of sodium oleate (1 in 20) should remain unchanged in color upon the addition of ammonium sulphide test solution; and upon acidulating another portion of the solution with hydrochloric acid and filtering, the filtrate should remain unchanged in color when an equal volume of hydrogen sulphide test solution is added and the mixture is allowed to stand well stoppered in a warm place for half an hour (absence of metallic impurities).

Action and Uses.—Sodium oleate is antacid and mildly laxative. It is commonly added to laxative pills. It has been claimed without any definite evidence that it is especially useful in disease of the biliary tract.

Dosage.—0.12 to 1.3 Gm. (2 to 20 grains).

1. This preparation should not be confounded with the preparations sold as "Acid sodium oleate" or "Sodium Oleate, acid" which are mixtures of sodium oleate and free oleic acid, containing from about 5 to 30 per cent. of the latter.

(To be continued)

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[For other information see second page following reading matter]

SATURDAY, MAY 29, 1909

THE BIOLOGIC ANALYSIS OF GENERAL SENSATION

In view of the great importance of so-called general sensation, or common sensation, in clinical work, particularly in the diagnosis of nervous and visceral diseases, it is rather surprising that we have so often been content with a very uncritical analysis of this sensation complex.

Nearly twenty-five years ago Gaskell from the physiologic side and His from the embryologic side established the now classical four-root theory of the composition of the spinal nerves, recognizing in each pair somatic and visceral motor and somatic and visceral sensory components. More recently Sherrington¹ has elaborated a very fruitful physiologic analysis, dividing the sense organs (receptors) of the body into: (1) interoceptors, or visceral sense organs of the digestive tract and its derivatives; (2) exteroceptors, or somatic sense organs of the outer body surfaces for impressions coming from the outside world, and (3) proprioceptors, sense organs of the muscles, joints, tendons, etc., adapted to report to the central nervous system the exact state of contraction, tension, etc., which these organs experience during function and thereby assisting in the coordination of all somatic movements.

The chief importance of this analysis lies in the emphasis placed on the type of response characteristic of the several receptors. The interoceptors are related through the sympathetic nervous system with visceral muscles; the exteroceptors through the superficial nerves, including the nerves of higher sense, with the somatic or skeletal muscles; the proprioceptors through the deep sensory nerves with reflex arcs leading back to the body musculature. Otherwise expressed, the interoceptive reflexes are visceral responses to visceral stimuli; the exteroceptive sensori-motor system is the apparatus by which the body is able to make adaptive responses to outside stimuli, and the proprioceptive system is for the internal regulation of the exteroceptive mechanism. Naturally, the peripheral and central conduction paths of these three systems have played a dominant rôle in the evolution of the architecture of the nervous system, and the accurate knowledge of these conduction paths is of great clinical importance.

The detailed analysis of the sensory components of the cranial nerves of vertebrates and their cerebral centers has been effected by a series of researches of the past fifteen years, chiefly at the hands of American comparative neurologists.² It seems probable that from the primordial nerves of general sensation of the lowest animals the first differentiation was into visceral (interoceptive) and somatic (exteroceptive) nerves and that each of these was then further subdivided. Some members of both systems of nerves in lower vertebrates are sensitive to chemical stimuli; but in man the chemical sense (taste) seems to be chiefly, if not wholly, represented in the visceral system, its fibers ending in company with more generalized visceral nerves in the nucleus of the fasciculus solitarius. Smell is probably a still more highly differentiated member of the same system.

The exteroceptive and proprioceptive functions of the somatic sensory system were doubtless contemporaneously differentiated and each was early subdivided into different kinds of sense qualities. The proprioceptive nerves include several sensory types whose functions (for the most part wholly unconscious) are concerned with equilibration, muscular coordination, etc., such as the nerves of muscle spindles, tendons, articular surfaces and deep sensibility in general. The nerves of the semicircular canals are the most highly specialized members of this system (Sherrington). The exteroceptive nerves include contact receptors, serving the sensations of pressure, touch, temperature, etc., and distance receptors (organs of vision and hearing). The contact sensations of the skin, which are frequently classed uncritically in clinical practice in a single category as "general sensation," have been analyzed in a valuable way by the recent clinical and experimental work of Henry Head and his colleagues.

THE PATHOGENESIS OF URINARY CALCULI

Since the demonstration of the infectious basis of gallstone formation we have had many contributions to our knowledge of their pathogenesis, chemistry and structure, which have cleared up this subject to a gratifying degree. Urinary calculi have, during the same period, received less attention from the pathologists and chemists. Just as Naunyn worked out the principles of gallstone formation to a satisfactory conclusion which has stood the test of time, so Ebstein, in his classical monograph on urinary concretions, developed many of the fundamental conceptions of this topic. He showed that the urinary calculi are not simple conglomerations of crystals, but possess an organic framework of characteristic structure, the product of pathologic processes in the urinary tract, in which the crystalline salts are imbedded and held together. Just what conditions are

1. *The Integrative Action of the Nervous System*. New York, 1906.

2. For summaries of this work see Johnston, *The Nervous System of Vertebrates*, Philadelphia, 1906.

necessary for the production of this complex deposit in the urine has not yet been fully determined, but a recent paper by Schade¹ seems to bring forward a reasonable theory of calculus formation.

He begins by pointing out a fundamental error in earlier considerations of this subject, namely, that of looking on the urinary constituents as existing in simple watery solution. In the light of physicochemical conceptions, urine is more complex than this. It contains always more or less of colloids, including under normal conditions especially the pigments, which greatly modify the solution of the crystalloids. The colloidal substances exist in the condition of colloidal suspension, and consequently present an enormous amount of surface area which has more or less adsorptive power for the crystalloids which are in true solution. When a considerable amount of adsorption takes place in this way, there results at the surface of each colloidal particle a zone in which the crystalloids are more concentrated than elsewhere, and which will always serve as the starting point of crystallization whenever the solution becomes oversaturated. It is because of this adsorptive power that colloids increase the solvent power of urine for uric acid, for the more of the slightly soluble uric acid that is withdrawn from the watery solution by adsorption into colloidal particles the more uric acid can the urine dissolve. When the crystalloid goes out of solution it will, therefore, form crystals or precipitates which are most intimately associated with the colloids, as we see when uric acid crystallizes out of urine taking with it the colloidal pigments by which it is adsorbed. Hence the complex colloidal stroma which is found in every concretion and even in every crystalline deposit which is formed in urine.

It is a well-known fact clinically that a urinary calculus is not nearly so soluble as a simple crystalline mass of the same chemical nature; otherwise we would be able much more easily to dissolve urinary calculi by merely changing the reaction of the urine according to the nature of the calculus. But it is only too certain that uratic calculi will persist in alkaline urine, and oxalate calculi will remain in acid urine without appreciable change. This insolubility Schade explains as due also to the colloidal matrix. If the calculi consisted merely of crystalline deposits, they would dissolve readily, for crystallization is a reversible process. Likewise if the colloid were one that formed reversible precipitates or gels, as mucin which precipitates with acids and redissolves in alkalis, urinary calculi would also be correspondingly soluble; but if the colloidal matrix is one that forms precipitates or gels that are not reversible, then resolution of the calculus is difficult.

Such a colloid is fibrin, and Schade found that he could produce experimentally with calcium salts and fibrinogen, masses of salts which became progressively harder and stonelike, and which had the same struc-

tural arrangement of matrix and crystals as is characteristic of calculi. Therefore, he urges the importance of inflammatory exudation in the formation of urinary calculi. Normal urine contains no irreversible colloids, and hence does not form concretions; but any inflammatory exudation taking place in any part of the urinary tract introduces fibrinogen, and conditions become suitable for the formation of irreversible deposits of any crystalloid with which the urine may at the time be saturated or oversaturated. Possibly other colloids may have the same property, but probably fibrinogen is the most important. Much of practical significance for the prevention and treatment of urinary calculi would seem to lie in these suggestions of Schade's, which point out some of the reasons for existing disagreement between theory and practice.

The solubility of concretions depends on entirely different laws from that of the simple crystalline deposits which never form concretions, yet hitherto we have attempted to find solvents for calculi on the basis of our experience with the solubility of simple crystalline formation, and have met with failure. Possibly a better understanding of the nature of calculus formation will help us toward the goal of solvent treatment.

A BRITISH COUNCIL ON PHARMACY AND CHEMISTRY

While it is possible that the medical profession of Great Britain has not been exploited by proprietary medicine promoters to quite the extent that has been the case in this country, yet the proprietary evil there is a serious and a growing one. That British medical men are beginning to wake up to this fact is evident from one of the "notices of motion" put forward by the South-Eastern of Ireland Branch of the British Medical Association, to be acted on at the annual meeting of the association to be held in July.

This notice proposes "that the council be requested to appoint a Materia Medica Committee, whose duty it will be, with such professional aid as they can summon to their assistance, to investigate and pronounce on the uses and properties of all drugs which shall be used by the profession; and, in view of the grave injury inflicted on the public and on the profession alike by the present wholesale introduction of drugs by mere commercial firms, whereby the ground is being cut from under our feet, and the gullible public are induced to accept nostrums on the sole strength of mere assertions, that the hospitality of our museum and the pages of our *Journal* shall both be shut out from giving any further aid to the wholesale advertisements of drugs and preparations, the virtues of which have too often no existence save in the mendacity of their introducers."

It will be seen that the proposed Materia Medica Committee is practically identical with the Council on Pharmacy and Chemistry of the American Medical Association. The need of such a committee is evident;

1. Münch. med. Wchnschr., 1909, lvi, 3.

should it be appointed, it will do much to limit the sale of nostrums as "ethical proprietaries." Since the work of the Council and the campaign carried on by THE JOURNAL have given American nostrum makers a substantial set-back, it has been the policy of these gentlemen to transfer their activity to the other side of the Atlantic. When a similar campaign is waged in the British Isles, the discomfited manufacturers will have no place to go. The Anglo-Saxon countries have been the last to regulate the traffic in nostrums, but the field of operation for this business is slowly but surely narrowing.

In passing, it might be said that when the suggested body begins its work, the *British Medical Journal* will, perforce, lose some of its regular advertisers. Nevertheless, this loss of revenue to the association's organ will be more than compensated by the gain to the profession generally.

A STUDY IN THE INCONSISTENCY OF THE ANTI-VIVISECTIONISTS

The inconsistency in operation of the basic emotional activities which are the springs of human action is well brought out in an editorial in *La Follette's Weekly Magazine* for April 10, entitled "False Mercy and Real Cruelty." "If a horse had been tied on the street in Washington on inauguration day," says *La Follette's*, "its owner would have been arrested for cruelty." Yet, the article goes on to point out, on the same day 800 men of a Massachusetts coast artillery organization were kept shivering and stiff for two hours or more in the storm, waiting for the parade to move, then marched for five hours in a blizzard, and quartered without beds on the floor in a cold and miserable armory. It is scarcely to be wondered at that 100 of them became ill, mostly with pneumonia, and that a score or so died. Some years ago on a similar occasion 75 men died from a similar cause. "If 75 sparrows had been tortured for five hours for somebody's pleasure," comments *La Follette's*, "the conscience of the nation would have been shocked." Verily, a sensitive conscience is an elastic term when applied to communities, and recalls to mind the distinction finely drawn by Jane Austen in "Sense and Sensibility."

It is but natural that the article should pass on to the consideration of an analogous inconsistency—that of the supersensitive souls who would fain abolish all experimentation on animals. Says *La Follette's*, "The animals, of course, are not experimented on for pleasure, or to make a parade, but for the sake of the knowledge and cure of diseases. The animals are put under ether or chloroform, and the operations are usually painless. The average dog used in educating physicians and surgeons dies with infinitely less suffering than that endured by any one of the Massachusetts soldiers as he shivered the night through in a bedless armory—to say nothing of the marching and pneumonia—and he dies

for a good and, to most people, a sufficient reason. Dogs, cats, rabbits, and guinea-pigs should not be killed, even under anesthesia, wantonly or for no reason. But if the question is not whether the animal experiments shall stop, but whether the animals experimented on are to be dumb animals or men, women and children, then we may ask whether human beings are not worth more than dogs or guinea-pigs.

"The antitoxin that cures diphtheria, the Pasteur hydrophobia treatment, the Koch tuberculin test for consumption, the knowledge that protects us from disease generally, the prevention of disease in live stock, the use of ether, chloroform and cocaine, which make dentistry and surgery painless, all have been discovered by and depend on animal experiments. Had it not been for them we should not yet have learned that the blood circulates, or the use of the heart, or the functions of the nerves; we should still be calling in magicians to cast out the devils when we are ill, and hanging the witches believed to torment us with pains and aches. Protect the animals—certainly. But do not force science to practice on us rather than on them. Protect the horses—certainly. But remember that a man is worth more than many horses. Don't be so falsely merciful that you reach real cruelty."

It is an admirable thing when a man of public affairs, possessed of an unusual capacity for "straight talk," is imbued also with a breadth of view in the search for knowledge concerning that whereof he talks, that shall enable him to use it wisely and well.

RESIDUAL TYPHOID FEVER

Not long ago it was generally considered that practically all cases of typhoid were due to polluted drinking water, and some enthusiasts even ventured the statement that the amount of typhoid in a city affords a very fair idea of the purity of its public water supply. The acquisition of new data, however, is bringing about in this field, as in so many others, what might almost be styled a reversal of opinion. Not that there is any doubt on the part of any competent authority as to the large part sewage-contaminated water has played and is still playing in the transmission of typhoid fever, but there is no longer a tendency to minimize or to ignore other causes. One really astonishing circumstance is that after an infected water supply has been purified or replaced by a purer source the residuum of typhoid fever is still very great. A recent Harvey lecturer has drawn attention to the fact that in most cities in the United States, even after a pure water supply has been secured, the typhoid fever death rate has remained at least five or six times as high as in European cities of similar rank.¹ Point has been given to this situation by the well-known experience of the city of Washington, D. C., which has had the keen disappointment of seeing its typhoid rate remain prac-

1. Jordan: THE JOURNAL A. M. A., Feb. 15, 1908, 493.

tically stationary after the installation of a well-built and efficiently operated filter plant.

Longley² has now thrown some new light on the Washington problem by showing that there is a reasonable doubt whether even in years past the Potomac water supply was really responsible for the general prevalence of typhoid fever in the District of Columbia. Sedimentation of the river water, which has been believed by many sanitarians to explain the fluctuations in typhoid fever in Washington, is considered by Longley, after careful analysis of the data, to have had little or no share in bringing about the conditions observed. There is, in his opinion, no marked relation between the period of sedimentation and the typhoid death rate in Washington. This conviction is strengthened by the remarkable parallelism which Levy and Freeman have shown to exist between the typhoid fever curves in Washington and in Richmond, Va. In Richmond the water supply has remained unchanged during a period of nearly thirty years, and yet the years of rise and fall of the typhoid death rate in the two cities coincide in a manner that suggests the operation of some common cause.

What explanation can be given for the non-water-borne typhoid fever? There is no doubt that a certain proportion of it can be accounted for by milk infection, by fly infection, by contact through the agency of carriers and in other ways with which recent investigation has made us familiar, but when all is said there is still an unexplained residuum. The proportion of typhoid not traceable to acknowledged sources of infection is apparently greater in some localities than in others. It is a tempting speculation that meteorologic conditions in some way influence individual susceptibility, but it can hardly be said that there is any strong evidence for this view. The coincidence in the typhoid curve in cities with dissimilar sanitary conditions might seem to support this hypothesis, but there are obviously other possibilities. The questions raised are certainly important and hardly to be dismissed as of theoretical interest only.

SMOKE CONSUMPTION

The unwholesome effect, psychical and physical, exercised by a sunless smoke-laden atmosphere has long been recognized. The crux of the problem has been to render smokeless combustion not merely experimentally possible, but commercially practicable. Smoke in cities is undoubtedly an immense extravagance for the community, having a deleterious effect on many marketable commodities, as well as on the health and strength of the inhabitants. It is a direct loss to the consumer of coal, too, for smoke means waste fuel. Yet the attempts to make smokeless combustion an actual, as well as a theoretical, economy to the one who pays the coal bills have been only partially successful in the past. It is

now asserted that the United States Geological Survey Experiment Station at Pittsburg, Pa., has succeeded in solving the problem and in that smoky city is now operating its plant absolutely without smoke, even though burning a coal considered refuse by the trade and costing, delivered at the station, 88 cents a ton. Moreover, over two hundred industrial plants in the larger cities of the country are now being operated without smoke, and with a gain in economy. The solution of the whole problem appears to depend, not on any particular form of furnace, but on the simple principle that "stokers or furnaces must be so set that the combustion shall be complete before the gases strike the heating surface of the boiler"; otherwise sudden cooling, with checking of combustion, will ensue. Absolutely and invariably satisfactory results are said to depend on the installation of mechanical stokers, as the personal element in firing is too variable to be relied on. The report of the experts who had immediate charge of the government investigation will shortly be issued by the Geological Survey as a bulletin, which will doubtless prove valuable reading for sanitary medical officers and engineers. If it can be demonstrated that, as the Geological Survey maintains, "in 50 per cent. of the industrial plants of the United States more than 10 per cent. of the coal bill can be saved each year by the smokeless burning of coal, and 5 per cent. in the other plants," our cities will soon enjoy a purer air and a brighter sky than they have known for many a long day.

Medical News

ILLINOIS

Home for Nurses Donated.—James A. Patten has donated \$40,000 for the erection of a home for nurses of the Evanston Hospital. The structure will be connected with the main hospital building and will provide accommodation for 40 employés, including nurses and internes.

Hospital Appropriation.—The omnibus appropriation bill which passed the house early this week gives the State Board of Health \$46,000 for the free distribution of antidiphtheric serum throughout the state. The last general assembly appropriated \$30,000 for this purpose.—The State Board of Health has already been allowed \$4,000 for the free treatment of poor persons said to have been bitten by rabid animals or otherwise in danger from infection from hydrophobia.—The appropriations for the State Board of Health have been materially increased.

Personal.—Dr. George S. Duntley, Bushnell, has succeeded Dr. William E. Haines, resigned, as local physician for the T. P. & W. Railway.—Dr. Alvard G. Durkee, Pontiac, is at St. James Hospital, recovering from an operation for appendicitis.—Dr. Homer M. Little, East St. Louis, has returned after eighteen months abroad. While in Vienna, Dr. Little was elected secretary-treasurer of the American Medical Association of Vienna.—Dr. Albert N. Mueller has been appointed health commissioner of Rock Island, and Drs. William H. Ludewig, Michael J. O'Hern, Frank H. First and Joseph R. Hollowbush have been appointed members of the board of health.

Legislative Progress.—Senate Bill No. 214, to create a state board of osteopathy, was defeated in the house May 19, by a vote of 72 to 45. The "osteopathic lobby" claimed 100 votes for this bill, which at one time seemed assured of passage.—On May 21 the house set its disapproval on optometry by killing House Bill No. 576, which received only 28 of the 77 votes required for passage. There is still another osteopathic

bill, Senate Bill No. 351, which passed the senate two weeks ago. This bill is even more objectionable than Senate Bill 214, and is at its second reading in the house. The State Board of Health and the legislative committee of the state medical society are of the opinion that this bill will not become a law.

State Medical Society Meeting.—The fifty-ninth annual meeting of the Illinois State Medical Society was held in Quincy, May 18-20. The following officers were elected: President, Dr. J. Leaming Wiggins, East St. Louis; vice-presidents, Drs. Clifford U. Collins, Peoria, and James E. Stubbs, Chicago; secretary, Dr. Edmund W. Weis, Ottawa (re-elected); treasurer, Dr. Everett J. Brown, Decatur (re-elected); councilors, Drs. Malcolm L. Harris, Chicago, Carl E. Black, Jacksonville, and Henry C. Mitchell, Carbondale; delegates to the American Medical Association, Drs. Frank Billings and Charles S. Bacon, Chicago, and James W. Pettit, Ottawa; alternates, Drs. Samuel C. Stremmel, Macomb, W. K. Newcomb, Champaign, Joseph R. Hollowbush, Rock Island, Edwin W. Ryerson, Chicago, and Alfred C. Haven, Lake Forest; committee on public policy, Drs. Robert B. Preble and William L. Baum, Chicago, and Carl E. Black, Jacksonville; committee on medical legislation, Drs. Charles J. Whalen, Chicago, Milton S. Marey, Peoria, and Lewis C. Taylor, Springfield; and chairman of the medicolegal committee, Dr. Harold N. Moyer, Chicago. Danville was selected as the place of meeting for 1910.

IOWA

Personal.—Dr. James P. Lane has been elected health officer of Cascade.—Drs. John W. Reynolds and Cleve Coakley, Creston, and Dr. Oliver S. Barber, Kent, will open a hospital in Creston in a few weeks.—Dr. Henry J. Prentiss, professor of anatomy in the State University College of Medicine, Iowa City, has declined an offer to return to his former work at Bellevue Hospital Medical College, New York City.

Medical Women Meet.—At the twelfth annual meeting of the State Society of Iowa Medical Women, held in Dubuque, May 18, the following officers were elected: Dr. Lenna L. Means, Des Moines, president; Drs. Kate S. Harpel, Boone, and Pauline Myers-Townsend, Marshalltown, vice-presidents; Dr. Lena A. Beach, Cherokee, secretary, and Dr. Clara B. Whitmore, Cedar Rapids, treasurer. At the annual banquet Dr. Julia M. Donahue, Burlington, presided as toastmistress.

State Society Meeting.—At the fifty-eighth annual meeting of the Iowa State Medical Society, held in Dubuque, May 19-21, the following officers were elected: President, Dr. George E. Crawford, Cedar Rapids; vice-presidents, Drs. Nelson M. Voldeng, Cherokee, and Henry H. Clark, McGregor; secretary, Dr. Vernon L. Treynor, Council Bluffs; treasurer, Dr. William B. Small, Waterloo, and delegate to the American Medical Association, Dr. Arthur L. Wright, Carroll. Des Moines was selected as the next place of meeting.

KANSAS

New Hospital.—The Sisters of St. Agnes will establish and equip a hospital at Hays, to be owned by the sisters, but to be open to the sick of all creeds and beliefs.

Personal.—Dr. Joseph F. Wallace, Leavenworth, has been selected as superintendent of the sanatorium for tuberculosis which is being established by the Modern Woodmen of America, near Colorado Springs.—Dr. Sherman LaB. Axford, Burlington, has been appointed physician to the state penitentiary, Lansing.

Councilors Elected.—At the annual meeting of the Kansas Medical Society, the following councilors were elected: First District, Dr. Charles W. Reynolds, Holton; Second District, Dr. W. Preston Sterret, Kansas City; Third District, Dr. Hugh B. Caffey, Pittsburg; Fourth District, Dr. Ora P. Davis, Topeka; Fifth District, Dr. William E. Currie, Sterling; Sixth District, Dr. Archibald D. Jones, Wichita; Seventh District, Dr. F. M. Daily, Beloit; Eighth District, Dr. Oliver D. Walker, Salina; Ninth District, Dr. Chauncey S. Kenney, Norcatur; Tenth District, Dr. Ernest J. Beckner, Selden; Eleventh District, Dr. John A. Dillon, Larned; and Twelfth District, Dr. William F. Fee, Mead.

Society Meetings.—At the semi-annual meeting of the Southeast Kansas Medical Society, held in Parsons April 13, Dr. Edward B. Payne, Fort Scott, was elected president; Dr. Giles A. Blasdel, Garnett, secretary, and Dr. Millard F. Jarrett, Fort Scott, treasurer.—Physicians of Lynn county have effected a medical organization and elected the following officers: President, Dr. David E. Green, Pleasanton, and secretary-treasurer, Dr. Howard L. Clarke, LaCygne.—A committee from the Sedgwick County Medical Society appeared before the mayor of Wichita, April 22, and requested that the

secretary of the City Board of Health be given a position in the city hall, and that he take over the duties now devolving on the city physician and police surgeon and also the duties of city pathologist and bacteriologist, registrar of vital statistics, supervisor of sanitation of city schools, and local statistician for the State Board of Health.

KENTUCKY

Tuberculosis.—As the result of "Ten Cent Day," an idea conceived by Mrs. L. H. Wyman, Louisville, to raise funds for the work against tuberculosis, nearly \$2,000 was collected May 18, and it is anticipated that the total receipts will exceed \$3,000.

Damage Suits.—The Court of Appeals is reported to have ruled that Dr. Fouche W. Samuels, Louisville, pay Mary Willis damages of \$3,500. She claimed that he had left a sponge in her abdomen after laparotomy.—Judge Gordon May 19 gave instructions to the jury to find for the defendant in the case of Annie Edelen against Dr. Edgar W. Stokes, Louisville, who was sued for \$5,000, the plaintiff alleging that the defendant had failed properly to treat a fracture of the wrist.

Personal.—Dr. Lewis S. McMurtry, Louisville, has had conferred on him the degree of LL.D. by his alma mater, the Tulane University of Louisiana.—Drs. Clyde A. Eckler, Dry Ridge, Joseph L. Price, Sherman, and Americus V. Menefee, Williamstown, have been appointed members of the Grant County Board of Health, and Dr. Menefee has been made health officer of the county.—Dr. John Wood, assistant physician at the Central Kentucky Hospital for the Insane, Lakeland, resigned May 18, on account of ill health.

LOUISIANA

Site Purchased for Sanitarium.—The Hicks homestead, with about twelve acres of land at Shreveport, has been sold to the Sisters of the Incarnate Word for \$30,800. On this site will be erected the new Schumpert Memorial Sanitarium, to cost \$10,000, in memory of the late Dr. T. Edgar Schumpert.

Hospital Report.—At the annual meeting of the board of trustees of the Eye, Ear, Nose and Throat Hospital, New Orleans, April 20, the present administration was re-elected by unanimous vote. The total number of patients treated during the year was 7,838, or 1,147 more than for the preceding year, distributed as follows: Eye department, 3,552; ear, nose and throat department, 4,191; dermatological department, 95. Included in these were 686 emergency cases. The total number of consultations for the year was 53,687, an increase of 9,731 over last year. The maximum daily number of patients was 297, and the maximum number of new cases 74. During the year 1,657 operations were performed.

Society Meetings.—At the annual meeting of St. Landry Parish Medical Association, held in Opelousas, April 15, Dr. Robert G. Hawkins, Palmetto, was elected president; Dr. Paul Foster, Lewisburg, vice-president; Dr. L. Lazaro, Washington, secretary; Dr. William R. Boudreau, Washington, treasurer, and delegates to the state society, Drs. L. Lazaro, Washington, and J. C. Vidrine, Villeplatte.—Claiborne Parish Medical Society, at its annual meeting at Homer April 13, re-elected the following officers: President, Dr. Joseph W. Day, Homer; vice-presidents, Drs. Phillip Gibson, Homer, James F. Simpson, Athens, and Lee T. Waller, Haynesville, and secretary-treasurer, Dr. William L. Stone, Homer.—At the April meeting of Bienville Parish Medical Society Dr. Shelton I. Colvin, Gibsland, was elected delegate to the state medical society.

MARYLAND

County Association Meeting.—The annual meeting of Baltimore County Medical Association was held in Towson, May 20. Dr. Bennet F. Bussey, Cockeysville, was elected president; Dr. H. J. Jarrett, Towson, vice-president; Dr. Richard C. Massenburg, Towson, corresponding secretary; Dr. Josiah S. Bowen, Mount Washington, recording secretary; and Dr. William L. Smith, Sherwood, treasurer; and Drs. H. Lewis Naylor, Pikesville, and L. Gibbons Smart, Lutherville, were elected delegates to the Medical and Chirurgical Faculty of Maryland. The retiring president, Dr. Richard F. Gundry, Catonsville, in his address, made an urgent plea for the care of the indigent insane of the state.

Baltimore

Commencements.—The address at the commencement exercises of the University of Maryland, May 31, will be delivered by Dr. John A. Wyeth, New York City, who will also

receive from the university the honorary degree of LL.D.—At the annual commencement exercises of Baltimore Medical College, May 25, a class of 57 was graduated. Hon. J. Charles Linthicum presented the prizes, and ex-Governor Warfield delivered the address to the graduates.

Personal.—Dr. J. Canby Robinson has returned after a year in Germany.—Dr. Thomas S. Cullen sailed for Europe May 21.—Dr. Thomas H. Buckler will spend the summer abroad.—Dr. Samuel C. Chew has recovered from his recent illness.—Dr. Daniel W. Cathell has been elected president of the Baltimore Eastern Dispensary.—Dr. John C. Hemmeter has been named as one of the committee of patrons for the dedication of the monument to Michael Servetus, in Vienne, near Lyons, France, August 14.

Money for Charities.—As the result of a charity congress held by the Baltimore Judaic Union, \$1,400 was realized, which will be devoted to the establishment of a free dispensary in East Baltimore.—By the will of Miss Frances Donaldson, the Church Home and Infirmary received a bequest of \$5,000 for the endowment of a bed.—Harry E. Meyer has given \$10,000 to the Jewish Home for Consumptives, to be used for the erection of an additional cottage on the grounds of the institution near Baltimore.

MASSACHUSETTS

Gift to Hospital.—By the will of the late Miss Elizabeth Fay Brigham, Brookline, \$1,500,000 has been bequeathed to establish the Brigham Hospital for Incurables.

Wednesday Half Holiday.—The physicians of Lawrence, Methuen, Andover, and North Andover, have decided almost unanimously to close their offices on Wednesdays at 1 p. m., beginning July 1.

Bequests.—By the will of Mrs. Effa E. Brown, East Kingston, filed May 12, a bequest of about \$30,000 is made to the Lawrence General Hospital.—By the will of the late Dr. Frank W. Draper, Brookline, the income of the estate is eventually to be paid to Harvard University.

Personal.—Dr. Elmer E. Southard, Danvers, has been appointed pathologist to the Massachusetts Board of Insanity.—Dr. Robert W. Lovett has been appointed assistant professor of orthopedic surgery, Dr. Charles A. Porter, assistant professor of surgery, and Dr. Edward H. Nichols has been re-appointed assistant professor of surgical pathology in Harvard Medical School.

Carnation Day.—As the result of "Carnation Day" in Lynn, on which 27,000 carnations were sold for the benefit of the Day Camp for Consumptives, Swampscott, \$2,750.08 was raised. The camp will be opened as soon as the buildings can be put in condition for the reception of patients. On account of the success of the attempt, the committee has decided to establish the second Saturday in May in each year as "Carnation Day" for the benefit of the camp.

State Medical Society Meeting.—The one hundred and twenty-eighth annual meeting of the Massachusetts Medical Society will be held June 15 and 16 in Boston. The sectional meetings will be held in the Medical Library on the Fenway on June 15. In the evening the Shattuck Lecture on "The Widening Sphere of Medicine" will be delivered by Dr. Edward W. Taylor, Boston, and at the close of the lecture, a reception will be given to the president. On the second day, the annual discourse will be given by Dr. James G. Mumford, Boston, and at the close the annual dinner will be served.

Alumni Day at Harvard.—Alumni Day was celebrated at Harvard Medical School, May 20. In the evening the triennial dinner occurred, at which ex-President Eliot urged the necessity of a campaign of education so that the people may see vivisection and "new superstitions" in the right light. Lieutenant Governor Frothingham extended a welcome on behalf of the Commonwealth to the visitors from various parts of the country, and lauded the medical men holding state positions in Massachusetts. President Lowell, of Harvard, in his talk, stated that what the medical school of Harvard needed and should have, was a larger student body. Dr. William Osler, Oxford, England, advised that Harvard be remodeled on the lines of the medieval universities of Bologna and Padua. He thought the average age for Harvard medical graduates, 24, was too advanced, and should not be more than 23. He believed Harvard Medical School to be only half finished, as it had no hospital attachment. There should be a hospital as great as the school itself, and it should be a part of the university. Dr. Henry A. Christian, dean of the school, asked the cooperation of every alumnus in improving the institution. Major General Leonard Wood, U. S. Army, an alumnus of the school, delivered an address on what the med-

ical profession is doing in Porto Rico, Cuba, and the Philippines, and credited the profession with doing more than any other class excepting school teachers, to reconcile the people of the islands to American institutions. He urged young graduates to serve a while in the Army in the insular possessions to perfect their knowledge of tropical diseases, and finally endorsed the suggestion of the dean for the establishment of a professorship of tropical diseases in the university.

Elections.—At the annual meeting of Worcester North District Medical Society, held in Fitchburg, April 27, Dr. Eustace L. Fiske, Fitchburg, was elected president; Dr. William N. Cowles, Ayer, vice-president; Dr. Walter F. Sawyer, Fitchburg, secretary; Dr. Frederick H. Thompson, Jr., Fitchburg, treasurer; Dr. Luther G. Chandler, Townsend, commissioner of trials, and Dr. Atherton P. Mason, Fitchburg, librarian.—Hampden District Medical Association, at its annual meeting, held April 20, in Springfield, elected the following officers: President, Dr. Charles W. Jackson, Monson; vice-president, Dr. Harvey W. Van Allen, Springfield; secretary-treasurer, Dr. Richard S. Benner, Springfield; supervising censor, Dr. Vincent J. Irwin, Springfield; censors, Drs. George L. Taylor, Holyoke, Frederick S. Ward, Springfield, William C. Leary, Springfield, and J. H. Schneider, and commissioner of trials, Dr. Philip Kilroy, Springfield.—Plymouth District Medical Society, at its annual meeting, April 21, in Brockton, elected Dr. Frederick J. Ripley, president; Dr. Charles S. Millet, vice-president, and Dr. Alfred C. Smith, secretary, all of Brockton.—At the annual meeting of the Middlesex North District Medical Society, held in Lowell, the following officers were elected: President, Dr. Clarence A. Viles; vice-president, Dr. Omer P. Porter; secretary, Dr. Archibald R. Gardner; treasurer, Dr. Thomas B. Smith; librarian, Dr. Patrick J. Meehan, all of Lowell, and commissioner of trials, Dr. Frederick E. Varney, North Chelmsford.—At the annual meeting and dinner of the Dorchester Medical Society, April 28, Dr. Robert M. Merrick was elected president; Dr. M. Vassar Pierce, vice-president; Dr. Edward J. Brearton, secretary-treasurer.—The Berkshire District Medical Society, at its annual meeting, held in Pittsfield, April 29, elected Dr. Harry B. Holmes, Adams, president; Dr. Clifford S. Chapin, Great Barrington, vice-president, and Dr. Isaac S. F. Dodd, Pittsfield, secretary-treasurer.—Franklin District Medical Society held its annual meeting, May 12, in Greenfield, and elected Dr. Charles L. Upton, Shelburne Falls, president; Dr. Leroy A. Newton, Greenfield, vice-president; Harry N. Howe, Greenfield, secretary-treasurer, and Dr. Francis E. Johnson, Erving, commissioner of trials.

MICHIGAN

Acquitted on Charge of Perjury.—In the case of Dr. George A. Fritch, Detroit, charged with the commission of perjury in a death certificate, the charges were dismissed April 2, and the judge is said to have criticized the prosecutor severely from the bench.

March Mortality.—During March 3,524 deaths were reported, equivalent to an annual death rate of 15.6 per 1,000 of population. Among these were 696 infants under 1 year; 212 children from 1 to 4 years of age, and 1,180 individuals of 65 years of age or over. Among the important death causes were pneumonia, 355; tuberculosis, 256; cancer, 163; violence, 154; influenza, 71; meningitis, 47; diarrheal diseases of infants, 43; typhoid fever, 41; measles, 35; whooping cough, 32; diphtheria, 31, and scarlet fever, 14.

MISSISSIPPI

Hospital Notes.—The need of a central general hospital in the state has resulted in the organization of the Jackson Hospital and Sanatorium Company with a paid-up capital stock of \$50,000, by Drs. Julius Crisler, Christopher H. Herbert and others. The charter has been approved and the extension and addition to the present sanatorium plant will be undertaken promptly.

MISSOURI

Antituberculosis Campaign.—At a meeting of the St. Joseph-Buchanan County Medical Society, held April 22, plans were outlined for the organization of a society for the prevention of tuberculosis, and for the establishment of an outdoor ward at St. Joseph's Hospital for both city and county patients.

Sanatorium Officers.—The newly-elected board of managers of the Missouri State Sanatorium for Incipient Tuberculosis, Mount Vernon, at its meeting May 8, elected the following officers: President, Dr. William Porter, St. Louis; medical director, Dr. Edward W. Schauffler, Kansas City; vice-president, F. H. Miner, Aurora; secretary, W. L. Gup-ton, Montgomery City; auditor, W. T. Craig, Galena; superintendent,

Dr. Orville H. Brown (reelected), and assistant superintendent, Dr. George W. Orrick, Rolla.

State Society Meeting.—The opening address at the fifty-second annual meeting of the Missouri State Medical Association, held in Jefferson City, May 18-20, was delivered by Dr. J. N. McCormack, Bowling Green, Ky. The House of Delegates met and the general and medical sessions were held in the House of Representatives, and the surgical section met in the Senate Chamber. The following officers were elected: President, Dr. Tinsley Brown, Hamilton; vice-presidents, Drs. John M. Bell, St. Joseph; James A. Harris, Mount Vernon; Herbert C. Schobe, Paris; Bernard W. Hays, Jackson, and Jefferson L. Thorpe, Jefferson City; secretary, Dr. Andrew W. McAlester, Kansas City (re-elected); treasurer, Dr. J. Franklin Welch, Salisbury; delegates to the American Medical Association, Drs. Walter B. Dorsett and Edward J. Goodwin, St. Louis; orator in medicine, Dr. Nimrod P. Wood, Independence, and orator in surgery, Dr. Francis Reder, St. Louis. Hannibal was selected as the place of the next annual meeting.

MONTANA

State Tuberculosis League.—A meeting was held in Missoula, May 12, at which the Montana Antituberculosis League was organized with the following officers: President, Dr. William F. Cogswell, Livingston; vice-president, Mrs. T. J. Walsh, Helena; secretary, Dr. Thomas D. Tuttle, Helena; and treasurer, Dr. Mary B. Atwater, Helena.

State Board Election.—At the meeting of the State Board of Medical Examiners, held April 28, in Helena, the following officers were elected: President, Dr. Frederick M. Poindexter, Dillon; secretary, Dr. William C. Riddell, Helena, and treasurer, Dr. Sidney A. Cooney, Helena.—Dr. George B. Owen, Butte, has been appointed a member of the board.

State Medical Society Meeting.—At the thirty-first annual meeting of the Montana State Medical Association, held in Missoula, May 12 and 13, the following officers were elected: President, Dr. Thomas D. Tuttle, Helena; vice-presidents, Drs. John J. Buckley, Missoula; Frederick Cuttle, Hunter's Hot Springs, and Fritz E. Buchen, Hamilton; secretary, Dr. Herbert D. Kistler, Butte, and treasurer, Dr. Creswell T. Pigot, Butte. Hunter's Hot Springs was decided on as the next place of meeting.

Regulations for Car Sanitation.—Regulations have been issued by Dr. Thomas D. Tuttle, secretary of the State Board of Health, governing sanitation and ventilation of passenger cars in Montana. These regulations are the result of a conference between the State Board of Health, railway officials and state railroad commission. The rules provide that no person with a contagious or infectious disease shall enter a public conveyance except a hack, and then only after the person in charge of the hack has been notified. Train conductors are charged to notify health officers when they discover cases of contagious or infectious diseases on their trains, and the local health officer may, at his discretion, remove such persons from trains and hold them in quarantine until disinfected. Spitting and throwing refuse on floors of cars is prohibited. Waiting rooms, smoking rooms and cars must be provided with cuspidors, and water for car tanks is not to be used without the approval of the board of health when a waterborne disease has developed in epidemic form in the municipality.

NEBRASKA

Personal.—The governor has appointed the following four secretaries for the State Board of Health in the so-called "defective act" of the last legislature: Dr. Archibald L. Muirhead, Omaha, two years; Dr. Clifford P. Fall, Beatrice, four years; Dr. Herschell B. Cummins, Seward, three years, and Dr. E. Arthur Carr, Lincoln, one year.—Dr. Malcolm Stewart has been appointed city physician of Tecumseh.—Dr. and Mrs. Lester M. Stearns, Kearney, sailed for Germany May 13.

State Tuberculosis Association.—At the annual meeting of the Nebraska Association for the Study and Prevention of Tuberculosis, held in Omaha, May 7, the following officers were elected: President, Dr. Harold Gifford, Omaha; vice-president, Dr. Francis A. Long, Madison; and executive committee, Mrs. K. R. Edholm, Omaha; Dr. Solon R. Towne, Omaha; Prof. H. B. Ward, Lincoln; Father Reusing, West Point; Mrs. Draper Smith, Omaha; Dr. Charles O. Giese, Holdrege, and Dr. Adrian F. Burkhard, Omaha.

Medical College Closes.—Dr. James F. Stevens, dean of the Nebraska College of Medicine, Lincoln, an affiliated school of the Nebraska Wesleyan University, in a letter to Dr. Ernest

J. C. Sward, secretary of the State Board of Health, notifies him that after careful consideration, the board of directors of the college has decided to close its doors to students and permanently retire from the field. The chief reason stated for the discontinuance was that Lincoln did not furnish the advantages which a college of medicine should have.

Graduation Exercises.—On May 20 the annual commencement exercises of the University of Nebraska, College of Medicine, Omaha, were held, when a class of nine was graduated and the annual address was delivered by Dr. William W. Keen, Philadelphia.—The seventeenth annual commencement of Creighton Medical College, Omaha, was held May 1, and a class of 29 was graduated. The degrees were conferred by the president, Eugene E. Magevney, and Dr. Archibald L. Muirhead, vice-dean of the school, delivered an address on "Thoroughness." At the annual banquet, Dr. Frank E. Coulter presided as toastmaster.

Organization of Hospital Staff.—The organization of the staff of the Douglas County Hospital, Omaha, has been effected by the county commissioner. The position of chief of staff has been done away with, and an executive council has been substituted, composed of Drs. Herschel P. Hamilton, Palmer Findley, and Frederick W. Lake. Dr. Wilson O. Bridges has been appointed consulting physician and the heads of departments are Dr. Paul G. Woolley, pathology; Dr. Solon R. Towne, hygiene and sanitation; Drs. Frederick W. Lake and Rudolph Rix, diseases of children; Dr. Palmer Findley, gynecology; Dr. Frank E. Coulter, mental and nervous diseases; Dr. Alonzo E. Mack, obstetrics; Dr. Frank S. Owen, diseases of the eye and ear; Dr. William F. Milroy, medicine, and Dr. Herschel P. Hamilton, surgery.

NEW HAMPSHIRE

State Society Election.—At the one hundred and eighteenth annual meeting of the New Hampshire Medical Society, held in Concord May 13 and 14, Dr. John B. Deaver, Philadelphia, delivered the oration on surgery, and Dr. Thomas M. Rotch, Boston, the address on medicine. The following officers were elected: President, Dr. Frank Blaisdell, Goffstown; vice-president, Dr. Alonzo S. Wallace, Nashua; councilors, Drs. Herbert K. Faulkner, Keen; Emery M. Fitch, Claremont, and Frederic Von Tobel, Lebanon; trustee, Dr. Silas M. Dinsmore, Keene; examiner, Dr. James T. Greeley, Nashua; delegate to the American Medical Association, Dr. Ferdinand A. Stillings, Concord, and alternate, Dr. William E. Reed, Nashua. At the annual banquet, Dr. Howard N. Kingsford, Hanover, officiated as toastmaster.

NEW YORK

To be Sued for Death of Physician.—It is announced that the city of Troy is to be called on to defend a suit for damages for \$150,000 for the death of Dr. Harry O. Fairweather, who died recently as the result of a fall from a ladder which broke while he was fighting a fire as a member of the volunteer fire department, the ground of suit being that death was brought about through the negligence of the city.

Bills Become Laws.—Governor Hughes has signed the Woods bill requiring death and birth certificates to be forwarded by local health boards to the State Bureau of Vital Statistics on or before the fifth day of each month. Under the present law no time is specified.—The Davis bill has also been signed prohibiting physicians who receive a salary from the state from taking fees for reporting tuberculosis cases.—The bill abolishing the Quarantine Commission and transferring its duties to Dr. Alvah H. Doty, health officer of the Port of New York, has been signed by the governor.

New York City

Personal.—Prof. Charles Baskerville, director of the chemical laboratory, College of the City of New York, sailed for London, May 15, to attend the Seventh International Congress of Applied Chemistry.—Dr. and Mrs. Frederick S. Dennis returned from Europe May 21.

Hospital Fund Distributed.—The distributing committee of the Hospital Saturday and Sunday Association appropriated \$72,000 of the funds received, the largest awards being made to the Montefiore Home and Hospital for Invalids and Mount Sinai Hospital, each of which received \$7,200.

Sea Air for Babies.—St. John's Guild has opened its seaside hospital for babies at New Dorp, Staten Island, two weeks earlier than usual, the boats having already begun three daily trips. Under the policy of the guild the sick child secures admission for itself and mother and all children under the age of 6 in the family.

OKLAHOMA

Commencement.—A class of six was graduated from the College of Medicine of Epworth University, Oklahoma City, May 10. Chancellor George H. Bradford and Bishop W. A. Quayle delivered addresses to the class, and Dr. Archa K. West, dean of the school, presented the diplomas.

State Society Meeting.—The seventeenth annual meeting of the Oklahoma State Medical Association was held in Oklahoma City, May 11-13. The following officers were elected: President, Dr. Walter C. Bradford, Shawnee; vice-presidents, Drs. Charles L. Reeder, Tulsa; David A. Myers, Lawton, and John W. Duke, Guthrie; secretary-treasurer, Dr. Claude A. Thompson, Muskogee, and councilors: First District, Dr. J. Asa Walker, Shawnee; Second District, Dr. John W. Duke, Guthrie; Third District, Dr. Charles R. Hume, Anadarko; Fourth District, Dr. Adam B. Fair, Frederick; Fifth District, Dr. Frederick R. Sutton, Bartlesville; Sixth District, Dr. William G. Blake, Tahlequah; Seventh District, Dr. Ira W. Robertson, Dustin; and Eighth District, Dr. Herbert P. Wilson, Wynnewood. Tulsa was selected as the place of meeting for 1910.

PENNSYLVANIA

Inebriate Hospital Bill Vetoed.—The bill providing for the erection of a state hospital for inebriates, which carried with it an appropriation of \$100,000, was vetoed by the governor, who is said to have been really in favor of the measure, but was obliged to cut off all new institutions on account of the fact that the legislature had made appropriations of \$20,000,000 more than the income of the state.

Vital Statistics.—During March there were reported in the state 13,377 cases of communicable disease, chief among which were measles, 4,507; scarlet fever, 1,881; tuberculosis, 1,375; diphtheria, 1,283; chickenpox, 1,207; pneumonia, 943; whooping cough, 794; typhoid fever, 690, and mumps, 530. During February there were 10,230 deaths reported, of which 1,503 were due to pneumonia, 876 to tuberculosis, 528 to accidents, 516 to diseases of early infancy, 451 to nephritis, 352 to cancer, 198 to influenza, 161 to diphtheria, 136 to typhoid fever, 124 to scarlet fever, 111 to whooping cough, 82 to measles, and 68 to suicide.

Philadelphia

Free Bed for Jefferson Hospital.—In memory of her son, Dr. Charles N. Williams, Mrs. Sarah E. Williams, of Wellsboro, has endowed in perpetuity, a free bed in the Jefferson Hospital at an expense of \$5,000.

Personal.—Dr. R. Bruce Burns was stricken with apoplexy, May 19. He is reported to be convalescing in the Pennsylvania Hospital.—Drs. Eli L. Klopp and Dr. Augusta A. Koenig sailed for Europe May 22.

Failed to Register Births.—Five physicians and three midwives, who were arraigned, April 30, charged with failure to report births within ten days, as required, are said to have pleaded guilty and paid the cost of the proceedings.

Ex-Residents Meet.—The first meeting of the ex-residents association of St. Joseph's Hospital was held May 10. At the business meeting the following officers were elected: President, Dr. George M. Marshall; vice-president, Dr. John J. Moylan; secretary and treasurer, Dr. Joseph M. Spellissy, and historian, Dr. Joseph E. Roberts.

TENNESSEE

Endow Memorial Room.—Two families in Memphis and one family in Oxford, Miss., have endowed a memorial room in the new Baptist Memorial Hospital, Memphis, at a cost of \$1,000.

Alumni Election.—The Alumni Association of Memphis Hospital Medical College, at its annual election, April 29, elected Dr. Landon A. Yarbrough, Covington, president; Dr. R. E. Hering, Arlington, vice-president; Dr. Buford N. Dunavant, Memphis, secretary, and Dr. D. Max Henning, Memphis, treasurer.

Society Meetings.—At the semi-annual meeting of the Dickson County Medical Association, held in Dickson March 12, Dr. W. W. Walker was elected president; Dr. Joseph C. Flowers, vice-president; Dr. William S. Scott, secretary, and Dr. William J. Sugg, delegate to the state medical association, all of Dickson.—Claiborne County Medical Society was organized at Tazewell February 3, with Dr. Monte B. Carr as president, and Dr. Patterson as secretary.—The Nashville Academy of Medicine met April 6, and elected the following officers: Dr. Duncan Eve, Sr., president; Dr. James M. King, vice-president; Dr. Holland M. Tigert, secretary-treasurer; Drs. Matthew C. McGannon, William H. Witt and Mar-

vin M. Cullom, delegates to the state association, and Drs. Lucius E. Burch, Olin West and David R. Neil, alternates.

TEXAS

Health Board Organized.—The Board of Health of Austin has been organized with Dr. William J. Matthews, president; Dr. Thomas R. Pettway, vice-president; and Dr. Thomas S. Bennett, secretary.

Commencement.—The annual commencement exercises of the medical department of Fort Worth University were held May 4, when a class of 17 was graduated. The faculty address was made by Dr. Bacon Saunders, and the diplomas were awarded by the president.—The annual commencement exercises of the Baylor University, College of Medicine, Dallas, were held April 29, when a class of 16 received diplomas from the hand of President S. P. Brooks. The address of the evening was made by Dr. Garfield M. Hackler.—The sixth annual commencement exercises of the Southwestern University Medical College, Dallas, were held April 29, when a class of 9 was graduated. The degrees were conferred by R. S. Hyer, president of the University, and the doctorate address was delivered by Bishop A. C. Garrett.

Legislative Work.—The legislature has passed a bill providing for the appropriation of \$40,000 for the establishment of a leper colony at some point in the state, at least five miles from any town, and making it a misdemeanor punishable by fine to conceal any case of leprosy.—An appropriation of \$90,000 has been made for the erection of a new building for the criminal insane at the Southwestern Insane Asylum, San Antonio, and an appropriation of \$35,000 for each of the state asylums for the care of the consumptive insane.—The tuberculosis commission bill was killed in the house May 3 by a vote of 59 to 35. The bill provided for the creation of a commission of three physicians experienced in dealing with tuberculosis, to be appointed by the governor, and to be furnished with \$5,000 for the gathering of information.

State Society Election.—At the forty-first annual meeting of the State Medical Association of Texas, held in Galveston, May 4-6, the following officers were elected: President, Dr. Witten B. Russ, San Antonio; vice-presidents, Drs. W. N. Wardlaw, Plainview; Charles M. Alexander, Coleman, and Joseph W. Largent, McKinney; councilors: First District, Dr. Felix P. Miller, El Paso; Fourth District, Dr. Stoyell E. Parsons, San Angelo; Eleventh District, Dr. Alfred L. Hathecock, Palestine; Thirteenth District, Dr. John H. Ball, Crystal Falls; and Fourteenth District, Dr. Frank D. Boyd, Fort Worth; trustee, Dr. John S. Lankford, San Antonio (re-elected); delegates to the American Medical Association, Drs. Edward H. Cary, Dallas; William M. Brumby, Austin, and Frank Paschal, San Antonio, and alternates, Drs. Ira C. Chase, Fort Worth; William R. Thompson, Fort Worth, and Hatcher W. Cummings, Hearne. Dallas was selected as the next meeting place.

VERMONT

Tuberculosis Exhibit.—The State Tuberculosis Commission gave its exhibit in Rutland May 12 and 13. The exhibitions are being given in all the larger towns of the state, and in addition to the exhibit itself, illustrated lectures are delivered.

Personal.—Dr. Bertrand J. Andrews, Burlington, celebrated the twentieth anniversary of his appointment as superintendent of the Mary Fletcher Hospital recently.—Dr. Henry D. Chadwick, Pittsford, has been appointed superintendent of the new state tuberculosis hospital to be established at Westfield, Mass.—Dr. John D. Hanrahan, Rutland, celebrated the fortieth anniversary of his entrance into practice, April 12.—Dr. George C. Berkley, St. Albans, has resigned as surgeon of the First Infantry Vt. N. G.

WASHINGTON

Physician Sentenced.—Dr. Fred Peacock, Cathlamet, charged with manslaughter by causing the death of Madeline Longtine as the result of an alleged illegal operation, is said to have been sentenced, April 2, to serve an indeterminate sentence from one to twenty years in the state penitentiary. Motion for a new trial was denied. In February last the defendant was shot and dangerously wounded by the mother of the deceased girl.

Medical Inspection of Schools.—Dr. H. Eugene Allen, chief medical inspector of schools, Seattle, in a report of his inspection work for the first half of the fiscal year, shows that the medical inspectors made 885 school visits and examined 37,948 pupils, recommended treatment in 5,483 cases and excluded conditionally from school 1,211 pupils on account of

scabies, pediculosis and ringworm. There were also 392 cases of contagious disease unconditionally excluded from the schools.

GENERAL NEWS AND COMMENT

Consumptive Camp in Hawaii.—Funds have been contributed for a camp soon to be erected at Honolulu for the open-air treatment of tuberculosis.

Examination in Public Health Service.—A board of medical officers of the Public Health and Marine Hospital Service will convene in Washington on June 14, at 3 B St., S. E., at 10 a. m., to examine candidates for admission to the grade of assistant surgeon in the service. Candidates must be between 22 and 30 years of age, graduates of reputable medical colleges, and must furnish satisfactory testimonials. The examination will be physical, oral, written and clinical. Assistant surgeons receive a salary of \$1,600, and after four years' service are entitled to examination for promotion to the grade of passed assistant surgeon, with a salary of \$2,000 per year. Promotion to the grade of surgeon is made according to seniority, and after examination, and this grade pays a salary of \$2,500 a year. Officers are entitled to quarters for themselves and families, and all grades above that of assistant surgeon receive longevity pay. The tenure of office is permanent. For further information application should be made to the Surgeon General, Public Health and Marine Hospital Service, Washington, D. C.

The Carroll Fund.—The following subscriptions have been received since the last report:

Medical Officers of the Army.....	\$ 40.00
Mr. John D. Rockefeller, New York.....	500.00
Dr. E. H. Sichter, Detroit.....	5.00
Dr. W. L. Adams, Palo Alto, Cal.....	5.00
Las Vegas Medical Society, East Las Vegas, N. M.....	20.00
Dr. Joseph Brettauer, New York.....	25.00
Dr. K. C. Melhorn, U. S. Navy, U. S. S. <i>Dixie</i> , Navy Yard, Philadelphia.....	5.00
W. G., San Francisco.....	5.00
Chicago Pathological Society.....	50.00
Nebraska State Medical Society.....	100.00
Dr. M. Klonk, Lodi, Cal.....	2.00
Dr. Willis W. Waite, Syracuse, N. Y.....	2.00
Cambridge Medical Improvement Society, Cambridge, Mass.....	25.00
Crawford County (Ill.) Medical Society.....	15.00
Dr. William Pepper, Philadelphia.....	5.00
Dr. Mark W. Richardson, Boston.....	5.00

\$ 814.00

Previously acknowledged..... 3,825.65

Total\$4,639.65

Two thousand five hundred dollars is still necessary to raise this mortgage. There is information that at least \$500 of this amount has been subscribed and will be forwarded before the session of the American Medical Association. It would be gratifying to all concerned if it could be announced at the session that the entire amount had been raised. All subscriptions should be sent to Major M. W. Ireland, Medical Corps, U. S. Army, War Department, Washington, D. C.

Societies.—At the annual meeting of the Connecticut River Valley Medical Association, held in Bellows Falls, Vt., May 6, Dr. John D. Proctor, Keene, N. H., was elected president; Dr. Ansel S. Miller, Brattleboro, Vt., vice-president; Dr. James S. Hill, Bellows Falls, secretary, and Dr. Edward R. Campbell, Bellows Falls, treasurer.—The Interstate Medical Club has been organized at Breckenridge, Minn., with the following officers: President, Dr. Timothy O'Brien, Wahpeton, N. D.; vice-president, Dr. Nathan F. Doleman, Tintah, Minn.; secretary, Dr. Clarence P. Rice, Breckenridge, Minn.; treasurer, Dr. Louis W. Armstrong, Breckenridge, Minn., and censors, Drs. Tobias Birnberg, Campbell, Minn.; A. Victor Young, Hankinson, N. D.; and Robert H. Devine, Wahpeton, N. D.—The second annual meeting of the Tri-State Railway Surgeons' Association was held in New Orleans, May 3, when the following officers were elected: President, Dr. James J. Haralson, Forest, Miss.; vice-presidents, Drs. Henry F. Wilkins, Rayville, La., and J. Mosley Alford, Ellisville, Miss.; secretary, Dr. Joseph D. Martin, New Orleans, and treasurer, Dr. Robert W. Thompson, Lumberton, Miss.—At the fifth annual meeting of the National Association for the Study and Prevention of Tuberculosis, held in Washington, May 13-15, more than 250 delegates from all sections of the country were present. The executive secretary reported that the association had gained 600 members during the year, and that 34 out of 40 state legislatures had considered legislation on tuberculosis. At the meeting of the advisory council Dr. Victor C. Vaughan, Ann Arbor, Mich., delivered an address on "Tuberculosis Legislation in Municipal and State Governments." Dr. Henry M. Bracken, Minneapolis, Minn., was elected president

of the section. Great interest attached to the address of Dr. Homer Folks, New York, on recent tuberculosis campaigns and their results. In his opinion, the control of tuberculosis is a problem for local authorities, and he believes the most effective work that can be done by local organizations is to follow the example of the national association in forming local organizations and committees to take the responsibility of securing county and municipal control of the disease. Drs. William Osler, Oxford, England, and William M. Welch, Philadelphia, spoke of the results of the work on tuberculosis, and Speaker Cannon and Ambassador Brice gave their views regarding the outlook. Nathan Strauss, in his address, stated that he had discovered that one out of every eighteen samples of milk sold in Washington was tuberculous, and that one out of every ten dairies in the city supplied tuberculous milk despite the recent vigorous campaigns and that efforts had thus far failed to check the ravages of the disease.

CANADA

Memorial Chair.—At the recent convocation of McGill University, it was announced that \$60,000 had been guaranteed by the committee to establish a chair of chemistry in memory of the late Professor Harrington.

Hospital Notes.—Montreal is about to have a hospital to be devoted entirely to the care of advanced cases of tuberculosis.—Grace and Western hospitals, Toronto, are to be amalgamated in a short time.—A new Western Hospital is to be erected soon, to cost \$150,000.

Graduation Exercises.—At the annual convocation of the Western University Medical Department, London, a class of 23 was graduated. Dr. Hadley Williams delivered the faculty address, and Rev. E. B. Lancel was the orator of the occasion.—At the twenty-sixth annual graduation exercises of Manitoba Medical College, Winnipeg, May 13, Dr. Robert S. Thorton, member of the Provincial Parliament from Deloraine, delivered the principal address, and a class of 36 was graduated.

Tuberculosis in Prince Edward Island.—It is reported that out of the 950 deaths which occurred in Prince Edward Island during the year ended May 31, 1908, 142 were due to tuberculosis. The society for the prevention of tuberculosis in that island has recently been rejuvenated and medical men have been appointed to the chief offices therein. Lectures are being given and a dispensary has been established in Charlottetown. An appropriation of \$600 has been made by the provincial parliament for the work against tuberculosis.

Personal.—Dr. Dyer, Vancouver, B. C., has been appointed assistant to the medical health officer.—Dr. Albert K. Pyne, Toronto, has been appointed chairman of the local milk commission.—Drs. Geoffrey Boyd and Charles Trow, Toronto, have gone to Europe.—Dr. George A. Armstrong, Montreal, has returned from Paris.—Dr. Robichaud, Montreal, has resigned as superintendent of the Hôtel Dieu, Montreal, and has been succeeded by Dr. G. H. Baril.—Dr. H. H. McIntosh, Vancouver, B. C., has resigned as superintendent of the Vancouver General Hospital, and has been succeeded by Dr. Whitelaw.—Dr. James Sampson, Windsor, Ont., has been appointed chief lecturer on "Old Age Pensions" by the Dominion government.—Dr. William I. Senkler, Vancouver, is reported to be critically ill in St. Vincent's Hospital, Portland, Ore.—Dr. James Christie, on May 1, celebrated the fiftieth anniversary of his entry into practice in St. John, N. B.—Dr. J. B. Leathes, F.R.S.C., London, has been appointed professor of chemical pathology in the faculty of medicine of the University of Toronto.

FOREIGN

Psychologic Congress.—The sixth International Congress of Psychology will convene at Geneva, Switzerland, August 3-7, under the presidency of Prof. Thomas Flournoy. The general topics for discussion are "Feelings," "Subconsciousness," "Measure of Attention," and "Religious Psychology." The special topics are the "Psychopedagogical Classification of Backward Pupils," "Pedagogical Psychology," "Orientation at a Distance," and "Perception of Position and Movement of the Body and Limbs." Under standardization will be included terminology, standard colors, enumeration of errors in testimony experiments, notation of age of children and mathematical determination of numerical results of experiments.

Recent Deaths in the Profession Abroad.—In addition to the deaths of members of the profession mentioned by our foreign correspondents, we record those of E. Galvagni, professor of clinical medicine at Modena since 1880, a leader in the profession in Italy, and author of important works on peritonitis,

polyserositis and other phases of internal medicine; E. Kufferath, professor of obstetrics at Brussels; J. R. Costa, professor of medical physics at Buenos Aires; E. R. Haug, professor of otology at Munich; A. Almaraz, professor of chemistry at Mexico; P. de A. Magalhaes, professor of surgical pathology at Rio de Janeiro and author of numerous works on liver and cardiovascular affections, neuritis and beriberi.

British Medical Association.—The seventy-seventh annual meeting of the British Medical Association will be held in Belfast, Ireland, July 23 to 31, 1909. The scientific portion of the meeting will begin with the president's address, on Tuesday, July 27, and the sections will meet on the three following days. Saturday, the 31st, will, as usual, be reserved for excursions. The address in medicine will be delivered by Dr. R. W. Philip, physician to the Royal Infirmary and Royal Victoria Consumption Hospital, Edinburgh; that in surgery by Mr. A. E. J. Barker, professor of surgery, University College, London; and that in obstetrics, by Sir John W. Byers, professor in midwifery and diseases of women, Queen's College, Belfast. The "Popular Lecture," which of late years has become a feature and consists of a lecture open to the public at large, on some subject of general interest and welfare, will be delivered by Dr. A. J. Macdonald. In the Section on Hematology and Vaccine Therapy, presided over by Sir Almoth Wright, there will be papers on "Typhoid-Carriers" (Dr. Houston); "The Bacteriology of Cystitis" (Captain Douglas); and "The Bacteriology and Vaccine Treatment of Acne" (Dr. Fleming). A discussion on "The Early Diagnosis of Tuberculosis" will be opened on July 29 by Professor Calmette of Lille. In the Section on Hygiene and Public Health, compulsory notification of all forms of tuberculosis, latent infections of the diphtheria bacillus, and sewage discharge into tidal waters will be among the subjects. The discussion on latent infections of the diphtheria bacillus will be jointly with the Laryngologic Section. In the Section on Medicine, metabolism, the medical aspects of athleticism, and adolescent albuminuria or mucous colitis will be discussed. In the Navy, Army and Ambulance Section, the following subjects are proposed:

1. Effect on Health of Service in Submarine Boats; 2. Conditions of Life on Boys' Training Establishments on Shore; 3. Medical Arrangements for War in Ships of Dreadnought Type; 4. A Detailed Scheme for an Unexpected Landing Party, Using Material Available on Board Ship; 5. Pitfalls for the Recruiting Medical Officer; 6. Probable Effects in the Services of the New Treatment of Syphilis by Means of Organic Arsenical Compounds; 7. The Importance of the Permanent Attachment of Ample Transport under the Command of the Medical Officer to each Field Medical Unit; 8. The Infective Pneumonias, their Incidence, Causes, Prevention, and Treatment during a Campaign; 9. The Existing Ambulance Organization of the Home Railway Companies, with Suggestions for its Amplification and Unification; 10. The Effects of Recent Research on the Work of Colonial Medical Officers; 11. Diagnosis and Treatment of Pulmonary Tuberculosis in the Service; 12. Collection and Disposal of Wounded in War.

"The Graver Forms of Puerperal Sepsis and Endometritis" will occupy the attention of the Section on Obstetrics and Gynecology, and "Eye Injuries in Relation to the Workman's Compensation Act," "Vascular Diseases of the Retina," and "Diseases of the Lymphoid Tissues of the Conjunctiva" (Mr. Treacher Collins, F.R.C.S.) that of the Section on Ophthalmology. The Section on Pharmacology and Therapeutics will discuss spinal anesthesia and the treatment of edema. In the Section on Psychological Medicine, the subject of "Somatic Delusions and Local Lesions" will be opened by Dr. C. A. Mercier. The Section on Tropical Medicine will discuss, on July 28, "Persistence of the Tropical Diseases of Man Due to Protozoa" (C. W. Daniels, M.D.); July 29, "Treatment of Chronic Recurrent Dysentery with Special Reference to the Possibilities of Surgical Treatment" (Mr. J. Cantlie, F.R.C.S.); July 30, "Feeding and Treatment of Children in the Tropics" (Dr. W. Carnegie Brown). The annual dinner will take place on July 29, and the reception on July 30. The recreations, which are always an important feature with the British Medical Association, will include a golf competition, a cricket match, and in all probability, the launch of one of the great steamships for which the Belfast shipyards are famous.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 15, 1909.

Bill to Regulate the Use of Anesthetics

As shown in previous letters, the large and increasing number of deaths which occur under anesthesia has aroused considerable public attention and a bill is now under consideration in parliament to regulate their administration. It is to be a penal offense for any person not medically qualified to administer a drug for the purpose of producing a state of

unconsciousness during any medical or surgical operation or during childbirth. For the first offense the maximum penalty is \$50 and for the second \$100. Two exemptions are allowed. An anesthetic may be administered under the immediate direction and supervision of a legally qualified practitioner or in the event of the person administering it having reasonable grounds for believing that the delay caused by calling in a physician would endanger life. The bill is not to apply to those already registered under the Dentists Acts. It will be a severe blow to the numerous unqualified dentists who practice, though they are largely the product of circumstances. Registration of dentists was instituted in 1878. Before this date any one could practice dentistry. The supply of dentists with a qualification of a medical college was then small and all persons who were then engaged in the practice of dentistry were admitted to the register. After that period only qualified dentists were admitted to the register, but the supply has never equalled the demand for dentists. Consequently there is a large body of unqualified practitioners throughout the country. Until recently they were not in any way interfered with as long as they did not adopt the title "dentist," which is reserved for registered practitioners. This did not place them at much disadvantage, as they adopted such equivalent designations as "tooth specialist," "dental institution," etc. But recently the law has been set in motion against them and the courts have decided that the use of such designations is illegal, as they imply that the person using them is a dentist. Even the exhibition of sets of teeth in the window or the notice "teeth skilfully extracted" are now penal. Under the bill these practitioners will not only be prohibited from administering an anesthetic, but no physician may administer one for them.

Discomfiture of the Antivaccinationists

Mr. Lupton, M. P., the leader of the antivaccinationists in the House of Commons and a truculent advocate of this fallacy, asked a question in the House which received an unexpected answer. He inquired whether during the late outbreak of smallpox in Bristol the many unvaccinated children in the city showed any special liability to the disease. The president of the local government board, Mr. Burns, replied that any comparison between vaccinated and unvaccinated children should be made in respect to those children who were exposed to infection. At Bristol the persons who suffered from smallpox or were in contact with them were so carefully supervised that few unvaccinated children were so exposed. Of the children under the age of 14 so exposed 9 were attacked by the disease. Two of these had been vaccinated and in them the attacks were abortive. The remaining 7 children were unvaccinated, except that 2 were vaccinated during the incubation period of the disease. Of the 7 unvaccinated children 3 died, all of whom suffered from confluent smallpox.

Malaria in British Colonies

Major Ross, the discoverer of the malarial parasite, delivered a lecture on "The Campaign Against Malaria" before a distinguished audience, including Lord Rayleigh, Sir William Crookes, Sir James Dewar, Professor Arrhenius, and others at the Royal Institution. He pointed out that in Italy by distribution of quinin and mechanical protection against mosquito bites the number of deaths from malaria had been reduced from 21,033 in 1887 to 4,160 in 1907. At Ismailia, as the result of the methods which he had advised for the reduction of mosquitoes the disease had ceased to be endemic since 1904. Work at Klang and Port Swettenham in the Malay States had been equally successful. Excellent campaigns against the disease had also been conducted at Durban, Hong Kong, Khar-tum, Candia, and Port Said. But in India he could find no evidence of a generalized effort against the disease. In 1907 statements were published of what had been done in 21 colonies. Only in 7—Southern Rhodesia, Papua, Mauritius, British Central Africa, Gambia, Ceylon, Southern Nigeria—was there evidence of any real interest in the matter. The reports from the Bahamas, Barbadoes, Jamaica and St. Kitts-Nevis showed nothing but neglect of public duty. The immediate responsibility for the neglect lay with the heads of the sanitary services of the colonies. Though many capable individuals were to be found in those services colonial governments, as a rule, were too careless in selecting the men to whom they entrusted the public health.

London School of Tropical Medicine

The London School of Tropical Medicine has started an advanced course in medical zoology which includes protozoology,

arthropodology and helminthology. Arrangements have been made so that the course in all three subjects can be taken during three months or the whole time may be spent on one subject. Only students who have attended the ordinary course or those who can satisfy the teachers that they possess sufficient rudimentary knowledge are eligible. Special arrangements may be made for teachers who desire to devote themselves to any particular branch or to undertake research work.

State Registration of Nurses

An influential deputation which was recently received by the prime minister urged that facilities should be given by the government for the introduction of a bill establishing a statutory council for the examination of trained nurses. Sir Victor Horsley spoke on behalf of the British Medical Association and said that the medical profession desired to see the nursing profession properly equipped. The premier pointed out, however, that there was considerable opposition to the proposal. He had the views of persons who were entitled to the highest consideration who were altogether opposed to the proposed legislation. These included many of the chairmen of the London and provincial hospitals. He had also received a list of names of 100 members of the medical profession in London, including some of the most eminent, particularly in the department of obstetrics and surgery and a list of 120 names in the provinces who were entirely opposed to the proposal. So also were 49 matrons of the London hospitals and 109 matrons of the provincial hospitals. If such registration was enacted it would not in the least prevent persons who had not satisfied the examiners from pursuing the profession of nursing. Those outside the pale could carry on their profession as before. Under the circumstances he did not think the deputation could expect him to do more than promise to give the most careful consideration to their arguments.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 29, 1909.

Commercial Medical Societies

The *Association Générale de prévoyance et de secours mutuels des Médecins de France* celebrated in April its semi-centennial, as described in my letter on page 1592. At the general assembly the following day a question of professional ethics was raised which has occupied professional attention for a long time, but has not hitherto dared to show itself openly.

There exist in France certain medical societies claiming to be provident societies, which, in reality, are only commercial societies, and tend to deprive physicians who have subscribed to their statutes of liberty of conscience. The chief of these societies is the *Prévoyance médicale*, which is a purely commercial association, consisting of physicians and some pharmacists who possess either stock in mineral waters, or mineral springs themselves, and who undertake to recommend them in preference to other similar waters. Moreover, the physicians who belong to these societies are induced to prescribe soaps, medicated baths, meat preparations, etc., and even pharmaceutical products, such as the "grains de Vals." Officially, the society professes to leave its members entire liberty, not requiring them to prescribe its products save when the proper indication presents itself. But, as a matter of fact, those who prescribe them little are not long in being called to order, and the representative of the society does not hesitate to say to them "when an indication for prescribing our product fails to present itself you must know how to make one." In return the society assures to its members the following advantages:

Every member holds one or more shares in the society, which distributes an annual dividend, naturally varying according to the success of the sales of the society's products. Moreover, the society promises to all its adherents, at 60 years of age, a retiring pension, which at present amounts to 1,000 francs; their widows are also pensioned, and their orphans supported till they become of age. Quite recently the Provident Medical Society has organized a fund for indemnity in cases of sickness; for this the members have no contributions to pay, but must prescribe alimentary products, farinaceous foods, and other dietetic products. It is hardly ten years since the opinion of the entire medical body was almost unanimous for rejecting the principle of such an association. There were only certain physicians, very few in number, who were affiliated to this society, which at that time called itself the Society of Mineral Waters; and in 1900, when the question was put to the Congress of Deontology and Professional Medicine, Dr. Poirson, president of the Union of Medical Syn-

dicates, declared—without calling forth any protest—that the Provident Medical Society was one of those commercial affairs from which the physician ought to keep himself aloof. Unfortunately, since then too large a number of physicians have changed opinions on this question, either because of the increasing difficulty encountered in living by the normal practice of their profession, or because they have not sufficiently reflected on the gravity of the consequences for the medical body that the spread of such concerns must have—consequences grave, not only from a material point of view, for in proportion as these practices should become known to the public, the latter will less and less seek professional advice, which they know not to be disinterested; but still more, from a moral viewpoint, because such practices will end in the physician being regarded simply as an ordinary tradesman.

The local society of the department of Landes is disturbed at this state of things, which tends to discredit the entire medical body "by making of the physician a peddler in specialties." It consequently appealed to the board of the *Association Générale* mentioned above, presenting a resolution calling on the association to point out to all its members and to all the physicians of France, the moral danger that the medical body runs in entering on the path of so-called provident medical, but really commercial, societies. In conformity with the statutes, the board of officers has had to express its opinion on this resolution. It has done so very courageously through its general secretary, Dr. Lepage, who in his report has asked that the resolution of the Society of Landes be taken into consideration, that is to say, be referred for examination to the local societies, to be then discussed at the general assembly in 1910. A group of physicians, however, demanded: (1) That the resolution of the Society of Landes be erased from the orders of the day, and consequently that it should not be discussed; (2) that in the report of the general secretary everything relative to this question should be suppressed, and that this part should be neither read in session nor printed in the bulletin of the association. This maneuver of the partisans of the *Prévoyance médicale* society failed completely, and indeed resulted in the immediate opening of a discussion on the question. On the observation of one delegate, that everyone under the circumstances ought openly to take his responsibility, it was decided that the vote should be public and by name, each delegate answering to his name with *Yes* or *No*. This is the first time that a general assembly of the association has voted in this fashion. The vote resulted as follows: For taking under consideration the resolution of the Society of Landes, 113; against, 17. The resolution is therefore referred for the consideration of local societies, and without prejudging the view that these societies will take, we may congratulate ourselves that the general assembly should have taken a decision so conformable to the honor and dignity of the medical profession.

On the other hand, it is interesting to note that the council of the association of pharmacists complains equally of the existence of these so-called provident medical societies based on the exploitation of mineral waters and various other products. Recently, the council of the Union of Medical Syndicates has been overwhelmed with various propositions on this subject. Unfortunately, under the pretext of respecting the independence of the physician, the council has passed an order of the day which opens wide the door to all kinds of abuses and to commercial alliances between certain unscrupulous physicians and pharmacists. The administrative council of the Union of Medical Syndicates of France, holding that the physician ought to preserve absolute liberty of prescribing in regard to the patient, and to be dependent on nothing except his own conscience, denies to all professional bodies, medical or other, the right to dictate to him his conduct in this matter.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, May 6, 1909.

The New Imperial Insurance Bill

This bill, which I have mentioned in a previous letter, is creating a considerable interest among the classes affected. The pharmacists seem to be well satisfied, but all the other trades or professions make more or less criticism. On the part of the medical profession one can take many exceptions to the bill, and in most publications the proposed law is designated as unacceptable to the medical men. The business committee of the German Medical Association (*Deutscher Aerzte Vereinsbund*) proposes some amendments which will be put before medical councils and societies for discussion.

The principal debate on the part of physicians will take place at the meeting of the German Medical Association (Aerztetag) which meets at Lübeck in June.

Personals

Prof. George Klemperer, for many years an assistant of v. Leyden, has been chosen director of the department of the city hospital, Moabit, as successor of the late v. Renvers. This choice not only corresponds to the expectations of the initiated, but is fully justified by the scientific qualities of Klemperer. Klemperer has been for some years in charge of the second medical division of the same hospital, so that his promotion to a higher position is quite in order.

Professor Stern of Breslau, the superintendent of the university polyclinic in medicine at that place, has accepted the call as director of the medical clinic at Greifswald in place of Minkowski. Stern has secured his reputation by the preparation of a very widely used text-book on the connection between trauma and internal diseases.

Professor Heine of Königsberg has accepted the call as director of the clinic and polyclinic for ear diseases at Munich as successor of the lately deceased Professors Bezold and Haug. In this case the disputed question which I have lately referred to, regarding the combination of instruction in laryngology and otology, has been settled for Munich by retaining the previous status of separate instructors for the two specialties.

On May 3 Professor Guttstadt died at Berlin, aged 69. Guttstadt was a member of the Prussian National Statistical Office and had rendered very good service in the field of medical statistics and public hygiene by a series of excellent investigations.

April 20, Professor Laqueur, formerly director of the Strassburg eye clinic, died at the age of 69. He was at one time an assistant of v. Gräfe and later of Professor Liebreich of Paris, but was professor of ophthalmology at Strassburg, 1872 to 1907.

The interregnum at the medical clinic at Bonn, which has lasted for nearly a year, is finally terminated. The direction of the polyclinic, which was rendered vacant when Professor Leo was appointed as successor of Professor Binz, has been assumed by Professor Krause, the director of the medical polyclinic of Jena. The successor of v. Krause is Professor Lommel.

Private Hospital for Middle Class Patients

The question, still unsettled for Berlin, whether beds shall be provided in city hospitals for middle class patients, has received a temporary solution in our neighboring city, Charlottenburg, by the establishment of a clinic with 50 beds for middle class patients in the Central Charities building (Zentral-Wohlfahrts-Gebäude), erected and dedicated a few days ago by the Women's Patriotic Association of Charlottenburg (Vaterländischen Frauenverein Charlottenburg). The daily price for a bed is 6 to 10 marks (\$1.50 to \$2.50). The building is further notable as furnishing a central bureau for the charitable work of the city of Charlottenburg. The house contains rooms for the care of pulmonary patients, a diet kitchen with special rooms for the feeding of school children, a room for the care of infants, the central bureau of the workingmen's recreation parks, a place for the care of alcoholic patients and an intelligence office for summer outings for people of moderate means and some other society bureaus. There is no doubt that such a centralization of charitable work in many respects will be very advantageous. The business between the individual charitable societies is facilitated and accelerated, time and labor are spared, and an equitable distribution of assistance is assured.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, May 8, 1909.

Health Statistics for Austria

A government report for 1907 contains some very instructive figures. According to this there were altogether 26,000,000 inhabitants in Austria (without Hungary); 731 hospitals, with 52,870 beds were available for patients; compared with 1906, this means an increase of 17 hospitals and 1,350 beds. The number of in-patients occupying these hospitals was 615,125, an increase of 22,600 against 1906. The proportion between population and hospital beds varied very much. Thus in Vienna there was one bed for each 269 persons, in Triest one for each 112 inhabitants, in Galicia one for 1,208 only. The most important affections treated in the hospitals were: injuries, 96,616; ophthalmic cases, 37,125; venereal diseases,

including syphilis, 39,740; tuberculosis, 31,845; bronchial catarrhs, 27,046; diseases of female sexual organs, 25,223; rheumatic affections, 22,868; diseases of stomach, not malignant, 19,142; heart disease, 13,948; cases of malignant tumors, 12,860; diseases of the bones, 12,981; cases of pneumonia, 11,512. There were 69 cases of smallpox with three deaths in this year, and one fatal case of Asiatic cholera.

Of course these figures comprise only the cases admitted into hospitals. In order to indicate the actual numbers of cases of disease, it must be stated that only 11 7/9 per cent. of all tuberculous persons who died that year died in hospitals. There were 96,000 deaths from this cause alone in the empire.

There were 32 public and 9 private lunatic asylums with 29,860 patients: of these 3,646 suffered from acquired idiocy, 2,712 from paranoia, 2,286 from general paralysis of the insane, 1,748 from alcoholic mania, 1,524 from epileptic insanity, 1,180 from congenital insanity, 500 from congenital idiocy. Of each 100 insane persons only 51 per cent. were in asylums, 70 per cent. in infirmaries, and 39 per cent. in private care. In 18 maternities with 1,917 beds, there were 29,681 mothers with 20,969 children; furthermore, there were 8 foundling asylums with 731 cots and 556 beds for wet-nurses. In these institutions 41,098 children were born. In 22 institutions for deaf-mutes, 1,938 persons were cared for while 27,500 were cared for privately. In 15 institutions for the blind 1,159 inmates were counted against 12,890 cared for privately. This year 767,950 persons were vaccinated for the first time. There were 263 *Curorte* or health resorts with nearly 500,000 health-seekers. Carlsbad with 60,000 visitors heads the list. There were 70 *Curorte* with 20,000 to 30,000 visitors paying the health tax (*Curtaxe*) and 62 with 10,000 to 20,000 visitors. The remainder are smaller health resorts.

It is interesting to note that 65 per cent. of all medical men held public appointments, of whom more than 30 per cent. had to rely on their income only, as they had to give all their time to their appointments while the other 70 per cent. of this class of physicians were allowed to follow private practice as well. The number of appointments is increasing constantly; so that in a few years to come every physician in this country will hold some position paid for by the community. This will be the ease especially when the new bill for *Sozialversicherung* (compulsory insurance of wage-earners) becomes law. Out of all practitioners 95 per cent. are doctors of medicine; 5 per cent. are masters of surgery or masters of obstetrics only, and this latter degree is no longer granted; all graduates must go in for the M.D. diploma. The number of practitioners has lately been increasing even more slowly than the population, but still the proportion is one doctor for each 2,200 of the population. As there were 12,260 practitioners in the country, naturally the towns are better off, having one doctor for each 900 to 1,200 inhabitants, while the country has a proportion of 1 to 2,600 and 1 to 5,600. As regards the income trustworthy information is of course hardly obtainable, but the values of appointments are known. The highest salary is \$2,600 a year with certain emoluments, amounting to about 30 per cent., the lowest \$300. Only 6 per cent. of the salaries reach the upper limit; 22 per cent. are at the bottom; the majority have \$600 to \$1,500 a year with the above-mentioned income.

Pharmacology

AGAIN LLOYD'S "CONSUMPTION CURE"

The "Discoverer" Is Awarded a Diploma of Merit by a Learned (?) Society

On two occasions¹ we have given space to a "consumption cure" fake known at various stages of its career as "Lloyd's Specific," "Sol. Anti-Phthisis (Lloyd)," "Aicsol," and finally "Re-Stor-All," the promoter being one Judd Q. Lloyd of St. Louis. Under the first three names it was advertised as an "ethical" remedy; the last name was given it when a company was organized by its promoter to place it on the market as a "patent medicine." This, at least, was the avowed intention. We find, however, in the daily papers that the nostrum is advertised not under its "patent medicine" name, "Re-Stor-All," but under its "ethical" name, "Aicsol." One adver-

1. THE JOURNAL, Nov. 21, 1908 and Dec. 5, 1908; reprinted in pamphlet form.

tisement which starts out with what is alleged to be a testimonial from a physician, contains in addition the following statement:

"On Dec. 15, 1908, the London Society of Science, Letters and Art, of London, England, which was established in 1881 for the purpose of determining the highest scientific and literary achievements of each year, awarded a diploma of merit to Judd Q. Lloyd in recognition of his valuable services to mankind in discovering 'Aiccol,' the only successful treatment for consumption, and was elected an honorary member of that well-known society. Only one such diploma is issued each year in any country."

It seemed strange that a "well-known society" should award a "diploma of merit" to Judd Q. Lloyd for having "discovered" a fake consumption cure and especially that this "society" should rank the "discovery" as the "highest scientific and literary achievement" in the United States for that year. We tried to find out, therefore, something about the society, but were unable to get any trace of it in the various lists of scientific organizations in London. To obtain light on the subject, the editor of *London Truth*, who has shown up so many fake "societies," was written to. He replied as follows:

"The Society of Science, Letters and Art, of London, is a swindle to which at one time we devoted a great deal of attention, and it figured for a time in the *Truth* 'Cautionary List,' but it has lapsed into obscurity in recent years, and we have not referred to it for some time. The concern was started by a man named Albert Sturman who at one time kept a private school for boys in London and also acted as an agent for the sale of various bogus degrees produced on your side of the Atlantic. He then started a degree factory of his own under the above title. He took a house in Kensington and got together a serio-comic literary society, the members of which were entitled to attend *conversaciones*, concerts, etc., in his front parlor, and to dub themselves 'F.S.Sc. (Lond.)' if they paid the fellows' subscription. He also sold them hoods and gowns, specially designed for the benefit of church organists, and generally practiced all the tricks of the trade. He also did very good business by instituting a system of examining small private schools in the provinces and giving the pupils certificates. As he styled his examinations the "Kensington Locals"—which suggested that they were in some way connected with the Government Science and Art Department at South Kensington—country schoolmasters and schoolmistresses patronized these examinations extensively; and I need not tell you that Sturman gave them good value for their money by always passing a fair proportion of pupils."

"In an evil moment for himself, Sturman, who was a stupid and illiterate man, came here to see us, and we published the interview, which made very funny reading. After this the concern went down hill and Sturman himself died six or seven years ago. His wife, however, who was really the active partner in the business, carried it on afterward with some success, but, as I have said, it has dropped out of sight recently, though one occasionally comes across people who display the 'F.S.Sc. (Lond.)'."

Nostrums Containing Habit-Forming Drugs

We recently referred to the large amount of information of interest to physicians which appears in the "Report of the President's Homes Commission," and we quoted from the report a list of "patent medicines" which contained practically no medicinal agents except alcohol. In another part of the same report, Dr. Lyman F. Kebler, chief of division of drugs of U. S. Department of Agriculture, says: "There are on the market many medicinal preparations which contain as ingredients habit-forming drugs. Such drugs are: Alcohol; opium and its derivatives, notably morphin, codein and heroin; cocain; chloral; cannabis indica; acetanilid; etc." Some of these preparations containing habit-forming drugs other than alcohol are given in the "President's Homes Commission" report and are here arranged alphabetically under the habit-forming drug which they contain:

CANNABIS INDICA

One Day Cough Cure (also morphin)
Piso's Cure

CHLORAL

Capitol
D. D. D. Remedy

COCAIN

Agnew's Powder
Anglo-American Catarrh Powder
Coco-Bola
Tucker's Asthma Cure

OPIMUM AND ITS DERIVATIVES

Boschee's German Syrup (morphin)	Harrison's Opium Elixir (opium)
Brou's Injection (morphin)	Hooper's Anodyne, The Infant's Friend (morphin)
Carney Common Sense Cure (morphin)	Jayne's Expectorant (opium)
Children's Comfort (morphin)	Maguire's Compound Extract Benne (morphin)
Colwell's Egyptian Oil (opium)	Mexican Oil (opium)
Crossman's Specific Mixture (opium)	Mrs. Winslow's Soothing Syrup (morphin)
Dr. Drake's German Croup Remedy (opium)	One Day Cough Cure (morphin, also cannabis indica)
Dr. Fahrney's Teething Syrup (morphin)	Petit's Eye Salve (morphin)
Dr. James' Soothing Syrup (heroin)	Pierce's Smart Weed (opium)
Dr. Seth Arnold's Cough Killer (morphin)	Rexal Cholera Cure (opium)
Dr. Moffett's Teethina: Teething Powders (opium)	Shiloh's Cure (heroin)
Fruit-Lax (morphin)	Taylor's Sweet Gum and Mullein Compound (morphin)
Godfrey's Cordial (opium)	Tousley's Sneezless Snuff (morphin)
Gowan's Pneumonia Cure (opium)	Tubercine (opium)
Habitina (morphin)	Victor Lung Syrup (opium)
	Watkin's Anodyne (heroin)
	Wright's Instant Relief (opium)

Association News

THE ATLANTIC CITY SESSION

Additional Announcements—Alumni Reunions—Meeting Places—Other Information

RAILROAD RATES

The Committee on Transportation and Place of Session announces the following rates to the Atlantic City Session. In the New England, Trunk Line, Central and Western passenger associations territories, a rate of one and one-half fare, based on fares in effect April 1, 1909. In the trans-Missouri territory, which includes the Dakotas, Nebraska, Kansas, and the eastern half of Colorado, double the one way fares to Missouri River stations, added to rate of fare and one-half for the round trip tendered therefrom (not to exceed otherwise summer tourists' selling fare to the eastern gateways of this association where same are in effect, added to fares tendered by the Central Passenger Association). From the trans-continental territory, which includes the states west of Colorado, special rates have been made up to the trans-Missouri territory above mentioned. A special rate of \$26.00 has been made for the round trip from Chicago to Atlantic City. This is less than the rate of the fare and one-half, and all those who pass through Chicago or St. Louis may therefore avail themselves of this rate from Chicago or St. Louis. A return limit of 30 days is placed on the \$26.00 rate from Chicago, and stopovers may be made at Baltimore, Washington and Philadelphia providing the ticket agent is so informed when tickets are purchased. A special rate of \$28.20 has been made from Chicago to New York and return for those who wish to go to New York City. Those who wish to make this trip may stop over at Philadelphia by depositing their tickets at Philadelphia and then may go on to Atlantic City to attend the session, taking up the tickets on return to Philadelphia and continuing the trip to New York. The rates here given are for the first-class standard roads and are good on all trains except the 20th Century Limited and the Pennsylvania Special. The rate from Chicago by the differential roads is \$25.70 in place of \$26.00 by the standard, and to New York is \$25.50 instead of \$28.20, but the purchaser should remember that he is obliged to go and return by the same route. Up to the present time we have been unable to secure any special rates from the Southeastern Passenger Association. In all cases, before purchasing tickets, consult the local ticket agent and get all particulars in regard to the special rates from that particular point.

M. L. HARRIS, Chairman.

OTHER ALUMNI REUNIONS

A partial list of the entertainments to be given to the visitors at the Sixtieth Annual Session of the American Medical Association in Atlantic City, June 8-11, was published in *THE JOURNAL* May 15, page 1594. The following additional alumni reunions are announced for Tuesday, June 8:

7:30 p. m.—Harvard University alumni meeting and dinner at Hotel Windsor.
 9 p. m.—Dartmouth Medical College alumni reunion at Hotel Chelsea.
 9 p. m.—Jefferson Medical College alumni reunion and smoker at Hotel Royal Palace.
 8:30 p. m.—Medico-Chirurgical College of Philadelphia alumni reunion and smoker at Hotel Rudolf.
 8 p. m.—Vanderbilt University Medical Department alumni banquet at Young's Hotel.

Other alumni reunions are to be held this same evening for medical departments of the University of Vermont and the University of Minnesota and for Long Island Medical College and Tufts' Medical School.

"Wiener Studenten" will hold a reunion, supper and smoker at Old Vienna, Wednesday, June 9, at 6:30 p. m.

The University of Pennsylvania Medical Department alumni will have lounging, smoking and writing rooms at Young's Hotel the entire week; Vanderbilt medical alumni will also have their headquarters at Young's Hotel.

HOTEL HEADQUARTERS

A large list of hotels with an elaborately tabulated schedule of rates and accommodations, and also with a map of Atlantic City showing the locations of the hotels, appeared in THE JOURNAL, May 1, page 1410. Attention is again called to this list with a recommendation that members secure accommodations in advance. There will be no lack of accommodations in Atlantic City, but the headquarters hotels are apt to be filled before the session, and those who have special preferences as to hotels should secure accommodations at once. The following hotels have been designated as headquarters for the various sections in order that the section members may group themselves in hotels if desired:

OPENING SESSION.....Auditorium, Young's New Pier
 GENERAL HEADQUARTERS.....Marlborough-Blenheim
 PRACTICE OF MEDICINE.....Hotel Dennis
 SURGERY AND ANATOMY.....Hotel Chalfonte
 OBSTETRICS AND DISEASES OF WOMEN.....Haddon Hall
 DISEASES OF CHILDREN.....Hotel Traymore
 NERVOUS AND MENTAL DISEASES.....Hotel Brighton
 HYGIENE AND SANITARY SCIENCE.....Hotel Seaside
 PHARMACOLOGY AND THERAPEUTICS.....Hotel Chelsea
 OPHTHALMOLOGY.....Hotel Rudolf
 LARYNGOLOGY AND OTOTOLOGY.....Hotel St. Charles
 CUTANEOUS MEDICINE AND SURGERY.....Hotel Shelburne
 PATHOLOGY AND PHYSIOLOGY.....Hotel Windsor
 STOMATOLOGYHotel Royal Palace

OTHER SOCIETIES TO MEET

Many other societies will meet in connection with the Association session, as already announced. The American Society for the Study of Alcohol and Other Narcotics will hold its thirty-ninth annual meeting at Young's Hotel, June 7 to 9. A temperance lunch will be served at 1 p. m., Wednesday, June 9, at Young's Hotel. This will be addressed by many eminent physicians, and is an occasion for the gathering of physicians who are interested in the scientific study of the alcoholic problem. A cordial invitation is extended to all. For programs and further particulars, address Dr. T. D. Crothers, Hartford, Conn.

BUREAU OF INFORMATION, REGISTRATION, POSTOFFICE, ETC.

The registration bureau, at which all members should register as soon as they have secured hotel accommodations, is located at the shore end of Young's old pier. Adjoining the registration department is a branch postoffice, as well as telephone and telegraph booths, and bureau of information where one may learn about hotels, transportation, meeting places, entertainments, etc. Occupying the major part of this same pavilion will be the Commercial Exhibit and the Scientific Exhibit, which will receive careful examination from most of the visitors.

ATLANTIC CITY NUMBER

Part of the above announcements are repeated from the Atlantic City Number of THE JOURNAL, May 1, to which readers are referred for further details. That issue contained an illustrated article on Atlantic City and its fame as a watering place. The preliminary programs of the twelve sections were given and much other interesting matter concerning the approaching session.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

SYNONYMS FOR CHLORID OF LIME

To the Editor:—What is the chemical formula of "hypochlorite of lime"? I found this term in the article "A Case of Poisoning from the Bite of a Rattlesnake," by Charles S. White (THE JOURNAL, May 8, 1909, lii, 1486), which states (p. 1844) that "the best chemical antidote is 2 per cent. solution of the hypochlorite of lime."
 G. H. PINEGIN, M.D., Yonkers, N. Y.

ANSWER.—"Hypochlorite of lime" and "chlorid of lime" are terms often applied to the official chlorinated lime. Chlorinated lime is a mixture consisting essentially of calcium chlorid—CaCl₂—and calcium hypochlorite—Ca(OCl)₂—in molecular proportions. Besides these constituents, chlorinated lime also contains calcium hydroxid, calcium carbonate as well as some other calcium salts.

ACID NITROUS ETHER MAY EFFERVESCE WITH POTASSIUM ACETATE

To the Editor:—I should like information as to what occurs in the following prescription:

R
 Potassii acetatis (vel citratis)..... 125
 Spt. ætheris nitrosi..... 15
 Aquæ q. s. ad..... 125
 M.

After mixing, a marked ebullition takes place, which is somewhat retarded if glycerin is added. What gas is generated? If it is ethyl nitrite why is that combination prescribed?
 O. P.

ANSWER.—A neutral potassium acetate or potassium citrate and neutral spirits of nitrous ether, when dissolved in water, should not cause effervescence. Spirit of nitrous ether is liable to be of acid reaction, while potassium acetate and potassium citrate may contain small amounts of carbonate. Under these conditions, when mixed, effervescence will of course occur and carbon dioxide gas will be generated. The addition of glycerin does not prevent, but may slightly retard, the reaction. No decomposition of the medicinal ingredients takes place. It should be remembered, however, that ethyl nitrite, while fairly permanent when dissolved in alcohol (spirits of nitrous ether), is decomposed (hydrolyzed) rather readily by water. The above mixture therefore decomposes gradually when kept.

BILLROTH'S ANESTHESIA SOLUTION

To the Editor:—Will you kindly publish in your Queries and Minor Notes department the formula of Billroth's solution for anesthesia?
 E. B. QUILLER, Wilmington, N. C.

ANSWER.—Billroth's A. C. E. mixture consists of chloroform 3 parts and ether and alcohol 1 part each.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, for the week ended May 22, 1909:

Truby, A. E., major, ordered to accompany Company A, Eng., to Washington Barracks, D. C., and then return to San Francisco.
 Winter, Francis A., major, granted leave of absence for 1 month, about July 1.

Baker, David, major, granted leave of absence for 2 months.

Reasoner, M. A., 1st lieutenant, granted leave of absence for 24 days; relieved from duty at Fort Caswell, N. C., and ordered to Vancouver Barracks, Wash., for duty.

Stuckey, H. W., 1st lieutenant, M. R. C., relieved from duty in the Philippines Division and ordered to sail August 15 from Manila, P. I., for San Francisco.

Stallman, G. P., 1st lieutenant, M. R. C., ordered from San Francisco to Fort Douglas, Utah, for duty.

Park, Roswell, 1st lieutenant, M. R. C., ordered to active duty May 26 to June 1; will repair to Washington and deliver the address to the graduating class of the Army Medical School, May 29.

Hull, A. R., M. R. C., granted leave of absence to May 31.

McLeod, H. C., 1st lieutenant, M. R. C., relieved from duty in Philippines Division; will proceed on first available transport to San Francisco.

Craig, E. J., D. S., left Fort Leavenworth, Kans., and arrived at Fort Omaha, Nebr., for duty.

Ryan, E. P. R., D. S., left Fort Leavenworth, Kans., and arrived at Fort Robinson, Nebr., for duty.

Mills, R. H., D. S., ordered to proceed from Monticello, Fla., to Fort Adams, R. I., for duty.

Lafamme, F. L. K., D. S., ordered to proceed from Rumford, Me., to Fort Thomas, Ky., for temporary duty, and, on completion, to Fort Sheridan, Ill., for duty.

Waddell, R. W., D. S., contract annulled at his own request.
Hussey, S. W., D. S., contract annulled at his own request.
Tignor, E. P., D. S., relieved from temporary duty at Fort Monroe, Va., and further duty at Fort Adams, R. I.; will proceed to Fort Slocum, N. Y., for duty.
Carpenter, Alden, D. S., relieved from temporary duty at Fort Slocum, N. Y., and ordered to return to his proper station, Fort Hancock, N. J.
Whinnery, J. C., D. S., left Fort Liscum, Alaska, and arrived at Fort William H. Seward, Alaska, for duty.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended May 22, 1909:

Huntington, E. O., surgeon, detached from the Naval Station, San Juan, P. R., and ordered to the Naval Medical School Hospital, Washington, D. C., for treatment.

Cecil, A. B., and Walton, D. C., acting asst.-surgeons, appointed acting asst.-surgeons from May 12, 1909.

Bucher, W. H., surgeon, ordered to report to the president of the Naval Retiring Board at the Navy Yard, Mare Island, Cal., May 31, for examination by the board and thence to treatment at the Naval Hospital, Mare Island, Cal., until further orders.

Fiske, C. N., P. A. surgeon, detached from the Navy Yard, Washington, D. C., and ordered to the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

Hart, S. D., acting asst.-surgeon, ordered to duty at the Naval Hospital, New York.

Leach, P., medical inspector, commissioned medical inspector, with rank of commander, from April 1, 1909.

Payne, J. H., P. A. surgeon, detached from the *Salem* and directed to wait orders.

Zalesky, W. J., P. A. surgeon, detached from the Naval Station, New Orleans, and ordered to the *Salem*.

Ryder, C. E., P. A. surgeon, detached from the *Vermont* and ordered to the Massachusetts nautical training ship *Newport*.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service, for the seven days ended May 19, 1909:

White, J. H., surgeon, detailed to represent the service at the annual meeting of the American Medical Association, to be held in Atlantic City, N. J., June 8-11, 1909.

Rosenau, Milton J., surgeon, granted 2 months' leave of absence from April 8, 1909, on account of sickness.

Ramus, Carl, P. A. surgeon, granted 1 day's leave of absence, May 11, 1909, on account of sickness.

Miranda, Rafael U. L., acting asst.-surgeon, granted 1 month's leave of absence from June 1, 1909, and 3 months' leave of absence, without pay, from July 1, 1909.

Small, Edward M., acting asst.-surgeon, granted 10 days' leave of absence from May 19, 1909.

PROMOTIONS

Gardner, Charles H., Blue, Rupert, Oakley, James H., and Sprague, Ezra K., P. A. surgeons, commissioned surgeons, to rank as such from May 1, 1909.

CASUALTY

Wightman, William M., P. A. surgeon, died from yellow fever in Guayaquil, Ecuador, May 16, 1909.

RESIGNATION

Watters, M. H., pharmacist, resigned, to take effect May 13, 1909.

BOARDS CONVENED

Board of medical officers convened to meet at the Marine Hospital, Boston, May 14, 1909, for the purpose of making a physical examination of an applicant for appointment as cadet in the Revenue-Cutter Service. Detail for the board: Surgeon L. L. Williams, chairman; P. A. Surgeon T. W. Salmon, recorder.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 21, 1909:

SMALLPOX—UNITED STATES

California: Sacramento, May 1-8, 5.

Illinois: Alton, April 1-30, 2 cases; Danville, May 2-9, 15 cases; Chicago, May 1-8, 1 case; Galesburg, 1 case; Peoria, April 1-30, 44 cases; Springfield, April 30-May 7, 3 cases.

Indiana: Indianapolis, May 2-9, 1 case; South Bend, May 1-8, 1 case.

Iowa: Council Bluffs, May 3-10, 1 case.

Kansas: Kansas City, May 1-8, 3 cases; Wichita, 2 cases.

Kentucky: Lexington, May 1-8, 1 case; Newport, 2 cases.

Michigan: Saginaw, May 1-8, 7 cases.

Minnesota: Duluth, April 30-May 6, 2 cases.

Missouri: Kansas City, April 17-May 8, 10 cases; St. Joseph, March 27-April 3, 1 case; St. Louis, May 1-8, 1 case.

Montana: Butte, April 20-May 4, 7 cases; Great Falls, April 24-May 1, 1 case.

New Jersey: Camden, May 1-8, 2 cases; Trenton, 1 death.

New York: Little Falls, April 24-May 8, 2 cases.

Ohio: Ashtabula, April 17-May 8, 2 cases; Cincinnati, April 30-May 6, 9 cases; Columbus, May 1-8, 1 case.

Tennessee: Nashville, May 1-8, 1 case.

Virginia: Richmond, April 30-May 1, 1 case.

Washington: Spokane, April 30-May 1, 4 cases.

Wisconsin: La Crosse, May 1-8, 1 case.

SMALLPOX—INSULAR

Philippine Islands: Manila, March 27-April 3, 3 cases, 1 death.

SMALLPOX—FOREIGN

Canada: Halifax, April 24-May 1, 1 case; Yarmouth, May 1-8, 1 case.

Ceylon: Colombo, Feb. 13-March 27, 37 cases, 8 deaths.

China: Amoy, March 27-April 3, present; Canton, March 20-27, 20 cases.

Egypt: Cairo, March 25-April 8, 28 cases, 10 deaths.

Gibraltar: March 26-May 2, 1 case.

India: Bombay, April 6-13, 15 deaths; Calcutta, March 26-April 3, 281 deaths; Rangoon, 14 deaths.

Italy: General, April 18-25, 9 cases; Naples, 13 cases, 1 death.

Java: Batavia, March 20-April 3, 7 cases, 2 deaths.

Manchuria: Dalny, April 3-10, 5 cases, 1 death.

Mexico: Chihuahua, April 18-May 2, 4 cases; Monterey, April 25-May 2, 16 deaths.

Russia: Batoom, March 1-31, 2 cases; Moscow, April 10-17, 28 cases, 13 deaths; Odessa, April 3-17, 23 cases, 2 deaths; Riga, April 18-21, 2 cases; St. Petersburg, March 27-April 10, 46 cases, 11 deaths; Warsaw, Feb. 13-20, 2 deaths.

Siam: Bangkok, Feb. 1-28, 111 cases, 72 deaths.

Spain: Barcelona, April 19-26, 5 deaths; Valencia, April 17-24, 10 cases.

Straits Settlements: Singapore, March 20-27, 1 death.

YELLOW FEVER

Barbados: April 25-May 1, 4 cases.

Brazil: Para, April 10-17, 6 cases, 6 deaths.

Ecuador: Guayaquil, March 20-April 3, 72 cases, 34 deaths.

CHOLERA—INSULAR

Philippine Islands: Provinces, March 25-April 3, 177 cases, 82 deaths.

CHOLERA

India: Bombay, April 6-13, 97 deaths; Calcutta, March 26-April 3, 129 deaths; Rangoon, 8 deaths.

Russia: St. Petersburg, April 22-28, 12 cases, 1 death.

PLAGUE

Arabia: Mascat, April 14, 1 case, 1 death, imported.

Australia: New Castle, March 1-31, 1 case, imported; Sydney, March 6-12, 4 cases, 1 imported.

Chile: Antofagasta, April 7, 10 cases; Iquique, April 8, 17 cases.

China: Amoy, March 27-April 3, present; Chang Chew, epidemic.

Ecuador: Babohoyo, March 20-27, 2 cases; Guayaquil, March 20-April 3, 34 cases, 12 deaths.

India: Bombay, April 6-13, 370 deaths; Calcutta, March 27-April 3, 94 deaths; Rangoon, 29 deaths.

Japan: Kobe, April 3-17, 2 cases; Formosa, March 27-April 10, 123 cases, 99 deaths.

Peru: General, April 10-17, 29 cases, 19 deaths; Callao, 4 cases, 3 deaths; Lima, 10 cases, 4 deaths.

Marriages

R. C. BOWMAN, M.D., to Miss Blanche Smith, both of Philadelphia, May 12.

LEROY H. SANE, M.D., to Miss Estelle S. Gerhart, both of Telford, Pa., April 28.

CHARLES N. ALLISON, M.D., Canton, Ill., to Miss Fern Barnes of Paulding, Ohio, May 1.

MARY L. D. BICKINGS, M.D., to Harold Thornton, both of Philadelphia, Pa., April 30.

WILLIAM W. LEWIS, M.D., St. Paul, Minn., to Miss Barbara Haug of Duluth, March 22.

ANDREW COLIN GILLIS, M.D., Baltimore, to Miss Bertha Fischer, at Baltimore, May 4.

REU A. HAND, M.D., Camden, N. J., to Miss Elizabeth Hughes Blattner of Cape May, N. J., May 11.

CORDY N. PATE, M.D., Fort Smith, Ark., to Miss Ione Gayden of Winona, Miss., May 7.

DON C. HUGHES, M.D., Findlay, Ohio, to Mrs. Laura Lingenfelter, at Chicago, April 20.

VIRGINIUS DABNEY, M.D., to Miss Ada Louise Newlands, both of Washington, D. C., May 18.

WILLIAM H. STRENG, M.D., Spring Grove, Ill., to Miss Ada Richardson of Richmond, Ill., recently.

EDGAR S. McILVAIN, M.D., Manila, P. I., to Miss Saidee Dougherty of Nashville, Tenn., May 12.

WALTER BAER WEIDLER, M.D., Lancaster, Pa., to Miss Grace Langley at New York City, April 20.

DWIGHT GORDON SMITH, M.D., Washington, D. C., to Miss Emily Griffin Reid, at Washington, May 11.

C. S. FLOYD, M.D., Loganville, Ga., to Miss Birdie Scott of Norwood, Ga., at Stone Mountain, Ga., May 6.

STANFORD K. WINSOR, M.D., Anand, British India, to Miss Bessie Marie Carroll of Chicago, May 11.

WILLIAM THEOPHILUS CHAPMAN, M.D., Uniontown, Pa., to Miss Wilbia May Newson of Monessen, Pa., May 12.

Deaths

Thomas J. Happel, M.D.

Dr. Thomas J. Happel, one of the most earnest, faithful and efficient members of the American Medical Association, died at his home in Trenton, Tenn., May 24, from brain tumor, after a protracted illness, aged 62.

He was born in Greensboro, Alabama, Jan. 24, 1847. Enlisted as a boy as a soldier in the Confederate Service; he was taken prisoner in 1864, and imprisoned in Mobile until the close of the Civil War.

He was graduated from the medical department of the University of Virginia, Charlottesville, in 1871, and in the following year from New York University.

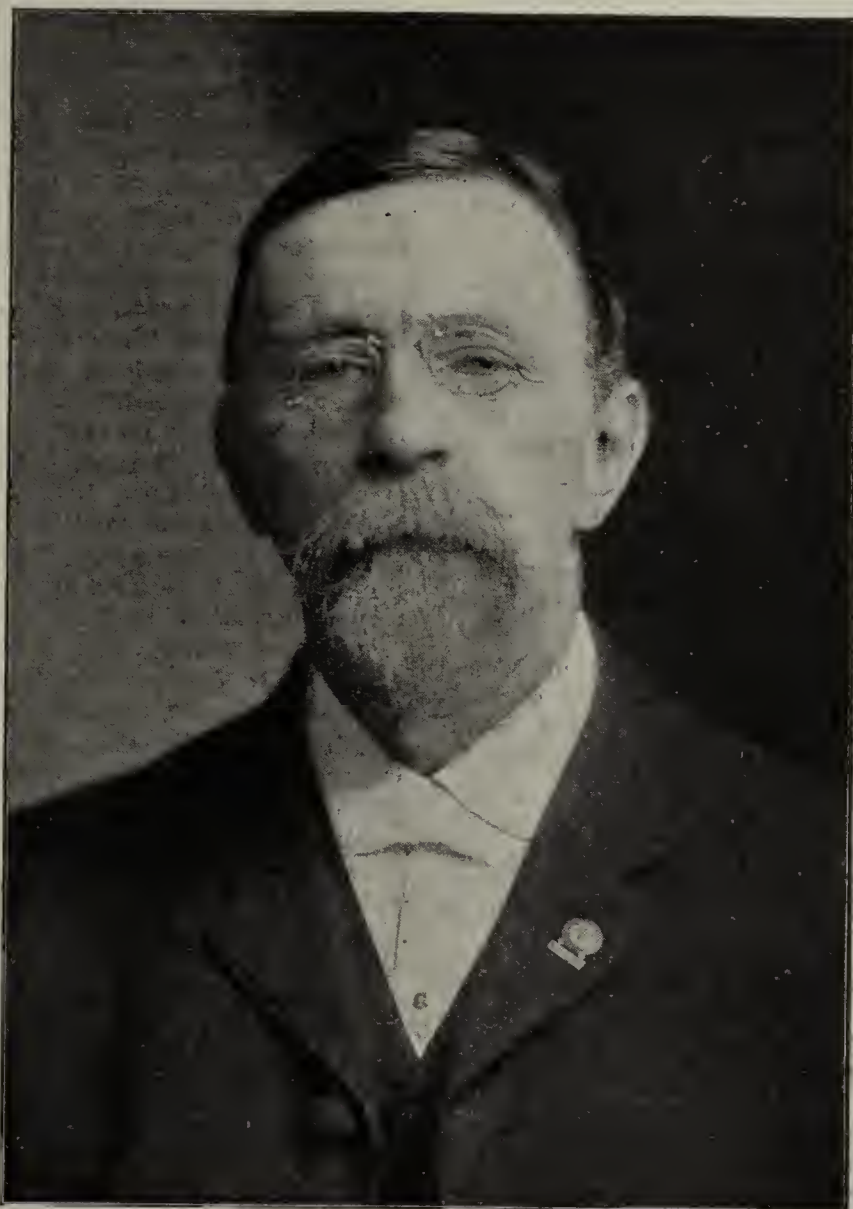
He was a member of the American Medical Association for many years, vice-president in 1897, a member of the Board of Trustees from 1898 until the time of his death and chairman of the board from 1901 to 1908. Those who were present at the meeting of the Association in Denver in 1898 will remember the splendid record he made as presiding officer on that occasion when the notable discussion of the rules of ethics took place.

He served as president of the Tennessee State Medical Association, of the Gibson County Medical Association, the Tri-State Medical Association of Tennessee, Arkansas and Mississippi, and West Tennessee Medical and Surgical Association. He was health officer of Gibson County for sixteen years, and president of the Trenton board of health for twenty-eight years and secretary and treasurer of the State Board of Medical Examiners since its organization in 1889, and during this time compiled and issued the state directory, which stands as a monument to his painstaking labor. He also served as vice-president of the Association of Southern Railway Surgeons, and the National Association for the Study and Prevention of Tuberculosis. He was for many years local surgeon of the Mobile and Ohio Railroad, and a member of the local board of pension examining surgeons.

For a number of years he had been a member of the Board of Aldermen of Trenton, and to him is given the credit of the high position that city holds in regard to paving, light, and water supply, as well as low taxation.

Dr. Happel was always in the forefront of all work for the good of the community in which he lived, and the profession which he honored. He was known throughout the state and the South, and was universally beloved. He was one of the most esteemed and most conscientious members of the Board of Trustees of the American Medical Association and was always ready to give freely of his counsel and his time for the upbuilding of the Association. Those who have had the pleasure of being associated with him will not soon lose the inspiration of this noble life.

William Martin Wightman, M.D. Cooper Medical College, San Francisco, 1899; a member of the American Medical Association; who entered the Public Health and Marine-Hospital Service, in 1902, a year later was made assistant surgeon, and in 1908 was promoted to the grade of passed assistant surgeon; one of the ablest of the younger officers of the service; died from yellow fever, May 16, at his station in Guayaquil, Ecuador, where he had been sent to observe and take measures for preventing the spread of yellow fever, aged 33.



THOMAS J. HAPPEL, M.D., 1847—1909

William L. Steele, M.D. Medical College of the State of South Carolina, Charleston, 1857; formerly president of the Association of Montana Pioneers; for one term sheriff, for ten years coroner, and for two terms treasurer of Lewis and Clark county, Mont.; for four years state senator; for one term alderman, and for three terms mayor of Helena; died at his home in Helena, May 16, from cerebral hemorrhage, aged 76.

Isaac Francis Galloupe, M.D. Harvard Medical College, Boston, 1849; a member of the Massachusetts Medical Society; surgeon of the Seventeenth Massachusetts Volunteer Infantry and later brigade and division surgeon and medical director of the Eighteenth Army Corps during the Civil War; and a prisoner in Libby Prison, Richmond, Va.; formerly city physician and a member of the board of U. S. pension examining surgeons and of the school board of Lynn, Mass.; died at his home, May 17, from paralysis, aged 85.

Charles M. Thompson, M.D. College of Physicians and Surgeons, Chicago, 1883; a member of the Michigan State Medical Society; a member of the first village council and at one time health officer of Elk Rapids, Mich.; died at his home from aneurism of the aorta, May 10, aged 44.

Charles Bates Tower, M.D. Harvard Medical School, Boston, 1881; died at his home in Cambridge, Mass., May 14, aged 66.

William R. Bird, M.D. College of Physicians and Surgeons, Baltimore, 1880; a member of the Medical Society of the State of Pennsylvania; died at his home in Chester, May 13, from pneumonia, aged 51. At a special meeting of the Delaware County Medical Society, a committee was appointed to prepare and present suitable resolutions regarding the death of Dr. Bird.

Gerardus Hilles Wynkoop, M.D. College of Physicians and Surgeons, New York City, 1866; a member of the Medical Society of the State of New York, consulting surgeon to the Northern Dispensary, New York City; visiting surgeon to St. Luke's and the Roosevelt hospitals; died at his home May 16, from peritonitis, three days after an operation for appendicitis, aged 65.

C. Helge Browall, M.D. University of Stockholm, Sweden, 1895; local surgeon at Ada, Okla., for the Oklahoma Central Railroad; pres-

ident of the local health board, and city physician of Ada; died in the St. Vincent de Paul Sanitarium, Sherman, Texas, May 14, from septicemia, due to an operation wound, aged 38.

Rachel S. Skidelsky, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1894; a member of the Medical Society of the State of Pennsylvania and prominent as a philanthropist; physician to the Home for Jewish Girls, Philadelphia; died at her home in that city, May 13, from pneumonia, aged 53.

Salvatore Gomez, M.D. Long Island College Hospital, 1891; formerly acting assistant surgeon P. H. and M.-H. Service at Gibara, Cuba; for eight years port physician at Sastia, and since May head physician of the Spanish-American Iron Company's Hospital; died in that institution, May 16, aged 47.

Charles E. Witbeck, M.D. Albany (N. Y.) Medical College, 1866; a member of the American Medical Association; president of the staff of the Cohoes, N. Y., Hospital; for many years health officer and member of the board of health of Cohoes; died at his home, May 13, from nephritis, aged 65.

John Eberle Payton, M.D. Willamette University, Salem, Ore., 1877; a member of the American Medical Association; a member of the Board of Health and a prominent practitioner and citizen of Redlands, Cal.; died from tuberculosis, at the Pottenger Sanatorium, Monrovia, Cal., May 10, aged 51.

George W. Fisher, M.D. Georgetown University, Washington, D. C., 1870; a veteran of the Civil War; and for several years a clerk in the record and pension division of the War Department, Washington; died May 17, at his home in Anacostia, Washington, D. C., aged 69.

John Grove Speer, M.D. Transylvania University, Lexington, Ky., 1830; for a time probate judge of Macon county, Ill., and a resident of Decatur, and later a practitioner of Floydshurg, Ky.; died at the home of his son in Alton, Ky., from influenza, May 2, aged 100.

Alta Fremont Cook, M.D. University of Michigan, Ann Arbor, 1881; a member of the American Medical Association; acting assistant surgeon P. H. and M.-H. Service; was found dead in his office in Sandusky, Ohio, May 14, from valvular heart disease, aged 58.

John C. Edward Kaiser, M.D. University of Berlin, Germany, 1870; lecturer on histology and embryology at his alma mater in 1874; and professor of anatomy at the Humboldt Academy, Berlin, in 1876; died at his home in Green Bay, Wis., May 17, from heart disease, aged 56.

Joseph Edgar Grimsley, M.D. University of Virginia, Charlottesville, 1883; of Greensboro, N. C.; a member of the Medical Society of the State of North Carolina; died in St. Leo's Hospital, Greensboro, May 15, from septicemia, due to an operation wound, aged 49.

Joseph B. Kinley, M.D. Hahnemann Medical College, Chicago, 1885; dean of the Denver College of Physicians and Surgeons; died suddenly May 13, from concussion of the brain following a fall due to vertigo, at a banquet of the graduating class of the college, aged 49.

William Long, M.D. Georgetown University, Washington, D. C.; chief chemist in the Bureau of Engraving and Printing, Washington; a chemist, linguist, and musician of note; died in the Emergency Hospital, Washington, May 14, from cerebral hemorrhage, aged 50.

Charles Appleton Packard, M.D. Medical School of Maine, Brunswick, 1856; a fellow of the American Academy of Medicine; for 20 years physician to the Military and Naval Orphans' Hospital, Bath, Maine; died at his home, March 23, from arteriosclerosis, aged 80.

Francis Marion Savage, M.D. Louisville, 1870; for several years president of the U. S. board of pension examining surgeons at South McAlester, I. T.; twice postmaster of Harts-horne, Okla.; a veteran of the Civil War; died at his home in Harts-horne, Nov. 8, 1908, aged 76.

Robert H. Seymour, M.D. University of Dublin, Ireland, 1870; a member of the State Medical Association of Texas; and for several years secretary of the Fayette County Medical Society; died at his home in Warrenton, March 26, aged 57.

Durell Shepard, M.D. Yale University, New Haven, 1864; a member of the American Medical Association; acting assistant surgeon in the Army during the Civil War; died at his home in West Haven, Conn., from senile debility, May 16, aged 77.

John S. Lupton, who retired from practice forty-five years ago on account of deafness and was the pioneer fruit grower of the Shenandoah Valley; died at his home in Winchester, Va., Nov. 6, 1908, from paralysis, aged 80.

Joshua Swigert, M.D. Washington University, Baltimore, 1863; formerly of Brazil, Ind.; died in the Cook County Institutions, Dunning, Ill., May 3, from exhaustion, due to chronic morphinism, aged 71.

Samuel G. Statler, M.D. Jefferson Medical College, Philadelphia, 1851; a member of the Medical Society of the State of Pennsylvania; died at his home in Alum Bank, May 13, from senile debility, aged 82.

Asa Walter Jayne, M.D. Homeopathic Medical College, New York City, 1879; of North Tonawanda, N. Y.; coroner of the first Niagara District; died in Buffalo, Nov. 16, 1908, from pneumonia, aged 58.

Arthur C. L. Fox, M.D. McGill University, Montreal, 1898; of Montreal; formerly an oarsman of repute in western Canada; died in the Royal Victoria Hospital, Montreal, March 31, aged 44.

Thomas Hall, M.D. Harvard Medical School, Boston, 1866; of Boston, a member of the Massachusetts Medical Society; died in Chelmsford Center, Mass., May 14, from cerebral embolism, aged 70.

Alfred Knox Middleton, M.D. Louisville, 1851; surgeon in the Confederate Service during the Civil War; died at his home in Arlington, Texas, April 14, 1908, from senile debility, aged 78.

Alfred P. Pierce, M.D. University of Buffalo, N. Y., 1898; a member of the Medical Society of the State of Pennsylvania; died at his home in Bradford, Aug. 15, 1908, from uremia, aged 45.

Sam L. Holcomb, M.D. St. Louis; for many years a practitioner of Pike county, Mo.; died at the home of his brother in Cherokee, Texas, Oct. 17, 1908, from cerebral hemorrhage, aged 73.

John Farquhar McDonald, M.D. Harvard Medical School, Boston, 1868; formerly of Elmsdale and Hopewell, N. S.; died at his home in Shubenacadie, N. S., in November, 1908, aged 71.

Samuel Gager Johnson, M.D. New York University, New York City, 1878; died at his home in Bozrah, Conn., April 3, from influenza and secondary anemia, aged 60.

William Devereaux Kendall, M.D. University of Pennsylvania, Philadelphia, 1858; a Confederate veteran; died at his home in Paris, Tenn., May 8, aged 64.

Bradley Crippen, M.D. Western Reserve University, Cleveland, 1861; a veteran of the Civil War; died at his home in Coldwater, Mich., March 17, aged 64.

Andrew J. Bobbs, M.D. Medical College of Ohio, Cincinnati, 1854; a pioneer practitioner of Marion, Ind.; died at his home in that city, May 13, aged 76.

Margaret Richardson, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1853; died at her home in Norristown, Pa., May 15, aged 91.

Manfred H. McDonald, M.D. Bellevue Hospital Medical College, New York City, 1873; died at his home in Hempstead, N. B., February 28, aged 62.

William S. Moslander, M.D. Hahnemann Medical College, Philadelphia, 1889; died at his home in Camden, N. J., May 12, from tuberculosis, aged 49.

Theodore Miller, M.D. New York University, New York City, 1873; died at his home in Califon, N. J., May 14, from lung disease, aged 60.

Alter Louis Slonaker, M.D. Western Pennsylvania Medical College, Pittsburg, 1889; died at his home in East End, Pittsburg, May 14, aged 46.

Cornelius W. Parker, M.D. Southern Botanical-Medical College, Macon, Ga., 1853; died at his home in Atlanta, May 15, aged 80.

George W. Landis, for many years a practitioner of North Carolina; died at his home in Durham, Sept. 22, 1908, aged 67.

John Hammel, M.D. Kentucky School of Medicine, Louisville, 1880; died at his home in Bucks-kn, Ind., May 12, aged 54.

David Randall, M.D. St. Louis, 1836; died at his home in Norwalk, Cal., Sept. 18, 1908, from senile debility, aged 98.

James Henry Payne, M.D. New York University, New York City, 1849; died at his home in Boston, May 14, aged 85.

Book Notices

THERAPEUTICS OF THE CIRCULATION. Eight Lectures Delivered in the Spring of 1905 in the Physiologic Laboratory of the University of London. By Lauder Brunton, Kt., M.D., D.Sc., LL.D. (Edin.), LL.D. (Aberd.), F.R.C.P., F.R.S., Consulting Physician to St. Bartholomew's Hospital. Cloth. Pp. 280, with illustrations. Price, \$1.50. Philadelphia: P. Blakiston's Son & Co., 1908.

These lectures, delivered in 1905, have been revised by the author. The reader who expects to find only a treatise on therapeutics of the circulation will be disappointed because 108 of the 280 pages in the book are devoted to physiology and the instruments by which this subject can be studied in the laboratory and clinic. This portion of the book is written in Brunton's usual style, and is full of his own observations and interpretations of facts. Lectures 4 and 5 discuss the therapeutics of various heart diseases and conditions. The two succeeding chapters describe the physiologic and therapeutic action of such drugs as digitalis, adrenalin, strychnin, caffeine, amyl nitrite, isobutyl nitrite, hydroxylamin, nitrogly-

cerin, nitroerythrin, nitromannite, tobacco, aconite, general and local bleeding, diet and regimen, Nauheim and Oertal treatments, exercise, etc. Several appendices and full indexes follow these lectures. This book is full of the interest which Brunton's personality gives to all his writings. It also possesses the defect of most lectures, in that many topics are too briefly considered and others too much in detail. The book is attractive and copiously illustrated.

TUBERCULOSIS OF THE NOSE AND THROAT. By Lorenzo B. Lockard, M.D., Laryngologist and Rhinologist to the Jewish Consumptives' Relief Society Sanatorium. Cloth. Pp. 368, with illustrations. Price, \$5. St. Louis: C. V. Mosby Co., 1909.

Dr. Lockard reviews the entire subject of tuberculosis of the larynx, pharynx and nose. He begins with a digest of the history of the subject, follows this with well-selected statistics, and then enters into clinical details and treatment. Throughout the treatise he shows thorough familiarity with the literature, as well as extensive personal experience. His own experience leads him to take definite position regarding many questions under discussion. This makes the book a satisfactory one for clinical reference. Notwithstanding its bulk, the work contains neither unnecessary repetitions nor padding; it can be recommended to any one interested in the subject. Its therapeutic teaching is judicious and conservative, though often rather optimistic—the optimism being justified, no doubt, by the climatic advantages of Dr. Lockard's practice. It is to be regretted, perhaps, that he takes so reserved a position toward all forms of tuberculin treatment, even though this treatment has not yet been successfully applied to tuberculous diseases of the throat. The influence of tuberculin treatment on tuberculosis in other parts of the body has been so often demonstrated that laryngologists can not afford to be indifferent to it. The numerous laryngoscopic illustrations may be somewhat criticized from an artistic point of view, but for clinical purposes they are good and useful.

OPERATIVE MIDWIFERY. By J. M. Munro Kerr, M.B., C.M., Glas., Fellow of the Faculty of Physicians and Surgeons, Glasgow. Cloth. Pp. 705, with illustrations. Price, \$6.00. New York: William Wood & Co., 1908.

This work deals mainly with the abnormal part of obstetrics, and in this respect at least in the English language, stands alone. Dr. Kerr dwells at length on causes of dystocia, and attempts to impress the necessity of an early, careful, scientific examination of every pregnant woman. These chapters abound in most excellent advice, and can be read frequently with profit. While Dr. Kerr is not dogmatic, still he has some set ideas which do not appeal to us on this side of the water. For instance, he is enthusiastic over the symphyseotomy operation; says that he can see no reason to abandon it, and presents statistics which really give him ground for such an opinion. Pubiotomy, he says, will not displace it, or at least he is willing to wait until the pubiotomy craze is over and we can draw a calm dispassionate conclusion of its merits. We in America have never had a high opinion of the operation of symphyseotomy, and, as he says, most of the criticism has come from those who have never performed it. He admits that there are no fast rules to be followed in every case, and says that one is not long in obstetrical practice without finding out that Nature in parturition, although generally following a certain course, refuses to be trammelled by hard and fast rules. It is for the accoucheur to bear in mind, however, Nature's limits. The mistake is often made of forgetting these limits and of interfering with Nature in cases in which a little patience would render such interference unnecessary.

Diagnosis, examination by external palpation and auscultation and contracted pelvis are considered more fully than is usual. Dr. Kerr has little faith in instrumental measurement of the internal pelvis, and relies principally on the hand and on the judgment which comes from experience. Radiography, in estimating the size of the pelvis, or relation of the head to the pelvis, has not proved of value in his hands. He advises prophylactic cephalic version in breech cases in the last week or two of pregnancy, a treatment which has many warm advocates, but which seems to be open to criticism. The 294 illustrations are mostly original and highly instructive.

THE HERTER LECTURES (NEW YORK, 1908) ON THE FLUIDS OF THE BODY. By Ernest H. Starling, M.D., F.R.C.P., F.R.S., Jodrell Professor of Physiology in the University College, London. Cloth. Pp. 186, with illustrations. Price, \$2. Chicago: W. T. Keener & Co., 1909.

This book contains eight lectures given all but one under the Herter foundation at the Bellevue Hospital and University Medical School in 1908. The subjects discussed are the physical properties of protoplasm, the osmotic relationships of cells, the intake of fluid, the exchange of fluids in the body and the production of lymph, the absorption of the interstitial fluids, the output of fluid, the fluid balance of the body, and the causation of dropsy. The presentation is interesting. Dr. Starling speaks his own views, which no doubt will stimulate discussion among workers in this field. To physicians who desire to follow the growth of knowledge of the physico-chemical processes in the body, the book is recommended most heartily as sure to be read with interest and profit.

THE PROBLEM OF AGE, GROWTH AND DEATH. A Study of Cyto-morphosis Based on Lectures at the Lowell Institute, March, 1907. By Charles S. Minot, LL.D., D.Sc., James Stillman Professor of Comparative Anatomy in the Harvard Medical School. Cloth. Pp. 280, with illustrations. Price, \$2.50. New York: G. P. Putnam's Sons, 1908.

In this volume the distinguished author summarizes the results of his scientific work on the problem of age, growth and death. It appears that for twenty-five years and more this problem has occupied his scientific interest. Desire to get at actual facts led to a long and comprehensive series of observations on the growth of certain animals in order to secure vantage ground for attack on the changes affected by age, changes that have been studied but little in a systematic way. Says Dr. Minot: "Age causes many progressive changes in the organism, but none which are more obvious and more accessible to exact study than those of growth." Most of the very valuable observations on growth as a function of age were made on guinea-pigs, the growth being measured by weight.

The book itself is divided in six chapters, the subjects being the condition of old age, cytomorphosis, the cellular changes of age, the rate of growth, differentiation and rejuvenation, regeneration and death, and the four laws of age.

The four laws of age, which in a way constitute the conclusions, are: First, rejuvenation depends on an increase of the nuclei; second, senescence depends on the increase of the protoplasm, and on the differentiation of the cells; third, the rate of growth depends on the degree of senescence; fourth, senescence is at its maximum in the very young stages, and the rate of senescence diminishes with age.

Dr. Minot carefully refrains from any suggestions as to the actual causes of the increase in the amount of protoplasm that characterizes senescence, confining himself entirely to morphologic considerations.

The book constitutes an important contribution to general biology. The presentation is excellent, the style clear and lucid.

THE THEORY OF IONS. A Consideration of Its Place in Biology and Therapeutics. By William Tibbles, M.D. (Hon. Causa), Chicago, LL.D., LL.R.C.P.E., LL.R.C.S., LL.S.A., etc. Cloth. Pp. 131. Price, \$1. New York: Rebman & Co., 1909.

Dr. Tibbles attempts to account for all biologic processes on the basis of ionization. As practically all chemical reactions are between ions, and as all biologic processes are directly or indirectly the result of chemical reactions, the proposition would seem to be self-evident. The reader will find a brief semi-popular discussion of the principles of the ion theory, but the logic of much of Dr. Tibbles' theorization is difficult to follow. His facts seem to have been obtained from standard authorities and therefore are reliable.

MILITARY HYGIENE. By R. H. Firth, Lieut.-Colonel Royal Army Medical Corps. Cloth. Pp. 299. Price, \$1.40. Philadelphia: P. Blakiston's Son & Co., 1908.

This is a brief, succinct and practical manual of sanitation for soldiers, in which Colonel Firth takes up the causes of disease; the preventable diseases; principles of disease prevention; the recruit; physical training of the soldier; the barrack; water supply, food, clothing and equipment; the work of the soldier, the march, and the camp.

HOW TO NURSE SICK CHILDREN. By Charles West, M.D., Founder of and Late Physician to the Hospital for Sick Children, Great Ormond Street. With a Preface by George F. Still, M.D., Physician to Out-Patients, The Hospital for Sick Children. New Edition. Cloth. Pp. 52. Price, 40 cents. New York: Longmans, Green & Co., 1908.

While this book contains little that is likely to interest the physician, it should prove of value to mothers and nurses. It contains much practical advice and common sense, especially on points generally omitted from ordinary text-books of nursing. Emphasis is laid on the importance of truthfulness in dealing with children.

LEHMANN'S MEDIZINISCHE HANDATLANTEN. BAND XVII/1. Atlas und Grundriss der gerichtlichen Medizin, unter Benutzung von E. v. Hofmann's Atlas der gerichtlichen Medizin. Herausgegeben von Dr. Georg Puppe, Professor der gerichtlichen Medizin in Königsberg i. P. Mit 70 vielfarbigen Tafeln und 204 schwarzen Abbildungen. Parts I and II. Price, \$5.00 per set. München: J. F. Lehmann's Verlag, 1908.

This work of about 700 pages appears in the form of two rather small volumes. It deals with the autopsy findings in death from any cause which may have a legal or forensic bearing and these findings are not only clearly described, but excellently illustrated in black and white and in colors. In addition to this methods of identification of both the living and the dead are described, together with the German laws governing the making of autopsies for medicolegal purposes and the giving of expert testimony and of certificates or opinions by medical men. The work contains much that is of value to physicians in general as well as to those who are especially engaged in medicolegal work.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

American Academy of Medicine, Atlantic City, June 5-7.
Am. Assn. of Genito-Urinary Surgeons, Pocono, Pa., May 31-June 1.
Am. Assn. of Med. Milk Commissions, Atlantic City, June 7.
Am. Climatological Association, Fortress Monroe, Va., June 4-5.
American Dermatological Association, Philadelphia, June 3-5.
Am. Gastro-Enterological Association, Atlantic City, June 7-8.
American Laryngological Association, Boston, May 31-June 2.
American Laryn., Rhin. and Otol. Society, Atlantic City, June 3-5.
American Medico-Psychological Assoc., Atlantic City, June 1-4.
American Orthopedic Association, Hartford, Conn., June 14-16.
American Proctologic Society, Atlantic City, June 7-8.
American Surgical Association, Philadelphia, June 1-3.
American Urological Association, Atlantic City, June 7.
Con. of State and Prov. Bds. of No. Am., Washington, June 4-5.
Maine Medical Association, Portland, June 16-17.
Massachusetts Medical Society, Boston, June 15-16.
Natl. Con. State Med. Ex. and Licensing Bds., Atlantic City, June 7.
New Jersey Medical Society, Cape May, June 23-25.
Rhode Island Medical Society, Providence, June 1.
Wisconsin State Medical Society, Madison, June 30-July 2.

ASSOCIATION OF AMERICAN PHYSICIANS

Twenty-fourth Annual Meeting, held at Washington, D. C., May 11-12, 1909

The President, DR. VICTOR C. VAUGHAN, Ann Arbor, Mich., in the Chair

Officers Elected

The list of officers elected appeared in THE JOURNAL, May 22, page 1675.

The President's Address: The Physical Basis of Life

DR. VICTOR C. VAUGHAN, Ann Arbor, Mich.: The living cell is made up of active labile molecules, and these molecules consist of numerous atoms, and each atom contains a large group of electrons; atoms and electrons are in ceaseless, rhythmic motion, while groups of atoms are being constantly cast off of the molecule and replaced by new groups split off from matter outside the molecule. Metabolism, the one characteristic phenomenon of living matter, involves intramolecular change; consequently, the molecule and not the cell is the unit of life. Life is function and not form, and, moreover, it is a molecular function. In multicellular animals, such as man, we have colonies, or groups of cells, or organs, bound together. Each kind of cell has its own peculiar molecular composition, and through these living molecules the work of

the organ is accomplished. We have heard much of late concerning the influence of mind on the body, and many who speak on this subject seem to assume that there is some entity, called mind, that controls the body, to which it is superior, and apart from which it may exist. This dualistic doctrine is as old as the philosophy of Plato; it always has been and remains to-day a dogma without scientific support, and as a hypothesis it has led to the discovery of no scientific fact. Every attempt to apply it to the treatment of disease has led to the development of conscious or unconscious charlatanism, and has resulted in more or less marked atavism. The term functional disease is now being used by those who know but little concerning the functions of the body in either normal or abnormal states. It seems to be inferred or assumed by those using this expression that a mysterious power has been given to some to set the mechanism of the disordered body aright. In truth, we have no evidence of the existence of a functional disease as thus understood. We may not always be able to find where the basic fault lies, but shall we for this reason stop looking for it, shut our eyes, give over our search and ask some individual quite ignorant of the body and its functions to undertake the task of inducing harmonious activities?

Three Cases of Amaurotic Family Idiocy with an Anatomic Study of One: A Preliminary Report

DRS. HARLOW BROOKS and HENRY WANDLESS, New York: This is a rare disease, affecting several members of the same family, and characterized by distinct lack of mental development, by a progressive weakness of all the muscles of the body, and by a defect in vision. It is generally fatal, the children dying as a rule in a condition of complete marasmus before the end of the second year of life. The pathology of the disease has been chiefly studied by ophthalmologists and neurologists. In the region of the macula lutea a whitish spot appears, in the center of which a cherry red point is seen. In the encephalon and throughout the entire spinal cord very extreme grades of ganglion cell degeneration are shown. The general consensus of opinion is that the degeneration is an aplastic one, a failure to progress and consequently a cell deterioration. Another theory is that the disease is toxic in origin. In the case subjected to special study, besides the changes usually found in cases of amaurotic family idiocy, we have found marked and more or less characteristic alterations in the thymus body and in the adrenal and pituitary glands. These lesions are of such nature as strongly to suggest long-standing atypical functional activity. With our certain knowledge of the dependency for proper growth and function of the central nervous tissues on the normal activity of these bodies, it seems justifiable to assume a possible causal relationship in this condition, though it is quite possible that these lesions in the ductless glands are merely concomitant or associated ones.

DISCUSSION

DR. B. SACHS, New York: I am not yet willing to go to the length Dr. Brooks has gone regarding the cause of the disease, although his findings in this case are extremely interesting. I will say, in justification of others who have examined these cases, that the attempt has been made to examine every single organ of the body, and no changes have been found in the adrenals, thymus or pituitary gland. I think the proper view to take of the disease is that in these children the defect in the nervous system is such that the highest nerve elements are only equipped for a certain and a very limited function. In other words, that they are so started in life that they can only perform their function properly for a number of months and then give out, and, in consequence of this, undergo degeneration. I can not conceive that any family disease should be due to toxic causes and nothing else.

Visceral Angioneuroses

DR. S. SOLIS COHEN, Philadelphia: I have made previous communications on the subject of vasomotor ataxia (1892-1894-1896-1898). The condition is by no means rare, and is marked in certain families, especially in those exhibiting her-

editary tendency to disorders of metabolism, gout, diabetes, etc. It exists in some persons without causing any inconvenience. When, however, disease of any kind or from any cause arises in such persons, their constitutional peculiarities modify the symptomatology. An incautious observer, or one who does not recognize the significance of the vasomotor phenomena, may easily be led astray. This is especially the case in maladies attended with hemorrhage—whether slight or profuse—with cardiac disturbance, with headache, with painful crises or with serous discharges. The dependence of certain asthmatic paroxysms on what may be termed bronchial urticaria was emphasized in my previous communications and was well known before. Less familiar are the angioneurotic edemas of the base of the tongue and of the larynx, which cause suffocative paroxysms and may threaten death. Still rarer in literature and in practice is the recognition of angioneurotic conditions of the gastroenteric tract, the liver and the kidney. Certain utero-ovarian symptoms may by analogy be ascribed to similar processes, and there is no reason for excluding any viscous or tissue supplied with vessels. Considerable doubt and difficulty arises when cerebral symptoms are manifested. I have seen two cases in which operations for appendicitis were done because of painful abdominal crises of angioneurotic origin, and normal appendices were found. Evidence from morbid anatomy supporting the diagnosis of visceral angioneurosis is, from the nature of the process, practically unattainable; except negatively in the rare instances of surgery and the still rarer instances which can be followed throughout life and after death. Organic disease or deformity may coexist with angioneurotic disorder, as exemplified by one of my cases in which malposition of the kidney was responsible for some of the symptoms, and these, together with general nutrition, were relieved by successful operation. Furthermore, it is my conviction, from cases observed over prolonged periods, that actual disease of the vessels (angiosclerosis) may eventually be set up, pseudoangina, for example, becoming veritable angina. A number of cases were seen in which Graves' syndrome developed under observation, from a basis of slight vasomotor ataxia, and one in which an incomplete Raynaud's syndrome similarly developed. A notable case is one which began with uremic symptoms, including suppression, and in which the patient exhibits no evidence of nephritis but has passed through and recovered from the full syndrome.

DISCUSSION

DR. WILLIAM OSLER, Oxford, England: Largely through Dr. Cohen's stimulation we have of late years gained a good deal of information regarding these angioneurotic edemas. The group which is associated with skin lesions is most important to us practically, because undoubtedly the same lesions may occur in the abdominal organs, particularly the stomach and intestines, with severe symptoms, as vomiting, nausea, pain, and all the features of a severe attack of colic. Such features may occur owing to changes in the walls of the stomach or intestines the exact counterpart of those changes which occur in the skin. Surgeons know this. They have operated in a number of cases, supposing the patient had appendicitis, and the localized edema in the stomach and intestines has been seen—an edema which is exactly like angioneurotic edema. This is a very interesting group of cases which may or may not be associated with skin lesions. There are cases in children undoubtedly in which these features have occurred for years and years before any skin lesion has occurred. I saw only a few months ago a case that was about to go to operation for supposed gallstones, and fortunately just a little before my visit there came out a crop of urticaria and one characteristic patch of angioneurotic edema. Of course the patient was not operated on. It turned out that from childhood the patient had had attacks of colic, some of which had been associated with these cutaneous outbreaks. Another group that we may recognize is that which is associated with arteriosclerosis and spasm of the vessels of the abdomen. I think these cases that we call angina abdominalis, cases with symptoms like angina pectoris, in all probability are due to spasm of the visceral vessels.

(To be continued)

AMERICAN THERAPEUTIC SOCIETY

Tenth Annual Meeting, held at New Haven, Conn., May 6-8, 1909

The President, DR. FREDERIC H. GERRISH, Portland, Maine, in the Chair

The address of welcome was delivered by Arthur T. Hadley, LL.D., president of Yale University, and the response by Dr. Thomas E. Satterthwaite, New York.

The report of the standing committee on therapeutic research, which was read by the secretary of the committee, Dr. H. C. Wood, Jr., Philadelphia, was on "The Quality of Fluidextract of Ergot at Present on the Market."

The obituary of Dr. Robert Reyburn, president of the society, 1906 to 1907, written by Dr. H. H. Barker, was read by the secretary, Dr. Noble P. Barnes, Washington, D. C.

Officers Elected

The officers elected were given in THE JOURNAL, May 15, p. 1591.

President's Address: The Therapeutic Value of Hypnotic Suggestion

DR. F. H. GERRISH, Portland, Maine: This subject has been surrounded with much entirely unnecessary mystery, and there has been a great deal of confusion in regard to it, not only among the public at large, but also in the minds of physicians. There can be no doubt, however, that it has a legitimate field in medicine, and when I was in general practice I made use of it for many years, with satisfactory results in a number of cases. The methods of applying this mode of treatment can be easily acquired, and it is a mistaken notion that it requires any special qualifications on the part of the operator for its successful employment.

The Standardization of Materia Medica Products

DR. F. E. STEWART, Germantown, Pa.: This subject embraces a much wider scope than is usually realized. It is impossible to carry out any systematic plan of standardization without considering the matter from the broadest possible point of view, and I believe that the present conditions call for the establishment of a strong central committee, board of control or bureau of materia medica (call it what you will), representative in character, which should have as its functions the cooperative classification and standardization of the newer materia medica, the censorship of advertising, the promotion of professional and commercial interests, and the protection of the public from dishonest commercial exploitation.

SYMPOSIUM ON DIABETES

Experience with Oatmeal in Diabetes

DR. ALFRED C. CROFTON, Chicago: v. Noorden's adoption of the oatmeal diet treatment was purely empirical, and even up to the present there is no definite knowledge as to the mode of action of this agent. Authorities differ as to its value, but there is now at command considerable evidence that it is more or less useful. I have experimented with it to a considerable extent, and have found that, if cases are properly selected, the employment of the oatmeal diet is attended with fairly good results.

Drugs Useful in the Treatment of Diabetes

DR. D. O. LEECH, Washington, D. C.: While I believe, with many others, that no drug is curative, there are a few which act as palliatives, and in some selected cases control, to a large degree, the output of sugar, render the patient fairly comfortable and prolong his life. Opium and its derivatives, notably codein sulphate, hold first place in the opinion of many practitioners, while many consider alkalies as important as opium.

Other drugs that are worthy of mention are gold and arsenic bromid, especially in combination with tryptic and amyloptic ferments, the salicylates, particularly in the case of children, calcium as a prophylactic against boils and carbuncles, potassium permanganate, potassium iodid and emul-

sions of mixed fats. In cases believed to be due to ptomain poisoning, mercuric chlorid has sometimes been used with good effect. We can expect no beneficial effects from drugs, however, without constant and careful attention to the diet.

Surgical Features Relating to the Effect of Gallstones; and the Question of Operation in the Presence of Diabetes

DR. ROBERT T. MORRIS, New York: There are two special objections to operating on individuals with diabetes: (1) The phagocytes do not properly perform their protective function; (2) repair is not carried on well, because the reparative cells are disabled. The reason for this is on account of the cells being deprived of the water essential to their activity by the hygroscopic action of the sugar in the circulation. It has been observed that when gangrene appears in a case of diabetes which has developed rapidly, the process is likely to go on. On the other hand, in a patient who has had diabetes for years, even if there has not been much reduction in the sugar, we can operate far more boldly. In cases of gallstone disease in which operation is indicated, there comes up the question of comparative danger. Is the greater danger to be apprehended from the operation or from the continuance of the condition without surgical interference? In certain cases the formation of gallstones would appear to precipitate diabetes; and so of other sources of continued irritation. Glycosuria, like cough, is a symptom, not a disease, and in cases in which there is no such evident cause, as the changes accompanying arteriosclerosis, a careful investigation should always be made for the purpose of finding out some possible peripheral cause.

The Treatment of Diabetes as an Infectious Disease

DR. ALFRED KING, Portland, Maine: By using a sterile solution of sodium citrate and chlorid to prevent coagulation, I have obtained active growing culture of the yeast fungus, *Saccharomyces cerevisia*, from a single drop of blood taken from the aseptic finger-tip of every diabetic patient I have been able to find in the last two months. The resisting power of the diabetic to this fungus was determined by Wright's method of taking the opsonic index. The examination of sixteen patients showed three things: (1) The existence of innumerable yeast fungi in the blood of each; (2) a disturbed power of resistance to this organism; (3) that the opsonic index registers a fair indication of the general physical condition of each patient. The indications for treatment are to restore the lowered power of resistance, destroy or remove that cause, and prevent, relieve or remove the complications which may arise. The lowered resistance may be removed by the use of vaccines and the careful regulation of the diet. So far, I have been able to study the action of the vaccine treatment in but six cases, and that for less than two months, but the results would appear to be fairly satisfactory. I am aware that I have not proceeded far in my investigation, but hope that I have gone far enough to interest other investigators in the subject.

Discussion on Diabetes

DR. J. BLAKE WHITE, New York: I have seen some surprising results from guaiacol benzoate, as recommended by Piatkowski, and among the effects observed have been increased appetite and improved digestion and assimilation, with perceptible stimulation of the nerve centers.

DR. C. E. DE M. SAJOUS, Philadelphia: Division of the splanchnic, which contains the nerves going to the adrenals, has been shown to affect the sugar in the urine. Now, the adrenals are governed by the sympathetic system, and it would appear that the pituitary body is actually the center for this. I ask, therefore, that investigators shall take the adrenals into consideration, for in this way, it seems to me, we may be able to find out the secret of this disease.

DR. WILLIAM H. PORTER, New York: I have never ventured to carry out the oatmeal treatment, as I have feared that my patients would starve under it.

DR. A. CROFTAN, Chicago: I am entirely in accord with the view that diabetes is apparently due to a variety of different causes. Practically, however, it is a disorder of the carbohydrate metabolism. Too much reliance must not be placed

on the supposed efficacy of drugs, as there is no disease so fluctuating in all its manifestations. Dr. King's contribution is new and interesting, but his view of diabetes can not be accepted without further proof.

DR. R. J. MORRIS, New York: I know of no reason why there should not be a dozen causes for irritation of the floor of the fourth ventricle, such as arteriosclerosis, injury or eye-strain. As Dr. Sajous has suggested, all these causes may act by affecting the pituitary body, which he believes controls the sympathetic system.

(To be continued)

LOUISIANA STATE MEDICAL SOCIETY

Thirtieth Annual Meeting, held at New Orleans, May 4-6, 1909

(Continued from page 1637)

The Treatment of Syphilis by Mercurial Inhalations in a Hot Room

DR. S. SCHIRO, New Orleans: The method of treating syphilis by mercurial inhalations, known also as Campailla's method, consists in mercurial fumigation combined with diaphoresis in a small heated room, properly ventilated, and having enough air capacity to allow the patient to breathe comfortably. In the forty-four patients thus treated up to the present time I have always obtained favorable results, and draw the following conclusions:

1. Mercurial inhalations in dry heat yield more rapid, immediate and constant results in treating syphilis, of any stage, than the other methods in use; hence its special indication in severe or impending cases of syphilis.

2. For the same reason of its intensity, this method confers on the syphilitic for a longer period an intermission of apparent recovery, which is a favorable condition, especially in pregnant women, who may with much more probability have a normal delivery, greatly reducing infant mortality.

3. It is preferable for the sake of the comfort of the patients, for it saves the digestive apparatus and is not so troublesome as the injections or other methods.

4. It is harmless, except in cases in which it is contraindicated by disorders in the respiratory, circulatory and renal apparatus or by old age of the patient.

5. It does not interfere with the patient's occupation and keeps him out of trouble in eluding social or family criticism.

6. It is the most efficient aid to social prophylaxis, as the syphilitic subjects, under this treatment, quickly become non-contagious, or at least much less dangerous to others.

7. Compared with the various methods in use, this method, as it is practiced to-day in the hot room, meets better the two most important points in dealing with syphilis.

The Hyperacid Stomach

DR. S. K. SIMON, New Orleans: The first hydrochloric acid secreted is neutralized in great part by the alkaline mucus present on the gastric surface. The proteid element of the food takes up the further supply, but there is always a surplus during ordinary digestion accumulating toward the end of the process. This is what causes trouble for the stomach when there is no longer a free supply of mucus present to neutralize it and to prevent irritation of the delicate gastric nerve endings. In a clinical way, therefore, hyperacidity is strictly a relative term; the actual gross percentage of hydrochloric acid in the gastric juice may vary, depending on many factors, but the secretion of each individual gland in the stomach remains constant. The acid *per se* does not cause symptoms, but when these occur there is a relative and appreciable decrease of the mucus coating to the stomach wall. The diet should be bland. Olive oil probably acts by protecting the walls of the stomach and bismuth probably acts in the same way. The drug that has given me most satisfaction in the treatment of this condition is nitrate of silver. I believe we should drop the misleading terms of "hyperchlorhydria" and "hyperacidity," and substitute the name "hyperacid stomach."

Epilepsy and Its Treatment

DR. P. E. ARCHINARD, New Orleans: Early diagnosis is the main anchor of the successful treatment, and that diagnosis rests on a suspicion that all spasmodic affections, be they general or partial, tonic or clonic, accompanied at some stage with the least loss of consciousness, is or may become epilepsy, and must be treated accordingly. This treatment we find in the

judicious employment of the bromids, especially potassium bromid.

The use of bromid in moderation can be continued indefinitely, and is much less hurtful to mental and other developments than the attacks it is given to prevent. Potassium bromid is innocuous and cheaper than any of the others. In a large practice extending over a good many years, and including an unusually large number of epileptics, I have followed the rule of giving this class of patients bromids for months, and in some instances for years, and I have felt at all times gratified at the results. I have never seen any untoward effects.

Substitution of Muscle for Tendo Achilles

DR. A. C. KING, New Orleans: E. D., male, aged 5, while wading in a filthy gutter, stepped on a broken bottle in such a way as completely to sever the right tendo Achilles, about three-quarters of an inch above its insertion into the os calcis. Under thorough aseptic precautions the ends of the divided tendon were united with No. 2 chromic gut, but suppuration followed, resulting in the destruction of about two and a half inches of the tendon. After healing had occurred an incision was made extending from the heel half way up the leg, search was carefully made for a possible fibrous reproduction which might in time give a useful foot. Nothing was found, and all efforts at approximation failed. The gastrocnemius was split on one edge, then a transverse cut was made, thus freeing enough muscle tissue to bridge over the defect. The muscle was turned down in such manner as to fill in the gap, and the lower end was sutured to the heel end of the tendon. The wound was closed without drainage, dressings and plaster were applied with the foot in extension. The final result is all that could be desired.

Appendicostomy, Appendicotomy and Appendix Transplantation

DR. RANDALL HUNT, Shreveport: Patient was a white male, married, aged 38, weight 140 pounds. Four years ago he had an attack of malaria lasting two weeks. A month later symptoms of colitis supervened of a continuous character, except when rectal irrigation was used, and immediately recurring on its abandonment. Examination of the stools showed ameba. He was operated on Feb. 18, 1909. The technic used was that described by C. B. Keetley in the *Lancet*, Jan. 2, 1909. The appendix was opened forty-eight hours after the operation. A catheter was introduced into the cecum daily, and the bowel was washed with two gallons of a warm 1 to 5,000 solution of quinin hydrochlorid. Though the bowel movements varied from four to eight in twenty-four hours prior to operation, irrigation promptly reduced this number to one movement a day. After thirty days' treatment re-examination of the feces still demonstrated the existence of amebas and the strength of the solution was increased to 1 to 1,000. Very few amebas were found, however, and as the patient has made a gain of twelve pounds in body weight it appears perfectly logical to predict a complete recovery in the near future.

OHIO STATE MEDICAL ASSOCIATION

Sixty-fourth Annual Meeting, held at Cincinnati, May 5-7, 1909

(Continued from page 1688)

Treatment of Clubfoot in Infancy

DR. ALBERT H. FREIBERG, Cincinnati: The crux of the problem lies in securing a satisfactory over-correction of the deformity by overcoming the resistance of the soft parts which holds the bones in their abnormal relationship to one another. The technic of retention in this over-corrected position is no longer a moot point, if only the before-mentioned first requisite be attained. I find, however, that there is frequent failure to realize the importance of the third requisite for accomplishing a real and therefore permanent cure, namely, that having over-corrected the deformity, mere retention in the over-corrected position will not bring about a cure, be it ever

so long maintained. There must be added the influence of function, of weight-bearing. Since this factor is not available until the tenth or twelfth month, it is unnecessary to maintain over-correction by plaster-of-paris until a period shortly before this. Over-correction can be most easily accomplished in the new-born infant. If we ignore the position of the heel, that is the element of equinus, in the untreated clubfoot, it will be found possible, by gentle and painless manipulation, to bring the forefoot into the axis of the leg, thus overcoming the adducted position of the forefoot. The forefoot and leg are now in a straight line, and can easily be held in this position by means of a simple splint and a roller bandage. It is intended that the splint shall be removed by the mother morning and evening for the purpose of rubbing and bathing, and particularly for manipulation of the foot in the manner of over-correction. Complete correction is then undertaken as close as possible to the beginning of walking. It is now no longer an infantile clubfoot, but is to be managed precisely like the clubfoot of an older child, which I do not discuss in this paper.

The Genesis of the Non-Infectious Chronic Diseases of Middle and Later Life from Early Microbic Infection

DR. J. B. BALLINGER, Bradford: On the basis of a common origin from microbial infection of the intestinal tract and modified by the kind of infection and mode of living chiefly, a class of evolutionary diseases probably exists, many of which produce changes characteristic of old age and organic disabilities which limit individual life. In this class, with others, are lithemia, various forms of rheumatism, arteriosclerosis, some cases of endocarditis, myocarditis, and chronic nephritis, apoplexy and diabetes. That intestinal infections occur early in life, even in infancy, scarcely admits of doubt. Reactions in the form of colic, jaundice, diarrhea and fever, occurring in infants but a few days old sufficiently attest this fact. Once established, infections are often permanent. This statement is not only supported by clinical facts, but has lately been strengthened by the discovery of bacillus-carriers. A degree of immunity to some bacteria evidently becomes established, but that their influence on the organism entirely disappears therewith admits of serious doubt. Disease and death are the measure of the victory of the microbial and parasitic forces of disorganization in their persistent warfare against an individual life, but it is especially when early in life an intestinal invasion has been followed by a permanent colitis and constipation, and the alimentary canal thereby converted into a bacterial culture tube, that the development of disease becomes rapid and a well-defined clinical history apparent. These fundamental principles of etiology give increased scope and definite aim to preventive medicine, and add hopefulness of further mitigation of disease and increase of longevity as the reward of continued efforts at therapeutics and sanitation.

Mind and Medicine

DR. J. S. RARDIN, Portsmouth: As the result of renewed activity recently in the field of psychic therapeutics we hear of various cults, such as christian science, the new thought, mental culture, and more recently the Emmanuel movement, and we are led to believe that the psychic factor in treatment has been neglected by the profession. It is in nervous disorders that mental treatment has its most valuable field of usefulness—the neuroses, psychasthenia, neurasthenia, hysteria, melancholia, hypochondria, mania, etc. The trend of modern civilization is to an increase of nervous disorders. Rapid transit, fierce competition in business, supremacy of great corporations, manipulation of intricate machinery, intense artificial light, all engross the nervous system, impairing its stability. Alcoholic drinks play an important part in causing nervousness, and venereal diseases and heredity are also important factors in the increase of nervous disorders. Suggestion is the basis of psychic treatment. The patient must be re-educated and the disordered mind directed in health channels. Suggestion acts through the conscious mind on the unconscious. Every dose of medicine given is more or less a suggestion, and sometimes the more valuable part of the dose.

The placebo is just as legitimate and at times more effective than potent remedies for it inspires hope and contentment of mind, without which the unconscious functions do not act properly. In the absolute confidence of the patient we hold the key to successful treatment, and without that confidence medicine loses much of its potency. Persuasion should be used and autosuggestion practiced. The tendency of the modern cults is to combine religion and medicine. I think we should be very careful of such an alliance. Tactful words of counsel and prayer will often soothe a nervous, wakeful patient into sweetest sleep.

Choked Disc, with Special Reference to Decompressing Trephining

DR. A. R. BAKER, Cleveland: Every patient with choked disc, syphilitic or otherwise, should first be treated vigorously with iodine or mercury. If not responding favorably, the question of operative interference must be seriously considered to prevent blindness. Among operative measures to be pursued are: (a) Incision of optic nerve sheath; (b) lumbar puncture; (c) decompressing operation.

Etiology of Senile Cataract

DR. CHARLES LUKENS, Toledo: The essential cause of senile cataract is disturbed nutrition of the crystalline lens. The function of the capsule is a protecting and regulating one. The nutrition of the lens is obtained by osmosis from surrounding media. If these media become so modified by certain toxins, exudates or altered composition that the lens is no longer able to get proper nutrition, this altered nutrition may produce opacity. Chorioiditis is the result of prolonged asthenopia, which may be from several causes, and probably accounts for more cases of cataract than any other one thing. The cause of many cases is obscure, and no single etiologic factor can account for all.

Report of a Case of Hodgkin's Disease with Recurrent Fever

DR. JOHN PHILLIPS, Cleveland: The patient in the case reported was admitted to Lakeside Hospital because of swelling of cervical glands. Some of the glands were removed and microscopic changes were found described by Reed and Longcope as characteristic of this disease. Under treatment with arsenic, the remaining glands became smaller and smaller and the patient was discharged, only to be readmitted one year later with marked enlargement of glands in the neck and axillæ. Under treatment with arsenic they again nearly disappeared. The patient was admitted again with the enlargement of all the superficial glands and evidences of compression from enlargement of the retroperitoneal group. The unusual condition noted, both in the record and third admission to the hospital, was the alternation periods of pyrexia and apyrexia.

(To be continued)

KANSAS MEDICAL SOCIETY

Forty-third Annual Session, held at Emporia, May 5-7, 1909

The council and house of delegates had their first meeting Tuesday, May 4. The financial report showed that the society is on a solid financial basis. The scientific session was opened Wednesday morning at 10 a. m., with an address of welcome by Mayor John H. Glatfelter, of Emporia. A response on behalf of the society was delivered by Dr. O. J. Furst, of Peabody.

President's Address: Tuberculosis

DR. C. C. GODDARD, Leavenworth, spoke of the efforts being made to stamp out this dread disease.

Almost one whole day of the session was devoted to papers and discussions relative to some phase of tuberculosis.

Changes in Councilor Districts and By-Laws

On Friday, May 7, the house of delegates reconvened. Several amendments to the constitution and by-laws were offered. One provided for the election of twelve councilors instead of eight as the constitution now provides. This will lie over one year and be voted on at the next annual meeting.

The by-laws were amended by dividing the state into twelve councilor districts in place of eight, and according to the constitution, as only eight councilors could be elected, four deputy councilors were appointed to serve for one year. The by-laws were also amended that the council and house of delegates could hold their first meeting on the morning of the first day of the session, and further amended that the officers of the society could be elected on the second day of the session.

Election of Officers

The officers elected were mentioned in THE JOURNAL, May 15, p. 1587. Topeka was selected as the next place of meeting.

Attendance and Entertainments

The attendance at this meeting was much larger than that of last year. Everything was done by the local committee of the society for the entertainment and comfort of the visiting physicians and their wives.

On Wednesday evening a smoker was given at the Whitley Opera-House. On Thursday morning an auto ride was given to the various points of interest in the city. A reception by the ladies of Emporia was given to the visiting ladies at the Elks club room on Thursday afternoon. A banquet was given Thursday evening, about three hundred plates being laid.

Contribution to the Carroll Fund

The appeal of the American Medical Association for the relief of the widow of Major Carroll, who lost his life as a result of work done while investigating the cause of yellow fever, was presented to the society and volunteer contributions were made, to the amount of \$55.50, which was forwarded to Major M. W. Ireland, to be added to this benefit fund.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

One Hundred and Eleventh Annual Meeting, held in Baltimore, May 13-15, 1909

(Concluded from page 1691)

The Specific Chemotherapy of Protozoal Diseases

DR. SIMON FLEXNER, New York, dealt with the new science of experimental therapeutics, *i. e.*, the effects of remedies in diseases artificially produced; its present status and possibilities. Dr. Welch said it was a good omen that the first paper read in the new building should have been one on a scientific subject and by a noted scientist.

The Variations of Nephrotomy Incisions from the Standpoint of Anatomic Study

DR. MAX BROEDEL, of Johns Hopkins Hospital: The key to the mode of operation is the embryology of the kidney. Rotation is the most important of all factors. It begins at the third week of intrauterine life, and usually reaches 100°, sometimes 130°. The position of the kidney determines the blood supply and the type of vascularization. The posterior incision into the organ is applicable in about three-fourths of all cases.

The Bacterial Content of the Feces with Experimental Observations Concerning the Effect of Various Intestinal Antiseptics

DRS. JULIUS FRIEDENWALD and J. FREDERICK LEITZ concluded their paper as follows: 1. Regulation of diet, together with the evacuation of the bowels, is the most effectual method that we have at hand for reducing the excessively high bacterial contents of the intestines. 2. Betanaphthol and bismuth salicylate appear to be our most effectual intestinal antiseptics in normal individuals, while aspirin and ichthalbin effect slight reduction and salol gives no results whatever. 3. The results produced by intestinal antiseptics in patients suffering with gastrointestinal disturbances do not seem to be marked, whereas the best results are obtained by regulation of the diet.

The Early Diagnosis of Brain Tumors

DR. HARVEY CUSHING: Brain tumors are very frequent. They may be removed without general anesthesia, only with

a hypodermic of morphin. The brain and dura being insensible, stimulation with the electric current is very helpful in diagnosis; so is the study of the eye grounds, the ophthalmologist often having the opportunity to make the first diagnosis. Choked disc may produce sudden blindness; it is the most important of the ocular manifestations of tumors. Inversion of color fields is not pathognomonic of hysteria; it occurs frequently in tumors. Syphilitic tumors are not removable by antisymphilitic remedies, but it is well to remember there may be some relief by their use in non-symphilitic tumors. I have operated on 40 or 50 brain tumors. Many cases of brain tumor, especially in hospitals, are mistaken for hysteria, syphilis and insanity.

The Widened Scope of Psychiatry

DR. C. B. FARRAR: There are two reasons for the activity of psychiatry in Baltimore. (1) the Phipps' clinic, (2) the activity of the lunacy commission. Mystery has lingered over this subject to the present. The word *schlenstör* is still used in Germany; diseases of the mind are still diseases of the soul. Yet our mental states are subject only to the laws that apply to the body. The last of the spiritualist physicians died in 1843 and in 1845. The somatic school triumphed with the advent of Griesinger. Psychiatry is neglected in the schools, and by the boards of examiners. In 1901 Germany required examination in it of all candidates. Every physician comes in contact with mental states. There is a classification mania; real classification of mental disturbances is impossible—individualism is essential. There are as many mental diseases as patients. We have to consider the personality of the individual and the acquired symptoms.

Family Epidemic of Acute Trichiniasis

DR. JOSE L. HIRSH: This epidemic came from eating uncooked ham. There is a large popular consumption of uncooked pork and it must be recognized that meat containing trichinae can be purchased in the markets. The attack occurred in a family of 8, 5 of whom ate the diseased ham and became affected. The ham was purchased January 31 and the disease appeared between February 7 and 12. The symptoms were edema of eyelids, abdominal cramps, nausea and vomiting, constipation, muscular soreness, urticaria, high temperature, eosinophilia constant from 18 to 45 per cent. There were no chills. The urine and stools were negative.

Fagopyrismus (Buckwheat Poisoning)

DR. HARRY LEE SMITH: The affection occurs in animals, but there is no record of it in man. The case here reported was that of a white man in whom the susceptibility was first observed at the age of 9, after eating buckwheat cakes. The symptoms as observed experimentally (application of buckwheat to scarified surface, or internal use) were itching, heat, suffusion of face, conjunctivæ, neck and arms, followed by desquamation, nausea, sense of tightness in chest, rapid pulse, giddiness, labored action of heart. The immediate cause of the symptoms is unknown.

Incised Wounds of Liver: Report of Case Complicated by Evisceration

DR. ALEXIUS McGLANNAN: Such wounds are uncommon, and their mortality is high. The chief danger is hemorrhage, and the most important treatment is to check it. Best results are attained when operation is done within six hours. The patient in this case was a white man who had a saw wound of the abdomen. The stomach and colon protruded and there was severe shock. There was an incised wound extending across the abdomen seven inches. The ribs were divided and a wound in the liver was exposed; the epigastric vessels were ligated and the liver wound closed with overlapping catgut sutures just tight enough to control bleeding. Recovery followed.

Gynecology and Obstetrics in General Practice

DR. L. A. GRIFFITH spoke from the standpoint of the country physician. He laid particular stress on three points: (1)

Asepsis in labor; (2) early recognition of cancer of the uterus; (3) the importance of a better class of midwives.

DR. J. J. CARROLL added the importance of attention to the eyes of the new-born. There were 29.2 per cent. of admission of cases due to ophthalmia neonatorum at the hospital for the blind. Of these, 76.8 per cent. of the mothers were attended by midwives and the remainder by physicians, showing that not midwives alone are to blame.

Life History of Uterine Myomata

DR. THOMAS S. CULLEN: The cause of uterine myomata is still in doubt; there is no relation to the blood vessels. Position is important. There may be only pressure, but, if the myoma impinges on the mucosa, there will be hemorrhage. Torsion (in subperitoneal form) and suppuration are occasional complications. The blood supply may be derived from the omentum or bladder, or the myoma may be entirely free. It may accompany carcinoma both of body (25 cases) and cervix (18 cases). Hyaline degeneration is nearly invariable; cystic degeneration is common. Sarcoma and myoma occurred together in seventeen cases. In a large proportion there were symptoms of irritation; many were unaware of its existence. I do not think it necessary to remove myoma in all cases. When there is no discomfort, no trouble, I leave it alone, requiring the patient to report two or three times a year.

Other Papers Read and Apparatus, Etc., Exhibited

"Methods of Skin Transplanting," by Dr. J. S. Davis; "Direct Laryngoscopy" (with exhibition of instruments), by Dr. R. H. Johnston; "Responsibility of Physicians in Campaign Against Tuberculosis," by Dr. John Girardwood. Dr. G. Timberlake demonstrated the *Spirochæta pallida* by dark-field illumination, and Dr. Hugh Young exhibited a number of instruments of his own invention for the removal of tumors from the bladder by the help of electric illumination.

Miscellany

Elbert Hubbard's Misstatements on Vaccination

To the Editor:—In December, 1906, Elbert Hubbard took occasion in the "Philistine" to attack the theory and practice of vaccination. I wrote to him commenting on his misstatements, but received no reply; neither did Mr. Hubbard in his journal correct them. In view of the fact that he is still writing articles in opposition to vaccination it may be well that material for refuting his assertions should be put in the hands of those members of the profession who have not paid special attention to the subject, who may nevertheless be called upon to defend vaccination against such attacks.

After two introductory paragraphs, I said:

Let me call your attention to what I regard as the errors in your article.

1. "Dr. Jenner made investigation and found that no person who had cowpox had contracted smallpox, or, more properly speaking, he could not discover that any person who had had cowpox ever had smallpox.

"It was also the belief that cross-eyed persons and hunchbacks were immune from smallpox, but Dr. Jenner says nothing about this!"—Elbert Hubbard.

COMMENT. For seventy-five years previous to the discovery of vaccination, people in England willingly had themselves inoculated with smallpox in order that they might secure the advantage of a mild attack and thus protect themselves against a severe attack of "natural smallpox," which almost every one contracted. It was believed that almost every one had to pass through an attack of smallpox in the course of his life, just as at the present time almost every one passes through an attack of measles, and statistics bore out this opinion. Therefore, your subsequent statement—in reference to Jenner's declaring that he had inoculated his cowpox

friends with genuine smallpox—that “it is much more likely that in his excess of zeal, Jenner lied than that he deliberately ran the risk of laying himself open to the charge of committing murder,” is an absolutely untrue and unwarranted statement.

2. “Professor Waterhouse, of Harvard University, vaccinated his children, and then to prove his faith took them to a house where there was smallpox. Afterward it was admitted that he (Dr. Waterhouse) only took them into the yard or past the house where the patient lay.”—Elbert Hubbard.

COMMENT. I do not know your authority for this statement. The facts are that Dr. Waterhouse after vaccinating his children, sent them into the smallpox hospital, which was under the charge of Dr. Aspinwall, who subsequently inoculated them with smallpox without effect. Apropos of inoculation, Thomas Jefferson, who was so much interested in the subject of vaccination, insisted on inoculation as a subsequent test in persons who were early vaccinated in Virginia.

3. “At the present time out of 1,200 deaths, but one is caused by smallpox. The danger of smallpox is infinitesimal where people pay proper attention to sanitation, but the risks from vaccination are considerable.”—Elbert Hubbard.

COMMENT. Before the days of vaccination, smallpox caused on an average one-thirteenth of the total number of deaths in England. The enormous difference between one death in 13 in the prevaccination period and one death in 1,200 at the present time constitutes certainly no argument against vaccination, but a pretty strong one in favor thereof. Improvement in sanitary conditions, while doubtless accountable for some decrease in smallpox, is entirely inadequate to explain the striking decline in the incidence and mortality from this disease.

It was shown before the Royal Commission of Vaccination, and the figures are unchallenged, that during a long period in England in which smallpox declined 72 per cent., the mortality from measles had fallen only 9 per cent. and the death rate from whooping-cough a little more than 1 per cent. The diminution in the mortality from scarlet fever has only become apparent at all within comparatively recent years. You write, “the conditions that breed consumption and typhoid fever are favorable to smallpox.” Your statement is untrue. Typhoid fever is caused almost exclusively by polluted water supply, and consumption is favored by conditions which lower the general health, but its transmission can not in any sense be compared with smallpox. Smallpox must be classed with measles, scarlet fever, whooping-cough, etc.—with diseases which are extremely contagious and are apt to be transmitted by the most casual contact with the person suffering therefrom. In other words, smallpox is influenced by personal infection rather than by any definite vices of sanitation.

There is almost a universal susceptibility of persons to smallpox and to measles. In the days before vaccination it was generally agreed that about 5 per cent. of the population was insusceptible to smallpox either through the air or by inoculation. My personal experience has been such that I never have seen an unvaccinated person exposed to smallpox fail to take the disease, with the exception of three infants born in the hospital of mothers suffering from smallpox. In every other case, and the figures would reach hundreds, the exposed person has contracted the disease. On the other hand, I have never seen a recently successfully vaccinated person, or one remotely vaccinated with subsequent revaccinations, fail to be protected in the presence of smallpox. During the years 1901 to 1904 we conducted in small classes 700 students of the different medical colleges in the city through the wards of our hospital. These wards were intensely infected, as at one time there were 304 patients suffering from smallpox. It was required that all students should be revaccinated whether they bore scars or not. Of this entire number but one man contracted the disease and, on examination and interrogation, it was found that he had never been successfully vaccinated and bore no mark on his arm.

In the Municipal Hospital of Philadelphia, during a period of

34 years, in which time over 9,000 cases of smallpox have been treated, we have not had a physician, a nurse, or an attendant, who had been successfully vaccinated or revaccinated prior to going on duty, contract the disease. Physicians and nurses have no such immunity against other infectious diseases as against smallpox. The deaths from smallpox of medical men (who constitute a class particularly well vaccinated) are 13 per 1,000,000 as against 73 per 1,000,000 of the general population in England. In scarlet fever, on the other hand, against which physicians have no special protection, the figures are reversed; 59 medical men per 1,000,000 die of scarlet fever as against 16 per 1,000,000 of the general population.

4. “Fully one-half of all physicians now know that vaccination is a fallacy. To-day the best doctors decline to be vaccinated.”—Elbert Hubbard.

COMMENT. How can you commit yourself in writing to such a statement? Practically all the eminent practicing physicians of this country as well as abroad are in favor of vaccination. Indeed, on no other therapeutic procedure is there such a unanimity of opinion in the profession. I do not know of the head of an infectious disease hospital anywhere in the world who is opposed to vaccination, and these men are the best qualified to form an opinion. There may be a small number of physicians in different communities who are opposed to vaccination. It is impossible, however, that such opposition should rest on proof of the non-efficacy of vaccination as a protection against smallpox.

No one familiar with the subject at the present day makes the claim that a single vaccination protects against smallpox for life, although in Jenner's time this was thought to be the case. It would be too much to expect, for one attack of smallpox does not invariably protect against a second at a later period of life. But what is claimed is that vaccination properly performed and repeated once or twice in the course of a lifetime does give an almost absolute assurance of security against the dread smallpox.

If physicians, nurses, and attendants, who are thoroughly vaccinated, can live in perfect security against this disease though coming into daily contact with cases of smallpox, it should certainly be possible for persons living under more favorable circumstances to secure to themselves a like protection. Smallpox, as you suggest, is a comparatively rare disease at the present time in vaccinated countries. The same, however, is not true of countries in which vaccination is greatly neglected. In these countries smallpox still finds its thousands of victims. According to figures collected by the German Imperial Board of Health, there were 275,502 deaths from smallpox in five years from 1893 to 1898 in the Russian Empire, including Asiatic Russia; in Spain, with a population of ten and one-half millions, there were 23,881 deaths from smallpox during this period. Hungary had 12,241 deaths and Italy and Austria 11,000 deaths each. In Germany, however, where vaccination is well carried out and where the population is five times that of Spain, the total number of deaths from smallpox during the same five years was 287, and these were largely in persons of foreign birth who had not been subjected to the vaccination laws of the country.

There is only one sane ground for opposition to vaccination, and that is, that it is not devoid of some danger. But the danger is so slight in any individual instance that it is almost a negligible quantity. No human act is completely unattended with risk. Railroad travel, attendance at the theater, the taking of an anesthetic, etc., all necessitate the taking of a slight risk. Certain it is that there is no reason why we should not be willing to take a minimal risk to secure protection against a disease which was, until the introduction of vaccination, a devastating plague. I do not deny that accidents and injuries, chiefly wound infections, occasionally complicate vaccination, but nearly the whole of these are preventable when the fullest precautions are taken in the propagation and preservation of the lymph, the operation itself, and the care of the arm after vaccination. In the conclusions of the Royal Commission on Vaccination the following is stated: “It is to be hoped that our report will stimulate belief in the efficacy of vaccination, that it will remove some

misapprehension, and reassure some who take an exaggerated view of the risk connected with the operation, as well as lead to a more ready enforcement of the law by local authorities."

I am sending you under separate cover several pamphlets which I trust you will read. Furthermore, if you are sufficiently interested in this matter, I would advise that you read the conclusions of the Royal Commission on Vaccination, a committee composed of eminent men appointed by Queen Victoria.

JAY F. SCHAMBERG, Philadelphia.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

DELAWARE: Dover and Wilmington, June 15-17. Sec., Dr. Henry W. Briggs, Wilmington.

FLORIDA ECLECTIC: DeFuniak Springs, June 10. Sec., Dr. Hiram J. Hampton, Tampa.

ILLINOIS: Coliseum Annex, Chicago, June 16-18. Sec., Dr. J. A. Egan, Springfield.

IOWA: Des Moines, June 1-3 and June 22-24; Iowa City, June 8-10. Sec., Dr. Louis A. Thomas, Des Moines.

KANSAS: Kansas City, June 10. Sec., Dr. R. A. Light, Chanute.

MARYLAND: Baltimore, June 15-18. Sec., Dr. J. M. Scott, Hagerstown. Homeopathic: Baltimore, June 15-17. Sec., Dr. Joseph S. Garrison, 848 W. North Ave.

MICHIGAN: Ann Arbor, June 8. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

MINNESOTA: Minneapolis, June 15. Sec., Dr. W. S. Fullerton, St. Paul.

NEW HAMPSHIRE: Concord, June 29-30. Regent, Mr. H. C. Morrison.

NEW JERSEY: State House, Trenton, June 15-16. Sec., Dr. J. W. Bennett, Long Branch.

NEW YORK: Albany, June 22-25. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

NORTH CAROLINA: Asheville, June 9. Sec., Dr. B. K. Hays, Oxford.

OHIO: Columbus, June 8-10. Sec., Dr. George H. Matson, State House, Columbus.

PENNSYLVANIA: Philadelphia and Pittsburg, June 22-25. Sec., Nathan C. Schaeffer, Harrisburg.

SOUTH CAROLINA: Columbia, June 8-10. Sec., Dr. H. H. Wyman, Aiken.

TEXAS: Cleburne, June 22-24. Sec., Dr. M. E. Daniel, Honey Grove.

VIRGINIA: Richmond, June 22-25. Sec., Dr. R. S. Martin, Stuart.

WYOMING: Laramie, June 23-25. Sec., Dr. S. B. Miller.

Florida Committee on Medical Education Report

At the session of the Florida Medical Association, held at Pensacola, April 7-9, the following report of the Committee on Medical Education was read by the chairman, Dr. Edward N. Liell:

The intelligent treatment of diseases requires training and experience on the part of the practitioner of medicine. A man is of value to the world, in his profession, only when his ability is such that he contributes something over and above the amount represented by his fees.

The time is at hand when it must be insisted on that the man licensed to practice medicine shall be first of all well-educated; and that he shall have been thoroughly grounded in the fundamental sciences on which all medical practice depends.

Low educational standards have heretofore been not only an injustice to the public but demoralizing to the profession. The public has been slow to appreciate the fact that its interests and its safety lay in good standards of medical education. It has even been hostile at times to the reforms which the representatives of the leading medical societies have endeavored to bring about. This attitude of the public makes the practice of medicine the easiest field for the charlatan and the quack to enter.

High standards should be enforced in professional education. There should be not only legal regulation of medical licensing, but expert scrutiny of medical education and in the admission to practice.

Finally, in raising the standard of medical education, influence should be brought to bear towards securing a proper standardization of our medical schools and a just and equitable system of examining boards for the issuance of licenses to practice.

Louisiana Committee on Education Report

The Committee on Medical Education of the Louisiana State Medical Society, of which Dr. L. G. LeBeuf is chairman, presented an extended report at the annual meeting of the society at New Orleans, May 4 to 6, 1909.

The growth and the standing of Tulane University Medical Department are dwelt on in the report and statistics given comparing this with other medical schools. The new buildings which, at a cost of \$275,110, have been erected and the great improvement of the teaching staff are alluded to. A new surgical and gynecological department to Charity Hospital, the Delgado Memorial with 120 beds, adds to the clinical facilities of the school. The average cost of teaching each student is shown to be \$175.44, while each student contributes but \$139.75, leaving a net cost of \$35.69 for teaching each student which must be met from other sources. This school is highly commended by the committee for the progress made, but is urged to extend its course to include thirty weeks of actual work each year, excluding holidays and examination week.

In regard to Flint Medical College, while that college is commended for the adoption of higher standards and statistics are given showing its successes and failures at state board examinations, it is also stated that the college was working against dreadful odds, with little endowment, with practically no clinical advantages and with a most modest laboratory equipment. Under these circumstances the committee was unable to understand how the school could do as well as it was doing. Allusion was also made to the wild search for students by colored medical schools whereby students which failed at Flint were taken without condition at other colleges.

The committee suggests that instead of the several smaller colored schools now struggling against insurmountable odds, some one or two central locations should be selected where prejudice is not so extreme and all means and energy be concentrated in building up one or two large well-equipped universities which, with ampler means, could obtain sufficient hospital advantages and better laboratory equipment. Medical education for colored students could then not only comply with the letter of the law but also with the requirements of modern medicine. Negro education should be encouraged in medicine as the 9,000,000 negroes of the South have a right to have physicians of their own race treat them if they so desire. But they also have the right to expect that such physicians shall have had a thorough training in high-grade medical colleges.

Connecticut Homeopathic March Report

Dr. Edwin C. M. Hall, secretary of the Connecticut Homeopathic Medical Examining Board, reports the written examination held at New Haven, March 9, 1909. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 2, both of whom passed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
New York Homeopathic Medical College. (1899)	84	(1906)	87

Medical Economics

Business Partnerships in the Medical Profession

The Chicago Physicians' Club, at its March meeting, held a symposium on business partnerships in the medical profession, three speakers taking the lead in the discussion, their subjects being "The Advantages of Business Cooperation and Business Partnerships;" "Division of Fees from the Surgeon's Standpoint," and the "Equitable Arrangement of Fees from the Physician's Standpoint."

Dr. Casey A. Wood, discussing the business partnership with special reference to office cooperation, advocated a combination of physicians devoting their time and energy to various specialties and forming a distinct business partnership. He attributed the rarity of such an arrangement to conservatism on the part of physicians and pointed out the fact that this kind of an arrangement is common in the legal profession. One probable obstacle in the way of such an arrangement was a lack of confidence in each other on the part of physicians, not so far as skill is concerned, but with reference to business relations.

There was nothing inherent in the study and practice of medicine that rationally explains this unnecessary and harmful distrust of each other that sometimes characterizes the members of the medical profession. The remedy lay in multiplied opportunities for better knowledge, both social and professional, of each other. Business partnerships in large centers and in small towns would greatly benefit not only the profession, but also the public, as it would increase mutual cooperation and give the public better service.

The material advantages of such partnerships, he said, were larger and better equipped offices and waiting rooms, common laboratories and libraries and better general equipment. The most obvious combination of this sort would be two internists, a general surgeon and a representative of each of the ordinary specialties. Another arrangement, which often works well, was an association of eye, ear, nose and throat specialists. The rapidly growing field of each of these departments was making it increasingly difficult for one man to cover all of them adequately. Another advantage was that many routine but necessary examinations could be made by assistants, thus saving time both to the physician and to the patient. Well-equipped laboratories and adequate libraries were easily obtained where half a dozen or more men were working together; properly equipped operating rooms, as well as competent bookkeepers, office attendants, assistants, etc., were also possible. Another advantage was the opportunity offered to each individual member of such a firm to take needed vacations and absences from work for the purpose of further study without feeling that his practice was being neglected. Any member of such a business association should have the advantage of the advice of another member at any time without extra charge to the patient, because the fee paid by the patient should give him the advantage of all the equipment, human or otherwise, in the entire office, and the charges should be sufficient to cover such a contingency in order to forestall any unfavorable criticism. The question of the division of profits should be left entirely to the members forming the partnership.

Dr. J. F. Percy, Galesburg, considered the much discussed question of division of fees. He said that the trouble with the fee-splitting proposition was that most of us were not sure when it departed from the fundamental principles of clean ethics, and that ethics of some sort were and always would be necessary to the human, civilized family. The larger part of the medical profession was opposed to such division. Those in favor of it were either willing to give or to take. Those willing to take were generally either young physicians unaware of the wrong they were committing and anxious to make as much as possible, or older practitioners who were willing to accept a part of the fee of the more successful money-getting member of the profession as a reward for collecting cases for him. Those who give were young men who wish to get the work of the specialist at the lowest possible price or specialists who had been in practice for years and whose business was not increasing. The origin of the fee-splitting custom was interesting.

Dr. Percy said that twenty-five years ago there were few surgeons and they were all in the large cities. All had immense personal followings, not only in the city, but for hundreds of miles around. These men trained assistants who went into practice for themselves and began to look for work. In order to get cases from the older men some of these younger men offered commissions to the general practitioners. After they got as much business as they wanted or could do they stopped paying commissions.

This practice, Dr. Percy thought, had been kept up by the ever-increasing number of young men who had been internes or assistants to surgeons in the city hospitals, who, seeing no chances for any returns from surgery in the city, are trying to establish themselves in the smaller towns and cities. This practice was also encouraged by so-called postgraduate schools, which gave courses in surgery and other special lines of practice. The graduates of these schools wished to acquire the position and income of specialists without devoting the time necessary to build up a clientele legitimately.

Medicolegal

Each Act by which One Practitioner Personates Another is a Separate Crime

The First Appellate Division of the Supreme Court of New York holds, in the case of *People vs. Dudenhausen*, that under Section 153 of the public health law of New York, which provides that "any person who shall practice medicine under a false or assumed name, or who shall falsely personate another practitioner of a like or different name, shall be guilty of a felony," each act by which one physician personates another constitutes a separate crime, and the commission of one crime has no relation to or bearing on the other.

As a consequence, the court further holds that when the indictment in this case charged a practicing of medicine with a particular individual on a particular date under a false name it was error to admit evidence of the defendant's relations to two other witnesses, one more than two months prior to the crime charged in the indictment, and one eight days before.

Here, the court says, the defendant was indicted for violating a particular statute, which provided that personating another practicing physician was a crime. To prove the crime it was necessary to prove that the defendant personated another practitioner, and the indictment alleged that that was what he did. To prove that he did practice medicine by prescribing for a person named in the indictment on a particular day named was not a part of a scheme the successful accomplishment of which the defendant was indicted for, but for violating the statute by doing a specific act charged in the indictment, and the intent of the defendant was not an essential element of the crime.

Justice Clarke, however, takes the ground, in a dissenting opinion, concurred in by Justice Scott, that the continued advertisement in the papers, inviting various persons to the same office for medical treatment by the same man, under the same impersonation, furnished a connection between the various occasions which permitted evidence thereof on the ground of a common intent and design; the offense charged being the fraudulent practicing of medicine.

Mental Requirements for Criminal Responsibility

The Court of Criminal Appeals of Texas says, on the appeal of *Thomas vs. State*, that the following conclusions seem to be supported by all the authorities: First, that the law does not require, as the condition on which criminal responsibility shall follow the commission of crime, the possession of one's faculties in full vigor, or a mind unimpaired by disease or infirmity; second, that the mind may be weakened by disease, or impaired, and yet the accused be criminally responsible for his acts; that he can only discharge himself from responsibility by proving that his intellect was so disordered that he did not know the nature and quality of the act he was doing, and that it was an act he ought not to do.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

May 15

- 1 *Newer Conceptions of Cardiac Arrhythmias and their Treatment. T. E. Satterthwaite, New York.
- 2 *Cause of Trembles and Milk Sickness. E. L. Moseley, Sandusky, Ohio.
- 3 X-Ray Diagnosis. H. E. Smith, Norwich, N. Y.
- 4 Cerebral Hemorrhage Following Arteriosclerotic Granular Nephritis Mistaken for Cerebral Embolism. B. Stow, New York.
- 5 The Benedict Method of Quantitative Estimations of Sugar in the Urine. I. R. Pels, Baltimore.

1. *Cardiac Arrhythmias*.—Satterthwaite quotes Gaskell's division of the functions of heart muscle into five classes: (1) rhythmicity; (2) excitability; (3) contractility; (4) conductivity; (5) tonicity. We have already learned enough from sphygmographic and polygraphic tracings, studied in conjunction with other objective and some subjective signs, to enable us to classify clinically, also, at least five correspond-

ing forms of arrhythmia. He refrains, however, from discussing abnormalities of excitability and tonicity, because we have as yet no clinical criteria for recognizing them. After discussing the neurogenic and myogenic theories and arriving at the conclusion that the influence of the nerves on the heart must be recognized equally well with the power of the muscle fibers among the influences that govern cardiac action, Satterthwaite considers in detail pneumogastric arrhythmia (fundamental or sinus irregularity) and extrasystolic arrhythmia, as disturbances in the first class. No great importance is necessarily to be attached to mere sinus irregularity, because it is simply a variation in rhythmicity within normal bounds and functional in character, depending on a temporarily disturbed condition of the heart, or on an underlying systemic affection, or on temporary disturbance of the function of the nerves. "Extrasystolic arrhythmia" is easily recognized in a polygram as a "premature or dwarf beat" in the radial pulse, followed immediately by an abnormally long pause. It is produced by a stimulus starting in the remains of the primitive cardiac tissue in the auricle, ventricle, or auriculoventricular node, independently of the sinus rhythm. The bigeminal pulse can be produced by extrasystoles, succession of which may produce the trigeminal or quadrigeminal pulses. Extrasystoles occur at all ages and under the most varying conditions both in health and in disease. Coffee and tobacco hearts and gastrointestinal reflexes are extrasystolic arrhythmias. In high temperature they indicate severe toxemia; in convalescence, a weak heart; in pneumonia or rheumatic fever, cardiac complications. The subjective symptoms are: (1) The feel of the extra thud in the chest and neck; or (2) the impression that the heart actually stops during the compensatory pause; (3) often giddiness. An example of disturbed contractility is the pulsus alternans. The astonishing regularity of its appearance should warn the physician that he is dealing with a case of alternating pulse rather than of extrasystole. The rhythm is invariably irregular. When the rate is not markedly increased patients may live for years, but when it is greatly increased, with fluttering in the chest, breathlessness, edema, cyanosis and venous fulness, the prognosis is grave. In affections of conductivity the stimulus for contraction starting in the sinus may be delayed, may not cross or may be blocked in its course through the auricle over the auriculoventricular bridge to the ventricle. This is the cause of the several varieties of heart block. Symptoms of heart block are irregularity and slow ventricular rhythm, with sometimes a sense of weakness or of exertion on dyspnea. Sir William T. Gairdner is said to have suffered from heart block, yet lived to 82. Errors in conductivity are easily made out by polygrams or may be determined by the inharmonious action of the radial or apex and jugular. There are three varieties of this form of arrhythmia, (1) partial, (2) complete, (3) the Adams-Stokes syndrome. Satterthwaite discusses the treatment and urges the importance of a good polygraphic instrument for diagnosis.

2. Trembles and Milk Sickness.—Moseley endeavors to show that trembles and milk sickness in animals are due to aluminum phosphate obtained by eating the white snake root or the rayless golden rod. He shows by experiment that the pathologic appearances found in animals poisoned by these plants are indistinguishable from those caused by aluminum phosphate poisoning; further, that watery extracts of the plants do not show aluminum on testing, and are not poisonous to rabbits, while the leached leaves, dried and given to a rabbit, produce the same effect as leaves from which nothing has been extracted. The objection, therefore, that no poisonous effect was produced by the consumption of the gelatinous extract from evaporating the liquid in which the flesh of animals with trembles had been boiled, is not conclusive to the contrary, since the meat itself must be eaten to produce the effect. The meat of animals that have died of trembles will cause trembles in animals that eat it, whether raw or boiled.

Boston Medical and Surgical Journal

May 13

- 6 *Breast Abscesses. Report of Seven Cases Treated by Bier's Suction Method. R. L. De Normandie, Boston.

- 7 *Effects of Coffee and Their Remedy. W. Wesselhoeft, Cambridge, Mass.
8 *Coffee as a Beverage, Its Use and Abuse. R. Amory, Boston.
9 Imperforate Anus. L. C. Kingman, Providence, R. I.
10 Intermittent Hydronephrosis. Report of Four Cases (concluded). D. F. Jones, Boston.

6. Breast Abscesses.—De Normandie describes the apparatus and method for applying Bier's suction, and reports in detail seven cases of abscess of the breast in which he has used it with excellent results in six cases and failure in one. He discusses each of the cases separately.

7. Coffee.—Wesselhoeft discusses the injurious effects of coffee in the light of laboratory investigations, which, he concludes, tend to show that the caffeine is the noxious constituent. He describes a preparation which, it is asserted, renders possible the extraction of the caffeine from the coffee bean, without at the same time depriving the infusion of its savor and aroma.

8. Idem.—Amory says that caffeine and tannic acid should be excluded, as far as possible, from the cup of coffee, in order to avoid a deleterious effect, while as much as possible of the volatile oils should be included in it. Coffee should therefore, be taken with food and not fasting. After a full meal or during it, coffee is beneficial to digestion. When brain or muscular stimulation is desired it is better to take caffeine, for it can be accurately dosed. Hot or boiling water should be avoided in making coffee, and an infusion should be made with cold water. Amory has for the last eight years prepared his coffee in a porcelain or china vessel with cold water. It does not lose color, strength or aroma for two or three weeks if kept corked and in a cool place. The infusion is prepared in a concentrated form and, before using, water, milk or cream, heated to boiling point is added to set free the volatile oils. He describes the preparation of the cold coffee extract. He particularly objects to the use of metal utensils and hard water which contains salts.

New York Medical Journal

May 15

- 11 Clefts of the Axis Cylinder, the Cable of the Nervous System. Sir J. Grant, Ottawa, Canada.
12 Ophthalmia Neonatorum and its Prophylaxis from the Standpoint of the Ophthalmologist. C. S. Bull, New York.
13 Preventable Blindness from the Standpoint of the Obstetrician. J. C. Edgar, New York.
14 Ophthalmia Neonatorum. P. A. Morrow, New York.
15 Ophthalmia Neonatorum. F. Krauss, Philadelphia.
16 *The Individual as a Surgical Factor. A. M. Crispin, New York.
17 Deficient Oxidation in Relation to the Etiology, Pathology, and Treatment of Nephritis (to be continued). N. E. Dittman and W. H. Welker, New York.
18 *Deafness Following Febrile Diseases, and Its Prevention. J. A. Pratt, Aurora, Ill.

16. The Individual as a Surgical Factor.—Crispin discusses the reciprocal influence of diseases and traumatism produced either accidentally or intentionally. He says that it is a dangerous error to undervalue the constitutional disturbances which underlie many surgical diseases, and a useless nicety to establish a distinction between diatheses and the lesions which they produce; it is a well-known fact that wounds are dangerous in persons who are suffering from certain general diseases, such as diabetes, malaria, syphilis, general intoxications, either from internal or external sources, as those from the intestines, alcoholism, saturnism, etc., all conditions that may eventually cause alterations of the liver, heart or kidneys. Alcoholism has only to be mentioned to evoke that dreaded postoperative sequel, delirium tremens and the general alterations of the organism, for it is a truism that chronic alcoholism profoundly modifies the recuperative process. These morbid conditions have a decided influence on all surgical operations, even before the lesions which they produce become appreciable. He then discusses in detail, in the order which their gravity demands, the constitutional states which have to be corrected or eliminated if possible before attempting any surgical procedure. They are: Renal insufficiency, asthenia, autointoxication, hepatic insufficiency, glycosuria, cardiac insufficiency, anemia, malaria, syphilis and the mental status, particularly with reference to fear. He concludes with an earnest plea for a more extended recognition of the heterogeneity of the individual, and a fuller appreciation of the bear-

ing of the above-mentioned constitutional conditions on the question of operative interference.

18. **Deafness Following Febrile Diseases.**—Pratt summarizes his paper as follows:

1. The majority of ear diseases are caused by adenoids and enlarged tonsils.
2. These conditions are in the greater proportion caused by mechanical obstructions of the Eustachian tube.
3. The germs found in the secretions are present in the normal middle ear as they are in the nasopharynx and sinuses.
4. While varying in different parts of the country, from 25 to 30 per cent. of the children have adenoids or enlarged tonsils.
5. All hypertrophied lymphatic tissues of the nasopharynx should be early and completely removed, so that mechanical obstruction of the Eustachian tube will not occur during congestion of the nasopharynx, to interfere with the drainage and ventilation of the middle ear.

Lancet-Clinic, Cincinnati

May 8

- 19 *The Non-Preservative Situation. P. W. Greyer, Cincinnati.
- 20 Uro-Ureter. B. Robinson, Chicago.
- 21 *New Process for Making New Noses in Twenty Minutes. H. R. Allen, Indianapolis.

May 15

- 22 Case of Mediastinal Sarcoma, with Special Reference to Differential Diagnosis. R. H. Babcock, Chicago.
- 23 Use of the Molded Plaster-of-Paris Splints in Fractures. J. E. King, Richmond, Ind.
- 24 A Question in Therapeutics. B. Horne, Gas City, Ind.
- 25 Polynasal Catarrh—So-Called La Grippe. H. Hays, New York.

19. **Preservatives.**—Greyer makes a forcible criticism on an address by Dr. R. G. Eccles on "the preservative situation" before the American meat packers' convention. He combats the contention that preservatives are necessary to keep the price of food within reach of the poor, by pointing out that they pay more now for their preserved provisions than they did years ago for non-preserved provisions, and asserts that this increase is due, not to increased cost of production or reasons of supply and demand, but to the machinations of the very men whom Eccles was addressing. The only way in which preservatives lessen the cost of production is by enabling these men to put on the market unfit contaminated products which would be rejected without preservatives. He discusses ptomain poisoning, citing passages from eminent authorities to demonstrate that ptomains are not dangerous in early putrescent stages; that most primary ptomains are destroyed by heat; that in advanced stages of putrescence ptomains are most dangerous; that secondary ptomains produced by age are not destroyed by heat; that especially dangerous ptomains have their origin in the non-putrid flesh of diseased animals; that the formation and poisonous effects of these are not prevented by preservatives; that sterility is not proof of their absence; that cleanliness, freshness and freedom from disease at time of curing or canning effectually prevents ptomains; and that days must elapse on opening a can ere dangerous ptomains can generate in such foods. He insists that water is a greater cause of typhoid than milk is, and that preservatives used in milk to kill all germ life or spores would be more fatal than the disease produced by them.

21. Abstracted in THE JOURNAL, Oct. 31, 1908, p. 1536.

Annals of Surgery, Philadelphia

May

- 26 An Analytic and Statistic Review of 1,000 Cases of Head Injury (continued). C. Phelps, New York.
- 27 Osteosarcoma of the Mandible. A. Hewson, Philadelphia.
- 28 *Congenital Mesenteric Cysts. H. C. Deaver, Philadelphia.
- 29 "Essential Hematuria" and "Nephralgia." A. Schwyzer, St. Paul.
- 30 *Renal Varix. P. M. Pilcher, Brooklyn.
- 31 On Renal and Ureteral Calculi. G. Woolsey, New York.
- 32 *Procidencia Recti; Treatment by Excision. J. H. Cunningham, Boston.
- 33 *Intestinal Anastomosis by Invagination. A. E. Maylard, Glasgow, Scotland.
- 34 Excision of the Shoulder Joint. C. L. Scudder and J. D. Barney, Boston.

28. **Congenital Mesenteric Cysts.**—Deaver reports cases of congenital mesenteric cyst and reviews the literature of the subject. He enumerates the four ways of dealing with intramesenteric cysts: (1) by aspiration; (2) by cystostomy and drainage, with or without the use of caustics; (3) by enucleation; and (4) by resection of the involved intestinal segment. The first method is obsolete, the second is useful in the presence of numerous adhesions, the third is ideal when practicable, and the fourth he recommends in multiple juxtaposed cysts when too much surgical interference, as from

dealing with cysts one by one, carries more risk than simple resection.

30. **Renal Varix.**—Pilcher considers renal varix a distinct pathologic entity, being an angiomatous disease of the renal papillæ, analogous to varicocele, etc. Many cases of supposed idiopathic hematuria are due to it. It may be impossible to differentiate it before operation from hematuria due to nephritis and renal papilloma. In most cases gross pathologic lesions are not found, but microscopic examination shows angiomatous disease of the papillæ. Renal decapsulation and fixation of the kidney will cure cases of unilateral hematuria due to nephritis. Nephrotomy is the operation of choice, the incision being made along Broedel's line, to avoid injury to arteries. Nephrectomy is indicated only when rapid and bloodless operation is demanded, or when nephrotomy fails to relieve the hematuria.

32. **Procidencia Recti.**—Cunningham describes an operation which he has employed satisfactorily in dealing with prolapse of the rectum in three cases, namely, by excising the mass. He was unable to find a description of the details of procedure, though the operation is recommended, so he publishes his own technic in detail. He summarizes his cases. The results of the operations have been most satisfactory and it is a surprising fact that continence of feces has resulted.

33. **Invaginating Intestinal Anastomosis.**—Maylard describes in detail a simple method of anastomosing one segment of the intestinal canal within another. He illustrates it with a case of excision of the cecum. After removal of the diseased part, the proximal patent end of the ascending colon is stitched up and withdrawn enough to permit a longitudinal incision of sufficient length (determined by the size of the ileum) to be made through the parietes slightly above the occluded end. A large-eyed needle, threaded with a silk suture about 18 inches in length, is carried three or four times across the patent orifice of the ileum, as if to occlude it. The free end of the suture, left long, is passed through the eye of the needle, so that the ileum is now secured as by a sling. The needle is passed into the colon through the previously made incision, and directed up the intestinal canal for about two inches, when it is made to penetrate the bowel wall from within outward. By pulling out the needle and dragging on the sling suture, the ileum—with a little guiding—is drawn through the incisions and made to pass for a short distance along the canal of the colon. While an assistant keeps tension on the sling, the operator begins to fix the ileum to the colon by a series of interrupted Lembert sutures, passed around the circumference of the opening of the colon. The needle is unthreaded; and by pulling one end of the sling suture the other is drawn out of the ileum, the orifice of the latter being thus left free to open out. It only remains for security's sake to tie a ligature around the puncture in the colon through which the needle and suture pass. The immediate advantage claimed for this operation is a lessening of the time of execution with the consequent minimizing of the risks of shock and infection. The after-advantage is the probability that neither occlusion nor contraction will take place at the opening of the colon. Maylard discusses the future fate of the portion of bowel drawn into the canal, and mentions intussusception as a possible untoward result.

American Journal of Medical Sciences, Philadelphia

May

- 35 *Diagnosis of Gastric Ulcer as Tested by Operation. J. N. Hall, Denver, Colo.
- 36 Diet in Typhoid Fever. S. Strouse, Baltimore.
- 37 *Typhoid Bacilluria. K. Connell, New York.
- 38 *Surgical Treatment of Perforation of Intestines in Typhoid Fever. F. D. Patterson, Philadelphia.
- 39 *Spasm of Chest Muscles, Particularly the Intercostals, as a Physical Sign of Disease of the Lungs. F. M. Pottenger, Monrovia, Cal.
- 40 Gastric Digestion in Infants. T. W. Clarke, New York.
- 41 Syphilis of the Stomach and Intestines. A. D. Kohn, Chicago.
- 42 The Liver in Tuberculosis. J. T. Ullom, Philadelphia.
- 43 Ascites in Cirrhosis of Liver Cured by Repeated Tappings. H. S. Patterson, New York.
- 44 *Adiposis Dolorosa. G. E. Price, Philadelphia.
- 45 Chemistry of the Urine in Diabetes Mellitus. C. P. Howard, Montreal.
- 46 Intestinal Obstruction: An Outline for Treatment Based on the Cause of Death. J. W. D. Maury, New York.

35. Diagnosis of Gastric Ulcer.—Hall has studied fifty consecutive cases of gastric, pyloric and duodenal ulcer in which the diagnosis was placed beyond all doubt by the findings at operation, expressly to bring out the relative frequency and value of the different symptoms and signs of ulcer. In brief, it was noted that pain (82 per cent.), persistent sour stomach (80 per cent.), tenderness (70 per cent.), vomiting (66 per cent.), and rigidity (60 per cent.), were the most frequent indications of ulcer. Gastric hemorrhage occurred in only 34 per cent. and bloody stools in only 8 per cent. The author's experience confirms that of the Mayos that those patients with the stomach dilated beyond all hope of regaining its motor power, generally fail to improve. There is frequently great dilatation in cases in which on operation the pylorus admits a finger freely so that mechanical obstruction can not be the sole factor. The influence of spasm of the pylorus from the irritation of an ulcer in that region possibly from hyperacidity alone in the causation of such a dilatation is most important. The frequent finding at operation of enlarged lymph nodes should be noted, as well as the chance of error in basing a diagnosis of cancer on their presence with an associated thickening about the pylorus. Hall suggests that we are inclined to look on gastric ulcer as comparatively rarer than it is, that we are too apt to look for a classical history especially of vomiting and hematemesis, with a high acidity reported from the laboratory, and that in consequence of placing too much reliance on the chemical findings and too little on the physical examination we make too many diagnoses of hyperacidity, when the finding, by careful examination of the slightest unilateral rigidity in the epigastric region associated with local tenderness, should lead us to diagnose ulcer instead. The chemical evidence is so extremely variable that we should not let it outweigh the more reliable findings of the bedside examination.

37. Typhoid Bacilluria.—Connell draws the following conclusions:

1. Typhoid bacilluria is a great menace to public health. Of all excretions containing typhoid bacilli, the most dangerous is the urine of the declining and postfebrile stage of typhoid fever. The feces are a greater public menace during the active stage of the illness, but taking the course of typhoid fever as a whole, the urine is probably the great spreader of this disease. However, in chronic typhoid bacillus-carriers, the bile more frequently than the urine is the medium in which the bacteria have perpetuated themselves.

2. As a routine in every case of typhoid fever, during the decline and convalescence, the urine in the bladder should be rendered inhibitory to the growth of typhoid bacilli. Bacilluria once established should be terminated by urinary antiseptics or by irrigation of the bladder. Obstinate ulcerative cystitis should be treated by surgical drainage. The passed urine of the typhoid fever patient at all stages of the illness should be disinfected with the same care as the feces.

38. Abstracted in THE JOURNAL, Dec. 19, 1908, p. 2182.

39. Spasm of the Intercostals as a Physical Sign in Lung Disease.—Pottenger has found rigidity of the chest muscles, particularly the intercostals, a constant sign in patients suffering from pulmonary tuberculosis. Not only has he been able to map out the areas of infection, but he has been able to judge the nature of infiltration with a considerable degree of accuracy by the condition of the muscles, the rigidity being much greater over dense infiltrations than over those of less degree, and greater over recent inflammatory infiltrations than over old quiescent ones. He discusses the explanation which remains doubtful. The intercostal rigidity must not be confused with the feeling of resistance found over non-air-containing organs like the liver and heart. He demonstrates that it is a true muscle spasm not dependent on the thickness of the muscles themselves. The best method of detecting the intercostal rigidity is a systematic palpation of the intercostal spaces beginning at the lowest and comparing the rigidity of space with the one above and also with the corresponding space on the other side. In examining, the fingers should not be placed flat on the chest, but the palpation should be made with the ends of the fingers gently pressed into the intercostal spaces. In advanced cases of pulmonary tuberculosis, he has found that when the tissues break down and form a superficial cavity the resistance formerly noted disappears. This he attributes not to the diminution of rigidity, but to the lack of support previously furnished by

infiltrated tissue. He holds that this spasm of the chest muscles, besides being an important diagnostic physical sign in itself, helps to explain other well-recognized signs, such as lagging on the affected side, contraction of the chest wall, ankylosis of the costo-sternal articulation, diminution of the respiratory murmur and the harsh impaired respiratory note. So far, he has been able to detect muscle rigidity above the clavicle and the spine of the scapula, or in the first intercostal space, in every early case he has examined. The rigidity remains for a long time, even over long healed lesions. This he attributes to a fibrous degeneration. He protests against the tendency brought about by the introduction of laboratory methods to neglect physical diagnosis.

44. Adiposis Dolorosa.—Price reports two cases that came to autopsy, and discusses the subject in the light of these observations. The disease develops gradually in most cases; occasionally rapidly but never abruptly. The cardinal symptoms are (1) fatty deposit; (2) pain and tenderness on manipulation of the adipose deposits; (3) general asthenia; (4) psychic phenomena. He discusses these separately. He differs with those who disregard alcoholism and syphilis as possible etiologic factors. He summarizes the results of the 6 previously recorded autopsies and the 2 now reported, and finds the thyroid affected in 7 of the 8 cases. The hypophysis also was distinctly affected in 5 cases, and had been unexamined microscopically in at least 2 of the remaining 3 cases. It has been found that in animals when the thyroid is extirpated the pituitary body enlarges. He thinks that sufficient attention has not been given to the hypothesis, and suggests that etiologically it is almost as important as the thyroid. He suggests that the symptom group may result from a primary disease of either of those structures, the other being involved secondarily, though their close interrelations have been noted in other structures, particularly the genital organs. Recovery from adiposis dolorosa is rare, but the disease itself does not directly cause death. Complete intermissions are but remissions and are common. The treatment leaves much to be desired. The salicylates advantageously combined with bromid salts are useful to relieve pain. Aspirin is of value. Extract of the thyroid gland is the most valuable remedy at our command. The pituitary body at present has little value as the results of its use are not known. Potassium iodid is called for with a syphilitic history. The heart may require attention.

American Journal of Physiology, Boston

May

- 47 *Mercurial Poisoning of Men in a Respiration Chamber. T. M. Carpenter and F. G. Benedict, Boston.
- 48 Preliminary Observations on Metabolism During Fever. T. M. Carpenter and F. G. Benedict, Boston.
- 49 Variations in Enzyme Concentration with the Variation in the Blood Supply to the Secreting Gland. J. G. Ryan, Chicago.
- 50 Rheotropism of Fish Blind in One Eye. E. P. Lyon, Woods Hole, Mass.
- 51 Hydrolysis of Crystallized Albumin from Hen's Eggs. T. B. Osborne, D. B. Jones and C. S. Leavenworth, New Haven, Conn.
- 52 Effects of Chlorid, Sulphate, Nitrate and Nitrite Radicles of Some Common Bases on the Frog's Heart. F. C. Cook, Washington, D. C.
- 53 *Quantitative Study of Faradic Stimulation. III. The Measurement of "Make" Shocks. E. G. Martin, Boston.
- 54 Method of Determining the Position of the Center of Gravity in its Relation to Certain Bony Landmarks in the Erect Position. E. Reynolds and R. W. Lovett.
- 55 *Absorption of Fat. R. H. Whitehead, Charlottesville, Va.

47. Mercurial Poisoning.—Carpenter and Benedict, in working with a respiration chamber in which the exit tubes were closed with mercurial valves, observed several instances of poisoning of the men experimented on in the chamber, which they attribute to the toxic action of mercurial vapor. On reference to the literature they find that Bing reports nine cases of poisoning in a hospital, due to the escape of steam through a mercury reduction valve. The patients exhibited a temporary rise of temperature, increase of pulse rate, cyanosis, vomiting and diarrhea. Two of the patients (infants) died, but the others recovered in a few days. Carpenter and Benedict give the record of nine experiments in which symptoms of poisoning were exhibited. The symptoms were usually nausea, increase of pulse rate and respiration, and in most cases rise of temperature. Attempts to demonstrate the

presence of mercury and its effects on animals were inconclusive. Some difference in susceptibility was shown, as some individuals showed no symptoms after a long stay in the respiration chamber.

53. Faradic Stimulation.—Martin has worked out a formula for the measurement of "make" shocks, and draws the following deduction: Comparison of the formula for "make" shocks with the one previously established for "break" shocks, shows that the relationship between the two sorts of stimuli depends in any given inductorium altogether on the intensity and voltage of the current through the primary coil. The effects on the relation between "break" and "make" shocks of variations in the intensity and voltage of the primary current may be stated in general terms thus: The higher the voltage of the primary current and the less its intensity, the more nearly will "make" shocks equal "break" shocks; conversely, the lower the voltage of the primary current and the greater its intensity, the more will "break" shocks exceed "make" shocks. With primary currents of high intensity and low voltage large variations in intensity produce relatively slight alterations in the stimulating values of "make" shocks.

55. Absorption of Fat.—Whitehead has endeavored to test the question as to whether fat is absorbed in emulsion or in the form of soap, by staining the fat fed to a cat with sudan III. The animal was killed and the intestinal villi and lacteals examined. It was found that while the fat in the lumen of the intestine was colored, that in the villi and lacteals was colorless. The experiment appears to show that fat is absorbed, not in the form of an emulsion, nor in the solutions of fatty acids, but in the form of a soluble soap.

Journal Medical Society of New Jersey, Orange

May

- 56 Laboratory Work in Physiology in Relation to Medical Practice. H. Emerson, New York.
- 57 Bacteriologic Notes on Diphtheria. G. T. Welch, Passaic.
- 58 Modern Urologic Diagnosis. G. N. J. Sommer, Trenton.
- 59 Recent Advances in Knowledge of Digestive Processes. J. J. Gilbride, Philadelphia.
- 60 Psychotherapy. C. C. Beling, Newark.
- 61 Duct Papilloma: Papillary Cystadenoma of the Breast. A. A. Strasser, Arlington.
- 62 Recurrent Iridocyclitis. C. J. Kipp, Newark.

Ohio State Medical Journal, Columbus

May

- 63 Factors of Shock and Sepsis in Technic. F. F. Lawrence, Columbus.
- 64 Treatment of Tuberculous Joint Disease in Childhood. W. G. Stern, Cleveland.
- 65 Causes of Chronic Urethral Discharge—Urethritis. A. W. Nelson, Cincinnati.
- 66 Advisability of Operative Interference in Malignant Disease of the Larynx. S. Allen, Cincinnati.
- 67 Cycloplegia. A. J. Hill, Canton.
- 68 Rabies, Report of Prophylactic or Pasteur Treatment Taken at Home by Writer. G. W. Rogers, Columbus.
- 69 The Electro-Magnet in Removal of Iron and Steel Particles from the Eye. V. Ray, Cincinnati.

Bulletin Johns Hopkins Hospital, Baltimore

May

- 70 Colloid Glands (Goiters): Their Etiology and Physiologic Significance. D. Marine and C. H. Lenhart, Cleveland.
- 71 Lesions of the Nerve Cell and Vascular Tissues Produced by Acute Experimental Alcoholic Poisoning. H. J. Berkley, Baltimore.
- 72 *Acquired Venereal Infections in Children. F. Pollack, Baltimore.

72. Venereal Infections in Children.—Pollack gives a study of 187 children treated in the women's venereal department of the Johns Hopkins Hospital Dispensary. There were 54 white children of 6 years and under, as compared with 33 colored, and 63 colored over 6 years of age as compared with 33 white. The increase in acquired venereal infections in children is greater than the medical profession or the laity realizes, and the increasing frequency of the criminal infection of baby girls makes the subject a matter of grave concern. Clinically, the venereal infections in children run a milder course as regards grave complications than is the rule in the adult, but the number of complications and the duration of the disease seem almost identical. Pollack insists that the cause of most outrages on children is to be found in the superstition that a person infected with either syphilis or gonorrhea may

get rid of it by infecting another, preferably an "untouched virgin;" thus a defenseless child is a most natural victim. She believes that if one were to ask ten police officers, cab drivers, hucksters, etc., of the truth of this superstition, eight would affirm it as a "fact," and all would know of its existence, so common is it. She has been frequently requested to prepare women for maternity with the avowed intention of "having the baby take the disease away from them." She does not credit the majority of this abuse of infants to sexual perversion, for the appalling number of cases seems too large to credit to perverts. She analyzes her cases, discusses the question of temperature in gonorrhea, and the treatment of venereal diseases in children; and, further, urges the necessity of cooperation in prophylaxis with the medical profession of the school board, juvenile courts, police departments, the state attorney's office, and such charitable institutions as the Playground Associations, the Charity Organization Society and Prisoner's Aid societies.

Journal Advanced Therapeutics, New York

May

- 73 Anterior Poliomyelitis. H. W. Frauenthal, New York.
- 74 Ideals. F. A. Davis, Boston.
- 75 Treatment by Superheated Air under Pressure. F. H. Humphris, London, Eng.
- 76 *Physiologic Effects of Light Energy. H. McIntosh, Boston.

76. Light Energy.—McIntosh, from a consideration of recorded experiments and observations, summarizes as follows the physiologic effects of light energy:

Light energy may produce an instant effect on the skin. It increases pigmentation of the skin and the energy of the sweat glands, and produces superficial hyperemia; and, as a determination of blood to the surface of the body can not take place without its withdrawal from the interior, it follows that when large areas of the body are exposed to light energy, there must be a depletion of the viscera. It exerts an inhibitory effect on bacterial growth in living tissue, a conclusion that finds confirmation in its clinical applications. It increases the elimination of carbon dioxide and the activity of the process of combustion, as well as urinary elimination; tends to raise the normal temperature and accelerate pulse and respiration, and to improve metabolism. It may produce motor excitation and reflexes. Colored rays of the spectrum may produce marked physical impressions. Blue light increases the energy and resistance of voluntary muscles, and tends to produce analgesia, frequently passing into anesthesia. The chemical frequencies exert an unfavorable influence on the exanthemata. He concludes his paper with a comparison of the efficiency of the various methods for the therapeutic employment of light energy, viz., solar energy, electric light baths, incandescent baths, concentrated energy of the sun, concentrated energy of the electric light, concentrated incandescent light energy, blue light energy, energy of red light, ultraviolet light energy, vacuum tube discharges and fluorescence.

Journal Nervous and Mental Disease, Lancaster, Pa.

May

- 77 *Motor Ataxia from Emotion. S. W. Mitchell, Philadelphia.
- 78 Tumor of the Frontal Subcortex and Callosum; with Flaccid Paralysis of the Muscles which Support the Head, Aphonia, Mental Change, and other Symptoms. Illustrated by a Case with Necropsy. C. K. Mills, Philadelphia.
- 79 *Optic Neuritis Associated with Disease of the Nasal Accessory Sinuses. S. D. Risley, Philadelphia.
- 80 *The Symptom-Complex of Central Neuritis. I. H. Coriat, Boston.

77, 79. Abstracted in THE JOURNAL, Feb. 27, 1909, p. 727.

80. Central Neuritis.—Coriat summarizes 23 cases of central neuritis in which the symptom-complex of diarrhea, loss of weight, emaciation, muscular rigidity and twitching, with some fever and some changes in the reflexes, was present, 6 times in the alcoholic psychoses, 3 times in melancholia, 5 times in dementia præcox, twice in senile depression, twice in carcinoma of the uterus, 3 times in acute delirium, and once in manic-depressive insanity. He says that since the symptom-complex of central neuritis is purely terminal in nature, occurring as the end-picture of certain eaehectic, depressive or delirious states, recovery can not take place. On the other

hand, depressive psychoses with marked emaciation and diarrhea are frequently observed, in which neither clinically nor anatomically, can any central neuritis be demonstrated. What, then, are the conditions necessary for the production of central neuritis? A toxic etiology can easily be dismissed, as the presence of cholin and the findings in the urine are merely secondary. Furthermore, in one of Coriat's cases, a careful examination of the urine, both chemically and physiologically, failed to demonstrate any poisonous products. The change in the nerve cells can not be produced by inanition, for he has seen that under these conditions there is nothing resembling the axonal reaction. The symptom-complex can be fairly satisfactorily explained, however, by an application of Edinger's *Ersatz-Theorie*. For the maintenance of a perfect function of the nerve cell, it is necessary that the reparative power of the cell should be accurately balanced and adjusted. If the cell becomes unable to repair the loss sustained by its functional activity, a progressive degeneration of the entire neurone follows. Mott has also pointed out how in neurones in a low state of nutritional equilibrium degeneration first begins in the fine collaterals and terminals and proceeds back to the cell of origin. Now, in certain psychoses, the loss in weight, the diarrhea and the emaciation reduce the neurones to such a low state of nutrition that they absolutely destroy its reparative power. As a result, the entire neurone degenerates and the peculiar symptom-complex of central neuritis follows.

Albany Medical Annals

May

- 81 The Rectal Shelf. G. Blumer, New Haven, Conn.
- 82 *Atrophy of the Testicle. C. G. Cumston, Boston.
- 83 *The Nervous Child. H. L. K. Shaw, Albany, N. Y.
- 84 Cyst of the Frontal Sinus, Communicating with the Frontal Lobe. C. F. Theisen, Albany.

82. **Atrophy of the Testicle.**—Cumston says that when one testicle is only slightly atrophied it gives rise to very little disturbance, but when both organs are involved there is complete impotency, or at any rate generative impotency. Under certain circumstances certain psychic disturbances occur, such as loss of courage and activity, and to a certain extent, changes in character.

83. **The Nervous Child.**—Shaw discusses the effects of excessive emotionalism, and says that fear is the emotion most apt to produce permanent injury in a child of neurotic temperament. Fear implies imagination, and the child who suffers most is the most imaginative. Most of the neurasthenia, hypochondriasis and hysteria, in adults, may be traced to the effects of fear in early life. Reflex irritation, from whatever source, plays an important part in the etiology of child nervousness. It occurs from the prepuce or clitoris, from gastrointestinal irritation, slow absorption of intestinal toxins, etc. Shaw describes the characteristics of the nervous child, and particularly notes the display of this characteristic in regard to food. He condemns the custom of administering medicine in food. The training of the child's nervous system can not be begun too early. The child is an imitative creature, and if the parents expect to exert proper influence they must hold themselves in check in his presence. In cases of willfulness and lack of discipline, the best results can be obtained when the child is removed from his ordinary surroundings, though it is difficult to convince the parents that this is necessary and that the mother is not the proper person to take care of this kind of case. The nervous child is the product of our present-day methods of living and the genus is rapidly increasing.

Journal Arkansas Medical Society, Little Rock

April

- 85 Pulmonary Tuberculosis. D. C. Walt, Little Rock.
- 86 Measles. A. L. Carmichael, Little Rock.
- 87 *Rheumatism. M. G. Thompson, Hot Springs.
- 88 Surgical Cases. J. C. Hughes, Walnut Ridge.
- 89 *Puerperal Eclampsia. C. M. Lutterloh, Jonesboro.
- 90 Cases of Progressive Pneumonia. J. M. Stephens, Clover Bend.
- 91 Cancer of the Esophagus. A. Watkins, Little Rock.
- 92 *Toxemia of Pregnancy. E. C. Myers, Fort Smith.

May

- 93 The Coexistence of the Symptoms of Appendicitis and Right Kidney and Ureteral Irritation. L. Young, McAlester, Okla.

- 94 Symmetrical Gangrene, or Raynaud's Disease. L. E. Runkle, El Reno, Okla.
- 95 Extrauterine Pregnancy with Escape of Fetus through the Rectum. J. D. Harbert, Marie.

87. **Rheumatism.**—Thompson discusses the great variety of cases classed together under the term rheumatism. He particularly dwells on pressure, both inside and outside the rectum, as a factor in the causation of sciatica, and cites instances in which relief immediately followed a discontinuance of the habit of carrying heavy things, books, etc., in the hip pocket.

89. Abstracted in *THE JOURNAL*, 1908, p. 250.

92. **The Toxemia of Pregnancy.**—Myers summarizes his paper as follows:

1. There is a special toxemia of pregnancy, but the exact nature of the toxic substance or substances is not known.
2. The theory is tenable, that it may be due to some vice of placental syncytial tissue.
3. The pathologic changes are, primarily, necrosis of the periphery of the liver lobules in eclampsia, with secondary changes in the kidneys and brain, while in pernicious vomiting the necrosis is more marked in the center of the lobules as an acute atrophy of the liver.
4. Laboratory findings are of value in determining the question of treatment or termination of pregnancy, and the quantitative analysis of the nitrogen output is more important than searching for casts or albumin.
5. In eclampsia with soft, dilated cervix, empty the uterus at once. With rigid, undilated cervix, be governed by the clinical picture in each case. If critical, forcibly dilate and empty the uterus, or, under strict asepsis, perform Cesarean section.
6. In pernicious vomiting the time to terminate pregnancy must be determined by the laboratory analysis, if available, by the progressive emaciation, and the first indication of exhaustion fever.

Myers concludes that while careful uranalysis is an important aid, still such examinations have the value only of all laboratory reports, and any decision as to therapeutic measures or the termination of pregnancy must be based on the condition of the individual patient. And, while we should never be eager to do this, we must keep in mind the possible necessity of terminating pregnancy.

Colorado Medicine, Denver

May

- 96 Relation Between Retinal Hemorrhages and High Arterial Pressure. L. W. Fox and W. C. Batroff, Philadelphia.
- 97 Myocardial vs. Endocardial Affections as a Cause of Disability and Death. O. M. Gilbert, Boulder.
- 98 General Neuritis of both Cranial and Spinal Nerves following Typhoid. E. W. Lazell, Denver.
- 99 Plea for Concerted Action of the Profession in Matters Pertaining to Medical Legislation in Colorado. S. D. Van Meter, Denver.

Denver Medical Times and Utah Medical Journal

May

- 100 Etiology, Prophylaxis and Treatment of Puerperal Infection. H. E. Abrahams, Trinidad, Colo.
- 101 Management of Labor for Nurses. T. M. Burns, Denver.
- 102 Venereal Diseases. W. H. Davis, Denver.
- 103 Modern Trend in Medical Education. J. Sundwall, Salt Lake City.

Illinois Medical Journal, Springfield

May

- 104 *Psychotherapy. S. Kuh, Chicago.
- 105 *Psychotherapy from the Psychologist's Point of View. J. R. Angell, Chicago.
- 106 *The Religious Therapeutic Movement. I. H. Coriat, Boston.
- 107 *The Medical Uses of Hypnotism. H. T. Patrick, Chicago.
- 108 *The Scope of Psychotherapy. H. Gradle, Chicago.
- 109 Psychotherapy. W. D. Scott, Evanston, Ill.
- 110 Prevention and Inhibition of Diffuse Suppurative Peritonitis. A. J. Ochsner, Chicago.
- 111 The Sequelæ of Acute Diffuse Suppurative Peritonitis. C. Davison, Chicago.
- 112 Report of Five Cases of Liver Resection. L. Feingold, Chicago.
- 113 Diagnosis and Treatment of Extrauterine Pregnancy. F. H. Martin, Chicago.
- 114 Blood Pressure in Chronic Interstitial Nephritis, with Special Reference to Treatment. G. W. Parker, Peoria.

104, 106, 107. Abstracted in *THE JOURNAL*, March 13, 1909, pp. 916, 917.

105. Abstracted in *THE JOURNAL*, March 13, 1909, p. 916, and published in the *Chicago Medical Recorder*, March, 1909.

108. **The Scope of Psychotherapy.**—Gradle says that while it is well known that the objective signs of any disease are directly proportionate to the intensity or extent of the morbid lesion or process, the subjective symptoms often seem to be more capricious in their degree. They vary with the individuality or even with the temper of the patient. The intensity of the pain and of other disagreeable sensations pro-

duced by a disturbance is increased by the concentration of attention, and conversely diminished by diversion of the attention. The query whether the mind can influence the actual course of lesions, as well as the subjective symptoms produced by them, is a difficult one to answer. As a rule, the cases quoted by older writers and the bulk of the illustrations mentioned by the laity can not stand the test of rigid criticism. Closer inquiry generally shows that subjective improvement was mistaken for objective changes. Indeed, it would be difficult to find the record of a case in which the direct influence of the mind on the course of any morbid lesion had been observed beyond doubt. It is easy enough to demonstrate the effect of emotions, of mental activity or mental fatigue on the circulation, the respiration and some secretions; in fact, on any process controlled directly by the nervous system. But it has yet to be shown that mental processes can in any way influence the phenomena of growth, of nutrition or of tissue change. Yet it seems reasonable to admit that the state of the patient's mind may directly influence the struggle with certain chronic diseases, especially those the course of which depends somewhat on the state of nutrition, as, for instance, slow tuberculosis. With confidence and hope a patient is much more apt to avail himself properly of all hygienic advantages and to utilize them to a better extent than when in a despondent frame of mind.

Bulletin Medical and Chirurgical Faculty of Maryland, Baltimore

May

- 115 Sketch of the Library of the Medical and Chirurgical Faculty of the State of Maryland. M. C. Noyes, Baltimore.

Memphis Medical Monthly

April

- 116 The Doctor's Attitude toward Certain Problems of Adolescence. B. F. Turner, Memphis, Tenn.
117 Sexual Education. H. C. Buck, Friars Point, Miss.
118 Experience with Apparently Mild Cases of Appendicitis. M. Moore, Memphis.
119 *Spirillosis of the Lungs. W. B. Johnson, Rosedale, Miss.
120 Treatment of Tuberculosis by Tuberculin. R. B. Underwood.

119. **Spirillosis of the Lung.**—Johnson records what he believes to be the first reported case of spirochetal infection of the lung. It occurred in a negro woman of 35, who had been feeling ill for a week before she had a hard chill followed by temperature of 106 F., pulse 110 and respirations 24. There was constant severe pain in the right side in the axillary line. Chest sounds were normal, except a few crepitant and subcrepitant râles. The lungs dilated evenly, there was slightly more fremitus and a duller note was heard on the right side posteriorly, and the breath and voice sounds were more distinct. The blood showed a sharp leucocytosis, but no malaria. The urine was loaded with albumen. The sputum, when stained for tubercle bacilli, showed none, but in every field there were numerous spirilla from one and a quarter to one and a half times the width of a red blood corpuscle, very thin and wavy. They stained blue, like the cocci, but not so dark. They also stained easily with a saturated suture of methylene blue, Loeffler's solution and the Wright blood stain. Johnson describes the course of the disease, which was severe, resolution setting in by crisis, with final recovery. The treatment was entirely symptomatic. He has seen two other cases, but reports this one only, as it was under observation from the initial chill. The case resembles relapsing fever, but no spirilla were found in the blood, while they were numerous in the sputum. The special complications of relapsing fever are bronchitis and pneumonia. He suggests a further search for this affection.

New Orleans Medical and Surgical Journal

May

- 121 Headaches as a Symptom in Pregnancy and Pelvic Disorders. C. N. Chavigny, New Orleans.
122 Nasal Causes of Headache. A. I. Weil, New Orleans.
123 Headaches of Organic and Constitutional Origin. I. I. Leemann, New Orleans.
124 Headaches Due to Functional and Organic Disturbances of the Eye. H. V. Blum, New Orleans.
125 Headaches as a Symptom of Disease of the Nervous System. R. M. Van Wart, New Orleans.
126 Treatment of Flatfoot. E. S. Hatch, New Orleans.
127 Interesting and Instructive Bone and Joint Cases. J. F. Oechsner, New Orleans

- 128 Importance of Examination of the Urine for Tubercle Bacilli, with Presentation of a Specimen of a Tuberculous Ureter Showing Calculi *in Situ*. F. W. Parham, New Orleans.
129 Use of the de Pezzar Catheter in Surgery. F. W. Parham, New Orleans.
130 Otitis Externa Acuta. R. F. Harrell, Alexandria, La.
131 Acute Nephritis in Children. O. M. Patterson, Bastrop, New Orleans.
132 Plea for Surgical Diagnosis by the General Practitioner with Report of Two Cases of Ruptured Tubal Pregnancy. T. Ragan, New Orleans.

Journal Oklahoma State Medical Association, Guthrie

January

- 133 Obstetrics and Gynecology. J. A. Walker, Shawnee.
134 Some Pathologic Conditions Justifying Therapeutic Abortion. G. H. Thrailkill, Chickasha.
135 Gonorrheal Complications of the Puerperium. J. J. Shippy, Belle Plain, Kan.
136 Syphilis. J. E. Stinson, Chickasha.
February
137 Plea for More Accurate Diagnosis of Disease in Infancy and Childhood. L. J. Moorman, Oklahoma City.
138 Laryngeal Diphtheria, with Special Reference to Intubation. T. J. Dodson, Mangum.
139 Points to be Observed and What they Indicate in the Examination of a Sick Child. J. H. Medaris, Helena.
140 Diagnosis of Brain Abscess—A Sequel to Purulent Otitis Media. H. C. Todd, Oklahoma City.
141 Professional Ethics. C. E. Frost, Duncan.

West Virginia Medical Journal, Wheeling

April

- 142 Examination of Insane Persons and Their Commitment to Asylums. J. R. Bloss, Huntington.
143 Surgical Treatment of Goiter. J. Schwinn, Wheeling.
144 Cholecystitis and Cholelithiasis. R. H. Edmondson, Morgantown.
145 Bronchopneumonia in Children. F. C. Abbott, Piedmont.

May

- 146 *Gastric Ulcer. C. R. Jones, Pittsburg, Pa.
147 Cardiac Asthma, Cheyne-Stokes Respiration, Bradycardia, Adams-Stokes Syndrome. L. D. Wilson, Wheeling.
148 Autointoxications and Nervous and Mental Diseases. G. H. Benton, Chester.
149 The Business Side of the Profession. W. H. Sharp, Parkersburg.
150 Diffuse Suppurative Peritonitis—The Fowler-Murphy Treatment. A. M. Burt, Elkins.

146. **Gastric Ulcer.**—Jones reports a few out of 66 consecutive cases of gastric ulcer treated during the last four years with the following results: Males, 19; females, 47; history of hematemesis, 11; hemorrhage during treatment, 3; rest cure, 51; ambulatory treatment, 15; recovery, 50; improved, 16; or approximately 75 per cent. and 25 per cent., respectively; no deaths. He controverts the modern tendency to advise gastroenterostomy as a routine measure in uncomplicated gastric ulcer. He considers that surgical interference of any kind has no place in the treatment of uncomplicated gastric ulcer. He has followed cases in which gastroenterostomy has been done and believes that the complications which may be charged entirely to the operative interference are far greater than those which naturally arise in cases of gastric ulcer undergoing a rational medical or dietary treatment. He appeals to the universally satisfactory results of medical treatment obtained by Von Leube and others in support of this position.

St. Paul Medical Journal

May

- 151 *Stenosis of the Pylorus in Infancy. C. L. Scudder, Boston.
152 *The Hygienic Element in the Treatment of Osseous Tuberculosis. C. F. Painter, Boston.
153 Conduct of Difficult and Abnormal Presentations. H. C. Johnson, St. Paul.

151. **Stenosis of the Pylorus.**—Scudder gives a general consideration of this subject, both from the literature and his own personal observations. He briefly records 12 cases, 5 of his own, and 7 from the literature, in each of which a posterior gastrojejunostomy was done, with the result that the babies recovered from the starvation caused by obstruction, increased properly in weight, are normal in height, and have maintained good health. These clinical observations appear to Scudder to demonstrate, that in children with a benign stenosis of the pylorus and otherwise without disease, gastrojejunostomy does not interfere with nutrition or with physiologic or anatomic development. Is it conceivable, he asks, that these children could live for years and develop into strong healthy individuals if the operation seriously interfered with metabolism?

152. **Osseous Tuberculosis.**—Painter bases his paper on the observations of a series of cases, admitted to the institution where they were studied for the express purpose of trying the effect of hygienic treatment exclusively, or as nearly so as seemed safe. Some of the patients were well advanced in the disease on admission. The figures offered by Painter go to emphasize the fact that tuberculous osseous foci situated elsewhere in the body are frequently complicated by lesions in the internal organs, and, whether the association be that of cause or effect, the consequences to the patient are those of a constitutional disease. Constitutional treatment, therefore, should play an important part in the management of tuberculous lesions, the most conspicuous manifestations of which may be in the osseous system. A readjustment of the values given to different features of treatment now in use is required. While a certain amount of apparatus is unquestionably necessary and desirable, its employment in the treatment of joint lesions should be so regulated that a minimal amount of such impairment of function may result, and it should be employed only so long as the patient requires the protection of the splint to avoid pain, prevent incorrigible deformity, or lessen the likelihood of suppuration.

Texas State Journal of Medicine, Fort Worth

May

- 154 *Retroadisplacements of the Uterus. W. Keiller, Galveston.
155 Chronic Interstitial Nephritis with Death from Uremia. S. B. Kirkpatrick, Waco.
156 Nasal Stenosis. D. A. Atkinson, Dallas.
157 Treatment of Tuberculous Joints from the Standpoint of the General Practitioner. G. E. Adams, Fort Worth.

154. **Retroadisplacement of Uterus.**—Keiller studies this subject from an anatomic standpoint. He calls special attention to the uterosacral ligament, and to the reflexion of the peritoneum from the side of the cervix to the side of the rectum, termed the rectouterine fold. He points out that in addition to the sheet of peritoneum there is a deeper fibrous sheet which passes from the sacrum in the region of the anterior sacral foramina to the vagina and cervix uteri, of which he has found no description. Its function appears to be to carry branches of the hypogastric plexus of the sympathetic and the third and fourth sacral nerves to the cervix uteri and the vagina. In some cases its uterine attachment receives a muscular band from the cervix uteri. Keiller regards this sheet of fascia as the main constituent of the uterosacral ligament and an important, if not the main support of the cervix uteri, and posterolateral fornix vaginae. Repeated examinations to determine the cause of the prominent ridge in the peritoneum called the uterorectal fold has invariably shown it to be due to the fourth sacral nerve and vaginal branches of the internal iliac vessel. The man who shortens that fold by stitches, by either vaginal or abdominal route does so at great risk of including the visceral branches of the fourth sacral nerve or of wounding important blood vessels.

Washington Medical Annals

May

- 158 Smallpox as I have Seen it in the District of Columbia. L. Elliot, Washington.
159 Exophoria, its Symptoms, Significance and Treatment. O. Wilkinson, Washington.
160 Review in Obstetrics. A. F. A. King, Washington.
161 Lumbricoid Worm in Ovarian Abscess. H. D. Fry, Washington.
162 Acute Yellow Atrophy of Liver. D. P. Hickling, Washington.
163 Endothelioma of the Brain. E. M. Hasbrouck, Washington.

Women's Medical Journal, Toledo, O.

April

- 164 *Results in the Surgical Treatment of Cancer of the Uterus. E. B. Everitt, Philadelphia.
165 Early Microscopic Changes in Carcinoma of the Uterus. A. W. Williams, New York.
166 Cases of Inoperable Uterine Carcinoma. M. D. Rushmore, New York.
167 Diseases of the Accessory Sinuses of the Nose, with Demonstration of Specimens, X-Ray Plates, Drawings, Photographs and Transilluminating Apparatus. I. D. Kerr, Boston.

164. **Cancer of the Uterus.**—Everitt gives a brief historical review of the operative treatment and refers to the work of the committee of the American Medical Association. But she adds that any mention of the question of operability leads us at once into confusion, for undoubtedly to-day many mis-

take the possibility of operation at any hazard for highly probable operative cure. A considerable step will have been taken toward the desired eradication from the popular mind of the idea that cancer is an incurable disease when operators can be restrained from undertaking unwarranted procedures in extensive cases, whereby the mortality and morbidity of cancer operations are greatly increased, and some of our most valuable measures are brought consequently into disrepute. A notable proportion of the difficulties encountered in operating for cancer of the uterus are due to attempts to enucleate embedded ureters, to separate adherent bladder or bowel, or to excise involved portions of these viscera. One can hardly contemplate with any degree of patience the extensive mutilating operations falsely undertaken in the name of medical science, since a little application of the golden rule would forbid the inevitable making of the last state of the women worse than the first.

Southern Medical Journal, Nashville

April

- 168 *Flap Sliding Operation for Rectovaginal Fistula, Leaving Perineum and Sphincter Muscle Intact. G. H. Noble, Atlanta, Ga.
169 Tuberculosis of Bones and Joints. E. H. Bradford, Boston.
170 *Diagnosis of Tuberculosis Apart from Physical Signs. W. A. Oughterson, Nashville.
171 *Epidemic Cerebrospinal Meningitis. W. M. McCabe, Nashville.
172 *Transfusion of Blood as a Therapeutic Agent with Report of Transfusion in a Case of Pellagra. H. P. Cole, Mobile, Ala.
173 Irrigation of the Aqueous Chamber for the Removal of Remaining Cortex. H. Wood, Nashville.
174 *Vesicouterine Fistula and Loss of the Function of the Vesical and Urethral Sphincter Muscles, Both Conditions Successfully Operated on. R. S. Hill, Montgomery, Ala.
175 Importance of the Early Treatment of Cholecystitis. C. M. Rakestraw, Savannah, Ga.
176 Suggestions in Treatment of the Drug Habit. W. S. Robinson, Nashville, Ark.
177 Pathology and Treatment of Gonorrhea in the Female. E. C. de Moss, Nashville.
178 Operative Relief of Intestinal Obstruction. F. G. DuBose, Selma, Ala.

168. **Rectovaginal Fistula and Fistula-in-Ano.**—Noble reports two simple operations, the first for the relief of rectovaginal fistula, in the lower end of the vagina when the sphincter muscle and perineum are intact; the second for excision of a fistula-in-ano without cutting the sphincter muscle. Use is made of the principle, presented by the author some years ago, of making a flap of the anterior wall of the rectum and drawing it externally to the anus in cases of complete laceration of the perineum. Both operations have proved successful in the author's hands. The article is illustrated.

170. **Diagnosis of Tuberculosis.**—Oughterson discusses detection of bacilli in the sputum and the various now well-known reactions to tuberculin.

171. **Epidemic Cerebrospinal Meningitis.**—McCabe, seeing that tuberculous meningitis is the one with which the diagnosis of epidemic cerebrospinal meningitis is liable to be confounded, makes the following differentiation:

1. In the epidemic form the onset is sudden, while in the tuberculous type it is slow.
2. Temperature, eyes, and pulse are about the same in each disease. The temperature in the tuberculous variety may correspond more nearly to the tuberculous type of fever.
3. Neck symptoms, Kernig's sign; spasm of the extremities and paralysis, are more marked in the epidemic form.
4. Cerebral pressure, as shown by the fontanelles, is more marked in the epidemic type.
5. There is a high leucocyte count in the epidemic type, while there is a low count in the tuberculous variety.
6. We have the history of an epidemic variety, and a history of tuberculosis in the tuberculous form.
7. In the epidemic variety the cerebrospinal fluid is turbid and contains polymorphonuclear leucocytes in excess, and the meningococcus. In the tuberculous type the fluid is clear and contains lymphocytes in excess and the tubercle bacilli.

172. **Transfusion of Blood.**—Cole reports a case of pellagra successfully treated by transfusion. He gives a historical résumé of the subject, describes the present technique of arterio-venous transfusion, discusses the contraindications, their detection and avoidance, the method of cell protection, and deduces indications for transfusion in the extracellular and endotoxic groups of diseases, respectively.

174. **Vesicouterine Fistula.**—Hill reports the case of a woman who, one hour after completion of labor (which had lasted eighteen hours, a fully developed child with normal presentation being born dead), felt an intense desire to

urinate, which was followed by a tremendous gush of water from the vagina. From this time on, the urine passed continually and entirely through the cervix uteri. Vesicouterine fistula was diagnosed. Hill saw her six weeks later. Through a T-shaped incision in front of the cervix uteri, he closed with catgut suture the openings into the bladder and uterus, which were about the size of the end of the index finger. Union was perfect, but from the continuation of the urinary incontinence, the vesical and urethral sphincters lost their function. She returned home, but returned about six months later in the same condition, but with a three months' pregnancy to complicate matters. The following technic, which, so far as Hill knows, is original, was used: With a metal sound in the urethra as a guide, a median incision was made through the vaginal mucosa from a point one inch on the bladder wall to the meatus urinarius, and then around this orifice. The mucosa was dissected from the underlying structures to the extent of an inch or more, transverse measurement. The sound in the urethra was then changed for one of smaller size. Commencing at the bladder end of the denudation, the muscular structures were folded in or brought together with a continuous catgut suture passed transversely, but never deep enough to include the vesical or urethral mucosa. As the gut was made taut after each passage of the needle, the sound was drawn from its grasp. The vaginal mucosa was next trimmed and made to fit snugly over the underlying tissue and held in position with silkworm-gut sutures, some of which were carried through the muscular tissues, reinforcing the catgut sutures. The patient was catheterized with a small soft rubber catheter every four or six hours. Hill is opposed to leaving an instrument in the urethra after this operation, and suggests the advisability of establishing vesicovaginal or even suprapubic drainage in order not to disturb the parts until firm union is established. The extent of the dissection is to be regulated by the condition found in the individual case. Furthermore, if any one part of the muscular wall—for instance, either of the sphincter muscles—appears more injured than the rest, a special suture of catgut should be used to repair it.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

May 1

- 1 *Duty of the Medical Profession in the Prevention of National Deterioration. W. Coates.
- 2 Fistula Between the Stomach and Bile Passages. A. W. M. Robson.
- 3 Unusual Case of Appendix Abscess Due to the Pneumococcus and *Bacillus Coli Communis*. E. Harrison, and E. Turton.
- 4 *Indications for Nephropexy. W. Billington.
- 5 Lipoma in the Site of a Femoral Hernia. C. J. Patten.
- 6 Bilateral Nephrolithotomy. J. Clay.
- 7 Removal of a Large Varix of the Orbit. Sir W. J. Collins.
- 8 *Application of Continuous Suction in Surgery. H. T. Herring.
- 9 Fatal Case of Lead Poisoning Due to Diachylon. F. S. Heaney.

1. **National Degeneration.**—Coates discusses the question of national physical deterioration and insists on the duty of the medical profession to take part in arresting it. He urges increased power to education authorities for systematic inspection of school children, and cooperation between the medical profession and educationists. He discusses the value of judicious physical exercise and the provision of public playing fields, the diminishing birth rate and marriage, and urges the taxing of every bachelor over 30, and the giving of privileges for healthy families. He reviews the effect of mentally defective children on race decay and also that of overcrowding and housing and the planning of towns. He urges support of the various health societies that aim to improve the condition of the people and cites Sweden as demonstrating what can be done by a national effort to check race degeneration. He discusses the evil effects of impurity on stamina and the effect of venereal disease on the decay of the race, and in this regard urges a better equipping of young practitioners to grapple with the difficult and interesting problems connected

with these complaints. Finally he discusses the effect of universal military service on the stamina of the race, and insists on the immense advantage that would accrue if a system of universal military training were enforced. Coates has watched over and over again the effect on recruits of their first three months' service; it has been marvelous. The lank, ungainly, casual, ill-developed loafer becomes an alert, strong, intelligent, orderly, self-respecting man.

4. **Nephropexy.**—Billington summarizes his paper—in which he discusses three groups of movable kidney, the predominant symptom in which is respectively local pain, digestive trouble, or spinal and cerebral neurasthenia—as follows:

1. Nephropexy is a safe and satisfactory surgical procedure.
2. Renal mobility alone is not an indication for operation.
3. Local pains of sufficient severity to diminish working efficiency are an indication for operation.
4. Chronic functional disturbance of the digestive system may be caused by movable kidney. Such cases often resist all kinds of general and medicinal treatment, and are greatly benefited by nephropexy.
5. Nephropexy is indicated in progressive spinal and cerebral neurasthenia occurring in association with movable kidney, when other measures have failed to cure or improvement is followed by rapid relapse.
6. Nephropexy is indicated when movable kidney is associated with insanity.

8. **Continuous Suction in Surgery.**—Herring advocates the use of continuous suction as opposed to intermittent aspiration, as a means of removing blood during operation and of subsequently draining wounds and withdrawing secretions, especially after cystotomy. He describes a portable apparatus which can be used in any place, and will easily maintain a continuous negative pressure without much attention.

Lancet, London

May 1

- 10 Rheumatic Fever and Valvular Disease. N. Moore.
- 11 *Removal of Tumors of the Large Intestine. A. E. J. Barker.
- 12 *When to Operate for Enlarged Prostate. P. J. Freyer.
- 13 Discrimination of Unrecognized Diseases. A Disease of Overcrowding in Ships, especially at Malta. W. E. Home.
- 14 Fatal Case of Splenomegalic Polycythemia (Erythremia). W. F. Umney.
- 15 Adenoids, Nocturnal Incontinence, and the Thyroid. L. Williams.
- 16 Streptococcal Pericarditis and Colitis Following Tonsillitis. J. S. Pearson.
- 17 Simple Method for the Sterile Collection of Blood. H. W. Bayly.
- 18 The Charitable Dispensaries in the Punjab. D. F. Keegan.

11. **Tumors of the Large Intestine.**—Barker says that the tumors with which we have to contend in the large intestine are almost invariably columnar epitheliomata of varying degrees of malignancy, slow growing, as a rule, and with but a moderate tendency to invade the lymphatic glands or generalize in other parts of the system. The whole question of safe removal of such masses is influenced more by the presence or absence of associated obstruction than by anything else. If there is but little or no obstruction to the passage of feces through the affected part, the removal of a segment of the bowel is, to a large extent, merely a question of skill and accuracy of technic. But if obstruction is present great judgment is necessary as to whether we shall first relieve the overloaded gut by making an artificial anus for a few weeks' preliminary drainage, or at once proceed to remove the tumor and unite the divided ends. The first course is usually best, on account of the technical difficulty of dealing with a bowel greatly distended with feces above a constriction of the danger of soiling the peritoneum and wound, the difficulty of suturing after excision—which may sometimes be avoided by lateral anastomosis—and the danger of giving way of the stitches, owing to the paralyzed and sodden conditions of the bowel, proximal to a bad obstruction. It is a better and safer rule to make a provisional drain opening in the upper bowel and allow the gut to recover in a couple of weeks before attempting a junction. A careful study of the history and course of each case, and close examination of the abdomen to determine whether or not the bowel is likely to be loaded with liquid feces, should precede any operative undertaking. Barker condemns the preoperative administration of purgatives in cases low down, but considers enemata, repeated as often as necessary, desirable—not, however, just before operation. He then describes cases to illustrate his technic under varying conditions. He discusses the comparative merits of

the dorsal methods, Kraske's operation, and the combined method.

12. Operation for Enlarged Prostate.—Freyer analyzes his statistics in 600 cases of his operation for total enucleation of the prostate, in patients varying between 48 and 89 years with an average age of 68½ years. The majority had been entirely dependent on the catheter for very many years. Nearly all were broken in health, most of them subjects of grave complications, many apparently dying. In the 600 cases there were 37 deaths, in periods ranging from 6 hours to 37 days after the operation, or a mortality of 6.15 per cent. The mortality has been steadily decreasing from 10 per cent. in the first 100 cases to 4 per cent. in the last. The causes of death were uremic symptoms due to chronic kidney disease, 16; heart failure, 6; septicemia, 2; shock, 3; exhaustion (kidneys much diseased), 1; mania (hereditary in 1), 2; malignant disease of liver, 2; heat stroke, 1; pneumonia, 1; acute bronchitis, 1; pulmonary embolism, 1; and cerebral hemorrhage with paralysis, 1. Though all these deaths are accepted in connection with the operation, in not more than half the number can the fatal result be attributed thereto, the remaining deaths being due to disease incident to old age and unconnected with the operation. In 108 cases vesical calculi were removed at the same time, but all the deaths in these cases are accepted in connection with the prostatectomy, none being put down to the suprapubic lithotomy involved. Freyer reports on his first two patients, now aged, respectively, 75 and 79 years, over 8 years having elapsed since the operation. Their sufferings were severe, their life entirely dependent on the catheter prior to operation. Since operation no instrument of any kind has been employed, there is perfect freedom from urinary symptoms, they are in excellent health, and sexual power has been regained.

Medical Press and Circular, London

April 28

- 19 Renal Calculus (concluded). A. Fullerton.
- 20 Gallstones in Gall Bladder, Cystic Duct, Common Duct, and Hepatic Ducts, in a Girl of Seventeen. T. Carwardine.
- 21 Oral Bacteria and Acquired Immunity to Disease. J. S. Wallace.
- 22 The Provident Dispensary. G. Crichton.

Clinical Journal, London

April 28

- 23 *Diagnosis and Treatment of Pus Formation in Appendicitis. E. M. Corner.
- 24 *Red Degeneration of Uterine Fibromyomata. F. E. Taylor.
- 25 Autoinoculation Versus Heteroinoculation in Treatment of Established Infection (concluded). E. C. Hort.

23. Suppuration in Appendicitis.—This article is similar to, and the conclusions are identical with those of an article by the same author in the *Medical Press and Circular*, Dec. 9, 1908; abstracted in *THE JOURNAL*, Jan. 9, 1909, p. 170.

24. Red Degeneration of Uterine Fibromyomata.—Taylor concludes that red degeneration of uterine fibromyomata is an aseptic necrobiosis of the tumor cells, associated with a diffuse staining of the tissues with hemoglobin, due to some local disturbance of nutrition in which pregnancy often, but by no means invariably plays a part.

Journal of Obstetrics and Gynecology, London

April

- 26 *Pathology of the Red Degeneration of Uterine Myomata. J. L. Smith, and W. F. Shaw.
- 27 *Menstruation and Menorrhagia. F. E. Willey.

26. Red Degeneration of Uterine Myomata.—Smith and Shaw arrive at the following conclusions, on the basis of three cases by A. Donald, one by W. K. Walls, and one by A. W. Lea:

1. The chief change in "red degeneration" of fibroids consists in thrombosis of the bloodvessels.
2. This thrombosis and red coloration may commence at the periphery of the tumor.
3. The tumors are also in a state of degeneration as evidenced by a homogeneous material separating the muscle bundles in many places.
4. The tumors contain fat and fat crystals, probably derived from the breaking up of the muscle bundles.
5. The tumors are liable to become infected by septic organisms and so to give rise to acute toxic symptoms.
6. Pregnancy is probably a predisposing factor in the causation of this condition.

27. Menstruation and Menorrhagia.—Willey says that we may still regard the monthly cycle as a preparation of the uterus for the development of an impregnated ovum, but we must realize that the important physiologic requirement is an efficient blood supply to the uterine musculature. Three points are important: 1. Many capillary fissures are closed during the intermenstrual period and become filled with blood and act as part of the general vascular system during menstruation and pregnancy. 2. The uterus increases in size during menstruation. 3. Besides contractility, uterine muscle possesses great possibility of hypertrophy. The monthly cycle is a vasomotor change of uncertain origin, but dependent on ovarian integrity, whereby the uterine wall is richly supplied with blood in preparation for hypertrophy in presence of an impregnated ovum. When no pregnancy occurs the increased blood supply escapes by rupture of capillaries and diapedesis of corpuscle, with possibly some slight destruction of surface epithelium. If this view of menstruation is true the endometrium plays a passive and secondary part at the monthly cycle, and menorrhagia should direct attention to the blood supply of the muscular wall, rather than to the endometrium. Various observations in reference to causation of congestion of the uterus and inefficient action of uterine muscle which lend support to this view are discussed. From these considerations Willey concludes that in menorrhagia without physical signs the aim should be (1) to relieve undue congestion—pessary or operation for misplacement, treatment of constipation and general conditions, etc.; (2) to eliminate sources of poison to the uterine muscle—lead or phosphorus poisoning, alcoholism, etc.; (3) to improve the general muscular tone of the patient by regular hours, simple nutritious food, gradually increasing outdoor exercise, Swedish movements, etc.—exercises of the arms and upper part of the body are often useful to relieve uterine congestion; (4) to assist the action of uterine muscle directly by suitable drugs, e. g., hydrastis or the cotarnin salts. Massage to the uterus, she considers harmful by directing attention to the pelvic organs. Curetting is indicated in many cases for diagnostic purposes.

Quarterly Journal of Medicine, London

April

- 28 Bronchiolectasis in Children. E. Leach.
- 29 Vasodilators in High Blood Pressure. E. Matthew.
- 30 *Etiology of Endemic Goiter. R. McCarrison.
- 31 Infective Endocarditis. T. J. Horder.
- 32 Acidosis. E. I. Spriggs.

30. Goiter.—McCarrison reports experimental investigations as follows:

1. The experimental administration to man of suspended matter, separated by infiltration from goiter-producing waters.
2. The experimental administration to man of boiled suspended matter, separated by filtration from goiter-producing waters.
3. The administration to goitrous individuals of intestinal antiseptics, notably thymol.
4. Experiments on monkeys to test the possibility of the spread of the disease by the feces of sufferers from it.
5. The microscopic examination of the feces of goitrous individuals.

McCarrison sums up the results of his researches in the following terms:

1. Goiter can be experimentally produced in man by the administration of the matter in suspension separated by infiltration from waters which are known to be goiter producing.
2. Goiter can not be so produced when the suspended matter is boiled.
3. The disease is due, therefore, not to the mineral but to the living component of the suspended matter, in other words to a living organism of disease.
4. The incubation period of experimentally produced goiter is from thirteen to fifteen days.
5. Goiter can be cured by the administration of intestinal antiseptics. It is probable, therefore, that the organism which is the cause of the disease is parasitic in the human intestine.
6. The feces of most cases of goiter in Gilgit show a plentiful amebic infection, but whether the disease is due to this infection has not been determined.

Glasgow Medical Journal

April

- 33 Recent Researches on Immunity, Especially in Relation to Diagnosis and Treatment. R. Muir.
- 34 *Cerebral Physiology and the Education of Abnormal Children (concluded). J. K. Love.

34. Education of Abnormal Children.—Love discusses the cases of Laura Bridgman and Helen Keller and gives a short

study of aphasia with the related conditions of word deafness and word blindness, which not only helps to the understanding of the mechanism of speech, but throws light on the management of a small class of extremely difficult, but also extremely important cases among backward children, as well as helping in the understanding of the difficulties of the deaf and blind. Love lays down the following general principles:

1. It is useless hammering along a ruined tract or along a sound tract toward a ruined center, in the hope of imparting knowledge to a really deaf and blind child. It is better to use a circuitous, though less used route.
2. When the remains of sight and hearing are considerable—when in the deaf they serve for the discovery of vowels, consonants, and words; in the blind, for what under favorable conditions of light, etc., is written on a book or a blackboard—these should be used to the utmost.
3. When a circuitous route is necessary, education should be directed so that Broca's center, the hereditary center for the memory of spoken words, is used.
4. When a boy is clever with his hands and good in his games, when the difficulty is chiefly with his acquisition of language, word-deafness and word-blindness should be sought for.
5. In the teaching of the aphasic child who is not mentally deficient, Broca's convolution on the right side, unless the defect is bilateral, may be made to take up the work of the hereditary speech center of the left side. When failure shows that the defect is probably bilateral, education may proceed by the help of writing, and the manual alphabet.
6. Mentally deficient children offer a different problem of the educator. The great need of the moment is to recognize their limitations.

Having due regard to physiologic indications present, the teacher should be left as free as possible in selecting the method and ordering the education of the abnormal child. The author, however, lays down the following physiologic indications with regard to the education of the orally taught deaf:

- (a) As signs are used very extensively in the education of the hearing child—during his first and second years of life—there is no physiologic reason for suppressing them at the beginning of the school education of the deaf child. They should be used just as they are with hearing children, and excluded, as in the case of the latter, as soon as the more accurate equivalent has been learnt.
- (b) During the early years of school life the acquisition of articulate speech should be the chief business of the deaf child. As soon as may be, a vocabulary of common words should be so thoroughly learnt that its use in speech becomes automatic.
- (c) In the education of the deaf, drawing should follow speech and precede writing.
- (d) Until speech has become automatic no finger-spelling should be known to a deaf child. A combined method, in which the combination is that of finger-spelling and speech is, from the physiologic standpoint, to be condemned.
- (e) The difficulty of procuring automatic speech in the deaf-born, while necessarily limiting the use of speech by these children, does not mean that it is not worth while teaching them speech.

Archives des Maladies du Cœur, Etc., Paris

April, II, No. 4, pp. 193-256

- 35 *Reactions on the Part of the Vessels: The Ice Test. (Réactions vasculaires: L'épreuve de la glace.) O. Josué and H. Paillard.
- 36 *Broncho-esophagoscopy in Diagnosis of Aneurism of the Aorta. Guisez.
- 37 *Gastric Cancer and Pernicious Anemia. A. Clerc and Gy.

35. **Ice Test for Vascular Reactions.**—Josué and Paillard have been seeking a test for reactions on the part of the vessels less fatiguing than the tests by severe muscular exertion or extensive application of heat or cold, and claim that their new ice test is a simple and reliable means for ascertaining the functional capacity of the blood vessels. It consists merely in the application of a piece of ice to the bend of the elbow; the patient is reclining with the arm exposed and the palm up, and all the muscles of the arm relaxed. Every two minutes the pulse is counted for a quarter of a minute, after which the arterial pressure is recorded with a mercury sphygmomanometer (the modified Potain apparatus). The pulse and arterial tension are thus recorded three times in turn at intervals of two minutes. After an interval of another two minutes the ice is then placed in the bend of the elbow. The pulse and tension are recorded again the moment the ice is applied and again after two, four and six minutes. After two more minutes the ice is removed, the skin wiped and the pulse and tension are recorded again after two, four and six minutes. The ice must not exert pressure on the arm, which would interfere with the circulation, but must be held. Among 100 persons to whom this test was applied it was easy to distinguish the arteriosclerotics and the tuberculous, as in them the reaction always differed so decidedly from normal. With normal conditions in the arterial

system the arterial pressure adapts itself to the influence of the ice and there is no modification in the pressure, but the pulse varies, or the pressure may vary and also the pulse, but always according to Marey's law; namely, that the pulse grows slow as the pressure increases and faster as the pressure diminishes. In case of functional incapacity on the part of the vessels the pulse does not vary, but the pressure fluctuates, or both fluctuate contrary to the Marey law. This abnormal reaction occurs frequently in arteriosclerosis, especially with involvement of the aorta. The same abnormal reaction occurs also in tuberculosis, but with the difference that the pressure declines progressively during and after the application of the ice, while in arteriosclerosis the pulse remains stable, while the pressure drops, but the latter rises again as the ice is removed. Among the practical points learned by this test is that arteriosclerotic patients presenting normal curves with the ice test have a more favorable prognosis. The test also throws light on the mechanism and action of digitalis in heart disease amenable to digitalis. The ice test further refutes the common assumption that the arterial pressure keeps at a constant level in the individual; on the contrary it is liable to vary within wide limits even from mere emotions. This shows the necessity for caution in ascribing to the effects of treatment any reduction in the pressure observed afterward. Twenty-five typical curves are given to show the reaction in various conditions. One curve shows remarkable fluctuations in the pulse, while the pressure was practically stable; this subject was a healthy girl of 18, very emotional.

36. **Bronchoesophagoscopy in Diagnosis of Aneurism of the Aorta.**—Guisez gives a number of illustrations to show how an otherwise latent aneurism may compress the trachea or esophagus and induce disturbances, the cause of which can be revealed only by direct visual inspection, disclosing the bulging of the wall into the lumen from the encroachment of the aneurism. He also reports the details of eight cases in which this syndrome was observed, and warns that aneurism of the aorta should be suspected whenever no other cause can be discovered for respiratory or esophageal disturbances.

37. **Gastric Cancer and Pernicious Anemia.**—Clerc and Gy give over two pages of bibliographic references on the subject of progressive pernicious anemia secondary to cancer, and warn that the presence of the cancer may be unsuspected and the whole syndrome referred to idiopathic progressive pernicious anemia, when in fact the anemia is secondary to an otherwise latent cancer. Neither examination of the blood nor the clinical symptoms nor the theoretical bases distinguish the anemia in these cases from idiopathic, progressive anemia. The latter, they say, is losing ground constantly as a morbid entity, while gaining more and more ground as a syndrome, whether the hemolysis results from the action of a cancer, the bothriocephalus, lead or other poisoning or infection. In the cases secondary to cancer the patients on record have been between 35 and 50, generally men, and the symptoms were those of progressive anemia with nothing to suggest cancer except possibly continuous, occult hemorrhages in the digestive tract. This symptom was pronounced in a personal case recently encountered.

Obstétrique, Paris

March, N. S. II, No. 3, pp. 177-239

- 38 Treatment of Vesicovaginal Fistulas. (Traitement des fistules vésico-vaginales par le procédé de Bracquehay.) A. Brindeau.
- 39 Serodiagnosis of Syphilis in Pregnant Women and New-Born Infants. II. (Syphilis chez la femme enceinte et l'enfant nouveau-né.) P. Bar and R. Daunay.
- 40 *Goiter and Congestion in the Thyroid in the New-Born. L. Thévenot.

40. **Goiter in the New-Born.**—Thévenot has found a number of cases of goiter in the new-born on record in the last few years, and here discusses the symptoms liable to be observed. When the enlargement is simple congestion it is liable to disappear within twenty-four hours or may appear intermittently and recurring attacks of dyspnea may be observed. The head of the child should be drawn back to examine the thyroid region for possible goiter in every case of dyspnea in

an infant. In the mild congestions, hot baths, revulsion to the legs, purgatives and ice to the thyroid region may aid in reducing the congestion, supplemented by potassium iodid and the ordinary measures for goiter. Guillermin reported last year that he shelled out of their nests the lobes of the thyroid with his fingers in one case, as for exothyropexy, and thus relieved the dyspnea without the necessity for an operation. If operative treatment is required exothyropexy is the preferable technic, possibly supplemented by an incision in the isthmus to hasten subsidence of the congestion. Pregnant women with goiter should be treated energetically to prevent congenital development of goiter in the fetus. Schmidt began at the fourth month to give iodine treatment to a pregnant woman who had already lost two children from congenital goiter. The mother's goiter diminished and the child was born free from goiter.

Presse Médicale, Paris

April 10, XVII, No. 29, pp. 257-264

- 41 Kala-Azar and Oriental Sore. (Leishmanioses.) A. Laveran.
42 *Draining the Popliteal Space. (Drainage du creux poplité dans l'ostéomyélite de l'extrémité inférieure du fémur.) P. Hardouin.

April 14, No. 30, pp. 265-272

- 43 *Traumatic Nephritis with Unilateral Edema. Klippel and E. Chabrol.
44 Course of Gunshot Wounds of the Abdomen. (Evolution en général des plaies pénétrantes de l'abdomen par petits projectiles de guerre.) J. Doche.
45 *Influence of Restricted Localization of Drug on its Action. (Essais d'une nouvelle méthode thérapeutique.) R. de Gaulejac.

42. **Drainage of the Popliteal Space.**—Hardouin shows in several illustrations the danger of compressing the blood vessels in draining the popliteal space and suggests a technic which renders such injury impossible. In osteomyelitis of the lower end of the femur, for example, he trephines the femur through an incision at the junction of the front and inner aspects of the thigh. The opening through the bone slopes downward slightly, and forceps are passed through it and pushed down and outward until they project under the skin in the popliteal space. The skin is incised a little outside of the median line and a fenestrated drain tube is introduced and then seized by the forceps and drawn back with them through the bone and out through the first opening on the opposite side above. By this means the region is thoroughly drained, while the tube passing through the bone does not come at all in contact with the vessels and causes no disturbance of any kind. This was shown in a recent case in which the parents insisted on taking away the patient, a boy of 5, six days after the drain had been introduced. The child was not seen again for three months, when the drain was found still in place and doing no harm, except for a little redness around the openings, which soon disappeared when the drain was removed.

43. **Traumatic Nephritis with Unilateral Edema.**—The case described is interesting from the development of the traumatic nephritis a few days after the accident, the enormous edema of the arm and breast on the injured side, the intense pain in the lumbar region, on the same side, and finally, three weeks after the accident, development of serious nephritis in the previously sound kidney proving fatal in ten days. The assumption of development of nephrotoxins best explains certain features of the case.

45. **Modification of Injected Toxin Restricted to a Certain Area.**—Gaulejac states that his experimental research has confirmed the fact he observed in a case of viper bite; namely, that an otherwise fatal toxin became harmless when it was temporarily localized in a certain limited area. An otherwise fatal dose of cocaine could be injected without harm into the cellular tissue of the hind leg of a guinea-pig after applying a constricting band above to induce venous stasis for two hours at least. After removal of the band the signs of toxic action were few and slight. If all the interstitial fluid in the limb below the constriction were withdrawn it was found to contain nearly all the cocaine injected, and yet injecting this fluid into another guinea-pig failed to cause any appreciable signs of intoxication. He ascribes this phenomenon of reduced

toxicity to three factors: the damming of the circulation, the mechanical influence of the cellular tissue and its power to modify the toxin, and lastly to the antitoxic action of the edema fluids. These three factors vary with the age, the individual and the tissues injected, but they throw light on the mode of action of passive hyperemic treatment, of "fixation abscesses" and on the healing of tuberculous lesions in the lungs during a concomitant bacillary arthritis.

Revue de Chirurgie, Paris

April, XXIX, No. 4, pp. 661-872

- 46 *Sporotrichosis of the Bones and Joints. (Sporotrichose osseuse et ostéo-articulaire.) De Beurmann, Gougerot and Vaucher.

46. **Sporotrichosis of Bones and Joints.**—The importance of differentiating bone and joint affections caused by the sporotrichum lies mostly in the prognosis and possibility of effectual treatment. The patient is relieved from suspicion of tuberculosis or syphilis, and can be cured by medical treatment without the necessity for surgical intervention. In a case reported by Josset the affection had dragged along for three years undifferentiated, but was cured in a month by iodo-iodid treatment. The lesion had simulated chronic osteomyelitis and four operations had been performed. The lesions have often been taken for gummy tumors. Cultivation of the sporotrichum from the lesions and experimental reproduction of the osteitis confirms the diagnosis. The cultivation of the germs or the spore-agglutination test is a simple and easy method for differentiating these lesions, and should be instituted in every dubious case of acute, subacute or chronic osteitis. Five typical cases are described in detail and extensive experimental research is reported with illustrations of the manifold lesions that may be induced by the sporotrichum, spontaneously or experimentally.

Berliner klinische Wochenschrift

April 19, XLVI, No. 16, pp. 717-764

- 47 Tube Casts in Urine free from Albumin and their Relation to Chronic Constipation. (Zylindrurie im eiweissfreien Harn und ihre Beziehungen zur chronischen Obstipation.) Wasserthal.
48 Study of Heart Action with the Electrocardiogram. (Elektrocardiographische Untersuchungen zur Physiologie und Pathologie des Herzschlags.) Strubell.
49 *Method for Determining and Locating Ulcers in Upper Digestive Tract. M. Einhorn.
50 *External Urethrotomy. C. Posner.

April 26, No. 17, pp. 765-812

- 51 *Protection of Wounds against Infectious Germs from Adjoining Skin. (Schutz der Wunde—bei Verletzungen und Operationen—vor den Infektionskeimen der benachbarten Haut.) F. König.
52 *Pathogenesis and Treatment of Anuria. H. Kümmell. Commenced in No. 16.
53 *Roentgen Examination of Surgical Gastric Lesions. (Röntgenuntersuchungen chirurgischer Magenkrankheiten.) V. Schmieden and F. Härtel. Commenced in No. 15.
54 Resection of Nerve Roots for Spastic Paralysis. (Zwei Fälle von Forster'scher Operation nach spastischen Lähmungen.) Gottstein.
55 *Complement Fixation in Gastric Cancer. (Biologische Untersuchungen über den Magenkrebs.) S. Livierato.

49. The technic described is similar to that summarized in THE JOURNAL, July 4, 1908, page 73.

50. **External Urethrotomy.**—Posner relates a case in which it proved impossible to find the posterior stump of the urethra so as to introduce a sound after external urethrotomy, and the urine flowed over the wound. Further efforts at catheterization were abandoned and very soon some of the urine passed through the urethra, the amount gradually increasing until normal functioning was re-established with only a little aid. Expectant treatment is thus justified in the rare cases in which the posterior stump evades discovery. Always, however, under the assumption that there is no retention of urine, but that it is normally voided, although by an abnormal route.

51. **Disinfection of Field and Adjoining Skin Before Operations.**—König systematically refrains from scrubbing the field of operation and merely paints it and the surrounding skin with tincture of iodine. The alcohol hardens the tissues, holds the bacteria immovable, and has a slight inhibiting action on them while inducing more or less hyperemia in the region, all of which are advantages in surgical work, while the patients

are not annoyed, chilled and depressed as by the usual scrubbing procedures. By thus avoiding danger of chilling, the tendency to postoperative complications on the part of the lungs is reduced. The patient gets his general bath and is shaved long enough beforehand to allow the skin to be thoroughly dry before the iodine is applied. Regions peculiarly sensitive, such as the scrotum and perineum, are not treated with the iodine. The disadvantages of the iodine disinfection are that the field of operation is so discolored that one has to habituate himself to the negro-like aspect to be able to recognize the various tissues. Another disadvantage is that the operation must be done as dry as possible, as fluids wash away the tincture; moist compresses must not be used directly on the painted surface. When the operation is completed he pours a little of the tincture on the line of suture to ensure fine linear scars. He compares this revolutionary passive disinfection of the skin with the experiences with carbolic-acid spray formerly used to disinfect the air in the operating room. It was found that the spray stirred up and mobilized the bacteria, doing more harm than good, and he believes that the scrubbing has the same harmful effect, stirring up the bacteria and washing them into the field and promoting the secretion of the glands, thus bringing germs to the surface which otherwise would slumber peacefully in the depths. To leave them unmolested is the safest course, and he thinks that this is best accomplished by the iodine disinfection of the surface to be operated on.

52. Anuria.—Kümmell reviews his experience with anuria at Hamburg and emphasizes the necessity for regarding anuria as a very serious condition, not to be neglected any more than acute ileus or incarceration of a hernia. The patients sometimes experience apparently no ill results; in one of his cases the patient felt perfectly well, notwithstanding four days of total anuria from obstruction by a kidney stone, and was with difficulty persuaded to allow an operation. In one case the anuria persisted for twenty and in another for thirty days, and normal urination was then spontaneously restored. These are the rare exceptions; the anuria, as a rule, entails a comatous uremic state after a phase of subjective freedom from disturbances. Anuria from renal concretions offers a grateful field for treatment when recognized early. If the x-rays show the stone to be too large to anticipate its expulsion by the natural routes operative intervention should be advised at once without further waste of time. If not larger than a cherry stone, or if its shape permits the hope of spontaneous expulsion, the ureter should be catheterized in the hope of dislodging the stone or stimulating the ureter to more energetic peristalsis, with or without injection of oil or glycerin through the catheter. Casper succeeded in stimulating the ureter by injecting water into the kidney pelvis on the other side, the reflex peristalsis thus induced becoming so vigorous that the uncatheterized ureter expelled the obstructing stone. Kümmell advises the use of the ureter catheter whenever indicated, but if no effect is promptly realized he would not waste further time on it, but proceed at once to the operation. In case there is obstruction in both kidneys his experience confirms the advisability of operating first on the kidney last obstructed. In case the wrong kidney is exposed, by a mistake in diagnosis, he advises opening up at once the other kidney and removal of the concretions. If the stone is in the ureter and the obstruction is comparatively recent it may be unnecessary to open the kidney, but if the obstruction is of long standing the kidney above is necessarily altered; also if the patient is comatous when first seen the kidney should be incised. In his nine cases of concretion anuria in three patients there was only one kidney in each, and these individuals all died, although one might have been saved by prompt removal of the stone. In all his cases the trouble was so advanced that operative intervention had scarcely any chance. The prospects are less favorable with anuria resulting from disturbances in the circulation; internal measures are indicated here, diuretics, saline infusion, venesection and, in extreme cases, decapsulation of the kidney. He has done decapsulation in 30 cases, with recovery in 10 and great improvement in 15 others. It is in-

dicated, he says, in prolonged chronic nephritis before anuria has developed, and also in acute hemorrhagic nephritis with scanty or no urine voided, especially when it is a sequel of scarlet fever, eclampsia or sepsis. Success was pronounced in all his cases of this kind. Catheterization of the ureters is also liable to induce benefit in these cases. It is liable to set up a reflex secretion which may transform the prognosis even in cases of chronic interstitial nephritis with anuria, as also in inhibition of the kidney functioning by toxic and nervous influences. The irritation of the ureter mucosa by the catheter may stimulate the functioning of both ureter and kidney.

53. Roentgen Examination of Surgical Stomach Lesions.—This long communication from Bier's clinic at Berlin is accompanied by 49 illustrations of the Roentgen findings in various cases out of a total of 100 thus examined. Each illustration is accompanied by the clinical history of the patient in question. The findings are recorded on a large uniform diagram of the trunk with blank spaces above for record of anamnesis, palpation, distention, stool, siphonage of the stomach, fasting, and after the test breakfast noting amount, microscopic findings and blood, and, with qualitative reaction, free HCl and lactic acid, and, quantitatively, total acidity and free HCl. A plaster cast is also taken of the stomach in the cases that come to autopsy, which is proving instructive for comparison of the cast of the lumen of the pathologic stomach with the records of the Roentgen findings during life.

55. Abstracted in THE JOURNAL, May 15, page 1633.

Deutsche medizinische Wochenschrift, Berlin

April 22, XXXV, No. 16, pp. 697-744

- 56 *Strangulation of the Cauda Equina. (Ueber Einklemmung bzw. Strangulation der Cauda Equina.) H. Oppenheim and F. Krause.
- 57 Localization of Projectiles in the Skull. (Ueber die Ortsbestimmung von Geschossen im Schädel.) H. Braun.
- 58 Local Anesthesia for Inguinal Hernia. (Technisches zur Ausführung der Lokalanästhesie bei grösseren Leistenhernien.) A. v. Lichtenberg.
- 59 *Pathogenesis of Nervous Secretory Disturbances of the Stomach. (Zur Pathogenese der nervösen Sekretionsstörungen des Magens.) A. Bickel.
- 60 *Testing of Functioning of Pancreas. (Zur Funktionsprüfung des Pankreas.) O. Gross.
- 61 *Syphilis of the Nervous System. (Verschiedene klinische Erscheinungsformen von Lues des Zerebrospinalsystems.) Engelen.
- 62 *Experimental Cancer Research and Parasitism. (Experimentelle Krebsforschung und Infektionstheorie.) C. Lewin.
- 63 Action of Formaldehyd on Tuberculous Sputum. A. Kaiser.

56. Strangulation of the Cauda Equina.—Oppenheim and Krause give an illustrated description of two cases in which severe symptoms of an affection of the cauda equina came on suddenly. As there was nothing to suggest syphilis, a tumor was assumed and an operation revealed some compression by a tumor or protuberance in the bone. But this did not explain the sudden onset of symptoms, and they assume that the tumor had caused no appreciable disturbance until the patient stooped to lift a heavy weight. This had squeezed the fibers up above the point of the compression. As the fibers became loosened they spread a little, after which they were unable to slide back into their place below and the whole bundle of fibers was thus incarcerated, as it were. The operation revealed the cauda roots displaced, sagging and spread apart, above the narrow point in the lumen, this incarceration being favored by the dilatation of the veins accompanying the roots. The trouble is aggravated by the resulting serous meningitis.

59. Pathogenesis of Nervous Secretory Disturbances in the Stomach.—Bickel has learned several new facts from research on dogs with a blind pouch made artificially from the fundus of the stomach and separated entirely from the rest of the body except for the arteries and veins. This second stomach has thus no connection with the nervous apparatus except for the minute nerves in the walls of the vessels. This "nerveless stomach" continued to secrete gastric juice of normal composition, and this secretion was stimulated by subcutaneous injection of meat extract or ingestion into the primary stomach of meat, bread or milk, the increased secretion commencing about ten or fifteen minutes after the commencement of the feeding. It is evident that the stomach,

like the heart, can continue its functioning even when deprived of all connection with the nervous system outside of the organ. Also that the stimulus for the secreting function is supplied by the food. His experiences have further shown that the "nerveless stomach" displays no tendency to atrophy or impairment of function; the tendency is rather toward hyperfunctioning. His research was undertaken in connection with an address he is preparing for the approaching International Medical Congress on the "Pathology of Secretion and Motility in the Digestive Canal" with special regard to his theory of the stimulation of the juice-producing cells by chemical substances circulating in the blood. This "blood stimulation" of the cell parenchyma is more or less continuous, and is the principal factor in the gastric secretion. The extragastric nervous secretion mechanism studied by Pawlow has merely a regulating function. Bickel's conception explains the importance of dietetic and purely psychic, suggestive treatment of secretory disturbances. It further emphasizes the psychic element in these disturbances and in the effects of medication and of balneologic and dietetic measures, and the possible curative influence of exclusion or stimulation of certain special nerve tracts.

60. Testing Functioning of Pancreas.—Gross has applied to the stools the casein test which has been found useful for examination of pure pancreatic juice and commercial trypsin. The technic is simple and the reaction occurs at physiologic temperature. It is based on the fact that casein, readily soluble in an alkali, is promptly precipitated by acetic acid, in contrast to the products digested by it. Examination of the stools in 200 cases revealed the presence of trypsin in every instance in which the digestion was normal, while the findings were constantly negative in a case of cancer of the pancreas and in one of complete occlusion of the common bile duct. In another case differentiated as cirrhosis of the pancreas, the test revealed normal pancreatic functioning and the integrity of the pancreas was confirmed by autopsy. In a case of hour-glass stomach the oil test breakfast indicated lack of normal pancreatic functioning, but the casein test of the stool gave normal findings in regard to tryptic digestion. The combination of these two tests may therefore prove useful in diagnosing hour-glass stomach. The intensity of tryptic digestion varied within wide limits on different diets, but showed very little fluctuation on an identical diet. This tryptic digestion is most pronounced on an albumin diet (lean meat), and was not influenced by concomitant gastrointestinal disturbance.

61. Syphilis of the Nervous System.—Engelen describes some atypical cases which throw light on the etiology of certain puzzling disturbances in the cerebrospinal system. In the first the syndrome simulated amyotrophic lateral sclerosis, except that it had been in a stationary stage for twelve years and that there had been pains in the legs at first. There were apparently no syphilitic antecedents but the ophthalmologic findings confirmed his assumption of a possible syphilitic origin previously unsuspected. The patient had wasted a fortune in seeking help from quacks when early appropriate specific treatment would probably have effected a cure years before. In a second case, the symptoms of a spinal cord trouble came twenty-five years after unsuspected syphilitic infection. The clinical picture was dominated by variable root and cord symptoms, pains in the back, neuralgic pains in the legs, and tenderness over the spine, tremor, bladder disturbances and variability of the reflexes. In another similar case the pupil reflex appeared and disappeared suddenly a number of times. These patients were both cured by specific treatment. In another case, the symptoms suggested diffuse basal meningitis plus spinal meningomyelitis, too advanced for relief in a woman of 63.

62. Parasitic Origin of Cancer.—In this communication from von Leyden's cancer service at Berlin, Lewin states that the facts observed in regard to the prevalence of cancers in the animals in certain cages and in human beings in certain houses and families can be explained only by assuming a parasitic origin—that the metabolic products of certain parasites are able to stimulate the cells of the new host to malignant proliferation.

Medizinische Klinik, Berlin

April 18, V, No. 16, pp. 567-612

- 64 *Multiple Acute Periostitis. R. v. Jaksch.
65 *Chronic Intermittent Albuminuria after Infectious Nephritis. H. Elchhorst.
66 *Deficiency in Mineral Constituents Predisposes Organism to Tuberculosis. (Demineralization organique.) A. Robln.
67 The Auto-elimination of Nitrogen and Mineral Salts into the Bowel in Health and Disease. (Eigenabscheidung von Stickstoff und Mineralsalzen im Darm.) G. Wallace.
68 Mineral Metabolism in Young Children. (Mineralstoffwechsel im frühen Kindesalter.) L. F. Meyer.
69 Tests of Heart Tonics on Frogs. (Herzmittel im Froschversuch.) H. Freund.
70 Theory of Origin of Species in Modern Geology. (Die Descendenzlehre in der modernen Geologie.) F. Frech.
71 *Progressive Paralysis from Standpoint of General Practitioner. R. Thomsen.

64. Multiple Acute Periostitis.—von Jaksch describes a syndrome which has much in common with acute articular rheumatism and probably has sometimes been confounded with the latter. The typical case reported in detail was in a young housemaid and was characterized by multiple periostitis, enlarged spleen and progressive leucocytosis, with such large proportions of eosinophiles that he examined the muscles for trichinosis. Fever kept up for several weeks; the swelling and pain were localized in the shafts of the bones instead of in the joints, and sodium salicylate not only failed to show the slightest benefit but induced symptoms of intoxication even in small doses. The affection finally subsided spontaneously under local application of Goulard's lead water (diluted solution of subacetate of lead with a little alcohol). The metabolic findings did not show any great disturbance in the metabolism. At one time he assumed certain transient murmurs to be due to concomitant endocarditis, but, as the heart findings became constantly normal thereafter, he now accepts them as fever murmurs. He has previously described a case of this same affection with a chronic, progressive and fatal course, and regards it as a morbid entity distinguished by the eosinophilia, myelocythemia and multiple periostitis, the localization of the swellings and pains throughout the entire extremities and the failure of the usual antirheumatic medication.

65. Chronic Intermittent Albuminuria as Relic of Infectious Nephritis.—Eichhorst has observed this intermittent albuminuria in a number of youths and young men and lays stress on psychotherapy to tranquilize the patient and the family, supplemented by careful hygiene and tepid baths, avoiding stimulants and salted and smoked meats, the diet being restricted mainly to milk, vegetables and starchy foods. He never witnessed much benefit from change of climate and none from drugs. Such patients must be careful not to get chilled suddenly, or get wet, and woolen underclothing is advisable. Most of his patients recovered entirely in the course of time, but several years were required in some cases.

66. Demineralization of Tissues Predisposing to Tuberculosis.—Robin's views in regard to the deficiency of mineral constituents of the blood and tissues as the basis on which tuberculosis develops have been described in these columns from time to time. He here cites various objections that have been made to this assumption and answers them in detail. He states that while normal blood contains from 8.39 to 9.109 per thousand parts of inorganic matters, the blood in the "pretuberculous" stage and in the early stages of tuberculosis contains only from 6.38 to 7.85 per thousand. The elimination of inorganic matters is also excessive; analysis of the organs of 5 consumptives and of 2 healthy persons succumbing to accidents showed that the proportion of inorganic matters in the lungs of the latter averaged 12.04 while in the tuberculous lung it averaged only 7.9 parts per thousand. On the other hand, in the sound lung in the tuberculous individuals the proportion was 14.27 per thousand. The contrast was still more marked in analysis of the femurs from both classes. Among the practical conclusions drawn is the necessity for energetically combating gastric hyperchlorhydria which promotes this organic demineralization and thus opens the door to tuberculous infection. A further conclusion is the necessity for supplying mineral elements to aid the organism in its struggle against the infection.

71. **Progressive Paralysis in General Practice.**—Thomsen discusses in detail the differentiation of progressive paralysis, especially from neurasthenia, with which it is most often confounded. Progressive paralysis should be suspected, he says, whenever a man between 35 and 45 complains of nervous or hypochondriac disturbances in the absence of a constitutional predisposition or tangible predisposing factors for neurasthenia, especially when there is a history of syphilis and the disturbances have come on gradually. But he warns that paralysis should never be diagnosed without definite physical findings or a convincing anamnesis. Disturbances in speech are peculiarly suggestive as testifying against neurasthenia.

Münchener medizinische Wochenschrift

April 13, LVI, No. 15, pp. 745-792

- 72 *Fever in Infectious Diseases. (Schädliche und nützliche Wirkungen der Fiebertemperatur bei Infektionskrankheiten.) F. Rolly.
- 73 *Frequency of Meningitis in Pneumonia. G. Liebermeister.
- 74 *Siphon and Aspiration in Treatment of Tuberculous Empyema of the Pleura. E. Schmidt.
- 75 *Treatment of Leucorrhea. (Behandlung des "Ausfluss.") M. Nassauer.
- 76 Effectual Treatment of Traumatic Ossifying Myositis with Fibrolysin. J. Aizner.
- 77 *Iron as Substitute for Bismuth in Roentgen Work. (Eisen als Ersatz des Wismut für Röntgenaufnahmen.) K. Taege.
- 78 *Osteomalacia and the Ovaries. H. Cramer.
- 79 Tardy Apoplexy from Standpoint of Industrial Insurance. (Tod durch Spätapoplexie als entschädigungspflichtige Unfallfolge anerkannt.) E. Franck.
- 80 *Combined Arsenic and Tuberculin Treatment. A. Friedmann.
- 81 *Significance of Urobilin. (Vorkommen und Bedeutung des Urobilins.) W. Hildebrandt. Commenced in No. 14.

April 20, No. 16, pp. 793-840

- 82 Time Required for Coagulation of Blood. (Zur Frage der Blutgerinnungszeit.) J. Hartmann.
- 83 Superheated Air in Acute Suppurations in the Hand. (Erfolge der Heissluftbehandlung bei akut eitrigen Entzündungen der Hand.) H. Iselin.
- 84 Occurrence of Pains on Change of Weather. (Aufreten von Schmerzen bei Witterungswechsel.) L. Miller.
- 85 Radical Operation for Chronic Empyema of Maxillary Sinus. (Radikaloperation des chronischen Kieferhöhlenempyems.) Aenstoots.
- 86 Circular Suture of Artery. (Naht der Gefässstämme bei Stichverletzungen der Extremitäten.) M. Grasmann.
- 87 *Recent Discovery of the Oldest Fossil Man Extant. (Das jüngst entdeckte älteste menschliche Skelett.) L. Reinhardt.

72. **Action of Fever in Infection.**—Rolly remarks that the generally accepted opinion in regard to febrile temperatures is that they are part of the defenses of the organism but that certain injury is connected with them which compels us under some circumstances to strive to reduce the febrile temperature. He then describes experimental research and compares the results with those of others in this line, drawing the conclusion that in infectious diseases there is increased destruction of albumin, both as a result of the high temperature and as a result of the causes inducing the fever. With a temperature under 104 F. the share of the fever in this increased destruction of albumin is comparatively so small as to be negligible. The changes in the corpuscles and in the proportion of hemoglobin are the work of the infectious cause and are not the results of the increased temperature. His experiments showed that the agglutinins were increased in the heated rabbits; the higher temperature favored the production of agglutinins as also of antitoxins and bacteriolytins. On the whole, he concludes, the febrile temperature if not excessive, must be regarded as a process which does much more good than harm. It is a manifestation of the efforts of the organism to neutralize or get rid of the invading bacteria or toxins. Fever under 104 F. should not be combated unless in case of severe disturbances of the central nervous system, such as headaches, stupor or excitement. Antipyretic measures in these cases are not directed against the high temperature so much as against the other symptoms. If antipyretic measures become necessary they should not be too severe, merely tepid baths with mild spongings and possibly a moderate use of antipyretic drugs, never cold baths according to Brand or Liebermeister.

73. **Frequency of Meningitis in Pneumonia.**—Liebermeister states that microscopic examination showed signs of suppurative meningitis in three out of eleven cases of pneumonia in adults. The nervous symptoms were no more pronounced in the meningitis cases than in many without.

74. **Drainage of Tuberculous Empyema of the Pleura.**—Schmidt gives an illustrated description of an aspirating apparatus composed of a jar with three tubes in the stopper, one connecting with a catheter introduced into the posterior wall of the thorax, the second tube connected with an air pump and the third with a manometer. When a vacuum is induced in the jar by the air pump, the negative pressure is felt even in the thorax. The connecting tube can be clamped and removed from the connection with the jar so that the negative pressure can be kept up for a long time without discomfort to the patient. This draws out the collapsed lung and proved effectual in the three cases in which the device has been used.

75. **Treatment of Leucorrhea.**—Nassauer deplores the present custom of treating leucorrhea with douches, etc., stating that the same principle should be applied here as to other secreting lesions, that is, to absorb the secretion and keep the surface dry, thus giving the parts a chance to heal. This is accomplished, he says, by dusting with a dry powder, and for this he has found bolus alba the most convenient, inexpensive and effectual. The powder is applied at the same time the walls of the vagina are distended with air, thus smoothing out all the folds and recesses. This he accomplishes with a pear-shaped glass bulb with a reservoir opening into a tube which passes through the glass pear connected with a rubber bulb. The glass bulb closes the entrance to the vagina airtight, and pressure on the rubber bulb fills the vagina with air and at the same time sprays it with the dry powder. He calls this little apparatus a "siccator," and has obtained good results with it in 100 cases. About once a week he orders a cleansing douche followed by the dry powder. His patients included cases of acute gonorrheal affections, senile colpitis, inoperable cancer, etc., and all were much gratified by the results.

77. **Substitute for Bismuth in Roentgen Work.**—Taege refers to Lewin's suggestion to use magnetic oxid of iron instead of bismuth, and confirms its value for Roentgen work, but he points out the objections to it in that it is not carried by druggists in stock, as a rule, and usually requires pulverization. These disadvantages can be avoided, he asserts, by substituting ferric oxid, better known as polishing rouge, which is obtainable everywhere as an exceptionally fine and inexpensive powder. He has taken, himself, 750 grains within a short period without disturbance, to test its harmlessness.

78. **Osteomalacia and the Ovaries.**—Cramer attributes osteomalacia to some metabolic anomaly which occurs more frequently in certain localities and in his district affects animals frequently. The aggravation of the symptoms during the menses and pregnancy is certainly due to the increase in size and augmented secretion of the ovaries. He does not regard the ovaries themselves as directly responsible for the osteomalacia. Besides removal of the ovaries, phosphorus and suprarenal preparations and ovarian antibodies are logically indicated in treatment. In a recent case a iii-para of 27, eight months pregnant, presented symptoms of osteomalacia. Castration was advised but refused. After the childbirth the symptoms subsided, but returned again at the next pregnancy in so severe a form that the ovaries had to be removed. To insure completeness the tubes were resected at the same time. The expected abortion did not occur and seven months later a normal child was delivered. The symptoms of osteomalacia subsided immediately after the castration. During the rest of the pregnancy there were no manifestations from the artificial menopause, but a month after delivery hot flashes were noticed. The ovaries from this woman were transplanted in a girl of 22 with pronounced infantilism. Cramer cites this case of osteomalacia as a striking proof of the fact that the osteomalacia is entirely independent of the development of the fetus, but is influenced by the exaggerated functioning of the ovaries.

80. **Arsenic-Tuberculin Treatment.**—Friedmann writes from Brazil to confirm Mendel's statements in regard to the advantage of combining arsenic with tuberculin. The beneficial effect is marked on the appetite.

81. **Urobilin.**—Hildebrandt discusses the occurrence and importance of urobilin in health and disease and especially its relation to jaundice. He describes a technic for determination of the proportion of the urobilin in the urine, declaring that the clinical examination of the patient which omits this finding is incomplete. Fever in itself never induces urobilinuria, and urobilin disappears from the urine in case the common bile duct becomes obstructed. Urobilinuria occurs from abnormal destruction of blood if the liver is sound, but if there is no other abnormal destruction of blood, urobilinuria always indicates some lesion in the liver and local stasis of bile.

87. Noted in *THE JOURNAL*, March 13, 1909, page 896.

Wiener klinische Wochenschrift, Vienna

April 15, XXII, No. 15, pp. 515-552

- 88 Routes of Infection by Tubercle Bacilli, especially in Infancy. (Die Infektionswege der Tuberkulose, insbesondere im Säuglingsalter.) T. Escherich.
- 89 Serodiagnosis in Scarlet Fever. (Wassermannsche Reaktion bei Scharlach.) R. Fua and H. Koch. Id. (Ueber Komplementbindungsreaktion bei Scharlach.) V. Hecht, M. Latteiner and M. Wilenko.
- 90 Physical-Dietetic Treatment of Arteriosclerosis. A. Strasser. Commenced in No. 14.

April 22, No. 16, pp. 553-588

- 91 *Scarlet Fever. (Bakteriologische und serologische Untersuchungen bei Scharlach.) F. Schleissner.
- 92 *Treatment of Femoral Hernia. (Behandlung der Kruralhernie.) J. Exalto.
- 93 *Polyserositis. J. Wiczkowski.
- 94 Isolated Defect of Auricular Septum and Its Clinical Manifestations. (Defekt der Vorhofschleimwand und seine klinischen Erscheinungen.) E. Popper.

91. **Bacteriology of Scarlet Fever.**—Schleissner found streptococci almost in pure cultures on the tonsils in every case of scarlet fever examined in its incipency before the sore throat had developed. He was also able to cultivate streptococci from the blood in a large proportion of the 73 cases reported, and the presence of antibodies was also unmistakable, reaching the maximum about the tenth day. It seems evident that streptococci are closely connected with the scarlet fever process, and hence that antistreptococcus treatment can not fail to aid in attenuating the disease.

92. **Femoral Hernia.**—Exalto states that of the 134 patients with femoral hernia operated on at von Eiselsberg's clinic at Vienna during 1901-1908, all but 20 were women. Three of the cases reported illustrate the dangers of forcible reduction at home of an incarcerated hernia; in one case an already perforated loop of intestine was thus pushed back and fatal peritonitis resulted. In 2 cases the femoral hernia developed after a radical operation for an inguinal hernia on the same side. This and other experiences suggest, he says, the advisability of operating on the femoral hernia through the inguinal ring if it is unusually large, even if there is no actual inguinal hernia at the time. By suturing the muscles to the horizontal ramus of the pubis the tendency to femoral hernia is most effectually combated while at the same time the danger of development of an inguinal hernia is averted.

93. **Polyserositis.**—Wiczkowski has encountered during the last five years 35 cases of a simultaneous inflammation of several serous membranes, fatal in 4 instances. The polyserositis develops in three stages. In the first there is merely a serous effusion in the pleura, pericardium and peritoneum, but no fever or apparent changes in the internal organs or glands and the patients complain only of general weakness and vague pain in the chest and abdomen. Adhesions form and the condition grows worse under increased temperature, with debility and irregular stools. Exceptionally the condition may improve and the improvement may persist for several years. The third stage is characterized by high fever, cachexia and edema of the feet, and autopsy reveals cheesy degeneration of the lymph glands, parenchymatous degeneration of the internal organs and tubercles disseminated over the serous membranes while the lungs and digestive tract are intact. Treatment can be only by general strengthening measures, forced feeding and possibly injections of some preparation of arsenic, supplemented by early aspiration of the effusion, this latter having a favorable effect on the circulation and nourishment of the regions involved and hastening the development of adhesions which modify favorably the

further course of the affection. The negative findings in the heart, lungs and kidneys differentiate the polyserositis from disease in these organs. He emphasizes the constant absence of the usual symptoms of pleurisy or peritonitis, also the simultaneous involvement of all the serous membranes, suggesting some general cause, which he thinks is unmistakably endotoxins generated in some comparatively small tuberculous focus, these endotoxins reaching and irritating the serous membranes. Some old focus in the lymph glands or urogenital apparatus was discovered in all the cases that came to autopsy. This assumption of the etiology explains the benefit from prompt evacuation of the effusion which removes quantities of these endotoxins while favoring production of adhesions. He is convinced that many cases of alleged "pericardiac pseudocirrhosis of the liver" and "chronic hyperplastic perihepatitis" really belong in this class of polyserositis. A case is reported in a footnote which confirms this view: A woman of 28 with effusions and adhesions in the pleura, pericardium and peritoneum, and with enlarged liver but normal temperature was tapped, and after evacuation of the effusion in the peritoneum a tumor was discovered in the pelvis which proved to be a cold abscess following a spondylitic process. The endotoxins generated in this abscess were evidently responsible for the development of the polyserositis.

Zentralblatt für Chirurgie, Leipsic

April 17, XXXVI, No. 16, pp. 553-592

- 95 *Radical Operation for Inguinal Hernia by Transverse Incision and Raising the Pelvis. (Radikaloperation der Leistenhernien mittels Haut-Fascienquerschnitts und Beckenhochlagerung.) C. Hofmann.

95. **Transverse Incision for Inguinal Hernia, Raising the Pelvis.**—Hofmann ensures with his incision perpendicular to Poupart's ligament that the musculature, deep fascia and peritoneum are incised lengthwise of their fibers. The herniotomy is much facilitated by his practice of raising the pelvis as soon as the hernial sac is mobilized.

Zentralblatt für Gynäkologie, Leipsic

April 17, XXXIII, No. 16, pp. 553-584

- 96 *Breast Pump. (Eine neue Milchpumpe.) R. T. Jaschke.
- 97 *Extraperitoneal Cesarean Section. (Extraperitoneale Kaiserschnitte.) H. Freund.

96. **Improved Breast Pump.**—The improvement in the pump, of which an illustrated description is given, consists merely in a "cone valve," a little cone fitting in an opening in the nozzle of the air pump with which suction is applied to the breast. The cone is lifted at will by a spring lever, and thus allows air to enter the glass chamber with which the pump is connected. The breast and nipple recede as air is admitted, but the pump still fits air-tight over the breast. Renewed aspiration with the air pump draws the breast and nipple out again, this intermittent suction and subsidence imitating the natural process of the child's sucking. It is thus possible to empty both breasts completely in from eight to fifteen minutes, so that an infant applied afterward is unable to get any milk. The spring cone valve can be applied to any air pump used for the purpose.

97. **Extraperitoneal Cesarean Section.**—In the two cases reported by Freund he incised the cervix after transverse incision of the abdomen, and was much pleased with the ease and results of this cervical Cesarean section. It is facilitated by the fact that the parietal peritoneum can be readily detached from the abdominal wall, even in the non-pregnant. It is most readily accessible through a transverse incision. The bladder during pregnancy is connected with the uterus only by delicate and loose connective tissue. The peritoneum can thus be easily pushed up and the bladder pushed down or to one side. It is important to turn the uterus from without until the point where the reflection of the peritoneum can be most readily pushed away is brought up for the incision, and the head can be also guided from without to bring it into the incision. He adds that the bladder should not be filled beforehand, and no retractors should be used on the bladder or lips of the wound. The incision in the cervix should be on the median line, and only the suspicious or infected cases require drainage.

Gazzetta degli Ospedali e delle Cliniche, Milan*April 13, XXX, No. 44, pp. 465-472*

- 98 *Treatment of Gangrenous Appendicitis. A. Montini.

April 15, No. 45, pp. 473-480

- 99 Bismuth Paste for Roentgen Examination of Fistulas. (Sull'esplorazione dei tramiti fistolosi col processo di Beck.) G. Spelta.

98. **Marsupialization of Gangrenous Appendix.**—Montini found at the laparotomy in the case described an ulcerating and gangrenous appendix with extensive peritonitis in this part of the abdomen. The cecum was involved in the ulceration to such an extent that he felt compelled to refrain from appendicectomy for the time being, and merely drew the appendix outside the abdomen and fastened the wall of the cecum to the lips of the wound all around the implantation of the appendix. By the end of a week the inflammation and tumefaction had subsided to such an extent that the appendix could have been readily resected, but he left it as it seemed to be undergoing a process almost like absorption as the wound healed. The adhesions that formed were sufficient, he thought, to protect the peritoneum against further trouble from the appendix.

Policlinico, Rome*April, XVI, Surgical Section, No. 4, pp. 145-192*

- 100 *Experimental and Histologic Study of Anastomosis of Nerves. P. Alessandrini.

- 101 *Sarcoma of the Pancreas. F. Ravenna.

100. **Anastomosis of Nerves.**—Alessandrini's experiments were made on dogs and showed that the ultimate functional results are better in young than in old animals. In the younger dogs he found that complete restitution of function followed implantation of the hypoglossal nerve in the spinal accessory severed where it emerges from the sternomastoid, or in the other hypoglossal or some nerve connected with the brachial plexus. Even when only a few fibers of the hypoglossal had been implanted in a lengthwise buttonhole in the other nerve the functional results were excellent. For the clinic, in case of danger of aspiration pneumonia from paralysis interfering with swallowing, he advises implantation of the hypoglossal in its sound mate, which was easily done in his experiments. An interval of two or three months between the severing of the nerve and its anastomosis did not interfere with the restoration of function, but it was found necessary to resect the enlarged end of the stump.

101. **Sarcoma of the Pancreas.**—Ravenna gives an illustrated description of two cases of sarcoma of the pancreas, in one of which a suprarenal capsule was imbedded in the depths of the pancreas, the suprarenal capsule on the left side being missing otherwise. This patient was a boy of 15, the other was a man of 50.

Riforma Medica, Naples*April 19, XXV, No. 16, pp. 421-448*

- 102 *Diagnosis of Hypernephroma. (Mezzi diagnostici del cosiddetto ipernephroma del rene.) D. Taddei.

- 103 *Experimental Research on Passage of Micro-organisms through Wall of Bladder. (Passaggio dei microorganismi attraverso le pareti vescicali.) G. Milone.

102. **Diagnosis of Hypernephroma of the Kidney.**—As a contribution to the diagnostic measures for the so-called hypernephroma of the kidney, Taddei relates a case in which an intermittent tendency to hematuria was noticed for a few weeks, in a boy of 11, with moderate fever and finally dysuria and retention. A tumor palpated in the kidney was removed and the various tests for hypernephroma were applied but with negative findings except the Croftan iodid-starch test, the Fedoroff test with mydriasis in the frog eye, and the nitrate of silver test. He attributes the positive findings even in these tests to a simple osmotic process or to the non-specificity of the tests—the iodid-starch test having given equally positive findings in his hands with an adenocarcinoma of the breast.

103. **Passage of Micro-Organisms Through the Bladder Wall.**—Milone's extensive experimental research has confirmed the assumption that when the bladder walls are sound and the flow of urine normal, micro-organisms are unable to find lodgment and injure the walls and pass through them—all of which is favored, on the other hand, by stagnation of urine

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

ORTHOPEDIC SURGERY FOR PRACTITIONERS. By Henry Ling Taylor, M.D., Professor of Orthopedic Surgery and Attending Orthopedic Surgeon, New York Post-Graduate Medical School and Hospital. Assisted by Charles Ogilvy, M.D., Adjunct Professor of Orthopedic Surgery New York Post-Graduate Medical School and Hospital, and Fred H. Albee, M.D., Instructor in Orthopedic Surgery, New York Postgraduate Medical School and Hospital. Cloth. Pp. 503, with illustrations. Price, \$5.00. New York: D. Appleton & Co., 1909.

HEALTH EDUCATION LEAGUE PAMPHLETS: No. 16, Sexual Hygiene. By a member of the Massachusetts Medical Society. (20 pages. 4 cts.) No. 17, Health in Labor Camps. By Mrs. E. H. Richards and Peter Roberts Ph.D., Secretary, Industrial Department, International Committee, Y.M.C.A. (10 pages. 3 cts.) No. 18, Tuberculosis. By Edward O. Otis, M.D. (24 pages. 5 cts.) No. 19, When to Call the Physician. By George W. Gay, M.D. (15 pages.) Paper. Boston: Health Education League, 113 Devonshire St.

DIE ENTSTEHUNG UND VERBREITUNG DER TUBERKULOSE IM WEIBLICHEN GENITALTRACTE. Von Dr. Albert Blau, Assistenten der Klinik von Rosthorn in Wien. Paper. Pp. 95. Price, 4 marks. Berlin: S. Karger, 1909.

ETUDES ANATOMO-CLINIQUES: COEUR—VAISSEAUX—POUMONS. Par Le Dr. Raymond Tripiier, Professeur à la Faculté de Médecine de Lyon. Paper. Pp. 604, with illustrations. Price, 10 francs. Paris: G. Steinheil, 1909.

HANDBUCH DER BIOCHEMIE DES MENSCHEN UND DER TIERE. Von Prof. Dr. Phil. et Med. Carl Oppenheimer, in Berlin. 15th installment. Paper. Pp. 320. Price, 5 marks. Jena: Verlag von Gustav Fischer, 1909.

THE ETIOLOGY AND NATURE OF CANCEROUS AND OTHER GROWTHS. By W. T. Gibson, A.R.C.S. Cloth. Pp. 123. Price, 6 shillings, net. London: John Bale, Sons & Danielsson, 1909.

FIRST ANNUAL REPORT OF THE SAN FRANCISCO ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS, 1908. Paper. San Francisco: 162 Post Street.

THE PHILOSOPHY OF LONG LIFE. By Jean Finot. Transl. by Harry Roberts. Cloth. Pp. 308. Price, \$2.50 net. New York: John Lane Co., 1909.

THIRTY-FIRST ANNUAL REPORT OF THE DEPARTMENT OF PUBLIC HEALTH, AUGUSTA, GEORGIA. 1909. Paper. Pp. 74.

New Patents

Recent patents of interest to physicians:

- 916098. Massage apparatus. L. Bramson, Copenhagen, Denmark.
- 915833. Operating table. G. R. De Nise, Denver.
- 915946. Making aldehydes. C. Ellis, White Plains, N. Y., and K. P. McElroy, Washington, D. C.
- 916143. Disinfecter. F. J. Gaus, New York.
- 915765. Pasteurizing apparatus. H. M. A. Harders, Milwaukee, Wis.
- 915959. Extracting iodine. E. Herrmann, Paris, France.
- 915977. Obtaining strong aqueous solutions of creosote. D. Lodigiani, Mexico, Mexico.
- 916177. Syringe. H. A. Mather, Pocatello, Idaho.
- 916046. Water-bag. D. Smith, Cotulla, Texas.
- 915917. Syringe. P. L. Wilbur, New York.
- 916692. Topical remedy. R. von Foregger, New York.
- 916864. Bed-pan. A. Henhapl, Superior, Wis.
- 916566. Ear-drum. A. O. Leonard, New York.
- 916567. Fresh-air treatment apparatus. L. P. Leonard, St. Cloud, Minn.
- 916953. Watch for counting the pulse by sound or touch. H. A. Lugin, New York.
- 916762. Fumigating apparatus. C. E. McFadden, near Fullerton, Cal.
- 916611. Sterilizing apparatus. J. Schoettl, Brooklyn.
- 916900. Electrolytically producing peroxid of hydrogen. G. Teichner, Nuremberg, Germany.
- 916637. Massage apparatus. K. P. Wallen, Providence, R. I.
- 917403. Combined blanket and sleeping bag. E. Bengier, New York.
- 917706. Formic-aldehyde-containing composition and making the same. H. S. Blackmore, Mount Vernon, N. Y.
- 917276. Apparatus for measuring and indicating blood pressure. F. A. Faught, Philadelphia.
- 917062. Separating casein. R. Head, New York.
- 917442. Pipette attachment. A. E. Hutchinson, Victor, Colo.
- 917626. Fumigator. L. S. Livingstone, Johnstown, Pa.
- 917113. Truss and like surgical appliance. W. F. Offord, Cambridge, Eng.
- 917151. Deodorizer container. L. R. Rich, Saratoga Springs, N. Y.
- 917367. Massage instrument. J. W. Scott and D. Tibbals, Granite City, Ill.
- 917502. Making phosphoric acid and Glauber salt. E. H. Strickler, New York.
- 917376. Hernia-support. F. J. Stuart, St. Louis.
- 917694. Combined bandage and dressing. H. Wilson, Conneaut, Ohio.
- 918472. Thermometer case. M. W. Reed, South Fork, Pa.
- 917812. Combined abdominal support and truss. L. H. Temme, Cleveland, Ohio.
- 918234. Syringe. C. F. Welsh, Detroit.
- 918409. Sterilizer. W. A. Wiley, J. E. Hall and G. F. Hall, Erie, Pa.

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PROBLEMS AND PROCEDURES IN CRANIAL SURGERY*

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The problems of cranial surgery are manifold and the procedures correspondingly diverse. In this age of specialism it falls to the lot of some, whether because of greater opportunities unsought or natural inclination, to acquire greater familiarity with this or that particular field of endeavor. The surgery of the central nervous system, as that of other systems, requires not only a practical knowledge of the technic, but an intimate knowledge of the physiology and pathology of the structures to be dealt with. The successful and intelligent abdominal surgeon not only must have acquired dexterity in the performance of certain operative procedures, but he has familiarized himself with the physiology, normal and perverted, and with the pathologic aspects of the organs under consideration. It is not enough for him to be able to perform a gastroenterostomy, but he must be able to recognize, if not before at least at the time of operation, the conditions which indicate the propriety of such an operation. It is not to be assumed that one who would engage in neurologic surgery must have either the knowledge or the skill of the neurologist in the diagnosis of affections of the nervous system, but he must have a good working knowledge of the functions of the organs he is dealing with and of the naked-eye appearance of the pathologic lesions to which they are subject. Too much stress has been laid in the surgery of all organs and systems on operative technic, important and essential as it is, and not enough on a fundamental knowledge of the physiology and pathology. It is not enough for a surgeon to be able with skill and dexterity to expose the affected region, but when it is exposed he must be able to recognize the precise nature of the lesion with which he is confronted and to decide promptly and intelligently to what extent he is called on to interfere. It is not my purpose to treat the various subjects to be alluded to, either comprehensively or in detail, but to review in very general terms some recent developments in the field of cranial surgery.

TRIGEMINAL NEURALGIA

While one could hardly say that the last chapter of the surgery of trigeminal neuralgia has been written, it may at least be said, without fear of contradiction,

that of all the operations on the central nervous system in none has a greater degree of perfection been attained and with none are the results so eminently and enduringly satisfactory. The attempt in recent years to substitute for operations on the ganglion or the sensory root various peripheral procedures is not justified by the results. The peripheral avulsion of Thiersch is the most satisfactory of the minor extracranial procedures, but, no matter how radical the removal of the nerve may seem to be, recurrence or subsequent involvement of other branches is the rule rather than the exception. The more recently advocated therapy of alcohol injections has not as yet given more than transitory relief, as the pain returns on an average within seven months.

The element of danger, so conspicuously dwelt on in many treatises on this subject, no longer justifies the apprehension which still lingers in the minds of the profession. The mortality, often quoted at 22 per cent., may be said now to be a gross exaggeration. In Horsley's series of 120 cases the mortality was 3.3 per cent. This report was made in 1905, and I have no doubt but that even a better showing will be seen in his more recent experiences. In my own series of twenty-seven cases I have lost but one patient—the sixth of the series. There have been no fatalities since 1905 (mortality 3.7 per cent.).

It is not necessary to dwell at length on the technic of the operation on the ganglion or its sensory root: suffice it here to emphasize certain features that seem of greater moment. Speaking only of personal preferences, the operation should be performed with the patient in the sitting posture as a matter of convenience to the operator, as a means of controlling hemorrhage, and as affording the most direct view of the deep-seated structures. The upper branch of the facial nerve must be avoided. The approach to the ganglion is made through an auriculo-temporal opening. This opening, somewhat posterior to the one usually prescribed, is preferred to others because it affords the most direct and shortest route to the sensory root of the ganglion. There is no advantage and some disadvantage in working through too small an opening. An opening 3 to 4 cm. in diameter is none too large and enables the brain to be elevated with less danger of trauma to the temporal lobe. The bone should be rongeured away as far down as the infratemporal ridge, and the middle meningeal artery ligated and divided in every instance, as the point of its convergence from the foramen spinosum is directly between the eye of the operator and the structure he is endeavoring to expose.

Though there is some difference of opinion as to some of the preliminary steps, the final one has provoked the most discussion. It is interesting to see how, chronologically considered, this step has been simplified. At

* An address before the Toronto Academy of Medicine, March 4, 1909.

first it was thought best to remove the ganglion *in toto* and the unsuccessful attempts in the early days were responsible for the so-called recurrences; later on some surgeons regarded removal of only the outer and posterior aspects of the ganglion as sufficient; and, still later, the division of the second and third divisions as



Fig. 1.—Table with special head extension and posture of patient preferred in operations on the Gasserian ganglion and in all craniotomies for pretentorial lesions.

they leave the ganglion, with the interposition of foreign material to prevent regeneration of new tissue. Finally, Spiller proposed the "sensory root" operation, providing it could be proved, as was done at that time by animal experimentation, and subsequently by clinical observations, that, once divided, the root was incapable of regenerating itself. The first operation, performed with the deliberate intention of dealing only with the sensory root, I undertook at Spiller's suggestion in 1901, and from that time to this have modified it only in exceptional instances. It has been truly and aptly called "the physiologic extirpation" of the ganglion and will become, I believe, if it has not already come to be, the operation of choice. Whether the root is divided or avulsed, judging from my results, is a matter of no consequence. Once having grasped the nerve it is quite as easy to avulse as to divide it and the results are equally effectual. I have done both a number of times and have never been able to discover any difference either in the immediate or ultimate effects. Division or avulsion of the sensory root gives just as positive assurance against the recurrence of neuralgic attacks as does the removal of the appendix against the recurrence of appendicitis.

CEREBRAL TRAUMA

Our attention in recent years has been directed to certain phases of cerebral trauma not to be found in earlier classical writings. In the latter we find discussions *in extenso* on the difference between concussion and contusion, elaborate presentations of the mechanics of fractures of the skull and of the effects of injuries by *contrecoup*. The indications for surgical therapy were confined to hemorrhage and depressed fracture and the treatment of contusion and concussion consisted chiefly in the administration of opiates, calomel and the iodids. The work of Cannon on the pathogenesis of cerebral edema and the experimental investigations

from Kocher's laboratory on the relation of increased intracranial tension to the circulation has opened up a new field to the practicing surgeon. Leaving out of consideration cases of either local or general compression of the cranial contents, the direct result of hemorrhage or depressed fracture—a group in which the indications for operative intervention are self-evident—there is left a large class, the essential feature of which is the damage to the brain itself. I am referring especially to cases of cerebral edema of traumatic origin, cases in which the function of the vital centers may be destroyed or altogether arrested, either directly by the injuring force or indirectly by circulatory disturbances. Cerebral edema causes increased intracranial tension; this in turn first interferes with the venous circulation, causing passive hyperemia, then with the arterial circulation, causing anemia. These problems in pathologic physiology have all been worked out in the laboratory and we can follow them in certain instances by analogy on the human subjects.

Cases of cerebral contusion with cerebral edema, with or without fracture, may be called border-line cases, because neither active surgical intervention nor invariable palliation can claim them all. Under what circumstances, therefore, is operation to be resorted to—this is a problem of great proportions. I can only allude to a few pertinent facts, and first to the relation of blood pressure to intracranial tension.

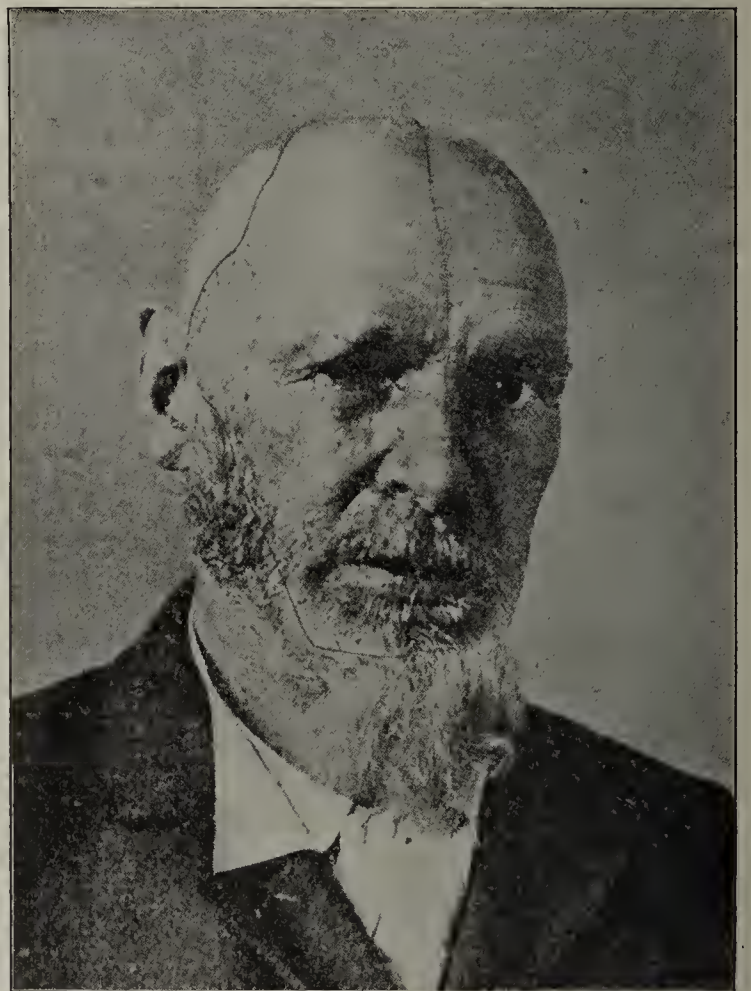


Fig. 2.—The first case in which the sensory root was deliberately divided as a substitute for the extraction of the ganglion; from photograph of patient taken when operation was performed in 1901.

As a result of the obstruction offered the circulation by the increased intracranial tension a comparative rise in the blood pressure has been observed in the laboratory, and this phenomenon has been suggested as an index of the gravity of the condition. But I wish to say quite emphatically that repeated observations on the human subject in cases of intracranial trauma have had, al-

most invariably, negative results; while exceptionally the blood pressure may be more or less elevated, in the great majority it is not, even though the symptoms indicate a very serious intracranial injury and the operation reveals tremendous intracranial tension. The elevation of blood pressure so frequently observed in the experimental laboratory when the cranial contents are me-

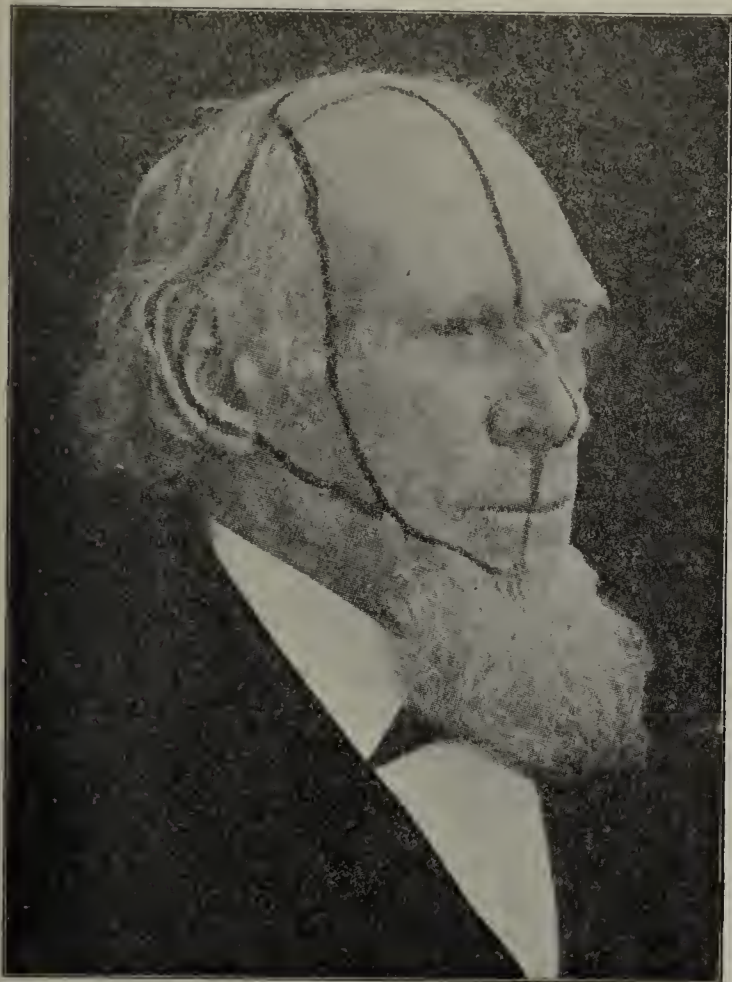


Fig. 3.—Patient shown in Figure 2, from photograph taken in 1908. The region outlined in front of ear only hyperesthetic; the remainder is absolutely anesthetic. There has been no recurrence of the neuralgia.

chanically encroached on is not present under corresponding physical conditions in the living subject. Therefore, as a guide to the grade of intracranial tension or an indication for operative intervention, blood pressure observations with the instruments now available are practically worthless.

Second, as to the relation of papilledema to increased intracranial tension, it has been asserted that papilledema is a more or less constant accompaniment of those cases of intracranial trauma in which there is obstruction to the venous circulations, the stage of *Stauungs-hyperämie*, which, according to Kocher's scheme, is the first stage of cerebral compression. For the past two years at the University Hospital Dr. G. E. de Schweinitz, the ophthalmic surgeon, has made repeated observations for me on all varieties of serious head injuries and I am privileged by de Schweinitz to say that in only two cases has he been able to detect a papilledema, one of three and one of seven diopters. In other words, papilledema as a manifestation of intracranial tension the result of trauma is the exception, not the rule, and therefore can not be considered of any great moment as a means of diagnosis or as a guide to treatment. The pathogenesis of papilledema is most perplexing. That it is not due solely to such encroachment on the cranial contents as may be brought about experimentally has been borne out by many investigations.

The third point to which I wish to refer has to do with the decompressive operation and its application in

cases of serious contusion of the brain, with or without a basal fracture. The decompressive operation recently has been much talked about and frequently practiced for the relief of certain symptoms of brain tumors, internal hydrocephalus and the like. That it has a field in cerebral trauma I am also quite convinced, but in what cases it is indicated there may be some difference of opinion. Thus, for example, the statement has been made¹ that it should be performed invariably in cases of basal fracture because nearly all the symptoms are due to intracranial pressure. According to Cushing, the mortality of basal fractures is 87 per cent. In times past a great many patients died as a result of secondary infection of the meninges, but in our modern management, infection as a factor has been generally eliminated, so that the fatalities now are due to injury to the brain structure, whether it be a contusion, laceration or edema. In the past ten years the mortality in all cases of basal fracture, not including those with fracture of the vault, at the Episcopal Hospital was 59 per cent. That this mortality could be reduced by operating in selected cases would seem more than likely. But, inasmuch as so large a percentage recover spontaneously, routine surgical intervention is obviously unnecessary and therefore unjustifiable. How are we to determine in which cases to interfere? If we attempt to analyze our cases they would seem to fall naturally into three groups.

Group 1.—Those in which damage to the brain has been so great that, decompression or no decompression, the patients die. The fatal tendencies in these cases are easily recognized, and as a rule the patients survive the injury but a few hours. The autopsy reveals laceration and hemorrhage in and about the brain substance. Thus, for example, a patient (No. 2138) aged 60, falls on the pavement and strikes the back of his head; he is



Fig. 4.—Patient one week after division of the sensory root; showing the position of flap within the hair line and use of an automobile goggle for protection of the eye.

brought to the hospital unconscious, with a slow pulse and deep but stertorous respiration; there is inequality of the pupils and left facial paralysis; complete muscular relaxation. Bloody fluid is removed by lumbar puncture and the blood pressure registers 180 mm. Hg; in a few hours the temperature begins to rise rapidly and the pulse to become accelerated; immediate decompres-

1. Cushing: Johns Hop. Bull., February, 1908.

sion is done; the brain is found edematous, the pial veins distended, and here and there are small blood clots over the surface; there is little pulsation, either before or after the dura is opened. The course of events is absolutely uninfluenced by the operation, the condition becomes progressively worse, and the patient dies a few hours later.

Group 2.—Those in which the symptoms at no time appear serious enough to threaten life. There may be, as in a case I have in mind, complete unconsciousness or deep somnolence, slow pulse and respiration, perhaps a papilledema and evidence of injury to some of the cranial nerves, as the oculomotor, abducens or facialis. The symptoms persist for several days and then show signs of abatement and the patient recovers. To illustrate this group I may cite a case with all the symptoms of basal fracture. Though unconscious for several days, the patient's condition was at no time serious; about the tenth day, when he had recovered sufficiently to make examination possible, a paralysis of one arm



Fig. 5.—From a photograph taken in the course of a craniotomy on a patient referred to in Group 2. Note pial clot in motor area.

was discovered. On exposure of the motor area a thin layer of clotted blood in the arm center was revealed, evidently the result of a torn pial vein. The latter was ligated, the clot removed and the paralysis disappeared. Not only would decompression in this case have been unnecessary, but had it been resorted to the clot would not have been revealed and the patient would have been subjected to the risks of two instead of one operation.

Group 3.—Those in which the patient's condition, though not desperate from the first, becomes progressively more serious; the unconsciousness deepens, relaxation takes the place of restlessness, the respirations become more stertorous and Cheyne-Stokes in type and the pulse slower; in a later stage there may be signs of beginning breakdown of the respiratory and circulatory functions; it is in this group that decompression should be considered as a means of saving life. Whether we should decompress in the temporal or in the subtentorial region I am not prepared at the present time to say. Theoretically we would select the subtentorial re-

gion, where the greatest relief of pressure would be afforded the most important structures; namely, the vital centers in the medulla. We have been at work for some time on this problem in our experimental laboratory and hope in the near future to be able to draw some interesting and valuable conclusions. It is needless to say that, when undertaken, the operation should be performed without any anesthetic and should be conducted as rapidly as possible.

ANESTHESIA AND HEMORRHAGE

In operations on the central nervous system and, more particularly, in subtentorial lesions, with the cardiac and respiratory centers often just on the verge of a breakdown, so that even comparatively slight insults are not tolerated, a greater responsibility rests on the anesthetizer than in any other class of cases, except perhaps in those of grave toxemias, as of peritonitis. So important is this feature of cranial operations that under no circumstances should an operation be undertaken unless the services of a skilled anesthetizer are available. This problem has been met in my service at the University Hospital by the appointment of a permanent salaried official, a graduate nurse, who gives her entire time to the work and has proved eminently satisfactory.

In addition to the anesthetizer, the operating staff includes an assistant, whose duty it is solely to observe and record the blood pressure at frequent intervals throughout the operation. With these precautions one may proceed with the operation with the fullest assurance that the condition of the patient is being carefully watched and that one's attention will be drawn at once to the first suggestion of any alarming symptoms.

As a matter of convenience to the operator, as well as of safety to the patient, some means should be adopted to control hemorrhage from the scalp in the performance of craniectomies or craniotomies. This is a much simpler problem when operating for pretentorial than for



Fig. 6.—Cryer's spiral osteotome, used by the author in all his craniotomies.

subtentorial lesions. A great variety of devices have been suggested, such as those of Kredel, of Haidenhain and others. Dawbarn's sequestration anemia sounds plausible and I have no doubt it would be a delightful sensation to perform a bloodless operation under the regulated pressure of a Sauerbruch's chamber could the element of expense be eliminated. I have come to the conclusion that the simplest and in other respects the most satisfactory is a simple, old-fashioned Petit's tourniquet. The rubber tubing which I had been in the habit of using was either too light or too loose and by pressure on the supraorbital nerves occasionally caused severe frontal neuralgia. By means of the key on the Petit's tourniquet the amount of pressure can be regulated to a nicety and the breadth of the tape lessens the likelihood of harmful pressure on the nerves. The tourniquet is rendered thoroughly sterile by boiling or in the autoclave and may be handled whenever necessary throughout the operation; in applying it a small compress of gauze should be inserted beneath the tape over each temporal fossa. At the conclusion of the operation the pressure should be released sufficiently to en-

able one to see the principal bleeding points, opposite which the scalp sutures should be introduced to control bleeding.

TECHNIC

The technic of the osteoplastic flap has been well-nigh perfected. Many instruments have been devised for this purpose, but each surgeon must select for himself the one with which he can develop the greatest dexterity, the one with which he can section the bone with a minimum of trauma and the least expenditure of time. My experience has been solely with the spiral osteotome (Cryer's), an instrument which has seemed to me to meet every indication and enables one to reflect a flap of considerable dimensions in four or five minutes. The initial and the only opening in the skull is made with a conical fraise, so constructed that it can not penetrate the dura and usually jams before it penetrates even the internal table. Once the brain is exposed, some attempt should be made to prevent its surface becoming chilled by the use either of hot compresses or hot irrigations. Before replacing the flap bleeding from



Fig. 7.—Exploratory craniotomy. Note the position of the patient, size of the flap and the absence of bleeding in operative field even without the use of hemostats.

every source should be under control, iodoform wax being used for the bone and the finest catgut ligatures for the pial vessels—the two common sources of hemorrhage.

Cortical stimulation may be used to advantage when it is desirable to determine with accuracy the situation of one or the other of the motor centers. As a matter of observation, it is interesting often to determine the precise relation of the lesion to the center involved, as, for example, in cortical epilepsy or in cases of tumor attended by convulsive seizures. It should be borne in mind, however, that with two or three successive stimuli the centers may be so exhausted as not to respond to subsequent attempts, no matter how strong the current.

The two-stage operation formerly so widely advocated is no longer necessary; so little blood is lost and time consumed in exposing the tumor that, when found, there is no reason why the surgeon should not proceed with its removal. We are speaking now of tumors of the cerebrum, not of the cerebellum, where there are greater technical difficulties and less favorable operative subjects to deal with. If it should be necessary for

other reasons to reopen the flap, as I have had occasion to do twice, the second operation may be performed without either local or general anesthesia. None of the manipulations cause discomfort except those which involve the dura. Grasping the dura with forceps, the introduction of dural sutures, hot applications or douches excite some pain, but the pain is quite bearable and calls forth but little protest on the part of the patients. If the two-stage operation is resorted to, therefore, one should bear in mind the feasibility of conducting the second stage without subjecting the patient to the inconvenience or the risk of a second etherization. The manipulations of the brain substance itself are painless.

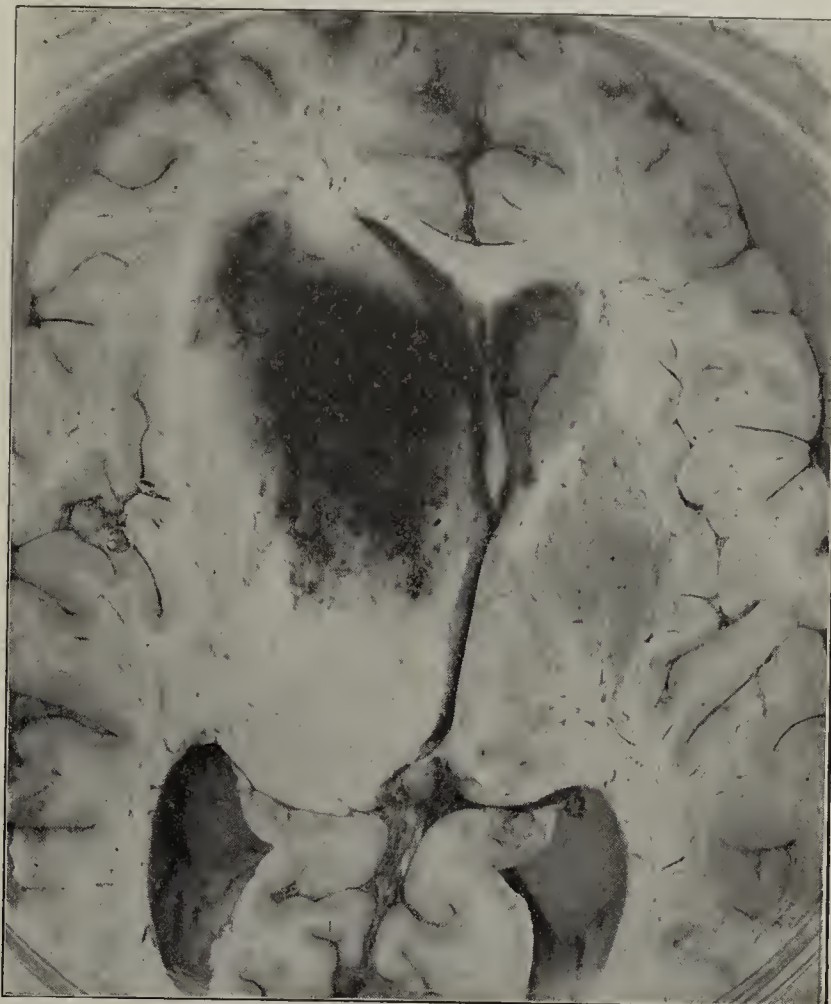


Fig. 8.—Section of brain, illustrating characteristics of an inoperable tumor. Note the distance of the tumor from the cortex and its infiltrating non-encapsulated character.

OPERABILITY OF BRAIN TUMORS

If the estimate is to be based on post-mortem statistics from 4 (Knapp) to 7 (Walton) per cent. are operable (Tillman places the percentage at 6.5). This, however, is a very inaccurate way of estimating the operability of tumors since at the autopsy table the size and relations of the tumor may differ very radically from that at the time when an operation should have been undertaken. As Horsley aptly says: "Post-mortem records can never teach what the careful study of the living tumor exposed in an operation can demonstrate, since in almost every case the former condition is what we may term inoperable." But unfortunately surgical therapy in cases of brain tumor is too often regarded as the *dernier ressort* and the operation has been postponed so long that, even when exposed at the operating table, an overwhelming majority are beyond the stage at which removal is possible. If my own experience is any criterion, I have seen but seven, or possibly eight, cases all told in which the tumor was operable. These do not include cysts, tuberculoma or gummata. The operable tumor must be accessible;

that is, either on or just beneath the cortex and sufficiently well defined to enable one to determine its limitations. The inoperable, on the other hand, is a deep-seated or infiltrating growth. No attempt should be made to remove a growth of an excessively vascular infiltrating type. The attending hemorrhage may prove fatal, and, if the patient survive and the growth be imperfectly removed, recurrence will be rapid and the expectation of life no longer than after a decompression, if as long.

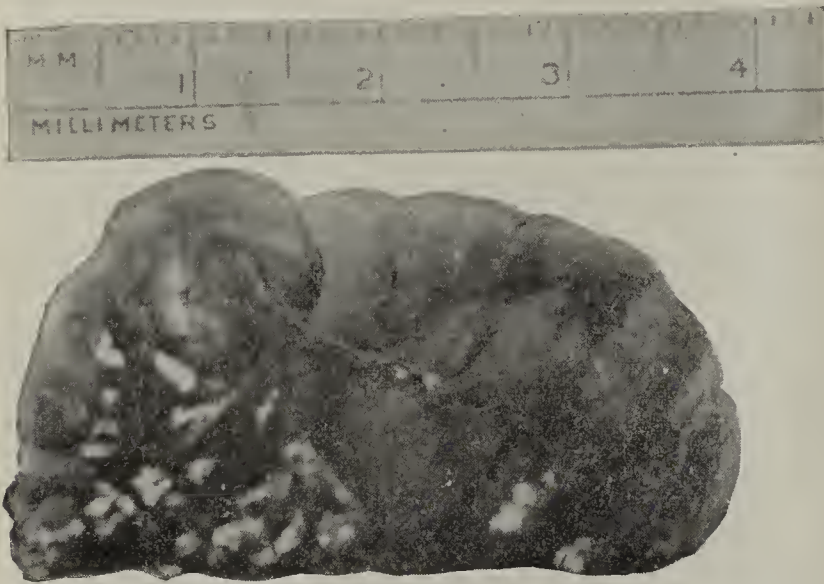


Fig. 9.—Type of operable tumor; from photograph of fibrosarcoma removed from the cerebello-pontile space.

THE SURGERY OF THE POSTERIOR FOSSA

The exploration of structures subtentorial constitutes a problem very different from that involved in pretentorial lesions. From a large and varied experience I have formulated for my own service certain definite conclusions. They are as follows:

1. Generally speaking, exploratory operations and decompressive operations in the posterior cranial fossa are fraught with more risks to the patient than are those in any other part of the brain; a certain percentage of patients will die while under observation, or just as the anesthetic is begun, or when convalescence seems well established, apparently irrespective of operation. Those deaths are usually sudden, not forewarned, and are due to central disturbance of the respiratory apparatus. By artificial respiration I have seen the life of the patient sustained for eighteen hours, but the respiratory center never resumed its function.

2. If, added to exploration, an attempt is made to remove the tumor the risks of the operation are increased to such a degree that I consider such attempts, where the tumors are malignant and adherent to adjacent structures, as absolutely unjustifiable. This statement refers particularly to the tumors of the cerebello-pontile angle and to the malignant type, especially the endotheliomata. There may be instances, as in the encapsulated types of fibrosarcoma, or, of course, in the benign fibroma of the auditory nerve, when removal is quite feasible and may be curative in its effect.

3. The great majority of tumors are situated in the pontile angle—at least, if my experience does not differ very radically from that of other operators. To express this relative frequency more definitely, I should say that in my whole series of exploratory operations for subtentorial lesions there was but a single case in which the tumor was discovered in the substance of either cerebellar hemisphere.

4. While assuming a skeptical attitude regarding the operability, so to speak, of tumors in this region, I am most optimistic as to the results of decompression. In the subtentorial, more than in the pretentorial, lesion is decompression clearly indicated once the diagnosis is made. Papilledema is so much more constant and optic atrophy so inevitable a sequel that, apart from other considerations, operation should have been resorted to, as a rule, months before the patient is brought to the surgeon.

5. Lumbar puncture, either as a diagnostic or therapeutic measure, should never be resorted to. The number of fatalities from this apparently harmless procedure are so great as to make it absolutely prohibitive. I am speaking now chiefly from the observations of others as recorded in literature, as I have in but one instance ventured to practice it, and then only after a decompressive operation had been performed. In this case the effects, while not alarming, were most distressing. For forty-eight hours the patient had a violent headache and a peculiar vasomotor disturbance, which manifested itself in a deep red flush of the cutaneous surface of the neck down to the level of the clavicles, quite symmetrical and sharply defined. This manifestation of vasomotor disturbance was quite unique in my experience, although the circulatory irregularities which one sees not infrequently in cerebellar lesions are, in all probability, due as much to disturbance of the vasomotor as of the cardiac center.

Not wishing to describe in detail the steps of the operation, I may add a word or two as to the incision and size of the opening. For most cases it is not necessary to make a bilateral opening; that is, to remove the skull from over both cerebellar hemispheres. It is taken for granted that the osteoplastic flap is not appropriate for operations in this region, and, as the



Fig. 10.—Incision for a unilateral suboccipital craniectomy. Stab wound in center of flap for drainage.

bone is not to be replaced, it has seemed to me unwise to leave permanently unprotected both hemispheres. An adequate opening is one which enables the operator to explore thoroughly the fossa on the suspected side without inflicting undue trauma on the cerebellum, pons, or medulla. Comparing the results of those cases in which I have made a bilateral with those in which a unilateral opening was made, I have come to the conclusion that in the majority of cases a perfectly satisfactory

exposure is obtained from a unilateral opening. On repeated occasions my records show that the deeper structures of the cerebello-pontile angle, as the auditory and facial nerves, were easily demonstrated to onlookers in the course of an operation. The nearer the external margin of the opening approaches the mastoid process the less displacement of the lobe will be necessary to explore the pontile angle. The opening should be large enough to prevent the cerebellar hemisphere, which when under great tension protrudes far beyond the level of the skull, from impinging against the edge of the bone. The cerebellum is much more easily lacerated than the cerebral tissue and must be handled with great delicacy. It is always possible to enlarge the opening so as to include the bone on the opposite side when the occasion demands it, but the larger the opening the more time is consumed and the more blood lost. If viewed from the standpoint of decompression a unilateral suboccipital opening will for obvious reasons afford proportionately greater relief of tension to the structures in the subtentorial region than a unilateral temporal opening to those in the pretentorial region.

Displacement of the hemisphere in one direction or another to explore the respective surfaces of the cerebellar hemisphere must be done with great gentleness and in this maneuver direct pressure on the medulla must be avoided. Many fatalities attending exploration or attempts to remove tumors are undoubtedly due to the effect of trauma on this structure. One might infer from certain illustrations that the cerebellar hemisphere can be dislocated to an almost unlimited degree, but this is far from the truth. In fact, one should always be content with a minimum rather than a maximum exposure.

Particularly after operations upon the posterior fossa has it been noticed that cerebrospinal fluid escapes through the drainage tract in much larger quantities than after the usual pretentorial exposure. This excess is no doubt due to the proximity of the large basal cisternæ and to the influence of gravity. When the drainage material is removed at the end of twenty-four hours there may be a continuous discharge of cerebrospinal fluid for several days. When the drainage tract closes the fluid may accumulate under considerable tension. This may give rise to some transitory disturbances, such as nausea and vomiting or other signs of pressure, or if the wound has not been carefully and properly closed the cerebrospinal fluid forces its way through between the margins of the wound and establishes a fistula which is sometimes difficult to close. The continuous flow of cerebrospinal fluid may be itself a serious matter, as, apart from the danger of infection, gradual exhaustion and death may ensue. Therefore, I wish to emphasize the importance of so making the incision in the various layers, the cutaneous and the fascial, that one overlaps the other. If this precaution is taken there can be no direct communication between the surface and the cerebrospinal space, and the chances of fistula formation are reduced to a minimum.

To obtain a better exposure of the cerebello-pontile space I once suggested the propriety of removing a portion of one cerebellar hemisphere. At the time the proposal was made, now some years ago, I had practiced it but once, and since then only twice. In discussing this proposal in his address before the British Medical Association three years ago Sir Victor Horsley, and since then Borchardt, Sachs and others, rather assumed

that the partial extirpation of a lateral lobe was a part of my routine technic. It is because this suggestion has been given so much notoriety that I mention it here again in order to correct a misapprehension. My position in this matter would be correctly stated by saying that there are exceptional instances in which a portion of one lateral lobe might with propriety be removed; instances in which an adequate exposure could not be obtained by a liberal opening or by emptying the basal cisternæ or by evacuating a lateral ventricle. From the practical point of view I have never seen any untoward effects from this procedure, and theoretically, judging from the experimental observations of Luciani, we have reason to believe that one portion of a hemisphere has the power of compensating for that which, either by atrophy or removal, has been thrown out of commission. I recently examined a patient from whom six years ago I removed from one-third to one-half of one cerebellar hemisphere and found no evidence of any dis-

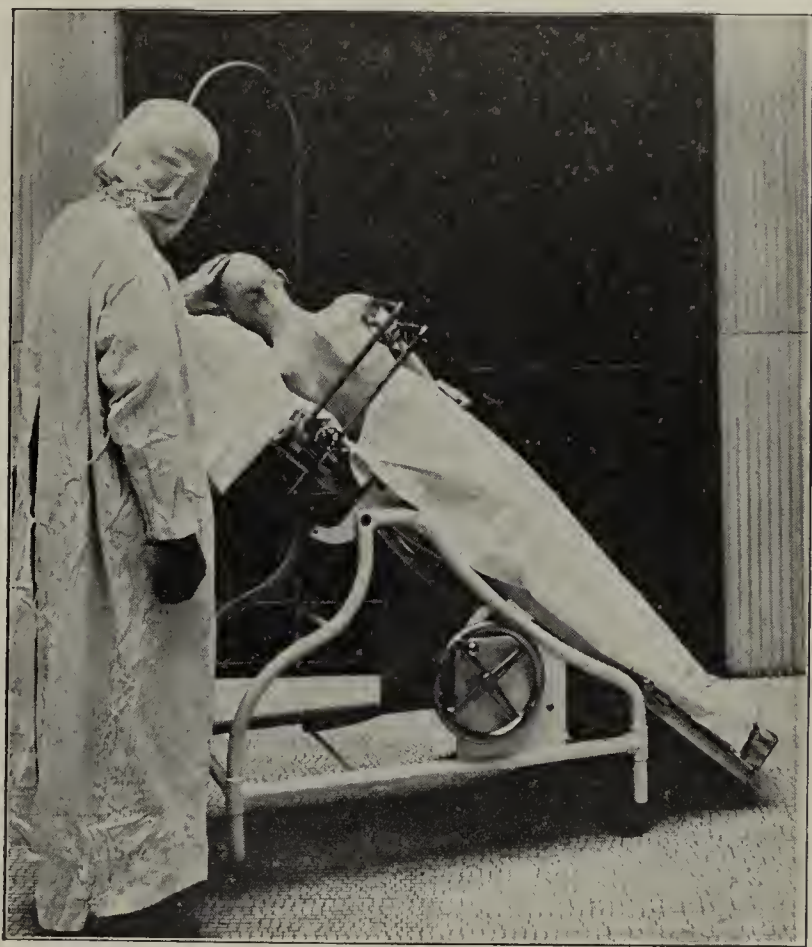


Fig. 11.—Author's special operating table and position preferred for operations on the posterior cranial fossa. Position of patient on the side is maintained by special appliance attached to deltoid region.

turbance which could be attributed to loss of cerebellar tissue.

The performance of an operation for the exposure of lesions in the posterior fossa requires as much experience and practice as that for the removal of the Gasserian ganglion. There are several features in the technic which seem to me worthy of mention. First, as to the position of the patient, having tried various ways, I have selected the head-up-lateral posture as the most desirable. In this position venous hemorrhage is minimized, respiration is not interfered with—a very important consideration in this class of cases—by slight flexion of the head the field of operation is quite accessible, the anesthetic can be administered more easily than in the prone posture and in exploring the pontile space. As the most direct approach is from the region of the mastoid along the posterior aspect of the pe-

trous bone, I find that with the patient on his side I can see, without stooping and without the aid of artificial light, into the depths of the posterior fossa. On a table designed for these operations the position of the patient is easily maintained and the degree of elevation is readily adjusted to meet the needs of the individual case.

It should be borne in mind that not infrequently in exploring the cerebello-pontile space the necessary manipulations, or possibly a residual blood clot, may cause some transitory disturbance of the function of the cranial nerves to be found in this region. This is especially true of the facial, auditory and glossopharyngeal, and occasionally of the trigeminal. Difficulty in swallowing has been observed a number of times. The surgery of the acoustic nerve is still in its infancy. The principal indications are persistent tinnitus of labyrinthine origin and aural vertigo. To one familiar with the technic of the surgery of the posterior fossa the operation is not difficult; at least, the nerve is readily exposed, although its isolation from the seventh, which it almost sur-

inasmuch as it has assumed so conspicuous a place in cranial surgery, I feel obliged to present some of its salient features.

The operation has a wide application and should not be reserved for tumors only; epilepsy, chronic meningitis, with or without hydrocephalus, and trauma should be included among the indications. But with tumors we should not be content with purposeful palliation unless the tumors can not be localized or can not be removed. The ease with which the simple decompressive operation can be performed, its growing popularity and the immediate relief it affords are tempting surgeons to be content with palliation, and if the habit becomes too prevalent some operable tumors will be overlooked.

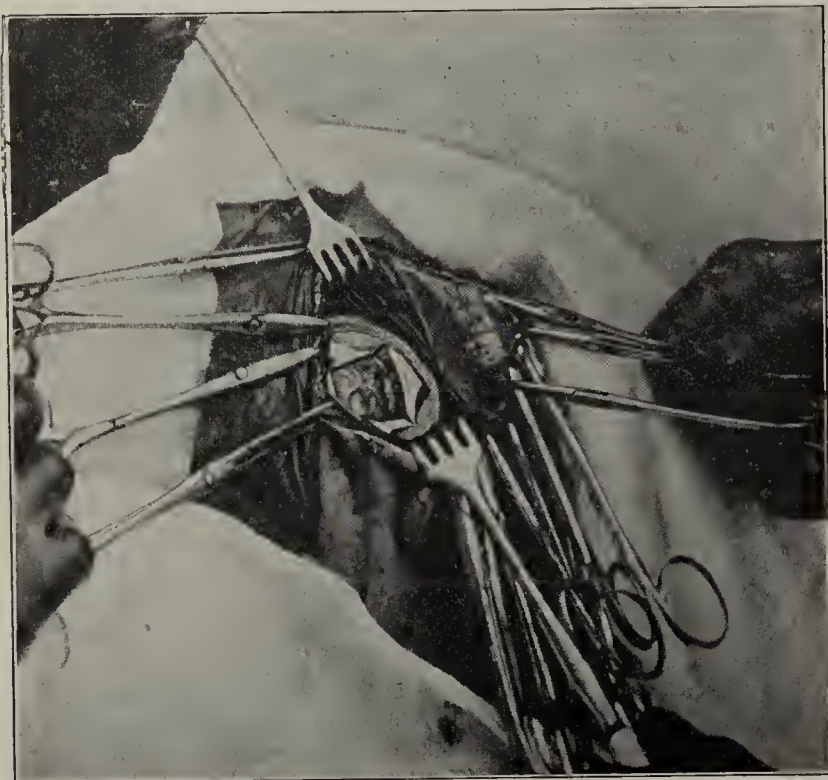


Fig. 12.—Simple temporal decompression. Note the fibers of the split temporal muscle; the reflected flap of temporal fascia; the crural incision in the dura; dural flaps reflected and the distention of the pial veins.

rounds, is not so easily accomplished. There are but five or six cases on record. During the past year Balance divided the nerve for painful tinnitus, and at the request of Dr. Mills I performed a similar operation for persistent vertigo. Up to the present time the results as a whole have not been satisfactory.

DECOMPRESSION

From what has been said of the operability or inoperability of pretentorial tumors it will be seen at a glance that in the great majority of instances palliation is the most that the surgeon can offer, but palliation in cases of brain tumors means a great deal more than is usually implied when the term is referred to other incurable conditions. It means restoration or preservation of vision, relief from headache and from vomiting, the three symptoms which together render the patient's life miserable and unendurable.

Decompressive operations have been written and talked about so much of late that to treat the subject exhaustively would but involve much repetition. But,

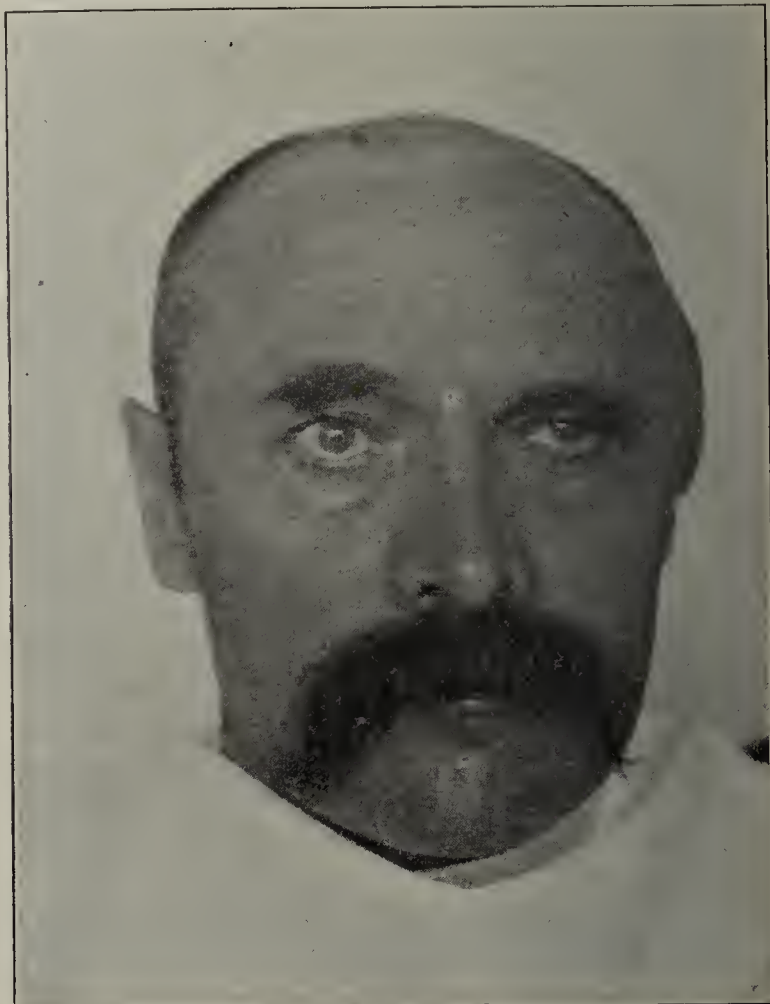


Fig. 13.—Patient shown in Figure 14, ten days after operation. Hernial protrusion twice the size, under tremendous tension and without pulsation.

In looking over my records I find that in the majority of cases decompression was preceded by exploration and without increasing the mortality. It is a very simple matter to decompress over the temporal region through the opening that was made for exploration, as the base of the osteoplastic flap is almost always in this neighborhood. I should like, therefore, to enter a plea against the growing tendency to resort to decompression without first carefully searching for the tumor.

To this general rule there may be an exception, however, as when the conditions call for immediate relief and the opportunity for careful study and localization of the growth has not been afforded. Three such instances occurred in my own practice.

It is needless to emphasize the importance of early operation in cases in which localization is difficult or sometimes impossible. The habit of indefinitely prolonged courses of iodid of mercury with the hope that some definitely localizing or diagnostic symptom may be developed should be deprecated. During this unpardonable delay the optic nerve may become so atrophied

that restoration of vision is out of the question. If in the course of six weeks or two months the condition is practically unchanged and the suspicion of tumor is reasonably established, decompression should be resorted to without delay, in the hope that subsequently, with the appearance of localizing symptoms, the tumor may be found and removed.

The propriety of resorting to decompression in advanced cases when the patient is already in deep stupor may be questioned. Bruns (quoted by Spiller), for example, advises against it. I recently operated in a case of this description for Spiller. The patient was so stuporous that no anesthetic was required; the operation did not influence in the least the subsequent course of events. A striking exception to this rule was brought to my attention in a patient referred to me by Dr. Mills. She was brought to the hospital unconscious; following decompression she not only recovered consciousness, but was relieved of all the symptoms of intraeranian tension, was able to leave the hospital and has resumed her household duties.

As a rule the effects of decompression are so beneficial that one should not question the propriety of the operation whenever there is a reasonable hope of the patient's surviving the ordeal. There are, however, exceptions to the rule. In some instances the operation seems to have little or no effect, and in others, though quite exceptionally, the relief of intracranial tension may be followed by some aggravation of these symptoms. Thus, about ten days after a bilateral decompression, a patient who had been under the care of Dr. Van Pelt, suddenly became somnolent, aphasic and paralyzed on the left side of the face and left arm. A hasty examination of the field of operation found a decided change in the condition as noted the day before. From a hernia under little tension, and with visible pulsation, the hernial protrusion had become more than double the size, was under tremendous tension and pulsation was absent (see Fig. 14). Thinking the sudden change in the condition might have been due to rupture of the middle meningeal artery, I laid bare the field of operation, but there was no evidence of subdural hemorrhage; the brain appeared congested, of pinkish color, and a section removed for microscopic examination was reported as showing evidence of hemorrhagic encephalitis. In this case I attributed this sequence of events to a hemorrhage into the cerebral tissue. The sudden relief of intraeranian pressure withdrew the support to which the vessels were accustomed, and, not being able to withstand the intravascular pressure, the vessels ruptured and hemorrhage ensued. What in most cases has been attributed to a more rapid growth of the tumor after exploration may be nothing more than a diffuse extravasation of blood or the edema which follows the sudden relief of intraeranian tension.

The term decompression implies not simple trephining, but the removal of a considerable portion of bone on one or both sides of the cranium, together with the removal of the dura or a crural incision in it. In subtentorial cases decompression is advisable in the occipital region, and in the pretentorial cases, as Snger suggested, in the silent area of the right temporal region, and as Cushing proposes, by splitting temporal muscle.

The expectancy of life after the operation is of no little interest; even though the patient survives the operation but a year it is no little thing to be able to preserve sight, allay vomiting and relieve headache for

the days that remain. But a greater prolongation of life may be anticipated; from my own clinical experience there are patients alive from three to six years after the date of decompression.

Reference has already been made to the problem of decompression as applied to cerebral contusion; whether decompression combined with drainage may be beneficial in inflammatory conditions, as in suppurative meningitis, is problematical; that it may be of service in unilateral internal hydrocephalus there is no question. According to Koehrer epilepsy may be favorably influenced by the *Ventilbildung*, the establishment of an opening large enough to prevent the increase in tension, which he believes precedes the attacks. While there may be theoretical and practical objections to this hypothesis, I am quite convinced that in some cases at least the improvement after the operation is very striking. Though acknowledging some skepticism as to the theory on which the operation is based, I have resorted to the operation a number of times and have under observation

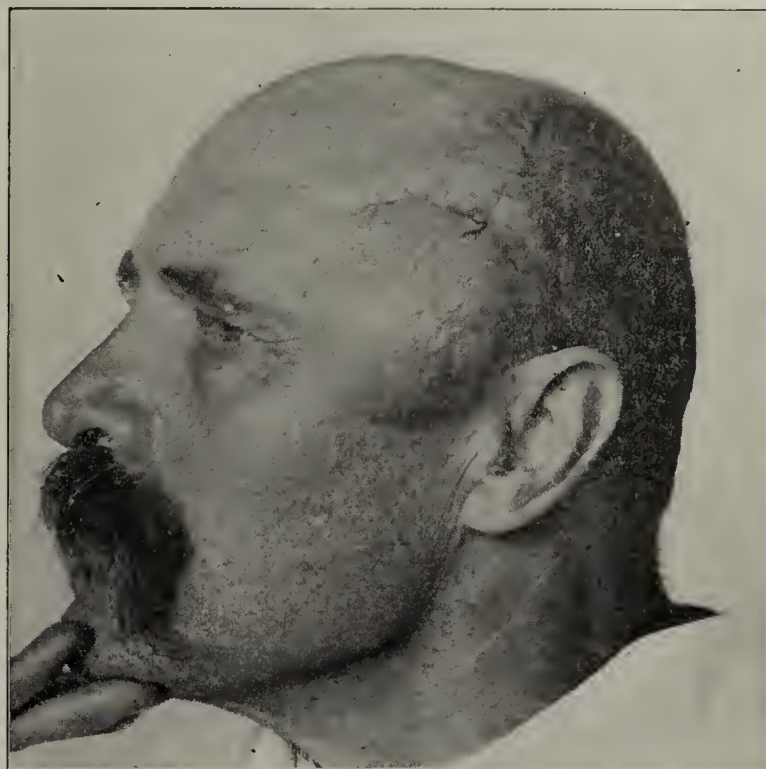


Fig. 14.—Patient after bilateral temporal decompression in a case of brain tumor which could not be localized. Note the establishment of a hernia cerebri only on one side.

some fifteen to twenty patients already operated on. For obvious reasons the results should not be published until five years have elapsed. Whatever may be said, *pro* or *con*, as to the propriety of operating in cases of the so-called idiopathic type, in cases without a suggestion of a focal lesion, I have been surprised to find in a large percentage of cases the brain when uncovered presented some gross pathologic lesion (adhesions, edema, the remnants of an old pachymeningitis, etc.) so frequently that it would appear as though the so-called idiopathic type was a little less prevalent than we were led to believe before we had so many opportunities as now to study the living pathology of the brain and its membranes.

This subject is a massive one and I am quite conscious of the necessarily superficial way in which it has been treated. There are many problems in cranial surgery but imperfectly grasped and many more still untouched. Though accompanied with many disappointments, the study of these problems is a fascinating one and offers a fruitful field for investigation.

1724 Spruce Street.

Original Articles

THE CINCINNATI MILK SHOW

W. A. EVANS, M.D.

Commissioner of Health
CHICAGO

The medical world is more and more making a study of the public health. Following closely on the progress made in the field of preventive medicine, we are seeing the principles therein established applied to large communities. The work of a health officer no longer means merely the collection of vital statistics, the suppression of communicable diseases and the abatement of nuisances, but involves the larger one of sanitary instruction of the public. There are in this country practically no colleges which prepare men for this expert work, and with the large percentage of our health boards

ably no city had greater need for such a campaign, and in no city could the work have been made more difficult, for past boards of health and milk inspectors have stood squarely in the way of any progress along the line of better milk.

The practice of feeding wet distillery waste to milk cows (abolished fifty years ago in New York), with the dairy conditions that are always to be found with such feeding, had made it impossible commercially to maintain dairies on a proper milk-producing basis in this vicinity. Dr. S. E. Allen, of Cincinnati, began a vigorous agitation for better dairy conditions in 1906. The community did not understand as well as it should the importance of better milk, and Dr. Allen was not backed up by his health board as he should have been. The present health officer, Dr. Mark A. Brown, has also failed to receive the kind of support that he should have had.

Largely through the influence of Dr. Allen, who had previously gone out of office, the State Legislature of Ohio in January, 1906, passed a bill prohibiting slop-feeding to dairy cows; and the organized medical profession, and especially the milk commission and its secretary, Dr. Otto P. Geier, conducted a three months' campaign in behalf of this bill with eventual success, although it was opposed by most powerful interests. The bill having passed, the difficulties were not at an end, and the milk commission and the medical profession were very active in securing administration under this bill.

The milk commission began to make arrests of the violators of the law, and so intelligently, fearlessly and consistently did they proceed in awakening public sentiment that they found all of the civic organizations back of them when they recently presented to the city council for passage an ordinance abolishing the present board of health and creating a non-partisan board, to be composed of experts properly qualified to carry on some continuous plan of guarding the city's health. This measure was passed in face of the fact that the council was strongly partisan.

From the very beginning this commission has gone direct to the people, and the politicians have heard in no uncertain terms from the sentiment thus crystallized in the public mind.

And so it was with the milk show. The moment the plan of the same was placed before the various civic organizations the milk commission was given their hearty support. And with what results? Twenty thousand people visited the pure milk exhibit in five days; hundreds of dairymen attended the four sessions of the dairy institute, where addresses were made by some seventeen authorities on the following general headings:



Fig. 1.—Cincinnati Milk Show. Exhibit of the Dairy Division, U. S. Department of Agriculture; good and bad dairy conditions.

whose personnel reflects some political affiliations in control of the work of the health officer, it is not to be wondered at that some of our cities are not making the desired progress in their health affairs.

The city's health, as well as its disease, is more and more becoming the business of every conscientious physician. The medical man is contributing his valued share to the universal improvement of health in cities. The Cincinnati Milk Show, which I visited the first week in May, was most distinctly a physicians' movement, and a report of the same should be of interest to the profession at large.

The Milk Commission of the Academy of Medicine of Cincinnati, now entering on its third year of activity, has just brought to a successful conclusion the Cincinnati Milk Show, the most comprehensive educational attempt of its kind ever made by any American city in the crusade for the betterment of its milk supply. Prob-

What Constitutes Good Milk and How It Is to Be Produced.
The Necessity of Cooperation Between the Consumer and Producer.

Detection and Cure of Diseases in Dairy Cattle.

Effect of Cattle Diseases on Milk.

The Breeding, Selection and Feeding of Dairy Cows.

A national certified milk contest added to the interest of the exhibit, while fifty shippers of milk into Cincinnati competed for the prizes offered in the market milk contest. A complete dairy equipment exposition was another feature added to educate the dairymen in the methods of modern dairying. A public meeting brought the milk show to a close.

And now a bit more into detail. What factors entered into the great success of this milk show? To begin with, a broad conception of the subject and a gathering together of all of those elements which would make for success. The underlying principle was the education of the consumer, as well as the producer, and that a better understanding between the two would make for an earlier solution of the problem of a clean milk supply. "Sanitary instruction is better than sanitary legislation."

The cooperation of the U. S. Department of Agriculture, Bureau of Animal Industry; the Ohio State University; the Ohio Dairymen's Association, and other local dairymen's associations, as well as the Business Men's Club; Antituberculosis League; Women's Club; Chamber of Commerce, and federated organizations were secured. Splendid quarters were obtained right in the heart of the city for the exhibits which I shall now briefly discuss.

THE PURE MILK EXHIBIT

This part of the milk show was held in a spacious vacant banking room, and was given over largely to the exhibit supplied by the Dairy Division of the U. S. Department of Agriculture and that of the Pathological Division of the same department. There was displayed a series of enlarged photographs so arranged that the good and bad dairy conditions were brought out in startling comparison. Charts of all kinds indicated the bacteriologic findings in milk produced under good and bad conditions. The tuberculous cow was shown next to a healthy one; badly ventilated barns next to modern ones; sanitary methods of milking alongside of slovenly methods. Thus in one glance the public could appreciate the basis for the agitation which has been carried on for an improvement of the milk industry.

The next and perhaps most popular exhibit was that held under the Pathological Division, Bureau of Animal Industry. In a large glass refrigerator were shown fresh specimens from the abattoir showing tuberculous lesions in dairy cattle. On top of the refrigerator were

placed the alcoholic specimens of the same human lesions under glass. On the wall near by were hung fine colored drawings of bovine and human tuberculous lesions in the various organs. A series of colored plates showed the transmission types of the tubercle bacilli. While the presence of tuberculosis in dairy cattle and its attendant danger is accepted without discussion by the profession, an ocular demonstration like the above was valuable in convincing the lay mind of this menace to public health. The elimination of this source of tuberculosis is difficult on account of public apathy, and compulsory pasteurization of the bulk of any city's milk supply will be necessary until the people acquire a better understanding of this danger, and then compulsory testing of all dairy cattle with tuberculin will be enforced.

The federal authorities were represented by a number of experts who throughout the day explained the



Fig. 2.—Cincinnati Milk Show. Tuberculosis exhibit, Pathological Division, U. S. Department of Agriculture.

various phases of the exhibit, and one can not speak too highly of the educational value of their work done in Cincinnati.

COMPLETELY EQUIPPED MILK LABORATORY

Here the government sought to enlighten the public and the dairymen in the details of milk examination. A complete laboratory for bacteriologic and chemical work had been provided by the local committee. Consumers and producers were invited to send in their samples of milk for a report thereon. The simpler methods of judging milk were also explained, and it was rather remarkable to see how the people crowded about this demonstrator continuously. A series of Petri dishes affixed to plate glass showed the rather interesting variation in bacterial growth in certified milk, fair market milk and filthy market milk. Black paper had been pasted on the opposite side of the glass so that the

colonies could be readily seen. This display gave to the uninitiated a fair understanding of the methods employed in judging the milk for its cleanliness.

MINIATURE MODEL DAIRIES

A valuable object-lesson to the farmer in this milk show was a miniature reproduction of the dairy buildings of one of the certified farms located at Louisville, Ky., which was loaned by the Neill Roach Dairy Company.

Every detail of construction, location of buildings, interior of barn, milk house, quarantine stables, detention barns, was shown, even to the point of the system of ventilation.

A topographic reproduction of the farm, roads, buildings, etc., of the Walker-Gordon farm at Plainsboro, N. J., added much value to this phase of the object-lesson in modern dairying.



Fig. 3.—Cincinnati Milk Show. Exhibit showing dairy conditions in Maryland and in foreign countries.

EXHIBIT OF MARYLAND STATE BOARD OF HEALTH

This collection of pictures was most interesting, showing not only the dairy conditions in the State of Maryland, but a most remarkable collection of photographs indicating good and bad dairy conditions in foreign climes.

SHOWING BY MEDICAL MILK COMMISSION

The Cincinnati Academy of Medicine, about three years ago, appointed a milk commission for the purpose of encouraging the production of a clean milk which might safely be prescribed by the medical fraternity of that city. That they accomplished that purpose was evidenced by the splendid showing made by the producers of four inspected and two certified milks put on display. The combined output of these six dairies which are supervised by the experts of the milk commission now totals 600 gallons a day. These producers forgot

for the time their rival interests and worked together in an admirable spirit of cooperation. Their products, properly capped and sealed with the insignia of the milk commission, showed the public in the purity of what milks they might have absolute confidence.

Panoramic views of the farms under certification and interiors of the dairy buildings were displayed and made a marked contrast to the slovenly city dairy portrayed by the government as an example of what constitutes insanitary dairying.

Among the many interesting charts of the milk commission exhibit was one which caught my particular fancy and which showed some of the earlier work of the commission. An inquiry was made into the kinds of milk purchased by the various hospitals in Cincinnati and was amplified by a search as to how the milk was cared for in the hospital and in what condition it finally reached the patient. The results shown by the

charts were most startling. The majority of the hospitals had purchased milk the chemical composition of which was very fair, but on account of indiscriminate skimming of the same along its route to the patient it reached the patient almost invariably with a very low fat content. Milk that averaged 4 per cent. in the store-room was given to the patient with a butter fat reduced to 3.2 per cent. and 1.8 per cent. From the standpoint of cleanliness, even grosser carelessness in the handling and keeping of the hospital milks was shown. While the content of the store-room milk was found to be anywhere from 17,000 up to 700,000 bacteria to the cubic centimeter, it was in all instances very much worse when received by the patient. Open vessels, lack of ice, etc., accounted for the tremendous increase. In one instance where a hospital was buying

inspected milk which showed a bacterial count of 17,000 in the store-room, the patients on the second floor were receiving that milk in which the bacteria now numbered 5,000,000.

The direct result of this investigation was an improvement in the care and handling of milk in all of the hospitals, and two hospitals now buy only inspected milk.

Many other charts, among them one showing the keeping qualities of certified milk in storage for the four weeks preceding the milk show, added interest to this phase of the exhibit.

This medical milk commission has taken on itself a much broader scope of work than the average commission. It has conducted a three years' campaign of education, the culmination of which was this milk show. In this it points the way for all other milk commissions. Every county medical society would do well to appoint

a similar committee, whose business it would be, not only to provide for them a clean milk, but to become conversant with the milk problem of that particular community and assist in its solution. If the health officials are doing their duty, such committees would only cooperate, but should they fail in giving proper service to the people such committees would properly bring the matter to the attention of the public.

TO MEET IN ATLANTIC CITY JUNE 7

The Cincinnati commission is credited with organizing the American Association of Medical Milk Commissions. In less than two years this association, through its central office, has been the means of so stimulating the interest of the profession in their work that the number of commissions has increased from twenty-two in 1907 to forty-eight at this time. This association meets each year one day previous and at the same place where the meetings of the American Medical Association are held. This year the conference will be held at the St. Charles Hotel, Atlantic City, N. J., June 7, 1909, at 10 a. m. Medical men interested in this work are invited to attend the meeting.

THE NATIONAL CERTIFIED MILK CONTEST

The secretary of the Cincinnati Commission is also secretary of the National Association of Medical Milk Commissions. Great pains were, therefore, taken in securing the cooperation of the various milk commissions of the country to the end that their producers should enter this contest. When the entries closed and the government took charge of the milk, which was in cold storage, they found twenty-five samples from certified milk producers scattered all over the country from San Francisco and Seattle on the west to many cities scattered along the Atlantic coast to Toronto on the north, not forgetting cities in the middle west and northwest. Almost without exception these milks arrived in splendid condition and the government officials say that there never was a contest in which the bacteriologic findings were so uniformly low. That clean milk, well iced, can be kept almost indefinitely was shown by the distribution of the prizes. Mr. Lovett, of Brighton, N. Y., took first; Mr. F. E. Moore, Alford, Pa., second; while honorable mention went to producers in California, New Jersey, Toronto, Canada, and Ohio.

An annual national certified milk contest was encouraged by the Cincinnati milk show in that the first prize, a silver cup, was offered by the American Association of Medical Milk Commissions, and the second prize, also a silver cup, was offered by the Certified Milk Producers' Association of America. They are presented with the understanding that they are to be held

by the fortunate winner until the next annual contest, when they will be passed on to the producer of certified milk receiving the highest score in that contest. A different system of collecting the samples for the certified milk contests will be placed before the members of these two associations at their meetings in June. This method, if adopted, will remove the only possible unfairness that might exist in similar contests in the future. It would seem that these two associations in offering these two cups in this way have made even more certain the continued progress of the certified milk commission idea, and that these annual contests will more and more unify the standards of the various commissions and thus widen their usefulness. There is no longer any doubt but that the professional control of dairies in the production of certified milk is a success and that the field of educational work of such medical milk commissions is practically unlimited.



Fig. 4.—Cincinnati Milk Show. Miniature models of dairy farms and prizes in national certified milk contest.

DAIRY EQUIPMENT EXPOSITION

The exchange floor of the Chamber of Commerce which is above the rooms given up to the pure milk exhibit was devoted to the dairy implements exposition. Thirteen implement manufacturers and supply houses here exhibited modern dairy equipment apparatus. The exhibit included a great variety of utensils, from a milk-pail to a gasoline engine, and attracted not only dairymen, but others as well. It was useful in that it placed before the dairymen those things which help to make their business more profitable and their product more acceptable. The handling of milk is becoming more and more a mechanical operation. Better appliances looking toward the safeguarding of a pure product are constantly appearing on the market. Boards of health are continually raising the standards and enforcing stricter requirements in regard to the milk supply, and these

conditions made this exposition a timely one. Exhibitors were charged a reasonable price for space, the money so acquired being used to assist in defraying the general expense of the milk show.

THE OHIO STATE MEDICAL ASSOCIATION

The milk show was so timed by the local committee that physicians from all over the State of Ohio who were in attendance on the state medical meeting held in Cincinnati might also be given the advantage of this comprehensive educational work. The medical men were not slow to take advantage of this opportunity and were found visiting the exhibits in large numbers. Health officers from the surrounding states were attracted by this exhibit, and even lay members of boards of health came to the city that they might see and learn. In this way the value of this exhibit will be carried far beyond the confines of Cincinnati.

Though entries were limited to the Cincinnati territory, the entries there, in the market class alone, numbered sixty-five. As a result there was a great stimulation of the producers' interest in the milk show and in consequence a large attendance of dairy farmers was found at the institute. It likewise brought them to attend the pure milk exhibit where they could witness the actual testing of milk by government officials and so come to a better understanding of the technical terms used in describing good milk.

It is evident to students of the milk problem in Cincinnati that the producer is not getting enough money for his product. It is equally patent that the consumer is not receiving the quality of milk he deserves. When such a situation exists, it can only do good for the producer and consumer to be brought together. This is what was done in Cincinnati. Each saw something of the other's point of view and a better understanding is

bound to prevail in the future. Better milk and more of it at a fair price will be available in Cincinnati as a result of this show.

Eleven prizes, the total value of which approximated \$150, were offered by the Business Men's Club and other local business houses. The chance of winning these prizes added zest to the competition, and their possession, it is hoped, will assist in keeping alive the interest of that particular community in the pure milk movement.

The quality of milk entered in this competition varied greatly. While some was found to contain millions of bacteria to the cubic centimeter, the majority of the entries were fairly clean. The producers of unclean milk were even more benefited than were the prize-winners in that they were able to learn just in

what particulars their products were deficient.

DAIRY SCORING CONTEST

The dairy buildings of those who invited the government officials to score them were found to be sadly needful of reconstruction, the seven or eight stables thus scored averaging 50 per cent. This is an indication of the general conditions which surround the dairy industry of Cincinnati. It must be added that the suggestions for the betterment of the physical conditions were kindly received by the dairymen from the government officials.

THE DAIRY INSTITUTE

This part of the Cincinnati milk show was projected as a school for dairymen. In the sessions, extending over two days, there were taught the various steps that make dairying a successful industry. The attendance on the institute was gratifying from the outset, in that about one hundred and fifty dairy farmers were present



Fig. 5.—Cincinnati Milk Show. Milks entered in market and certified contests.

MARKET MILK CONTEST

As a means of interesting the local producers in the milk show, invitations were sent out to about three thousand dairy farmers of Ohio, Indiana and Kentucky, within a radius of fifty miles of Cincinnati. They were invited to enter their products in the market milk contest and to attend the dairy institute, a program of which was enclosed. It was the aim of the committee to reach every man who was supplying milk to Cincinnati either as shipper or dealer. Sixty-five shippers of milk entered this contest, thus availing themselves of an opportunity to learn of the relative merit of their product. This numerical showing in this particular contest was remarkable in that one of our cities, where a national dairy show was being held last winter and in which entries of all grades of milk were allowed from all parts of the country, received only sixty samples.

throughout the four sessions. The local committee enjoyed the cooperation of the dairy department of the Ohio State University and the Ohio Dairymen's Association, who assisted not only in securing the speakers, but in bearing the burden of that expense. The papers brought out most interesting discussions, in which the dairymen took active part. A better mutual understanding of the conditions between the producer, dealer and consumer was the natural result. To those consumers who heard these discussions and to the far larger number who read about them in the newspaper reports of the meeting was brought home the conviction that his inquiry should be, not "How cheap," but "How good is the milk which I buy?"

103 State Street.

ACUTE PANCREATITIS *

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SAN FRANCISCO

REPORT OF CASE

History.—A man aged 29, always previously well, was taken suddenly and violently ill on the evening of July 19, 1908. After working all day and eating his supper as usual he had a feeling of weight in his stomach, drank some water for relief, and was immediately afterward seized with very severe pains. These persisted until an hour later he vomited a large amount of material, watery in character, which he described as "black-looking stuff." This vomiting recurred later in the night and altogether he brought up a large amount of this dark-looking fluid. After a hypodermic injection of morphin the pain and the vomiting gradually ceased and he slept. The next day he had hiccoughs and these persisted more or less constantly thereafter until July 25. During this period, July 20 to July 25, he had only a little pain, but vomited from time to time, at least once a day, irrespective of food taken, and could not take food because it caused nausea and distress. The hiccoughing was relieved only by stomach washing, but would recur after a short interval of relief. The material removed by lavage was only a greenish, watery fluid. At first, following the onset of his illness, he was bloated and tympanitic, but this gradually subsided. He had no fever of consequence and his temperature was mostly subnormal. After July 25 there was no more hiccoughing, but the patient continued to vomit at least once every day and was, therefore, fed exclusively by rectum; nevertheless he kept on vomiting at times, a very sour material, often dark brown in color. He had no pain, but rapidly grew very weak. Finally on July 30 he was brought to Lane Hospital, in San Francisco, when the foregoing history was elicited.

Examination.—On July 31 the following notes were made of the patient's condition: "His face looks drawn, haggard and cyanotic. The upper half of the abdomen is more full than the lower, especially in the right hypochondrium. The abdominal wall is rigid in the epigastrium and the right and left hypochondrium, so that deep palpation can not be made; furthermore, the patient complains of great tenderness when deep palpation is attempted. The liver dulness measures 10 cm., the splenic 7 cm. The temperature at this examination is normal, the pulse 100, full and regular." Further investigation showed that the urine was normal. The white blood corpuscles numbered as high as 35,000, and 84 per cent. of these were polymorphonuclears. The temperature by rectum was normal in the morning, but rose to 101 each evening.

Course of Disease.—The vomiting persisted several times each day, of dark brown material, showing blood both by gross inspection and by chemical tests; at times the vomitus was greenish and apparently free from blood, but at other times

it appeared to be almost pure blood, with clots, dark and coagulated. The pulse rapidly grew weaker and more rapid as the vomiting continued and no food could be taken. Operation was advised; was accepted, and was performed by Dr. Emmet Rixford on August 5. A large abscess was found in the gastrohepatic omentum and about 8 ounces of pus evacuated. The patient died at 4 a. m. on August 7.

Autopsy.—The partial autopsy permitted showed the pancreas sloughed and partially destroyed, with perforation into the lesser peritoneal cavity; but no perforated gastric ulcer as had been suspected as a cause of the abscess. The stomach, duodenum, pancreas and gall bladder were removed and submitted to Dr. William Ophüls for pathologic examination. His report on them was as follows: "A large portion of the pancreas, between the middle and the distal thirds, is necrotic and infiltrated with pus; there are no fat necroses and nothing abnormal about the pancreatic duct; one of the smaller branches opens abruptly into a defect caused by the necrosis. The bile ducts and gall bladder are normal, the latter filled with normal bile. Smears from the bile show nothing abnormal, no bacteria; smears from the necrotic mass show a few polynuclear leucocytes, many small encapsulated Gram-positive diplococci, a few short Gram-negative rods. Cultures from the bile show a mixture of Gram-positive diplococci and Gram-negative bacilli; cultures from the pancreas show a few Gram-positive diplococci and many Gram-negative bacilli. Diagnosis: Abscess of pancreas (pneumococcus infection), with perforation into lesser peritoneal cavity; infected bile."

Several important questions are suggested by this case.

I. HOW FREQUENTLY DOES ACUTE PANCREATITIS OCCUR?

To this one can only answer that it certainly is not a rare disease. It seems, however, to have gone undiscovered for many years, like appendicitis and cholecystitis; and, as with these latter, the cases have multiplied rapidly since the condition began to be studied.

It is generally admitted that the first satisfactory description of the symptoms of acute pancreatitis was given by Fitz, in 1889, in his Middleton-Goldsmith lecture,¹ though cases had been recognized before that time and reported by several clinicians and pathologists, especially in Germany. Since that date, and during the past decade particularly, the disease has received an increasing amount of attention; cases have been frequently reported in medical literature, and the pancreas has become an object of especial interest.

In April, 1907, Egdahl² was able to collect from literature 105 cases reported up to that date by various observers. No doubt as time goes on and the manifestations of the disease become better understood it will be found that acute pancreatitis occurs even more frequently than is now realized.

II. WHAT CAUSES THE DISEASE?

The answer to this question can be summed up in one word—infection; but there are several possibilities open as to the route of infection. This may occur (a) from the intestine through the ampulla of Vater and the pancreatic duct, or (b) from the gall bladder, by obstruction of the ampulla and the passage of infected bile from the common duct up the duct of Wirsung, or (c) by direct extension of a duodenitis through the wall of the duodenum into the head of the pancreas, or (d) by infected emboli carried by the blood stream from distant parts. The consideration of these various possibilities suggests the clinical conditions that may precede and underlie acute pancreatitis. Most cases have

* Read before the San Francisco County Medical Society, April 13, 1909.

1. Boston Med. and Surg. Jour., February and March, 1889, cxx, Nos. 8, 9 and 10.

2. Johns Hopkins Med. Bull., April, 1907.

been found to be associated with disease in the gall bladder; in Egdahl's list, 44 cases of the 105 belonged to this group. There may be a gallstone blocking the ampulla of Vater, or there may be, as in the case herewith reported, simply infected bile without evidence of gallstone formation.

The next largest group of cases, 32 in Egdahl's list, is associated with gastroduodenitis, especially that due to alcohol. This causes the pancreatitis indirectly, by occluding the ampulla by inflammatory swelling and so permitting retrojection of bile into the pancreas; or directly by infection along the common duct and the duct of Wirsung from the duodenal surface, or else through the duodenal wall.

The cases reported as occurring secondary to other local or general infection, such as appendicitis, mumps, typhoid fever and boils, are best explained as due to transmission of infection by the blood. That infection of the pancreas does not occur more frequently is probably owing to the bactericidal power of pancreatic juice; and when acute pancreatitis does occur there must be some other factor that diminishes this bactericidal power. Whether this is always stasis due to obstruction at the ampulla, or whether it may be some change in the chemical composition of the secretion, is so far only matter for conjecture.

III. HOW CAN WE RECOGNIZE THE DISEASE CLINICALLY?

From all the reports of published cases, as well as from the one above described, it is evident that the onset is violent and sudden.

The first symptom is usually pain, situated in the epigastrium, of great severity, usually paroxysmal in character; vomiting occurs soon after pain begins, is persistent and severe, and frequently the vomitus is bloody; collapse quickly follows, with rapid and weak pulse, prostration and possibly death within twenty-four or forty-eight hours. If the patient survives the shock of the initial symptoms, hiccough is likely to become a persistent feature; the bowels are obstinately constipated and the symptoms of localized peritonitis in the upper abdomen develop, with a low grade of fever and irregular chills, in addition to the previous vomiting, hiccough and prostration.

The physical signs at the outset are simply those of intense tenderness in the upper abdomen, with marked rigidity of the abdominal wall; later on there is commonly an increased fulness or even a visible and palpable swelling extending across the epigastrium and into each hypochondrium. The laboratory evidence is not diagnostic nor does it serve to differentiate acute pancreatitis from several other conditions simulating it. In the blood, there is quickly a high leucocyte count, with an increase in the polymorphonuclears. As regards the urine: first, it does not show sugar except in rare instances, because the pancreas is not uniformly or entirely destroyed; second, the absence of indican is a point of importance in differential but not in direct diagnosis; but third, Cammidge asserts that the urine gives the characteristic pancreatic reaction in all cases of acute pancreatitis in which he has examined for it—nine in all. Other observers, however, have not been so fortunate. The feces show an excess of undigested fat; but the constipation that usually accompanies the disease rarely permits of the use of this method of diagnosis.

Taking all these facts into consideration we must conclude that there is no absolutely certain way to

recognize acute pancreatitis clinically. In a discussion on the diagnosis of this disease, before the Section on Medicine of the British Medical Association, at its meeting in August, 1907, Cammidge remarked:³ "In reading through the recorded cases of acute pancreatitis I was much struck by the small proportion in which a correct diagnosis was made at the bedside prior to operation or postmortem examination. Taking 50 recently reported cases, the authors of which were presumably acquainted with the symptomatology of the condition, I find that 12 were diagnosed as perforating gastric ulcer, 12 as intestinal obstruction, 4 as peritonitis, 2 as appendicitis, 2 as cholecystitis, 1 as strangulated hernia; in 12 no diagnosis was made; and only 5 were correctly diagnosed as acute pancreatitis."

IV. WHAT SHALL WE DO FOR ACUTE PANCREATITIS?

It may be objected that where no positive diagnosis can be made, no plan of treatment is rationally indicated. But that is not altogether true. The symptoms are such that we can promptly arrive at a conclusion, limiting the diagnosis to one of a very few conditions arising in the upper abdomen, namely; acute pancreatitis; perforation of a gastric or duodenal ulcer; perforation of gall bladder; acute intestinal obstruction; or embolism of the superior mesenteric artery. As a matter of fact, each one of these demands surgical interference if life is to be saved, and the indication is clear for laparotomy just as soon after onset as the patient's condition will permit it. This is the only question to be answered—whether to operate early or to wait; whether the patient will be harmed more by the shock of the operation than by the delay. There is no medical treatment for acute pancreatitis, except for the early symptoms, such as morphin for pain and stimulants to tide over the crisis of imminent collapse.

In the discussion already mentioned, before the British Medical Association, Osler said:³ "Taking a large series of cases, 90 per cent. of those not operated on died, and of those operated on more than 50 per cent. recovered." In the recent work by Mayo Robson and Cammidge on the pancreas, the following statement is made regarding acute pancreatitis:⁴

Of fifty-nine reported cases of operation during the acute stage twenty-three recovered. Although this is a large mortality, it must be borne in mind that the disease usually ends in death if not treated surgically. The lessons which one may learn from recorded cases are not to wait until the system is overweighted with absorbed poison before operating and not to spend too long a time over the operation.

Shreve Building.

Science and Morality.—The value of science as a support of morality is emphasized by Prof. A. P. Mathews in the *Popular Science Monthly*, March, 1909. "Science," he says, "besides its material conquests of Nature, has developed human pity and compassion. . . . Science has shown the human race to be actually one great family, of which the misery of any part necessarily affects the happiness of the whole." It has also taught the value of truth and candor. Duty or responsibility to others should be the key-word of education. The ideals of science should become the ideals of every one. Efficient moral education must inculcate habits of logical thought. Moral conduct is conduct which increases human happiness. Human affection is the real basis of morals. It has been greatly stimulated by science, and anything which hinders or opposes the development of human affection in each individual and each nation is seen to be necessarily immoral.

3. Brit. Med. Jour., Oct. 26, 1907, p. 1133.

4. The Pancreas, 1907, p. 404.

POSTOPERATIVE ILEUS *

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For postoperative ileus we should substitute postoperative paralytic obstruction, partial or complete, temporary or permanent; for the word "ileus," in its etymology, has no pathologic significance and should be eliminated from surgical nomenclature.

Partial or complete intestinal obstruction may be either primarily paralytic, or mechanical, followed by loss of motility and peristalsis if operation is delayed.

The primary paralytic form of obstruction may be caused (1) by violent inhibitory impulses transmitted to the muscle walls of the intestines from the central nervous system by the splanchnic nerves through the sympathetics; (2) by impairment or destruction of the energy in the neurenteric plexus, and the myogenic force in the walls of the intestines on which motility and peristalsis depend, resulting from the poisonous action of bacterial enzymes from the intestines or the peritoneal cavity on the nerves or muscles in the bowel walls, or from traumatism; or (3) by the combined action of the central inhibitory splanchnic impulses, with impairment or destruction of the energy in the neurenteric plexus, and myogenic force in the walls of the intestines, caused by bacterial poisons or traumatism.

Mechanical intestinal obstruction may be caused by adhesions, constricting bands, volvulus, intussusception, hernia, etc., and if not relieved promptly by operation the bowel above the obstruction becomes dilated and then paralytic, and the ileus can not usually be differentiated from the primary paralytic form.

In order better to understand paralytic bowel obstruction, and also mechanical bowel obstruction, simple, or followed by paralysis, it is necessary to study the research work done on the gastrointestinal tract bearing on its anatomy, physiology, motility and bacteriology. While these observations have been made on animals, usually in good health, it has been shown that in treating such obstructions in man we may, with few exceptions, be governed by the results obtained. It may be urged that these experiments were on healthy animals, while in paralytic or mechanical obstruction we are treating patients with a pathologic condition of the gastrointestinal tract, and, while this is true, it is also equally true that we can not correctly understand the pathology until we learn the normal anatomy and physiology. In studying the anatomy and physiology of the gastrointestinal tract, while we recognize form, we must not forget that to understand better the physiology and motility, and often the pathology, we must make the division by function and not by form from the inlet to the outlet. This is in keeping with the embryology of the digestive tract, which arises from the foregut, the midgut and the hindgut. From the foregut is developed all the tract to a point in the duodenum below the entrance of the bile and pancreatic openings; in this part of the tract digestion is nearly completed, but there is but little absorption. From the midgut is developed the lower part of the duodenum, the

jejunum, the ileum and cecum, ascending colon and the transverse colon to the splenic flexure; in this part of the intestine nearly all absorption of digested products results. From the hindgut is developed the splenic flexure, the descending colon, the sigmoid flexure and the rectum, the part of the intestine used for storage and the expulsion of feces and gas.

The motility of the gastrointestinal tract is involuntary, except at the inlet and the outlet, and this is essential, because there must be a voluntary control of what enters the stomach and of what passes out of the rectum. The upper third of the esophagus is entirely controlled by the central nervous system, this control disappearing in the middle third, and is entirely abolished in the last third. The sigmoid flexure is nearly entirely controlled by the central nervous system, and the rectum is entirely so. In all other parts of the tract, the motility is involuntary, and a nervous system, known as Auerbach's plexus, lies in the muscle walls and imparts energy to the circular and longitudinal muscles, giving them force to propel the food and liquids through the tract after fixed laws.

The innervation to the stomach and intestines from the central nervous system is from the vagi, the fibers of which enter and become interlaced in the medulla oblongata, and the splanchnics, right and left major and minor, from the thoracic ganglia, which transmit impulses through the sympathetics. The impulses through the vagi to both stomach and intestines are mainly motor, but under certain conditions inhibitory impulses may be transmitted, but probably these are merely temporary, the inhibition being quickly followed by increased motility. The impulses transmitted through the splanchnics both to the stomach and intestines are inhibitory, and this inhibition may be so increased by injury to the testicles, kidneys, posterior structures of the peritoneal cavity, or in a state of profound asthenia, etc., as, temporarily at least, to control the neurenteric energy and myogenic force in the intestinal walls. When all inhibitory impulses from the central nervous system have been abolished by the division of these nerves, gastric and intestinal peristalsis continues practically normal, and the food products may enter the colon as soon as before such division, and sometimes sooner. It will also be noted that in cases in which the splanchnics are cut the relative characteristic rapid carbohydrate discharge and the slow proteid discharge is not materially changed. This may continue for weeks with but little change in the nutrition of the animal.

If the motor impulses of the vagi be destroyed by vagus section, leaving the splanchnics intact so as to allow the continuous inhibitory impulses, the discharge of both carbohydrate and proteid food is distinctly retarded, but the same relative rapidity of discharge is maintained. This slowness of discharge is, however, partially recovered from after several days.

When all extrinsic impulses are removed by both vagus and splanchnic section, the gastric and intestinal motility is nearly normal, indicating that the relatively slow discharge of food from the stomach and intestines after vagus section is caused not alone by the absence of vagus motor impulses, but also by the depressing or inhibitory influence of the splanchnics.

The characteristic rapid discharge of carbohydrate food, and the slow discharge of proteid food through the pylorus into the duodenum, after destroying central motor or inhibitory impulses, shows that the discharge from the stomach is mainly under local control, the

* Read in a Symposium on Sequelæ of Abdominal Sections, before the American Gynecological Society.

peristaltic wave in the body of the stomach and the antrum being induced by the mechanical irritation of the food, while the opening and closure of the pyloric constriction is under local reflex control, induced by the presence of acid chyme. While in much of the gastric secretion, and probably in all the secretion of the digestive enzymes in the intestines, the glands are activated by a hormone or secretin, we have not been able to show that chemical mechanisms have caused motility in any part of the gastrointestinal tract, this being entirely local reflex in the nerve plexus in the intestinal walls, caused by distention. Why these nervous mechanisms controlling motility should be so adaptable, allowing the food to remain in the stomach, the duodenum, the small intestine and colon, each a sufficient time to complete normal digestion and absorption, we have not been able to learn. We have learned, however, that this orderly march may be easily disturbed by central nervous influences, caused by excitement or shock, or by injury to certain organs, or retroperitoneal structures in the abdominal cavity, or by traumatism to abdominal viscera, especially the stomach and intestines.

That we may better appreciate the meaning and the significance of paralytic obstruction, we should first correctly understand the motility in the intestines as seen in normal peristalsis after food is taken into the stomach, which passes on, observing fixed laws—the laws of the intestines. The food remains in the stomach or any part of the intestines until it is acted on properly. The proximal bowel then develops onward peristaltic waves of contraction, and simultaneously the immediate distal bowel relaxes so as to allow the food to move toward the least resistance. The onward contraction peristaltic waves and the distal relaxation continue in a regular order until the food is passed into the cecum and colon, but these coordinating movements are easily disturbed by irritation or injury to the intestines, and in some cases of intestinal wounds by projectiles the bowel becomes temporarily paralyzed, thereby greatly lessening the amount of fecal matter that would otherwise empty into the peritoneal cavity and increase the dangers of infection. This conservatism is so protective as to allow a patient to recover from a timely operation who would otherwise die. But if the bowel is simply irritated at any point, it immediately contracts in the part oral to this point, and relaxes in the part aboral, which relaxation may extend a considerable distance. In all forms of so-called ileus, temporary or permanent, there must be a partial or complete destruction of peristalsis, which may be restored promptly, slowly, or continue until death. If the obstruction is complete, the peristalsis aboral to the obstructed part may be but little if at all disturbed, and we often see the distal bowel collapsed and apparently in a state of health, when the proximal bowel is greatly distended with feces and gas, its walls filled with infarcts, or in a state of death. We see the same condition in mesenteric thrombosis, in which there is neither mechanical obstruction, peritonitis or inflammation of the bowel walls. "Dynamic" signifies "pertaining to motion as the result of force"; hence the word should be excluded in any form of intestinal obstruction, unless there be cases caused by a temporary or continued spasmodic contraction in the ileocolic sphincter, or in some part of the bowel. Starling may be correct in his observation that, while splanchnic stimulation may cause complete relaxation of both the circular and longitudinal muscles of the small intestine, thereby

destroying peristalsis, it produces a strong contraction of the muscle fibers of the ileocolic sphincter. While vagus stimulation may cause an initial inhibition of gastrointestinal peristalsis, quickly followed by an increased motor force, it does not cause contraction at the ileocolic junction. Antiperistalsis is normal in the cecum and the ascending colon, and, while it is contended that there is no antiperistalsis in the small bowel, we have positive proof that in both mechanical and paralytic obstruction the intestinal contents, if not spontaneously expelled through the esophagus, or taken away by repeated lavage, may be forced into the stomach, greatly dilating it, the bowel contents in these cases moving in the direction of least resistance. This is an important fact to remember in abdominal surgery, for lives may be saved by the repeated use of the stomach-pump, just as we may cure a patient with acute dilatation of the stomach, with apparent spasmodic contraction of the pyloric ring, and a loss of motility in the gastric muscle fibers.

While there may be shock in most cases of severe or fatal postoperative paralytic obstruction, this is the result of, and is associated with the absorption of bacterial toxic products from the bowel or the peritoneal cavity into the intestinal walls and tissues of the body. We have proof of this in the fact that when we remove the mechanical obstruction and allow the virulent poisonous contents above in the distended and paralytic bowel to pass onward, the patient may collapse from the rapid absorption in the comparatively healthy bowel below, the epithelial resistance being quickly impaired. It is further shown by the experiments of Ramzi, Kula, Clairmont and Albu, that the subcutaneous or intraperitoneal injection of the filtrate of normal intestinal contents gave nearly negative results, but that the injection of the filtrate from an obstructed and distended bowel caused serious or fatal symptoms, in some cases collapse being marked. The absorption of intestinal gas does not seem to have much effect on man in paralytic obstruction, and, as the bowel distends, the absorption of gas and liquid from the bowel is diminished, and finally ceases. In such cases, however, the absorption of bacteria or of toxic bacterial products from the bowel contents into the bowel walls and other tissues is increased, because of the injury to or destruction of the epithelial layer, through which it is probable bacteria can not pass while it is intact and normal. This absorption from intestinal contents, however, ceases, after death of the bowel. Postoperative peritonitis, which causes intestinal paralytic distention, or probably sometimes narrow constriction in some part of the bowel, is usually caused by the invasion of pathogenic bacteria or their toxic products from the gastrointestinal tract, the pelvic organs, or by infection through abdominal wounds, or by unclean abdominal operations; a frequent contributing cause is extensive intestinal exposure and rough manipulation of the stomach, intestines, peritoneum and mesentery. The rough manipulations of the intestines injure the endothelial layer, the nerve plexus and the mesenteric structures; and tension on the mesentery may result in increased inhibitory splanchnic impulses, thereby causing distention of the bowel by impairing or destroying its motility and peristalsis.

What I have said above and also what follows is intended to apply to both acute and subacute postoperative mechanical or paralytic intestinal obstruction, remembering that the complete mechanical form will

always become paralytic if the obstruction is not promptly removed by surgical intervention; hence it will be seen that mechanical obstruction is always surgical, but that with too much delay surgery is of no avail, for the bowel will then have become greatly distended with liquid and gas, which gradually interferes with the nutrition of its walls, destroying the epithelial barrier against bacterial invasion. Unfortunately we are often unable to distinguish between the early or even the late primary mechanical and the purely paralytic forms. While some surgeons have claimed that the differentiation can usually be made, this is contrary to the experience of nearly all abdominal surgeons of broad experience; for this reason it may be impossible to decide if an operation is necessary until it is too late to be of benefit. In such cases as can be diagnosed, however, the abdomen must be promptly opened, the obstructing cause, whatever it may be, removed when it is possible to do so, the surgeon operating rapidly and committing as little traumatism as possible, for these cases will not resist a long operation or rough handling of the intestines and other intra-abdominal structures. Such patients will often recover if operated on before there is much peritonitis or peritoneal infection, and before the bowel is so distended as to interfere with its circulation and nutrition until its vitality is destroyed by the bacteria and bacterial toxic products absorbed from the intestinal contents. In some cases in which the obstruction can be removed, and in all cases in which it can not for the time being be removed, we shall get better results by performing enterotomy or even enterostomy, so as to give immediate temporary or continued drainage of the bowel contents, thereby removing tension on the walls and lessening the absorption of toxic products, thus giving the bowel a better chance to regain its nutrition and motility. In such cases a subsequent operation may be performed to remove the obstruction and to restore the bowel attached to the abdominal wall to its normal condition.

In operations for postoperative intestinal obstruction, it may be better not to enter the abdomen through the original incision, but to select a point that will probably enable the operator to find and remove the obstruction with the least possible exposure and handling of the intestines; by this means he may avoid opening a wound, often infected, and protect the patient from further peritoneal infection from this source. In the absence of any evidence of the seat of the obstruction, it is better to enter the abdomen in the median line below the umbilicus, for through this opening the focus of trouble may be found more easily than through any other incision; but if the original opening was made in or near the median line, then it may be better to open the cavity through an incision in the outer border or beyond the right rectus in the region of the appendix. If, however, there is evidence that the trouble is in the sigmoid flexure from volvulus or intussusception, it would be better to open on the left side. By practically studying the anatomy of the jejunum, the ileum, the mesentery and the relative positions in the abdominal cavity of the first, second and third parts of the small intestine, so beautifully demonstrated by Monks, we may better understand the part of the bowel presenting, its direction, and how to handle it quickly with the least possible traumatism. While I have operated successfully in many cases for intestinal obstruction, with the abdomen distended, a recital of these cases would be of no practical value

and of no interest to the experienced abdominal surgeon. Unfortunately the tendency with many of us is to report a long series of successful operations, often omitting the underlying basic principles on which we are enabled to philosophize correctly. The best surgeon is he who combines a knowledge of embryology, anatomy, physiology, bacteriology, pathology, diagnosis and surgical technic, so as to enable him to reason logically as to what is best in the interest of the patient in any individual case; and, finally, he should be a surgical mechanic. There is no department of surgery to which this more fittingly applies than to the treatment of bowel obstruction from any cause. In true paralytic postoperative obstruction with no suppurative peritonitis, surgery is usually contraindicated; hence the treatment should be rather preventive than curative. In some cases apparently severe, we may have a few days of discomfort, even with pain, nausea, vomiting, obstruction and distention, followed by an uninterrupted recovery without treatment; but a severe toxemia or general peritonitis may develop, which may not improve either under medicinal or surgical treatment. Purgation is contraindicated, and no food should be given in the stomach. If liquid and gas are regurgitated into the stomach and not easily expelled, they should be promptly removed by a stomach-pump, and lavage frequently repeated. It must be remembered that repeated vomiting of small quantities indicates a dilated stomach, a condition similar to what is found in an overdistended bladder. At the same time water through the rectum must be supplied to the tissues and thirst controlled by slow introduction of saline solution after the fashion recommended and described by Murphy. Finally, if gas does not pass from the colon, enemas may be given, care being taken never to distend the bowel too much. In some cases it is possible that the addition of small quantities of alum or carminatives may stimulate peristalsis in the large bowel and cause the expulsion of liquid and gas, leaving the cecum and colon relatively empty, thus encouraging the passage of liquid and gas from the small intestine into the large bowel.

In operations for paralytic or mechanical obstruction with peritonitis, drainage with a rubber tube introduced to the bottom of the pelvis is indicated, and may aid in the elimination of poisonous products. In such cases it may be better to put the patient in the semi-sitting or nearly sitting posture, so as to encourage gravitation of peritoneal liquids into the pelvic cavity, whereby the absorption of bacterial toxic products is reduced to a minimum. Proctoclysis should also be used, putting in the rectum from ten to fifteen pints of saline in each twenty-four hours. In such cases, no food should be given by the stomach for several days or a week, and the patient should be given no solid food for ten days or two weeks. Milk in any form should not be considered a liquid food. After several days we may give nutritious enemas. Finally when gas is passing freely and the bowels can not be moved by enemas, castor oil may be given, but it is usually best not to give saline purgatives. The general belief that we should give remedies internally, subcutaneously or intravenously to establish intestinal peristalsis in paralytic obstruction has no scientific basis. Such treatment is positively contraindicated in cases in which there is peritonitis, inflammation of the intestinal walls or injury to the nerve plexus or muscles in the bowel walls, and may cause death of a patient who would otherwise have recovered. In peritonitis the intestines should be at rest to prevent

the diffusion of infection, and in inflammation of or injury to any part of the bowel wall, rest is essential to encourage repair and a return to the normal anatomic and physiologic condition; hence such remedies could be indicated only in cases in which the paralytic obstruction results from central inhibitory influences through the splanchnics, probably associated with control of the vagi motor impulses, and in which there is but little injury to the nerve plexuses and muscles of the bowel. But we may expect such patients to recover without medicinal treatment if we observe the suggestions above mentioned as to stomach lavage and the use of saline solutions in the colon, as conditions may indicate.

While the experimental work of Meltzer and Auer and other laboratory research investigators has done much to show what medicines influence the motility and the inhibition of the gastrointestinal tract, the results are far from complete, and from this work we have probably gained but little to aid us in the medicinal treatment of paralytic intestinal obstruction. Further research will probably give a clearer insight into the subject, and when we have developed a more correct knowledge of the etiology, the diagnosis and the pathology of paralytic intestinal obstruction, we may then obtain better results from medicinal treatment. We know that ergot causes contraction of the involuntary muscle fibers, and it seems to increase peristalsis, but it is so erratic in its action that it can not be depended on, and may sometimes, as shown by Meltzer and Auer, cause tetanic contractions similar to what may occur in the muscles of the uterus when given during labor or after the birth of the child. Atropin abolishes vagi motor impulses and impairs the spontaneous movements of the stomach and intestines and should not be given.

If a paralytic condition of the bowel is due solely to inhibitory impulses, then hypodermic administration of morphin may be indicated, but we have no means to decide this question. Eserin (physostigmin), hypodermically administered, will increase peristalsis in the healthy animal, but its effect is not lasting, and, while some surgeons have reported successful results from its use in paralytic obstruction, it has no claim for general acceptance; it may be given in doses of 1/40 to 1/60 grain, repeated when necessary to get its therapeutic effect, but never used to excess.

Resection of the devitalized intestine in paralytic obstruction, with the walls filled with bacteria and bacterial toxic products, is generally fatal, and is especially likely to be so if the involvement is extensive. If undertaken, the operation must be performed quickly with lateral anastomosis. The bowel should be crushed well above and below the dead part in healthy tissue and ligated with catgut in the crushed groove, the ends inverted and closed with a purse-string linen suture. The anastomotic opening should be three inches in length, and sutured as in gastroenterostomy, the inner suture of catgut introduced through all the walls, linen being used for the outer seroserous suture. While it is theoretically preferable that all intestinal anastomosis should be made isoperistaltic, experience has taught that if this method is not observed, peristalsis will be established, but will be delayed in the anastomotic region. In obstruction from hernia or mesenteric thrombosis, where the devitalization of the bowel is not too extensive or shock not too profound, resection with lateral anastomosis is indicated. This does not mean that in all intestinal resections the union must be made by lateral anastomosis, for in many cases in which the trouble is not

acute and the resected ends are in a healthy condition, it may be better to make an end-to-end union, using the clamps for suturing, as we do in lateral anastomosis or in gastroenterostomy. Fortunately, postoperative paralytic or mechanical intestinal obstruction is now comparatively rare in the practice of a careful abdominal surgeon who rigidly observes asepsis in himself, his patients, assistants, nurses and everything that could convey infection, and who properly prepares his patients for operation. In cases in which immediate operation is not imperative, the bowels should be thoroughly moved by a large dose of castor oil, and nothing but liquid food given for two days before the operation, and no food the day of the operation. The intestines should be exposed and handled as little as possible, and the mesentery should not be put on the stretch; otherwise violent inhibitory impulses may be caused through the splanchnics, or peristaltic inhibition, because of traumatism to the nerve plexus or muscles in the bowel walls; such exposure and handling may also destroy much of the resistance in the endothelium of the peritoneum to the invasion of bacteria or bacterial toxic products, which causes peritonitis, local or general toxemia or septicemia. Drainage should be avoided, if possible, and when necessary a perforated or split rubber tube should be used, for bad postoperative results have often been caused by the use of the glass tube. Gauze ceases to drain after a few hours, and then is positively harmful; it should never be used in the peritoneal cavity except to control dangerous oozing of blood or to isolate an infected area. I have often seen in my own experience bad results from the use of gauze, and even when it is used to isolate an infected area the rubber tube may be also used.

I have recently had two cases of perforation of the stomach, in the first of which drainage by the tube alone was employed; in the second, drainage by the tube and gauze. The first patient made an uninterrupted recovery with practically a normal temperature and pulse, though the operation was performed nearly twenty-four hours after the perforation occurred. The second operation was performed seven hours after perforation, and, while the patient recovered and is now in vigorous health, there was decided suppuration, elevation of temperature and acceleration of pulse, which I believe would have been avoided had I not used gauze with the tube.

In conclusion, I beg to suggest that surgeons who are contributing something of value for the betterment of abdominal surgery should know the results of the research laboratory investigators of the gastrointestinal tract and the peritoneal cavity. They should be familiar with the results of the work of Pawlow and Starling and Bayless on the physiology, Metchnikoff and Herter on the bacteriology, Cannon, Murphy, Meltzer and Auer on the motility, Buxton on peritoneal absorption, Lennander on the sensibility of the intraperitoneal structures, and the laboratory research work of many other men who have done much in these related fields of science.

628½ Fourth Avenue.

Retinal Hemorrhages and Vision.—P. Fridenberg, in *Ophthalmology*, April, 1909, states that the effect of retinal hemorrhages on vision depends largely on their extent and location. If extensive and central they may cause marked blindness. The remote results are rupture through the hyaloid with the formation of vitreous hemorrhages, proliferating retinitis, glaucoma, and detachment, all of which lead to complete blindness.

GASTRIC SYMPTOMS CONSEQUENT ON
ARTERIOSCLEROSIS *

HENRY L. AKIN, M.D.

OMAHA

Arteriosclerosis, while it may occur in comparatively young individuals who have an inherited tendency to this sort of trouble, syphilitic or otherwise, or who have become subject to it through an acquired syphilis, is pre-eminently a disease of the later years of life and the mention of it brings to our minds almost involuntarily the picture of an elderly person. And it is of a train of symptoms quite frequently to be encountered in persons of middle age having arterial degeneration that I wish to speak. I have been struck with the frequency with which the various manifestations of arteriosclerotic change in the chest and abdomen are attributed to the stomach and some primary disorder of digestion not only by the laity but by physicians as well, and in view of that fact have thought that it would be a profitable subject to bring to consideration.

The group of symptoms must be one very strongly suggesting that the seat of the trouble is in the stomach, not only because it quite frequently deceives the physician who handles the case, but because it has generally fixed this idea so strongly on the patient's mind that even after a careful examination and the eliciting of facts which make it certain that the vascular system is the one at fault, he can never be fully convinced that the primary trouble is not in the stomach, and keeps harking back to that idea all the time and insisting that, if the stomach were put in good condition, he would be entirely well again.

HISTORIES OF CASES

Perhaps I can not do better than to cite a few case histories here, and then we can see in what form such cases present themselves and why they so often lead to a mistaken diagnosis.

CASE 1.—History.—The patient, E. C., an Englishman, aged 54, was a stockman. His health had been rugged all his life until January, 1906, when he "began to have trouble with his stomach." He habitually ate two meals a day—no breakfast, but a hearty dinner and good supper—and his trouble was something like this: In the morning he felt well, but after dinner if he went out and walked a quarter or half a mile there came on him a feeling of fulness in the epigastrium, a pain under the ensiform cartilage, running down the left arm; he felt oppressed, as if he could not get his breath and must stop for a time; on stopping he would soon get rid of considerable gas by belching, after which he felt well and could go on with no further trouble. If he sat still for half an hour or so after eating he generally had none of this trouble. The same thing occurred again after supper, except that he more frequently remained quiet then. If he drank much fluid with his meals, especially ice-water or tea, he was almost certain to have an attack. He had no sour stomach, heartburn, water-brash or belching except as stated. He slept well and weighed 190 pounds; his bowels were regular. He was a hearty meat-eater; smoked and drank liquor occasionally. Twenty years ago, before coming to the United States, he was subject to gout and would have attacks of it about every six months.

Examination.—Large man, heavy-set, with ruddy complexion, the picture of health. Heart not enlarged, apex normal, mitral first sound not clear, aortic second sound sharply accentuated, no murmurs audible; pulse 90, apparently high tension. Stomach contents, free hydrochloric acid, 20; total acidity, 35. Urine, 1.016 acid. Thin ring of albumin, no casts.

Course of Disease.—This was the first case of the kind which had come to my attention, and I mistook it entirely,

paying all my attention to the gastric symptoms. Three meals a day, a restriction of food and meat, careful mastication, no alcohol or tobacco, relief from business and some medication helped very noticeably to relieve the patient, but relief was not permanent, so that shift was made from one thing to another until a typical angina attack disclosed the true nature of the trouble.

CASE 2.—History.—The patient, G. P., a farmer, aged 55, was always well with the exception of occasional attacks of rheumatism until within a year of his present illness. Some seven or eight months before the first examination he began to have "trouble with his stomach;" would feel all right during the forenoon and afternoon, but after supper, no matter how little he ate, he had distress. The stomach filled up with gas so that the patient felt full there, and had a sense of oppression in the chest and a feeling of anxiety for himself, such that he could not lie down, flashes of heat would shoot over his body; he could not sleep and sometimes the condition rose to the height of mild delirium or terrors of one sort or another. Belching up of gas brought immediate relief, which might remain for the night or be followed by another accumulation. This had been going on for months; the patient had been seen and treated for stomach trouble by all the local physicians, then by physicians from a neighboring town, really excellent practitioners, too, with carbolic acid, bismuth and pepsin to allay the fermentation and finally by a consultant from St. Joseph, Mo., who diagnosed the case as dilatation of the stomach (probably without a sufficiently careful physical examination), and prescribed certain stimulants and digestants and dietary regulation, all of which resulted in no benefit whatever.

Examination.—This revealed a double murmur at the aortic valve, evidences of an enlarged and roughened ascending arch, and along with this arteriosclerotic changes throughout the body, and thus the real source of the difficulties in the stomach were explained.

Course of Disease.—Treatment by rest, vasodilators, followed by potassium iodid, and some suggestions as to diet, gave an excellent result, and the patient obtained more relief than he had ever had from the local measures directed toward the stomach. This patient, though a fairly intelligent man, persisted in the belief that the real seat of the difficulty was in the digestive organs and, though driven to accept the fact that there might be something the matter with his heart, too, centered most of his hope on "some medicine to help out his stomach."

CASE 3.—History.—The patient, a business man, aged 62, had been all his life a sufferer from "dyspepsia;" that is, at times, gaseous distention of the stomach with nervousness and general distress, but of late years this condition had come on more frequently and grown much more serious. In his severe attacks the stomach was much enlarged—as his attending physician said, "almost to the extent of an acute dilatation," and most of this enlargement took place in an upward direction, thus by pressure greatly increasing the already existing cardiac distress. These attacks and lighter ones also were accompanied by extreme nervousness, fright and a feeling of great anxiety, and a cold sweat broke out over the whole body. Great care had to be taken with the evening meal, lest some food be taken which would more easily give rise to gas formation, and even in spite of the very best efforts this would occur at times. Three years before I saw the patient a new symptom developed, pain in the chest when walking in the cold or up-hill, and a few weeks before I saw him a serious angina seizure. Through it all the patient and his wife believed that the trouble was due to the stomach, and I was called to see if I could not make some suggestions as to diet which would afford relief. The arteries were hard and sclerotic, arterial tension high and a suspicion of an aortic systolic murmur was heard over the aortic area.

Course of Disease.—While some attention was paid to the diet to see that sufficient nutritious food was given to maintain physical strength, the efforts in medication were entirely directed toward relief of the vascular trouble and with very satisfactory results so far, now nearly three years.

* Read before the Omaha-Douglas County Medical Society.

Such cases are quite similar in the underlying factor of disease, yet they vary sufficiently in their detail to allow them to be divided off into rough classes or groups. For instance, cases 2 and 3 illustrate a type in which all the attention is drawn to the stomach and its supposed misbehavior; most of the trouble comes on at night after the patient has gone to bed, and consists in gaseous distention, pressure upwards on the diaphragm, with still further embarrassment of the laboring heart, extreme nervous distress and anxiety, and at times delirium. Relief is immediate if the patient can belch up the gas accumulated, but this may be only temporary. It is really not surprising, in view of the apparent localization of all the symptoms that the patient should feel that the stomach is entirely at fault and direct his efforts toward improving its function, but the physician who runs across such a symptom-complex will do well to look deeper than the surface and seek some underlying cause for it.

In these two cases there is no hint of any muscular element; that is, the attack comes on almost invariably while the patient is at rest, but in Case 1, the physical effort was the exciting factor without which the trouble did not come on, yet the symptoms when they did appear, still, on the surface at least, incriminated the stomach as the chief offender—pain in the epigastrium, a feeling of fulness and distention there, and immediate relief on gaseous eructation.

Another case will illustrate this type still further.

CASE 4.—The patient, Mr. G., aged 63, an Englishman, twenty-five years ago had much trouble with rheumatism and still felt it in his fingers, ankles and feet. Otherwise he had always been well till the last three years. If he went outside after meals and walked or tried to do work of any sort, especially pump water, he was seized with a pain over the lower part of the chest and epigastrium, panted and felt oppressed and was obliged to desist from such effort. He had been treated for some time with stomachics, pepsin and similar medicines, which did not avail, the reason being apparent on physical examination, which showed the heart slightly enlarged to the right and to the left, systolic mitral and aortic murmurs, arteries hardened, tension high.

In these and many other similar cases we have a condition in which the real cause lies in the extensive involvement and serious degeneration of the organs and vessels of one great system, the vascular, while its effects, or at least its most striking and most easily perceived effects are manifested in various ways on another system, the digestive. For not alone is the stomach affected in this class of cases but also the whole of the intestinal tract, in ways even more varied and of quite as much intensity as those we are here considering; and it will no doubt prove to be an instructive and very fruitful quest to endeavor to elicit some of the reasons for this play of symptoms in the abdominal viscera. We are indebted for much of our work in this field to the observations and investigations to such men as Pal, Ortner, Buch, Perutz, Huchard and others, and an examination of some of their work and theories will be of benefit in throwing a light on the question at hand.

Ortner's contribution is the painstaking report of a case of general arteriosclerosis involving especially the superior and inferior mesenteric arteries and through them the intestines¹; and an exhaustive review of the literature pertaining to this subject. The symptoms in

his case had to do largely with the intestines and consisted of severe pains around and below the navel coming on two or three hours after eating, extreme distention with gas, difficulty in breathing, explosive belching, etc. The colon ascendens and transversum were greatly distended and visible through the abdominal wall but there was no sign of peristaltic waves. The severity of the attack was such as completely to incapacitate the patient.

All this Ortner explains on the basis of the anatomico-pathologic findings. The aorta was thickened and calcified, there was a thick deposit of lime salts about the mouths of its branches, especially the mesenteric arteries, and the small branches of these were stiff, inelastic and probably contracted. The result of this was that the intestines did not receive a sufficient quantity of blood from the aorta through the mesenteric arteries and what did come to them was poorly distributed, owing to the changes in the arterioles. The intestinal walls were poorly nourished; the muscular coat, weak and inefficient, was unequal to the task of doing its work, and this showed itself two to three hours after eating, when the intestines began to be called on to carry out their part in digestion, in disturbance of the motility and probably of the secretory and absorptive functions even to such an extreme degree as his case manifested; so that Ortner says that he could not help but be greatly impressed with the similarity which the condition in the intestines presented to that of intermittent claudication in the extremities, which latter he believes to be the result of a narrowing of the arteries and arterioles producing an ischemia of the muscles and consequent poor nourishment and an irritation of the nerve branches to the joints and muscles of the leg.

I do not know of any case in which the symptoms were predominant in the stomach as in those of my series, which has been as carefully worked out as Ortner, but we do know that the arteries supplying the stomach are in no way exempt from arteriosclerotic degeneration and that round ulcer has frequently been seen as a result of the trophic disturbances produced by arteriosclerosis and with all the conditions similar and the resulting symptoms almost the exact counterpart of those produced in the intestine.

I do not think we shall go far astray in assuming that the same causes produce similar symptoms in the one place as in the other, and that the gaseous distention, the belching, the oppression and the nervous phenomena resulting from these conditions are due to impaired motility and secretion, inability of the stomach properly to perform its natural function, resulting from ischemia of the stomach walls produced by the degenerated arteries and their branches.

To the working of these factors, especially in cases in which there is epigastric pain associated with the attacks, Buch adds an irritated condition of the abdominal sympathetic nerves as an important factor in exciting and increasing the distress of this class of patients. In this belief he is joined by Pal, whose researches in this field are very extensive; and as final additional causes both authors are inclined to consider vessel spasm, overaction of the vasoconstrictors due to irritants such as lead, caffeine, autotoxemia and possibly nicotine as bearing a not inconsiderable part in the production of the distressing symptoms.

Pal says further that it is his belief that the interruption of the normal supply of arterial blood to the intestines interferes not only with their motility

1. Zur Klinik der Angiosklerose der Darmarterien (Dyspragia intermittens angiosclerotica intestinalis), Samml. klin. Vortr. (Volkmann's), No. 347.

but also with their secretion and absorption as well; this would apply as well to the stomach, and the atony and fermentation resulting therefrom admirably explain the cause of the distention, belching and distress in the stomach so prominent in all these cases.

The variety of ways in which these arteriosclerotic changes may manifest themselves is great and sometimes leads to considerable confusion in the establishing of a diagnosis, as for instance, the pain and tenderness in the epigastrium if combined with vomiting and backache, may closely simulate gastric ulcer and when combined with hematemesis, which is not so very infrequent in abdominal arteriosclerosis, the differentiation is well-nigh impossible under continued observation. Perutz of Munich in a recent article² on abdominal arteriosclerosis cites a case in which he had great difficulty to exclude carcinoma of the stomach. It is as follows:

CASE 5.—Patient.—A woman, aged 59, who had always done hard work, but who had, nevertheless, always been well till some few weeks before examination, when she was taken with loss of appetite, distressing fulness after eating and increasing weakness.

Examination.—The patient was prematurely aged, pale and feeble, the heart boundaries were normal, the pulse regular, 66 to 72. Through the relaxed abdominal walls no swelling could be felt, but on palpation the abdominal aorta was sensitive to pressure. After nearly every meal the patient complained of distention of the stomach, and the feeling of pressure associated with this extended upward into the throat. Belching relieved the distention. Sometimes the latter was so great that the patient was obliged to leave her bed in order to get her breath. Lately these attacks had come on between meals and also at night. The heart "almost ran away" at these times. Once after such an attack there was irregular pulse. Repeated examinations of the circulatory system in the intervals were without result. There was no occult blood in the stool.

Course of Disease.—All dietetic and medicinal treatment directed towards the stomach was without effect. On trial of diuretin there appeared in a short time a striking improvement. The patient reported that for several days she had scarcely had an attack; she was able to leave her bed and attend to the housework; her appetite was improved. From time to time she had attacks more or less severe, which, however, were always quickly improved through alternation of theobromin, digitalis or nitroglycerin.

To this I can add a report of a case which even more closely resembles cancer of the stomach than that of Perutz and which showed some very curious symptoms:

CASE 6.—History.—The patient, J. W., aged 60, a farmer, with tuberculous family history, had been a steady hard worker for years, during which time his health had been good, with the exception of an increasing tendency toward constipation during the last ten years. In January, 1907, just previous to the beginning of his present illness, he weighed 190 pounds. At this time he had an acute illness which lasted some weeks and he was never well thereafter. The symptoms at that time consisted of pain in the left side, passage of dark urine, together with marked weakness and loss of strength. These subsided in a month or six weeks, but the bowels grew more obstinately constipated. The patient's appetite was greatly affected, and he was unable to do any work. Lately he developed a pain in the back and a great deal of distress after eating. There was a feeling of weight or pressure in the stomach and this was soon followed by a peculiar train of symptoms. There was a sensation of heat all over his body, accompanied by profuse sweating, and later a chilly condition; the hands and feet were cold and damp and clammy; the pulse jumped from 45 or 46 to 100-104; there was some dyspnea and panting respiration; the patient was obliged to

lie down and cover up. This lasted thirty to forty minutes and he obtained relief gradually. In six months he lost sixty pounds; he had a great distaste for meat and a poor appetite generally. There was occasional vomiting.

Examination.—There was tenderness in the median line of the epigastrium, which was found to follow the course of the aorta, and was especially marked at and just above the navel. The heart was slightly enlarged to the left; there was no murmur, but a sharply accentuated aortic second sound. The arteries were generally stiff and hard, especially the brachial, which was hard and rolled under the fingers like a piece of rubber tubing; it was also tortuous; the pulse in the dorsalis pedis arteries was absent on one side, and the feet and legs were cold. Careful examination for possible malignant growth disclosed no further evidences of same and diagnosis was made of general arteriosclerosis.

Course of Disease.—The patient received frequent small feedings which did away with the symptoms of arterial spasm which had previously troubled him. He was put on small doses of iodids and as the arterial tension was low (112 mg. of mercury) he was given digitalis. Under this regimen he continued to improve considerably and was sent home with instructions to keep it up and to take particular care of himself afterward.

This case was referred to me for investigation because it had been thought to be a malignant condition on account of the rapid loss of weight, the distress after meals, etc. Arteriosclerosis, however, when it comes to a breakdown, as in this case, can be followed by very severe wasting process, and the disturbance after meals was clearly of vascular origin.

DIAGNOSIS

In the matter of diagnosis, it is of the utmost importance not to be led astray by the complaints of the patient as to indigestion, pain in the stomach, distention and belching, and so neglect to obtain a full history and make such a careful physical examination as will reveal the deeper causes of which these digestive troubles are only symptoms. It is not that the diagnosis is in itself so very difficult, but rather that the case presents a picture which the physician has not learned to recognize; though after he has seen and recognized one case, he learns to look for the rest of the chain of symptoms as I have presented them here. In the light of my present experience, it seems remarkable to me that I did not recognize more completely the conditions in my first case, but, at the time, the real cause was overlooked. It seems, then, that the most necessary thing is to call the attention of physicians to the relative frequency of such cases and to urge them to look further than the stomach when they have a patient past middle life complaining of pain in the stomach, distention after eating if he attempts any physical exertion, and dyspnea, relieved by belching of gas; especially when nocturnal seizures, accompanied by distention, heart disturbances dyspnea and great anxiety, are the prominent symptoms. Then an examination of the vascular system will usually clear up the matter entirely. A heart somewhat enlarged, an aortic second sound sharp and snapping, a murmur over the aortic area and rough sounds over the aorta itself, pulsation in the episternal notch, hardened arteries with usually a pulse of high tension, attacks of pain over the heart region radiating to the arm, marked tenderness over the abdominal aorta down to the navel, urine perhaps increased in amount or containing albumin in small quantity, or both increased and albuminous, all these point unmistakably to the circulatory system as the real cause of the trouble at hand.

2. München. med. Wchnschr., May 28 and June 4, 1907.

TREATMENT

The treatment (for a time at least) often gives quite satisfactory results. The diet should be restricted to plain, nutritious and digestible food, the evening meal very strictly limited, so as to leave no chance for gas formation, and careful attention paid to such hygienic aids as are suitable to the case—bathing, fresh air, suitable exercise, attention to the bowels, relief from work, etc. The results obtained from the use of drugs in these conditions is, as a rule, very satisfactory, and foremost among these stand the vasodilators, diuretin, a saturated solution of sodium nitrite and nitroglycerin. Diuretin, or theobromin sodiosalicylate, is the most effective and most used, being employed in doses of ten to fifteen grains three times a day. So prompt and satisfactory is its action in cases of this kind that its use has been recommended as a means of diagnosis in doubtful cases; just as we use quinin in suspected malaria and mercury in syphilis; the case cited by Perutz is a good example of this. Its effect, as well as that of the others mentioned, depends on its powerful action in overcoming the vessel spasm and dilating the arterioles so that they allow a greater flow of blood to the sclerosed areas. Of diuretin it is also suggested by Buch that it may neutralize the effect of some toxic agent which tends to irritate the vasomotor centers and cause contraction. Whatever the exact mode of action, its effects are very satisfactory, and its use may be continued for one or two weeks or even longer without harm. Following this the effect may be continued by the use of tincture of strophanthus, five to eight drops three times a day, which seems to have a similar action to the diuretin, so much so that it is used in place of the latter in some cases in which expense is a great consideration.

As in all arteriosclerotic conditions, the iodids have an important place. Potassium or sodium iodid in doses of five to ten grains may be continued over a long period, but it is asserted that the good they accomplish is not due so much to their so-called alterative effects, as it is either to a dilating effect on the vessels involved or to a lessening of the blood density; as to this I can not say.

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Delayed Death in Gunshot Wound of Heart.—A remarkable instance of delayed death in gunshot wound of the heart is narrated by Dr. R. S. Magee, in the *Journal of the Kansas Medical Society* for April. A colored man, 18 years of age, was shot in the left heart at close range with a shot gun. The victim turned and walked away into the street and then dropped dead, clasping his own gun firmly in his hand. The distance walked by the man after being shot was, by the coroner's measurement, 41 feet. Yet it was found on post-mortem examination that there was "a circular (punchlike) opening, two and one-half inches in diameter, just above and including the left nipple. The fifth rib was broken. The pericardium was torn away and in shreds. The left ventricle was split in two from base to apex, separating it from the interventricular septum completely. Two openings admitting the index finger tip were found in the septum, passing through into the right ventricle. The right ventricular walls were otherwise uninjured. A number of shot, together with one of the gun wads, were found in the muscular substances of the heart. Some shot were found in the base of the left lung, the remainder in the bottom of the left pleural cavity, which also contained several pints of uncoagulated blood. All of the charge passed through the opening in the chest wall, as no shot were found in the skin outside, about the opening."

CHOLELITHIASIS AND PANCREATITIS: THEIR EARLY RECOGNITION *

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The prevalence of cholelithiasis and of infections of the bile tract, as the essential etiologic factors in the production of the great majority of the cases of pancreatitis, demands most thoughtful consideration, as must the fact that pancreatitis, in itself, may become an incurable condition or, by extension of the inflammatory process to the islands of Langerhans, result in a fatal diabetes. The general recognition of these now well-established facts by the profession should lead, not alone to the surgical removal of gallstones in every instance, but, as well, to the performance of the necessary operation at the earliest possible moment, before opportunity is given for the secondary involvement of the pancreas, as a prophylactic measure aimed against a probable pancreatitis and a possible diabetes. If we are to operate successfully on the gall tract, not alone for the prevention of the serious terminal events in that tract depending on inflammation or calculi, but also with the object of forestalling a secondary pancreatitis and a diabetes, we must forever eliminate that ancient and erroneous belief that gallstones may remain in the gall bladder or the ducts for a long and indefinite period, unproductive of symptoms and innocuous as to results. We must go further than this and, improving our diagnostic methods, determine the existence of gallstones at a much earlier period than is now customary.

A complete and revolutionary revision of our knowledge of the symptomatology of gallstone disease is about due—is, in fact, now under way. In the past, as in the present, we have considered as indicative of gallstone disease the terminal symptoms resulting from the complications and sequels of the disease and not the early symptoms of the uncomplicated disease itself. The long-continued presence of gallstones gives rise to certain pathologic conditions and their attendant train of symptoms as, for instance, severe and repeated attacks of biliary colic; impaction of stone in the common duct with or without intermittent jaundice and acholic stools; occlusion of the cystic duct with hydrops of the gall bladder; and we are wont to look on these and other late results and their symptoms as the symptoms of gallstones. Loss in weight is often mentioned as a symptom of gallstone disease, while, properly considered, it is in no sense a symptom of gallstones, but is a symptom, or result rather, of either a pancreatitis or of a suppurative infection of the biliary tract, either one of which is but a late secondary condition arising from the presence of gallstones. Too long and too frequently have we congratulated ourselves on our ability in the diagnosis of gallstones, with the diagnosis based on such late and apparent conditions, when, as a matter of fact, we have failed completely in the recognition and interpretation of the early, or inaugural, symptoms of the disease and recognized only the late and terminal symptoms of the complications and sequels.

As referred to in a previous writing,¹ it has been shown that practically 80 per cent. of the cases of pancreatitis have occurred secondary to, or associated with,

* Read before the Erie County (Ohio) Medical Society, March 24, 1909.

1. Smith, C. N.: The Surgical Conception of Pancreatitis, *Ann. Surg.*, June, 1909.

cholelithiasis or the concomitant cholecystitis and cholangitis incident thereto or provocative thereof. It was further shown that, at a certain stage in its progress, chronic pancreatitis becomes an incurable disease or, by extension of the inflammatory process, produces irremediable changes in the islands of Langerhans, with a resulting pancreatic diabetes. If we can so allay our surgical consciences as to ignore the impending dangers of incurable inflammatory changes in the wall of the gall bladder necessitating a cholecystectomy; of obstructive changes in the cystic duct eliminating the gall bladder from the biliary circuit; of crippling pericholecystic adhesions; of suppurative cholecystitis and cholangitis; of perforation of the gall bladder—some one of which is an ever-present danger in every case of gallstones—in the light of our present knowledge of pancreatic disease, we no longer can fail to appreciate the probabilities of an incurable pancreatitis or the possibilities of a fatal diabetes.

That pancreatitis can be caused by the mechanical obstruction of the excretory duct of the pancreas by a calculus lodged in the common bile duct, or in the ampulla of Vater, or by extension of infection from the biliary channels, will be appreciated readily by reference to the results of animal experimentation and to the anatomic relations existing between the common bile duct and the head of the pancreas.

The common duct passing through the gastrohepatic omentum, from its origin by the union of the cystic and common hepatic ducts, runs behind the first portion of the duodenum and enters the head of the pancreas, where, in the majority of instances, it forms a junction with the duct of Wirsung, the principal and most constant excretory duct of the pancreas, and together, through a common channel, the diverticulum of Vater, they open into the duodenum. In practically two-thirds of all individuals the common duct, in its course through the pancreas, runs in a canal in the head of that organ completely covered by pancreatic tissue, while in the remaining one-third it traverses a groove on the posterior surface of the head of the pancreas, and is not covered over by glandular structures. Occasionally the duct of Wirsung empties into the common duct some distance above the opening of the latter into the duodenum, and, again, the common duct and the duct of Wirsung fail to effect a junction in the head of the pancreas, but pass on to the duodenum, where they open by separate but contiguous openings.

It has been shown by animal experimentation that the injection of either pure bile, or of bile mixed with mucus, into the pancreatic duct will cause a pancreatitis, the intensity of the inflammation depending on the concentration or dilution of the bile. The blocking of the duodenal outlet of the ampulla of Vater by a small gallstone, as in the case reported by Opie, necessitates a retrojection of bile into the pancreatic ducts. When the common bile duct and the pancreatic duct unite to form a common channel some distance before opening into the duodenum, this same diversion of the bile stream into the pancreas must occur whenever a gallstone becomes impacted in this common channel.

Opie has shown that the injection of pure or undiluted bile into the pancreas causes an acute pancreatitis, while Flexner has demonstrated that the injection of bile containing a large increment of mucus results in a chronic pancreatitis. While the retrojection of bile into the pancreas must be looked on as necessarily an infrequent cause of pancreatitis, the prevalence of chole-

cystitis in gallstone disease, with an increased outpouring of mucus, thereby diluting the bile, undoubtedly accounts in a measure for the greater prevalence of chronic pancreatitis, as compared with the acute form. Anatomic conditions, however, will not permit the retrojection of bile except in a very small proportion of individuals.

It is in the obstruction of the duct of Wirsung by the pressure of a gallstone lodged in the pancreatic portion of the common duct, or in the ampulla of Vater, that gallstones become of such great etiologic importance in pancreatitis. As a result of the calculous obstruction, the pancreatic fluid, dammed up in the pancreas, overdistends the walls of the pancreatic duct and renders them less resistant to bacterial infection. Infection extending from the bile tract, either directly by continuity of tissue or indirectly through the lymphatics from the gall bladder to the head of the pancreas, readily infects the imprisoned fluid, the distended ducts and the glandular tissues themselves, and a chronic pancreatitis results.

Practically 80 per cent. of the cases of pancreatitis are but terminal events in the course of gallstone disease and its associated infections. It has been established that pancreatitis, occurring in the acute form, may quickly prove fatal, and in the chronic form may lead to a long period of invalidism, eventually terminating in death. Further, the operative results obtained by many surgeons prove that, in the majority of instances, chronic pancreatitis may be cured by the removal of the offending gallstones and the subsequent temporary or permanent drainage of the biliary tract. At what point in the progress of chronic pancreatitis biliary drainage may fail as a curative agent is not established. Neither can it be determined which particular case of gallstone disease will terminate in pancreatitis, nor at what stage of the former the latter will occur.

Routine postmortem examinations have shown that from 6 to 10 per cent. of all patients dying in public hospitals have gallstones. The higher percentage was observed in Germany and was based on the examination of 10,866 bodies. The percentage incidence in England and America is lower than in Germany and is practically the same for the two countries, being about 7 per cent. That but a small proportion of the cases of gallstone disease has been recognized as such during life must, of necessity, explain the great discrepancy between the relative number of diagnoses of gallstones and these postmortem findings. Many unhesitatingly question the accuracy of these results of postmortem examinations as to the frequency of gallstones, because of the fact that they do not tally with their non-operative observations on the living subject. The fact must not be obscured, however, that a positive finding is of far more value than an unsupported negative opinion.

Unquestionably but a minority of the patients afflicted with gallstones suffer from the disastrous terminal events thereof, and consequently few present the pronounced symptoms demanded by our text-books and by many of our surgeons as necessary before a diagnosis is warranted. On the other hand, cases of so-called "indigestion," "dyspepsia," "gastralgia" and "biliousness" are as common as the sands of the sea. In the light of to-day's knowledge, it seems fair to hold that in the great majority of instances these cases of indigestion, of dyspepsia, of ill-defined stomach disease, of biliousness, are, in very fact, cases of gallstone disease giving rise, not to the decided symptoms of terminal

events, but to the mild symptoms of concurrent cholecystitis and cholelithiasis.

A due appreciation of the diagnostic value and accuracy of the inaugural symptoms of gallstone disease, nearly all of which are referred by the patient to the stomach, will result, not only in a most decided and striking diminution in the number of diagnoses of "indigestion," of "dyspepsia" and of "biliousness," but also in a confirmation, by operative exploration, of the accuracy of postmortem findings as to the frequency of gallstone disease.

A few surgeons, operating largely in the pelvis and lower abdomen, have been making, in a desultory way, "touch" examinations of the gall bladder through a low abdominal incision. Failing to determine the presence of gallstones by this long-distance finger-tip touch of the globe of the gall bladder, they have gone on record as questioning the accuracy of postmortem findings as to the relative frequency of gallstones. Small calculi, even in considerable number, lying in a full gall bladder, easily may be overlooked by such palpation, while the exploration of the ducts, difficult at times through a high incision, is, in the great majority of instances, an impossibility through a low incision. Conclusions based on such incomplete attempts at examination are positively void of value.

Until, by either a large number of postmortem observations or an extensive series of complete and painstaking examinations of the bile tract in the living, we are able to controvert the findings of Riedel, Kehr, Recklinghausen and others in Germany, of Voelcker, Brockbank and Cooper in England, and of Mosher and Herter in America, we must accept the statements that from 6 to 10 per cent. of adults in these countries are the subjects of gallstone disease.

During a recent six weeks spent with Mr. B. G. A. Moynihan at the Leeds General Infirmary, I was deeply impressed by the ease and certainty with which he diagnosed the presence of gallstones at a much earlier period than is possible if one is to be guided alone by the symptoms so usually attributable to such disease, and so uniformly emphasized in our text-books and special articles on the subject. By an extensive and critical study of the "pathology of the living" as observed on the operating table, rather than by an unquestioning acceptance and reiteration of the old teachings in pathology, Moynihan has been able to define certain early or inaugural symptoms which precede by a considerable period the common and apparent phenomena so generally held as indicative of gallstone disease, but which we must now recognize as the symptoms of terminal events.

In an address on "Inaugural Symptoms"² and in a paper entitled "Cholelithiasis: Its Early Recognition and Early Surgical Treatment,"³ Moynihan has clearly stated these early symptoms and the underlying conditions for which they stand.

These inaugural symptoms are slight in their intensity, and when considered individually would, with but one or two exceptions, scarcely ever point to the bile tract as the seat of disease. Collectively, even, were it not for the observations made by Moynihan on the living, enabling us to interpret aright their significance, they would be considered, almost invariably, as indicative of gastric disease.

In a rapidly growing series of cases in which I have

operated, basing the necessity for the operation on these inaugural symptoms, gastric disease has been found in but one case. In that case, Cammidge's pancreatic reaction being positive, no gallstones were found, but a chronic cholecystitis with pericholecystic adhesions was present, as was a chronic pancreatitis and a prepyloric gastric ulcer.

Of the inaugural symptoms, pain, while present, is not marked, being rather a discomfort, an uneasiness, a flatulence, an ill-defined sensation of tightness, weight and oppression, always referred to the stomach, coming on in from half an hour to three-quarters of an hour after meals and being relieved by belching or vomiting, although vomiting is a rather infrequent event. In two cases in which I recently operated, vomiting, generally occurring before the meal was completed, was a frequent and conspicuous event. In one, the vomiting was preceded, momentarily, by severe pain referred to the stomach. In the other, severe pain was never present; but a feeling of discomfort, of oppression, of shortness of breath, first manifest early in the course of the meal, steadily increased in severity as the meal progressed, until suddenly, preceded by an instant of nausea, vomiting occurred. The one great complaint of this patient was an increasing shortness of breath as the meal progressed. One patient, a boy of 6 years, relieved of his pain by vomiting and having his hunger unappeased, would return to the table and eat again, only to have a repetition of the pain and vomiting. Several of my patients presenting the above-mentioned symptoms, complained also of a sense of discomfort and uneasiness along the free border of the right lobe of the liver, yet this discomfort never approached the dignity of a pain.

If this inaugural pain is at times somewhat more severe than at others, it may radiate from the stomach through to the right shoulder. With the pain, be it ever so slight, frequently comes a feeling of cold, a shiver, a chilliness, never severe, never of long duration, occurring after meals and more often noticed in the evening than at any other time. One of the patients above referred to volunteered the statement: "I so often feel chilly in the evening."

Moynihan justly attaches considerable importance to a catch in the breath as an inaugural symptom of gallstone disease, and I can not refrain from quoting him as follows:

In such attacks there may be "a catch in the breath"; the patient says that it is impossible for a deep breath to be taken, for, as the chest fills, a sudden stabbing pain is felt which cuts short the inspiratory effort. This spasm of the diaphragm is very characteristic of gall bladder diseases, and often distinguishes them from gastric and duodenal conditions, with which they are apt to be confounded.

Drowsiness, inability to concentrate the mind, "a sensation of weight and fulness in the head, . . . migraine are sometimes noted, especially when the patient is fatigued." Dr. Leonard Molloy, quoted by Moynihan, calls these symptoms "gall-bladder dyspepsia."

While tenderness on deep inspiration, from thumb pressure under the edge of the ribs and against the gall bladder, is present in the later stages of gallstone disease, it is also present in association with the inaugural symptoms and is a most important confirmatory sign of cholecystitis. All of my early cases in which it has been present to a marked extent have shown a decided degree of cholecystitis and, in several cases, cholecystitis without gallstones was found on operation. In one of these latter cases at least two-thirds of the gall bladder wall retained its natural suppleness and its bluish color,

2. Brit. Med. Jour., Nov. 28, 1908.

3. Practitioner, December, 1908.

while the remaining third seemed thicker, less supple and was of a decided grayish color. The gall bladder contained a mixed bile and mucus, black, thick and ropy, and a quantity of small, soft, sand-like particles. These were the foundation-stones of gallstones yet to be builded.

A valuable symptom, when present, is tenderness on pressure over the posterior surface of the liver, in an area extending from the eleventh dorsal to the first lumbar vertebra, and laterally from a line one inch to the right of the vertebral spines to the posterior axillary line. Tenderness in this area of Boas is present in some cases in which there is absence of tenderness over the gall bladder itself.

The fact must be recognized that the early symptoms ascribed to gallstones are but the symptoms of the inflammation which their presence has provoked. Gallstones lying in the gall bladder, producing or aggravating a cholecystitis, are attended by the general symptoms of the latter and not by any special symptoms attributable to the gallstones themselves, so long as they remain quietly sequestered. A mild degree of inflammation of the gall bladder, however, attended by a varying amount of desquamation of epithelium, the "lithogenous catarrh" of Meckel, is a necessary etiologic condition in gallstone disease. Operation based on the early symptoms under consideration—the symptoms of cholecystitis—may disclose a cholecystitis, but no gallstones. The cholecystitis so found may be the precursor of gallstone formation, or the result thereof, the gallstones at one time present in the latter instance having escaped through the ducts into the intestine and thence from the body.

A history of "malarial fever" in connection with, or subsequent to, or even antedating, these inaugural symptoms, should be critically analyzed in every instance. It will frequently develop that the chills of the supposed malarial fever occurred, not with any regularity, but with decided irregularity. My patients report these chills as occurring once or twice in a given day, then recurring after an interval of from two days to a week, then perhaps daily for a few days, with a subsequent lapse of days between attacks. The chills are followed by fever and sweating. One patient reports these chills, irregular in occurrence, extending over a period of four months, followed by two weeks of profound jaundice, and by four years of indigestion, flatulence, oppression and weight in the stomach after meals. These irregularly recurring chills which are so readily mistaken by the careless observer for the evidences of malarial fever are in reality the symptoms of decided infection of the bile tract or of calculous obstruction of the common duct. Moynihan has called attention to the "steeple" form of temperature curve occurring in acute infections of the biliary tract and in cases of stone passing through the common duct. The temperature rapidly rises to 102, 103 or 105, or even above, and as rapidly falls to normal or below. This rapid rise and fall recurs repeatedly but irregularly.

One young man who recently consulted me gave a history of "ague" extending over a period of two years, with an irritable hacking cough unattended by expectoration, with stabbing pain at the base of the right lung on deep inspiration. During these two years he complained of indigestion, belching, nausea and occasional vomiting. There was a feeling of fulness in the head, of vertigo and of drowsiness. The skin had a peculiar and striking bronzed appearance and yet the

patient was insistent in the statement that he had never been jaundiced. There never had been an attack of gallstone colic. The patient had lost fifteen pounds in weight and was so reduced in strength that he could not work more than three days in the week. He had been treated for "ague," "indigestion," "acid dyspepsia" and "pulmonary tuberculosis." In my examination, however, the tuberculin test was negative, while Cammidge's pancreatic reaction was positive. A diagnosis of gallstones with subsequent pancreatitis was warranted.

It scarcely seems proper to speak of symptoms existing for a period of from two to six years as "inaugural symptoms," yet it has been my experience that these mild symptoms do persist for that length of time. In every instance, too, operation has disclosed either the presence of gallstones, the indubitable evidences of their presence in the immediate past, or the presence of marked inflammation in the gall tract. In every instance, also, drainage of that tract has resulted in the abolishment of symptoms.

While exploration, based on these inaugural symptoms of Moynihan, may occasionally lead us into an operation for cholecystitis without gallstones, this certainly need be no cause for regret. The cholecystitis of itself demands relief. The previous continual suffering of the patient, the associated incapacity for continuous and productive labor, and the subsequent postoperative relief, justify the operation. The fact that inflammatory disease of the gall tract, especially of the gall bladder, is so frequently but a precursory event in gallstone formation, still further justifies the measure, if further justification is necessary.

Taken in connection with these inaugural symptoms, however slight they may be, a history of a preceding attack of typhoid fever is strongly confirmatory of the presence of gallstones. In all such cases the Widal reaction should be undertaken and the urine and feces examined for typhoid bacilli. Positive findings will mark the patient as a typhoid-carrier and exploration will almost invariably disclose the presence of gallstones.

The one great stumbling-block in the way of an early diagnosis of gallstone disease is the allurements of jaundice, which seems to have bewitched the judgment of so many medical men, in that they demand its evidence before admitting the presence of gallstones. Jaundice, however, is an infrequent and inconstant event in gallstone disease and, when present, is as a terminal, rather than as an inaugural one. Too frequently, indeed, does jaundice announce the advanced stage of a secondary chronic pancreatitis. It is high time that the medical profession should break away from the fetish of jaundice; that it should recognize the presence of gallstones by their inaugural symptoms; that it should appreciate the gravity of gallstone complications and sequels, and that it should forestall such complications and sequels by the institution of operative procedures immediately following the establishment of a diagnosis.

234 Michigan Street.

Angioneurotic Edema.—S. Seilikovitch, in the *Archives of Pediatrics*, May, states that in his opinion the condition known as periodic, recurrent or cyclical vomiting, often at first mistaken for acute indigestion or obstruction of the bowels, may be diagnosed by exclusion as angioneurotic edema of the stomach. The same holds good in regard to the condition known as "hydrops articulo-rum intermittens," described by some authors as a distinct disease. Seilikovitch believes that it is simply angioneurotic edema of the joints.

Clinical Notes**ANKYLOSTOMA DUODENALE**

(UNCINARIA AMERICANA) *

JOSEPH LEIDY, JR., M.D.

PHILADELPHIA

Some years ago (1904) the Smithsonian Institution published the collected "Researches in Helminthology and Parasitology," written by the late Prof. Joseph Leidy.¹ The publication consisted of the collected essays and original investigations² from 1844 to 1891. Unusual care was observed that the work should be complete in all details, but, as frequently occurs, owing to the vast amount of scientific literature which now burdens the transactions of our various learned societies, the title of one paper was not catalogued, and the communication was lost to the specialist interested in similar lines of investigation. The brief observations were presented under the title, "Remarks on Parasites and Scorpions, May 5, 1886."

Leidy described three specimens of worms obtained from an anemic cat, presumed to be specimens of *Ankylostoma duodenale*, which were sent to him by Dr. Belfield, of Chicago, for determination. He remarked:

On superficial examination I supposed the worms might belong to *Strongylus tubaformis*, a closely related parasite infesting the cat. The specimens, however, exhibit the same structure of the mouth as is described in the *Ankylostoma duodenale* of man. . . . [description follows].

The finding of this parasite in the cat in this country renders it probable that it may also infest man with us, and is probably one of the previously unrecognized causes of pernicious anemia.

The occurrence of the same parasite in the cat is also of interest, as heretofore it has only been noticed in man.

In reply to the question of Dr. Weir Mitchell as to how the animal gained entrance to the system, Leidy stated:

It is supposed that ankylostoma gain entrance to man through the drinking-water; and if that is the case the cats probably obtain it in the same way. If cats in this country obtain it from the drinking-water it is probable that with us man may do so.

It is curious that it should be found in the cat; generally we find that similar parasitic worms are found only in animals closely related to one another.

So far as we know, the *Ascaris vermicularis* occurs in no other animal than races of men. The cat has its own ascaris and this is found in various species of cats all over the world. There is another found in the dog, which is also found in the wolf. Again, the ordinary tapeworm of the dog is found in all sorts of dogs. I have a specimen from the wolf in the west, and I have another which Dr. Kane obtained from an Esquimaux dog in the north; as I have said, worms of the same species in the same stage usually only infest animals which are closely related.

The original communication was made to the College of Physicians of Philadelphia and was followed by further observations on *Trichina spiralis* and scorpions from Mexico. The date, May 5, 1886, is of historic interest.

1319 Locust Street.

* Read before the Pathological Society of Philadelphia, May 13, 1909.

1. Researches in Helminthology and Parasitology, by Joseph Leidy, M.D., LL.D., with a bibliography of his contributions to science arranged and edited by Joseph Leidy, Jr., M.D., Smithsonian Miscellaneous Collections, Vol. xlv (1904).

2. Originally published in Proceedings of the Philadelphia Academy of Natural Sciences and elsewhere.

QUININ INHALATIONS IN PERTUSSISWITH A CONSIDERATION OF OTHER PETROX
MEDICAMENTS *

H. C. MASLAND, A.M., M.D.

PHILADELPHIA

The physician has possibly no more irritating sense of helplessness than when called to treat a patient with whooping cough. Besought from day to day by a distressed mother for a greater measure of relief, he tries one and another drug, only to realize the inadequacy of them all.

A perusal of the literature demonstrates that quinin, despite all the newer drugs, holds its own. More than a year ago, in looking over some literature on the subject, the proposition to bring quinin for its germicidal effect into immediate contact with the respiratory mucous membrane, attracted my attention.

Michael, forty years ago, recommended the insufflation of quinin and benzoin powder into the nostrils. Litzierich mentions in Ziemssen's Encyclopedia that he tried an inhalation of a solution of sulphate of quinin in one case, but that the child was removed from the hospital too soon for any conclusions to be drawn.

At the present time quinin is usually given internally; when given locally it is in the form of a powder combined with minor drugs, and insufflated into the nostrils. The insufflated powder can reach only the prelaryngeal areas. To me, believing as I do that the infecting germ has its habitat throughout the respiratory mucous membrane, the idea of bringing the drug in contact with the whole tract seemed promising. The frequent use of an acid solution of quinin sulphate, by inhalation as suggested by Litzierich, would be sufficiently contraindicated because of its injurious effect on the teeth. To accomplish this purpose, I experimented with the liquid petrox of the National Formulary. Finding that the ammonia of this preparation caused some irritation of the nasal mucous membrane, I substituted therefor potassium. Using a corresponding portion of potassium hydrate makes a thick solution, requiring warming to liquefy. After considerable experimenting, a solution in which the potassium was considerably lessened in amount was found the most satisfactory.

The following is the stock formula¹ as given me by Mr. W. G. Nebig:

R.	gm. or e.c.	
Potassium hydrate	29.6	fl.38
Alcohol, q. s. ad.....	200	fl.3iss
Of this add:	5	fl.3iss
To		
Oleic acid	10	fl.33
Liquid petrolatum	25	fl.3iss

One ounce of this preparation will readily dissolve 30 grains of the alkaloid quinin. I have directed this to be used in a nebulizer not less than three times daily, preferably oftener. With very young children a mask or canopy over the head may be necessary. Older children will readily take, even ask for it, nebulized directly into the nostrils. In my experience, I have had no trouble in gaining the confidence of the child and being able to give it a concentrated inhalation of the drug.

* Read before the Northwest Medical Society, May 3, 1909.

1. Some preparations are made by dissolving the drug in the alcoholic solution of potash, some, as quinin, in the finished solution. No more alcohol than the amount stated should be used.

Considering the appalling array of drugs that have been offered for the treatment of pertussis, one hesitates to make any assertions. This, however, is no new drug, but one of recognized utility, only presented in a form that is new, and that will the better bring its virtues to bear on the site of the disease.

I am quite convinced of its value. To cite one illustration: In a family of three children, I gave it to the two older and, observing a little resistance on the part of the baby, not quite 2 years old, I treated it with other drugs. The two older, whose cases were severe at the beginning, immediately began to improve. The baby grew worse. The mother, convinced of the benefits derived, then used it of her own accord on the baby. In a few days she succeeded in getting it to take the vapor in a satisfactory manner, and it also showed immediate improvement. The chief difficulty I have met is that, after the first week, the child is so much better that the mother neglects to use the medicine systematically.

In a brief way, I wish to mention some other of these modified petrox preparations which I have had made and which, I believe, possess virtue sufficient to warrant their addition to our armamentarium. Incidentally I might mention that in the iodine preparations of liquid petrox, the ammonia is rather of advantage, considering the uses of the preparation.

Benzoin compound is a preparation that I have used in this potassium petrox solution and have found very soothing in acute inflammations of the respiratory mucous membrane.

Guaiaec is of accepted value in certain forms of tonsillitis and, dissolved in the potassium petrox solution, can be used more frequently than the alcoholic tincture.

Lately, carrying out the suggestion of Dr. B. Alexander Randall, of using dionin for its absorptive effect on cicatricial tissue, I have had made a 3 per cent. solution of dionin. Filling the Politzer bag with this vapor from the nebulizer. I have forced it into the middle ear through the Eustachian catheter. Where there is sclerosis and an old dry perforation, the nebulizer can be directed into the meatus. The value of this drug has hardly had time to be demonstrated, but this method of administration appeals to me as more thoroughly distributive of the drug than as commonly used.

Other resinous and alkaloidal drugs can doubtless be used in the same manner if desired. In closing I wish to express my appreciation of the experimental work and pharmaceutic skill of Mr. W. G. Nebig, which contributed materially to the degree of success so far obtained.

2130 North Nineteenth Street.

SCARF-PIN SWALLOWED BY INFANT

CLARENCE C. PARKS, M.D., LEECHBURG, PA.

A case report in *THE JOURNAL*, April 10, 1909, p. 1180, of a darning-needle extracted from the epigastrium of an infant, brings to my mind a similar case.

Baby A., 9 months old, breast-fed and in every way a healthy child, had in some manner obtained his father's stick-pin from his tie and swallowed it. The father did not miss the pin until ready to go to bed and then supposed he had left it at the barber-shop. The next day, while the mother was changing the baby's napkin, she noticed something protruding from the anus, and on closer inspection discovered it to be the stick-pin with the large part or head of the pin protruding. The pin measured $2\frac{1}{2}$ inches.

CERVICAL DISLOCATION

FRANK M. SHERMAN, M.D.

WEST NEWTON, MASS.

I reported two cases of dislocation of the neck in the *Boston Medical and Surgical Journal*, April 25, 1907. Since that date three additional cases have been seen—one a slight subluxation that was self-reduced during the relaxation of sleep; the other two the cases reported below.

Besides these cases may be mentioned one seen¹ in 1903. This makes a total of six cases in the past five years, five of them during the last two years.

These cases occurred in the practice of four different physicians. This experience tends to establish the probability that the condition is not a rare one, and that its apparent rarity may be due to lack of recognition.

It appears to be true with respect to some diseases that as they have become well understood they have apparently increased in frequency. Appendicitis may be mentioned as an example. Another instance is the disease actinomycosis, of which Dr. Maurice H. Richardson says:²

"Since Dr. C. A. Porter first called attention to the frequency of actinomycosis in the jaw cases at the Massachusetts General Hospital, the number of instances of this disease appearing in different parts of the body was apparently multiplied a hundredfold."

Is it not possible that dislocations of the neck, particularly subluxations, also occur oftener than is supposed? And that the cases which are thought to be torticollis or stiff neck from "cold" are in reality of this nature? Such, at any rate, is my present opinion. I would, therefore, urge careful attention to the points of differential diagnosis, and especially the application of the appropriate movements of reduction in all cases of suddenly acquired stiff neck.

If the articular process on one side has become displaced forward, the head will be more or less tilted toward the opposite side; it may also be rotated toward the opposite side. This is the position in subluxation. If the unilateral dislocation is complete, so that the articulating process has gone far enough to drop down in front of its fellow articulating process, the head will be turned toward the opposite side, but tilted toward the same side as the lesion.

The method of reducing these dislocations, worked out by G. L. Walton, is to make dorsolateral extension and then rotation to place, usually under complete anesthesia; but I have succeeded in one case in reducing the displacement without anesthesia. This treatment is of the greatest satisfaction to the surgeon and of benefit to the patient.

The following cases are of interest, both having occurred during sleep from a sudden twisting movement:

Fifth Case.—A young woman, aged about 19, awoke suddenly in much pain and unable to turn her head. This condition continued during the remainder of the night and the following day, when I was asked to see her and relieve her "stiff neck." The head was tilted to the left and slightly turned to the left; the muscles on the right side of the neck were tense. On the following morning the condition remained much the same. Examination revealed the spinous process of the fourth (?) cervical vertebra about one-half inch out of line with the others. Under ether anesthesia the head was bent diagonally backward and to the left and then rotated to place. At once the condition of the neck was changed from that of rigid stiffness to one of free mobility. On recovery from the anesthetic

1. Walton, G. L.: *Boston Med. and Surg. Jour.*, Oct. 22, 1903.
2. *Boston Med. and Surg. Jour.*, April 9 and April 16, 1908.

there was noted a marked change in the condition and sensations of the patient. Before the manipulation there was stiffness and pain, afterward complete relief from these symptoms. Deep tenderness in the right side of the neck remained, however, and persisted for several weeks.

Sixth Case.—A young man had had a minor degree of the same trouble twice before during the last six months, with recovery. On awakening, Jan. 24, 1909, he felt pain and stiffness in the left side of the neck. It grew worse during the day. The head was tipped decidedly to the right; the muscles on the left side were tense; the left side of the neck was painful and tender. The diagnosis was subluxation of articular process on the left. Bearing in mind the history of previous attacks which were thought to be of the same nature, and that these slight displacements had been self-reduced, I attempted to correct the subluxation without ether; this was found somewhat difficult on account of the spasm of the muscles, but it was accomplished successfully with immediate relief. A stiff collar was applied. Some tenderness persisted for a few days. The collar was worn at night for some time.

CONCLUSIONS

Many cases, perhaps all cases, of suddenly acquired stiff neck, with distortion, or abnormal position of the head, which position the patient is unable to correct because of the pain produced, are cases of more or less pronounced dislocation of the articular processes of the vertebrae.

In the great majority of these cases the articulating surfaces are but slightly displaced, so slightly that many of the dislocations have been self-reduced during sleep or during the relaxation of anesthesia.

These cases may occur during sleep or from direct trauma, as in football, and particularly from sudden turning of the head, especially if the muscles of one side are tense, as when carrying a heavy weight in one hand.

Treatment by laterodorsal extension and rotation is very satisfactory and the extreme cases are probably as amenable as the lighter ones to this treatment.

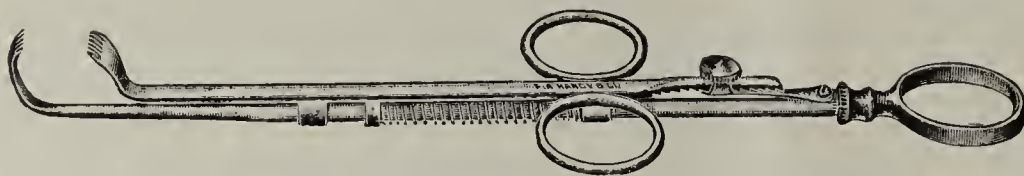
11 Fairview Terrace.

NEW TONSIL-SEIZING FORCEPS

E. E. CLARK, M.D.

DANVILLE, ILL.

All forceps are intended to grasp the tonsil parallel with its long diameter, a procedure which is often difficult. The forceps here described are intended to grasp



Forceps for grasping the tonsil across its short diameter.

the tonsil across the short diameter, which is always easy. The grasping blades are so shaped and toothed that they take a firm hold and do not tear out. When the jaws are opened to the fullest extent they occupy no more space in the fauces than when opened just a little, which is in marked contrast to other forms of forceps.

When the jaws are closed they lock firmly. If one suddenly desires to remove the forceps, the little button near the two rings is touched, and the coiled spring instantly throws open the jaws. If one desires to use the tonsillotome he can pass the forceps through the ring before grasping the tonsil.

MYOSPASM IN WHICH ONE LEG EXHIBITS TONIC, THE OTHER CLONIC, FORM

FRANCIS W. WHITE, M.D.

Demonstrator of Clinical Medicine, Jefferson Medical College
PHILADELPHIA

The following history is given somewhat in detail, which, on account of the oddity of the condition, is permissible:

Family History.—This, though very carefully elicited, shows nothing very interesting. Paternal grandfather, maternal grandmother and aunt suffered from articular rheumatism, the second succumbing to cardiac complications. The brothers and sister are strong and healthy.

Personal History.—The patient is 8 years old, pale, of ordinary muscular development and mentality. At twelve months of age he suffered from cholera infantum, and at five years from whooping cough, followed by measles; he has been otherwise fairly healthy and active until the onset of present condition.

Present Illness.—About eight months ago a mosquito-bite on the left foot, becoming highly irritated, caused the patient to limp on that side, also to turn the toes in on the same side. The limp continued about one month and gradually disappeared with subsidence of the inflammatory condition, but the inversion of the toes has persisted. Shortly after this the child fell and bruised his right knee. This caused him to limp on this side, also to invert the toes of the right foot and to keep the right knee joint perfectly rigid. The local injury was of slight degree, as the signs quickly disappeared. Although of over six months' duration the peculiar gait has not been absent for any appreciable length of time. Since the child has been under observation he has been highly nervous, and while on a sedative treatment the local conditions apparently improved, but it was only temporary, as a strict isolation could not be carried out. Wishing to eliminate any undiscovered orthopedic condition I referred the case to Dr. C. H. Muschitz, whose findings are negative. Later Dr. G. E. Price made an exhaustive neurologic examination.

Examination.—At present the patient is quite irritable and during examinations is extremely nervous. His station is very unsteady but does not display the Romberg sign. When asked to walk he starts off suddenly, the toes of both feet are inverted, and there is marked rotation on the right os calcis. The right knee joint is rigid when the corresponding foot is brought forward, but when the superincumbent weight of the body is brought to bear on it there is an outward and forward rotation, which, with the position of the feet, produce a most extraordinary and awkward gait. This can be completely corrected for a short time by making the patient count rapidly while walking. If the patient is placed in the recumbent position, the maneuver of flexing the thigh on the abdomen and

the leg on the thigh can be accomplished only with difficulty and maintained for but a very short time. The reverse procedure is attended with the same awkward movement as in walking. The left leg does not show the spastic condition or tonic contraction of the other, it being flaccid with at times an irregularly recurring spasm which is slower and more persistent than a choreiform movement, and more coordinate than an athetoid movement. There is no muscular wasting, the legs being about the same size. Both ankle clonus and Babinski's sign are absent and the knee-jerk can not be obtained on account of the spasm. The upper extremities are normal, the grip being equal in both hands and the spasm or twitching are absent. The reflexes are about normal. There are no abnormal conditions to be found in the face and the special senses are not affected. Hysterical stigmata are absent.

Vaginalitis.—Paul Loze, in the *American Journal of Urology*, states that in profuse suppuration of the tunica vaginalis the prognosis is generally serious, as there usually is inflammatory edema of the scrotum, high temperature and a serious general condition. Treatment consists in incision and free drainage.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1909," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(Continued from page 1499)

MERCURIC CYANIDE—Hydrargyri Cyanidum.—Hydrargyrum cyanatum (Pharm. Française, edit. 1908).

Mercuric cyanide, $\text{Hg}(\text{CN})_2$ is the mercuric salt of hydrocyanic acid.

Prussian blue and mercuric oxide in water are boiled until the mixture is brown; the mixture is filtered, acidified with hydrocyanic acid, evaporated and allowed to crystallize in a cool place. It is also prepared by the action of hydrocyanic acid on mercuric chloride. Colorless or white, prismatic crystals, odorless, and having a bitter, metallic taste (the salt is exceedingly poisonous). It is darkened on exposure to light. Soluble at 15°C . (59°F .) in 12.8 parts of water, and in 15 parts of alcohol; in 3 parts of boiling water, and in 6 parts of boiling alcohol; very sparingly soluble in ether.

When slowly heated in a glass tube, the salt decrepitates, and decomposes into metallic mercury and inflammable cyanogen gas, which burns with a purple flame. On further heating, the blackish residue, consisting of para-cyanogen with globules of metallic mercury, is wholly dissipated.

If 1 part of the salt be gently heated with 1 part of iodine in a dry test-tube, it will produce at first a yellow sublimate which afterwards becomes red, and above this a sublimate of colorless, needle-shaped crystals.

On adding hydrochloric acid to the aqueous solution of the salt, the odor of hydrocyanic acid is evolved.

A 5 per cent. aqueous solution of the salt should be neutral to litmus paper, and should not yield, on the gradual addition of a few drops of potassium iodide test solution, either a red or a reddish precipitate, soluble in an excess of the precipitant, nor should it yield a white precipitate with silver nitrate test solution (absence of mercuric chloride).

If mercuric cyanide be dissolved in an aqueous solution of sodium chloride the addition of phenolphthalein to this solution should produce no red coloration (absence of mercuric oxide).

Ammonia should not color an aqueous solution blue (absence of copper) nor should a solution of copper give a brown color or precipitate (absence of potassium ferrocyanide). The presence of large quantities of potassium sulphate may be demonstrated by igniting, leaching the ash and testing the filtrate with barium. Dilute sulphuric acid should not liberate hydrocyanic acid (absence of potassium cyanide). Ammonia should dissolve mercuric cyanide without producing a white precipitate (absence of oxycyanide). (Pharm. Française, edit. 1908.)

Action and Uses.—Mercuric Cyanide has been reported to be as actively antiseptic as mercuric chloride and to be less irritating; but this has been questioned. It is used locally and internally like mercuric chloride.

Dosage.—Internally from 0.004 to 0.008 Gm. (1/16 to 1/8 grain); locally, solutions of 1-4000 to 1-2000 may be used for applications to the eye or other mucous membrane; 25 to 35 minims of a 1 per cent. solution may be used hypodermically without causing local irritation. Death has occurred from the use of a vaginal injection containing 0.9 Gm. (14 grains) of mercuric cyanide.

In diphtheria and croup it is used in 0.01 per cent. solution and as a gargle or internally in doses of 0.0005 Gm.-0.001 (0.0077-0.0154 grain). In rhinitis fibrinosa it is used on a tampon in 0.04 per cent. solution.

KEFIR FUNGI.—A mixture of bacteria and yeasts capable of causing lactic acid fermentation of milk.

Kefir occurs in the form of white irregular roundish bodies, size of a walnut, with a very rough, furrowed surface, and a tough gelatinous consistency. The substance contains *Saccharomyces cerevisiae* (Heyden), *Bacillus acidilactici* (Pasteur), *Dispora Caucasica* (Kern). It acts on milk as follows: Fat, salt and water of the milk remain unaffected. The lactose is gradually decreased and the lactic acid increased. Alcohol is produced along with carbon dioxide. 10 per cent. of the casein is converted into acid albumin and peptones, 10 per cent. into hemialbumose and the rest loses its lime. (U. S. Disp., 19th ed., p. 1540.)

Action and Uses.—Kefir fungi are used for the preparation of fermented milk which contains lactic acid, alcohol, the fats, salt and water of the milk. Kefir milk acts as an easily digestible food in dyspepsia and lack of digestive power. It is

also serviceable in the prevention of intestinal putrefaction.

Dosage.—Kefir kunyss may be prepared by adding active kefir grains to fresh cows' milk, kept at a temperature of 21° - 27°C . (70° to 80°F .) until the effect of fermentation becomes apparent by the rising of the grains to the surface. The grains may then be strained off, and the milk, which now contains sufficient yeast cells to insure continuance of the fermentation, left to itself in well-corked bottles.

TRANSFER OF AGENCY.

Stovaine (see New and Nonofficial Remedies, 1909, p. 123). Formerly sold by Walter F. Sykes, New York, is now sold by the Parmele Pharmacal Co.

ARTICLES DROPPED FROM N. N. R.

Salit (Heyden Chemical Works). The Council, having been informed that this product is advertised in the daily papers in Germany, reconsidered its acceptance and decided to omit it from New and Nonofficial Remedies (see Pharmacology Department, this issue).

Migrainin (Victor Koechl & Co., New York). The Council voted to rescind the acceptance of Migrainin for non-compliance with rules 1 and 6 and to omit the article from New and Nonofficial Remedies (see Pharmacology Department, this issue).
(To be continued.)

Therapeutics

ACUTE ARTICULAR RHEUMATISM

In the *New York Medical Journal*, August 29, and Sept. 5, 12, and 19, 1908, appears a series of articles on the treatment of this disease. Twelve physicians contribute articles in the discussion of this subject.

For the purpose of analyzing the treatment and arriving at a conclusion of the best management of this disease, it seems best to divide the treatment under three heads; general, local, and specific.

GENERAL TREATMENT

The patient, of course, should be in bed, and it is emphasized that he should remain there several days after the temperature has become normal. Five of the writers insist that the patient lie between blankets; two make this optional; and the remainder allow it to be implied that the patient lies between sheets.

The majority order early purgation, and also give calomel, mostly followed by a saline, and one specifies magnesium citrate. One physician gives calomel in divided doses until purgation, which we do not consider good treatment. Daily movements are advised, with sodium phosphate by one contributor, and Rochelle salts by another, and others say "avoid constipation," or "cause daily movements," without stating how they accomplish this. One prefers to use an aromatic fluid-extract of cascara sagrada (*rhamnus purshiana*); another uses an aloin, belladonna, ipecac and strychnin tablet. In other words, it seems generally, as is true in the treatment of all infections and all feverish processes, that a daily movement of the bowels should be caused in the pleasantest manner possible with the least possible pain, and without causing diarrhea; calomel or castor oil as a primary purgative, and whether small doses of a saline, or other gentle laxative, should be used, daily, is a matter of individual choice.

All the authors allow plenty of plain water or mineral water, barley water, or oatmeal water. In other words, plenty of water in a disease that causes so much perspiration and requires so much elimination is desirable and advisable. Lemonade with but little sugar is advised by some, and certainly lemons or oranges may be allowed in rheumatism, even by those who believe that

there is a hyperacidity of the urine or a lessened alkalinity of the blood, as the acids of these fruits really act as alkalies in the system.

The diet generally advised is, of course, light, with milk predominating, and eggs allowed. Certainly the simple cereals may be given, and skimmed milk may be given. While theoretically milk is the correct diet for rheumatism, in individual instances in which it causes fermentation and indigestion, some other food should be substituted. Whether the cause of rheumatism, or the infection, if it is due to a germ, enters the system through the tonsils or through the intestines, it is certainly true that any treatment aimed toward diminishing intestinal fermentation and intestinal stagnation is good treatment, and it should not be forgotten that in administering the specific treatment of rheumatism, viz., the salicylates, we are using the best bowel antiseptics that we possess. Consequently, the best food is that which digests most easily and causes the least intestinal disturbance. Meats should certainly not be given in the acute stage of articular rheumatism. However, it is positively unwise to withhold meat from a patient who has been accustomed to it, for too many weeks. While the products caused by the digestion of meat may aggravate an acute rheumatism, such products are not the cause of rheumatism.

LOCAL TREATMENT

One of the contributors uses ice cold sponge baths as often as every one or two hours, if there is fever. Two others use cold sponging occasionally. One uses hot baths, and one hot water bag applications.

Various liniments for application to the joints are mentioned, but the most approved seems to be Fuller's lotion, which is as follows:

R.	gm. or c.c.	
Sodii bicarbonatis	30	3i
Tinctura opii	50	or fl. ʒiiss
Glycerini	100	fl. ʒiii
Aquæ, ad	500	ad, Oi

M. et Sig.: Use externally, as directed.

Lead and opium wash is mentioned, and one contributor uses a 4 per cent. solution of sodium bicarbonate, and another uses a saturated solution of magnesium sulphate. Two paint the joints with 50 per cent. ichthyol. Ichthyol may be used in water, in olive oil, in glycerin, or in an ointment. One writer advises Paquelin cautery applications above and below the painful joint, and one believes in the Bier hyperemic treatment. All bandage the painful joint, and whatever application is used, it is covered with oil silk, and the bandages are kept wet.

Twelve different combinations of either oil of wintergreen or salicylic acid are mentioned for external use. The following are types:

R.	gm. or c.c.	
Camphoræ	20	3v
Chlorali hydrati	5	or
Olei gaultheriæ	5	āā, gr. lxxv
Alcoholis	30	fl. ʒi

M. et Sig.: Paint over the surface surrounding the painful joint every twelve hours, then cover with cotton and oiled silk.

R.	gm. or c.c.	
Methylis salicylatis	15	
Ichthyolis	15	āā, fl. ʒss
Glycerini	100	or fl. ʒiii
Alcoholis, ad	200	ad, fl. ʒvi

M. et Sig.: Use externally, as directed.

Eight of the contributors splint the painful joint. This is all right where there are only one or two inflamed joints, but it can not be done to a series.

SPECIFIC TREATMENT

Two of the contributors advise very strongly the body hot-air treatment to the exclusion of everything else, as furnishing the greatest benefit in the shortest time in acute articular rheumatism. They would give such baking treatment to the patient once every day for seven days, and then much less frequently. When we consider that local warmth is very acceptable and very soothing to the joints of these suffering patients, when we also consider that there is a tendency to cardiac complication, and nothing more relieves cardiac disturbance than perfect surface circulation, and when it seems a fact that in this disease recovery ensues by profuse sweating and by greatly increased elimination through the skin, and when we know that body hot-air treatment does all these things, it would seem as though this treatment were a perfect one for acute inflammatory rheumatism. Hence, if it is a fact, as it seems to be, that body hot-air treatment can shorten this disease that tends to be protracted, and prevent recurrences of this disease that tends to recur, then, when a patient afflicted with this disease has the ability to go to an institution where such treatment can be carried out, he should be advised to do so. It would also seem that general hospitals should be equipped with apparatus to carry out such treatment of their rheumatic patients.

All contributors use salicylic acid in some form, and it seems to be agreed that it is specific in acute articular rheumatism. The salt most preferred is sodium salicylate, given well diluted, either in water or milk. Strontium salicylate is also recommended, and several of the unofficial salicylate preparations. The amount of salicylate given is large, especially the first day, and less subsequently; as much as 8 or 10 grams (2 to 2½ drams) in the first twenty-four hours.

There are certainly various preparations of salicylic acid which are pleasanter to take than sodium salicylate, but if salicylic acid is desired, it must be given in large enough doses to cause the same symptoms that sodium salicylate would cause. If it is wise to give large doses of salicylic acid, or if it is salicylic acid that combats, or counteracts, or controls rheumatism, then ordinary doses of the preparations that contain only small amounts of salicylic acid can not be satisfactory treatment. If, on the other hand, it is not advisable to give large doses of salicylic acid, then small doses of sodium salicylate can be administered and they will cause no unpleasant symptoms. If large doses should be given or must be given, then unpleasant salicylism or head symptoms may be prevented, if deemed advisable, in the same manner as cinchonism is prevented, either by small amounts of bromids, or morphin, or ergot. Such controlling medication, however, is not often needed, as it is hardly necessary to do more than produce slight salicylism with salicylates. When the system so feels the salicylic acid, certainly enough salicylate is circulating in the blood (and it is probably always absorbed as sodium salicylate) to do all the good that larger doses will do, and as soon as flushing of the face and ringing of the ears occur, the dose and the frequency of the dose should be diminished. Only the salicylates prepared from natural salicylic acid preparations should be administered internally, and sometimes natural salicylic acid in the form of the oil of wintergreen, in 10 minim capsules, every three hours, is good treatment.

In the dose necessary to control rheumatism, sodium salicylate should be given in solution, or it may be ordered in powders, to be drunk after solution. Cap-

sules are likely to cause gastric irritation. Sodium salicylate may be administered as follows:

R. gm. or c.c.
Sodii salicylatis 20 | or 3v
Aque gaultheriæ 100 | fl.ʒiv
M. et Sig.: A teaspoonful, well diluted, every three hours, or as directed.

Or:
R. gm. or c.c.
Acidi salicyli 10 | or
Sodii bicarbonatis sicca 10 | āā, ʒiiss
M. et fac. chartulas 20.

Sig.: One powder, dissolved in water, and drunk while effervescing, every three hours, or as directed.

As soon as the pain is less, the temperature less, the swelling of the joints less, and no new joints become affected, the sodium salicylate should be again diminished in amount and frequency. It should be stopped altogether as soon as the joint symptoms have disappeared, or at the end of a week or ten days. The prolonged use of salicylates is pernicious to the blood and circulation, and serious and protracted anemia and debility have followed its too long use in large doses. On the other hand, as recommended by some of the contributors of the above articles, the substitution, for the salicylate, of potassium acetate, bicarbonate, or citrate, in other words, an alkaline treatment for a series of days, and then again to give the salicylate seems to be very advisable. Potassium citrate is the pleasantest and acts as satisfactorily as either of the other potash salts. It may be given as:

R. gm. or c.c.
Potassii citratis 40 | or 3x
Aque menthæ piperitæ 200 | fl.ʒvii
M. et Sig.: Two teaspoonfuls, in water, every three or four hours.

As soon as the urine becomes alkaline, the frequency of the administration of the alkali should be diminished.

In this disease that tends so frequently to recur, and to recur immediately, it is advisable to give two or three days of the salicylate treatment after a week of the alkaline treatment, and then again every two weeks for several times. It has even seemed advisable to give a child who has had rheumatism a week's treatment of salicylate of soda, in the proper dose for its age, every two or three months after recovery from its primary attack, and then once in six months for several years.

While heat, whether dry or moist, and especially the hot-air body treatment may preclude the necessity of using morphin for pain in this disease, more especially perhaps than in some others, pain can not be endured, and the patient should not be allowed to suffer. A disease that causes pain on every movement, voluntary or involuntary, of the body requires a narcotic, and morphin is often needed, and should be given hypodermatically, or by the mouth, depending on the intensity of the pain, or whether or not, it disturbs the stomach when administered by the mouth. It is rare that codein is strong enough, except in large doses, to stop arthritic pain, and there is really very little difference whether small doses of morphin are given or large doses of codein, as the effect produced is similar. If much morphin is administered so that the patient sleeps and is indifferent to his sensations, he must be aroused periodically and urged to evacuate his bladder.

Ordinarily, the coal-tar analgesics should not be used, as, in the first place, if the pain is severe they are not strong enough, and in the second place the salicylates are debilitating, and no other debilitating drug should be given. If there is high temperature in the early part

of the disease a few doses of acetphenetidinum (phenacetin) may be administered.

In the treatment of this disease, it should be urged that the heart be watched daily by stethoscopic examination, to note as soon as signs of endocarditis occur. This complication is so insidious that it may not cause symptoms appreciable to the patient. There may, however, be an increase of temperature, as there may be cardiac pain or distress. While it is not the object of this article to describe the treatment of endocarditis, it may be stated that an ice bag over the heart may inhibit the inflammation, that the salicylates should be stopped if endocarditis occurs, and that rest and convalescence after such a complication should be greatly prolonged.

Profuse sweating without fever requires frequent spongings with hot water, may require spongings with warm alcohol, and may even require a nightly dose of atropin, from 1/200 to 1/100 of a grain. If the heart has not been affected, ergot may be given for its aid in checking the profuse perspiration.

Certainly during convalescence, and often best after the first ten days or two weeks, iron should be administered. It should be remembered that the diet advised for rheumatism contains no iron, that the disease is debilitating to all the blood-making organs, that the salicylates and alkalies are both debilitants of the blood, and consequently iron is indicated. Many a prolonged anemia following rheumatism is due to the shortage of this needed element in the body. Iron may be administered in any simple manner, as by a 0.05 gram (or 1 grain) capsule of reduced iron three times a day, or by a saccharated oxide of iron (*Eisenzucker*) three grain tablet, three times a day, or as follows:

R. gm. or c.c.
Tincturæ ferri chloridi..... 25 | or fl.ʒi

Sig.: Five drops in a small glass of fresh lemonade, three times a day, after meals.

Circulatory weakness during rheumatic fever may be combated with strychnin, with camphor, with aromatic spirits of ammonia, rarely with alcohol, sometimes with caffein, and exceptionally with strophanthus or digitalis, the latter provided that there has not been prolonged high fever and there is no acute endocarditis present.

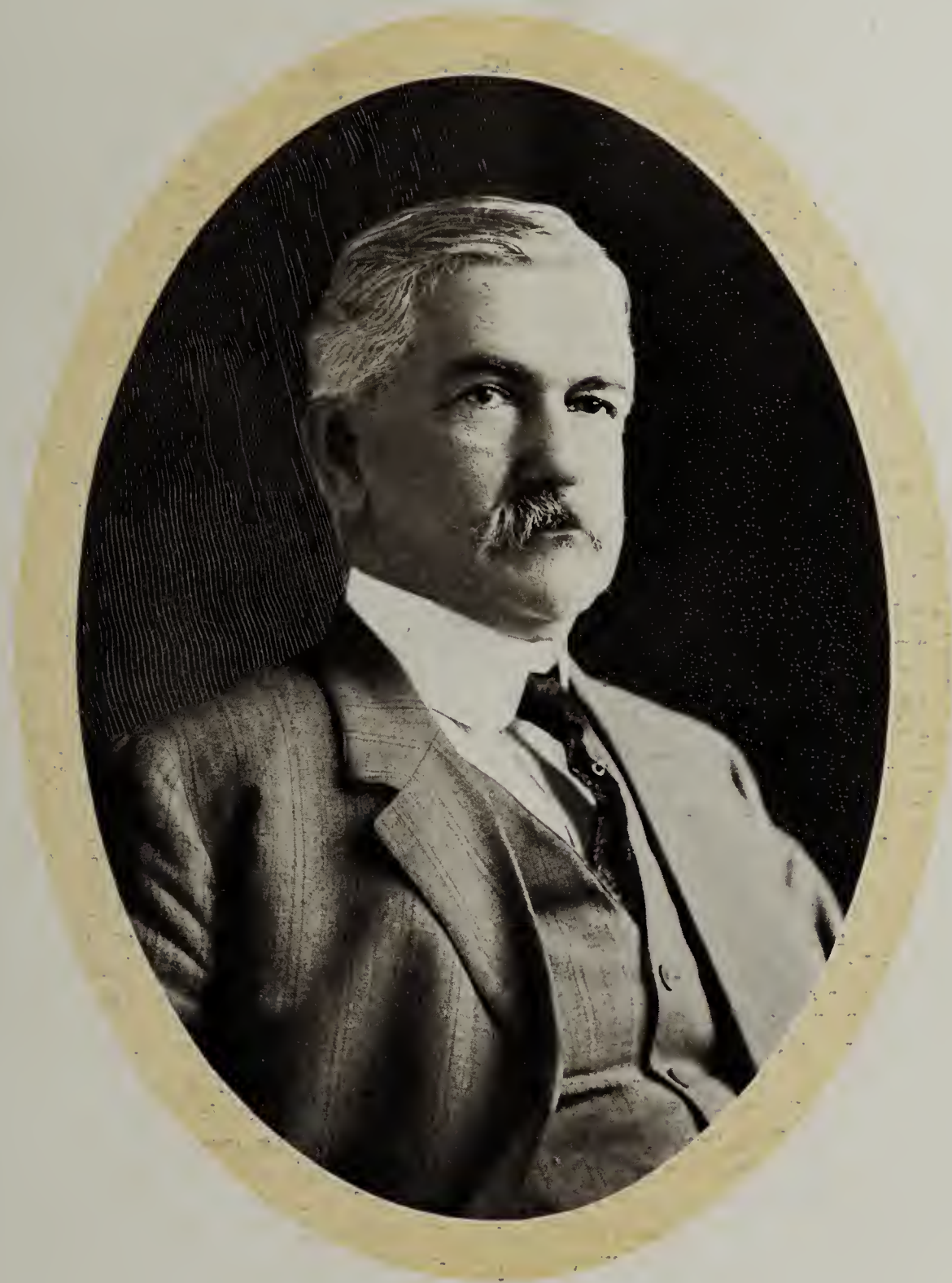
Lees, in the *British Medical Journal*, Jan. 16, 1909, says that part of the lack of successful treatment of rheumatism with salicylic acid is due to the belief that it is a heart depressant. He insists that it is not detrimental to the heart, and that all unpleasant "side effects" may be prevented by giving sodium bicarbonate coincidently in twice the amount of the salicylate. The initial adult dose is 15 grains, given ten times the first twenty-four hours, or 150 grains for the first day. He would then increase each dose for the second day by at least two grains, viz., 20 grains more than the first day, and would again increase the third day, such increase continuing until the temperature is and remains normal. With each dose of salicylate, however, he would give twice as much bicarbonate of sodium. He believes the cause of the cardiac complication is due to the acids of the toxins of the disease, and that the way to combat this is by alkaline salt, because potash is slightly depressing to the heart, and soda almost not at all.

His initial dose for a child from seven to twelve years of age is 10 grains, and ten doses a day, or 100 grains the first day, and then increased as above.

When the symptoms are all ameliorated, Lees then gradually reduces the twenty-four hour dose of salicylate.

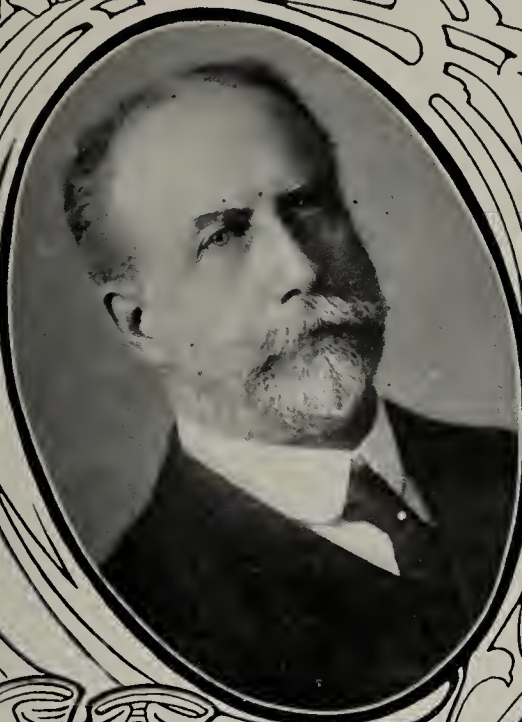


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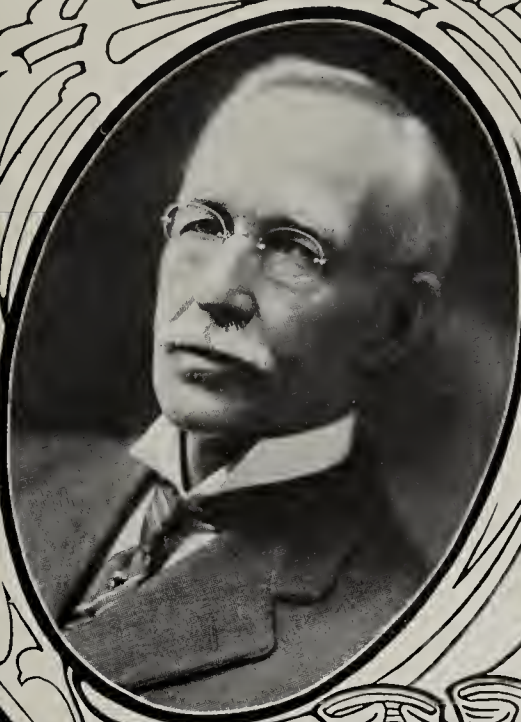


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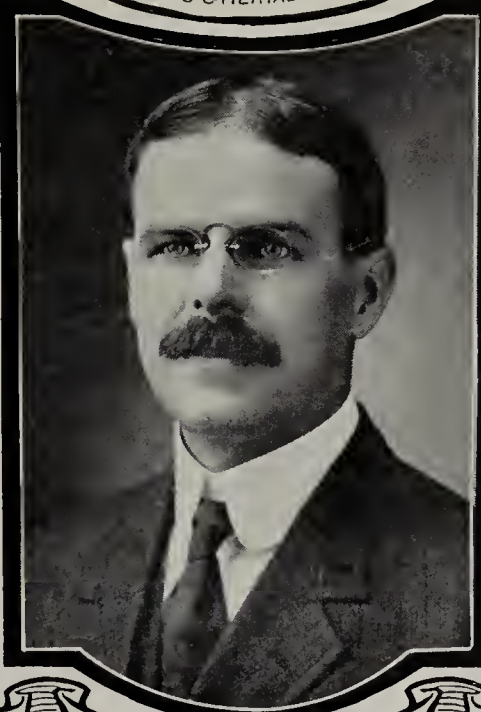
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[For other information see second page following reading matter]

SATURDAY, JUNE 5, 1909

THE CLINICAL ANALYSIS OF GENERAL SENSATION

From the careful analysis of the nervous symptoms in a very large number of cases of visceral disease and of lesions of the peripheral nerves and spinal cord, a group of English neurologists has recently made important additions to our knowledge of the cutaneous sensations, their peripheral nerves and central conduction paths.¹

It appears that the afferent nerves of general sensation are very much more complex than has hitherto been supposed. We may consider these pathways in three sections: (1) the peripheral division, carrying the impulses to the surface of the spinal cord; (2) the intraspinal division, and (3) the cerebral division. The limits of the peripheral division do not coincide with those of the peripheral neurone. The justification for this treatment lies in the observed character of the sensory disturbances in the central and peripheral courses of the path, peripheral lesions producing a wholly different type of symptom-complex than central. The explanation for this is to be sought in the phylogeny; the spinal roots being the most conservative part of the path, functional adaptations developed in the course of the phylogeny have taken different directions centrally and peripherally from this fixed point. Observation shows that the root fibers of the segmental spinal nerves and their associated secondary paths are so rearranged within the spinal cord as to bring together fibers conducting the same kinds of impulses from different segments into functionally homogeneous tracts.

In general sensation (exclusive of visceral sensations), Head distinguishes three types of sensibility. These are confused in the spinal roots, but may be separated in the peripheral nervous system, so that a peripheral lesion may affect one and not the others. These systems are:

1. See the following works and the literature there cited:

Head, Rivers and Sherren: *The Afferent Nervous System from a new Aspect*. Brain, 1905, xxviii, pp. 99-115.

Head and Sherren: *Injury to the Peripheral Nerves in Man*. Brain, 1905, xxviii, pp. 116-338.

Head and Thompson: *The Grouping of Afferent Impulses within the Spinal Cord*. Brain, 1906, xxix, p. 537.

Brief summaries of these papers will be found in Brain, 1906, xxix, p. 742.

Sherren: *Injuries of Nerves*. New York, 1908, William Wood & Co.

1. Deep sensibility. This system is preserved after destruction of all afferent cutaneous fibers. Pressure can still be recognized and discriminated. Pain can be felt on application of a measurable pressure and the point of application of the pressure can be localized. Movements of the muscles can be recognized and also passive movements of the joints.

2. Protopathic sensibility. This is essentially punctate sensibility. The sense organs seem to be arranged in definite spots (for heat, cold or pain), but the sensations have no clear local sign. They may be recognized diffusely or else clearly referred to points remote from the spot stimulated, but rarely to the point of stimulation. This is subjectively general diffuse sensibility of a primitive phyletic type. Hair bulbs are innervated from this system. Its loss abolishes cutaneous pain, especially pricking, burning or freezing; sensations of heat from temperatures above 45 degrees C.; sensations of cold from temperatures below 20 degrees C.

3. Epieritic sensibility. Here belong light touch, especially on hairless parts, cutaneous localization, discrimination of compass points and discrimination of intermediate degrees of temperature ("warm" and "cool"). This system appears to be of later phylogenetic origin than the others. In regeneration of nerves it appears long after protopathic sensibility of the same areas of skin.

Painful stimuli may reach the spinal cord either through the peripheral protopathic or the deep peripheral system, and analgesia produced by peripheral lesions is always associated with the loss of the tactile elements of the corresponding sensation complex in the analgesic area. Superficial pain may be lost without loss of deep pain, but never without disturbance of superficial protopathic touch and temperature sensations. But when pain in a region is abolished by a lesion within the spinal cord, all pain (both deep and superficial) may be lost, with no disturbance of either deep or cutaneous tactile sensation. This shows that the protopathic and deep peripheral systems have lost their individuality as such on entrance into the spinal cord, the pain elements of each having been separated from the tactile and related to a common pain tract in the spinal cord.

The spinal redistribution of temperature nerves is even more striking. Destruction of either epieritic or protopathic fibers peripherally disturbs both heat and cold. If epieritic sensibility is abolished, the patient can not discriminate intermediate temperatures, but is sensitive to extremes. If the protopathic also is abolished, even extreme temperatures are lost. If either heat or cold is disturbed in these cases, the other is affected also. But a spinal lesion may abolish either heat or cold separately, and will abolish both intermediate and extreme degrees of sensibility, and that, too, perhaps with no disturbance of any form of tactile sen-

sibility—a condition which could not arise from any form of peripheral lesion. All nerves for heat or cold reach a single spinal path, regardless of the path by which they enter the spinal cord.

The tactile functions are centralized in a similar way in the cord. Light (epicritic) touch is frequently dissociated from protopathic touch and pressure by peripheral lesions; never by central lesions. If tactile sensibility is lost at all in the latter case, all forms disappear from the area affected. Again, passive position and movement are always associated with deep sensibility in general in the peripheral nerves; but in the spinal cord they may be dissociated from all other forms of deep sensibility. In the epicritic peripheral system the discrimination of two points (compass test) is always associated with sensitiveness to light touch; but in the spinal cord these may be dissociated. All forms of tactile sensibility may be perfect in the case of a spinal lesion, and yet the discrimination in question be totally lost. This function has a certain physiologic independence, and these cases show that it has also an anatomic separateness.

The clinical study of the deep, protopathic and epicritic sensations is a matter of great difficulty, because of the rarity of uncomplicated lesions adapted to elucidate their relations and because few patients are either sufficiently well trained in introspection to give an accurate account of their sensations or able to devote the time necessary for their study. Accordingly, Dr. Head submitted himself to a carefully planned nerve lesion in order to be able to study the subjective phenomena at first hand in detail.²

In April, 1903, the radial and external cutaneous nerves of Head's arm were divided and during the succeeding five years the phenomena of restoration of function were very carefully studied by Head and Rivers. Immediately after the operation, though the skin supplied by the divided nerves was totally anesthetic, deep sensibility, as defined above, was found unimpaired under the same region. After about 50 days protopathic sensibility began to return, and for nearly a year thereafter the affected area showed deep and protopathic sensibility only, after which time epicritic sensibility slowly returned.

In this manner, opportunity for a very thorough study of the three types of sensibility was afforded. The result is a confirmation and considerable extension of the analysis of cutaneous sensibility previously made on other patients.

A similar but less extensive study of sensations following the division of a peripheral nerve has since been made at the Government Hospital for the Insane at Washington by Dr. Franz.³

MEDICINE AND THE LAY PRESS

The relations between medicine and the press form the subject of a thoughtful address¹ by Dr. G. W. Crile, before the Section of Experimental Medicine of the Academy of Medicine of Cleveland. To what is due, he asks, the changed attitude of the public and the press toward medicine, as evidenced in the desire for medical items, which leads the newspapers nowadays to invade the privacy of the physician: whereas, aforesaid, it was a fair presumption that such items appearing in the newspapers were not likely to be spontaneous, but had their source in the inspiration of the medical man. Crile sees in this change a realization by the public of the fact that medicine, by the rising tide of science, has come almost unexpectedly into the gravest of responsibilities, both private and public, and finds itself wielding a new and mighty power, affecting not alone the ordering of the life of the individual, but much of the conduct of the municipality and the state. It is making possible a world-wide conquest of the tropics by the white man, influencing commerce and industry at large, and adding year by year to the expectancy of life. In appreciation of this work, the public has invested it with continually growing authority and responsibility, and has provided vast sums for it to be applied not only in the immediate relief and prevention of disease, but in study and research for further means thereof. It is but natural, therefore, that the public should feel itself interested in this great work that is being done under its auspices; and the profession, for its part, concedes the principle of publicity, in certain directions, in the public interest. Exception is taken rather to the form and to the matter of the publication of medical items than to such publication in itself. The trouble between the physician and the editor, in Crile's opinion, lies in a lack of editorial discrimination in the use of medical items and of the appreciation of the rights of physicians. It is clear, however, that it would be impossible in these days to keep medical items of interest from the press, and Crile asks whether, even if it were possible, it would be desirable to do so. The press may be the most powerful means of influencing the public in those beneficent lines so much desired by the medical profession. The employment of a staff physician, therefore, or the submission of medical news to reasonable supervision by an authoritative committee, is suggested by Crile as the means of satisfying the needs alike of the public and the press, without, at the same time, trenching on the rights of the physician.

It is to be remembered, in viewing this subject, that the objection to the publication of medical details rested on the individualistic basis of medicine. It was due almost solely to the likelihood of its abuse as a mode of advertising, and to the consequent insult to the profession as a body that such "commercialism" on the part of any of its members entailed. That objection

2. Rivers and Head: A Human Experiment in Nerve Division. *Brain*, 1908, xxxi, pp. 323-450.

3. Sensations following Nerve Division. *Jour. Comp. Neur. and Psych.*, 1909, xix, 1 and 3.

1. *Cleveland Medical Journal*, May, 1909.

still holds good, so far as the medical news relates to the professional capacity, status or doings of individual physicians. But with the growth of scientific medicine, the individualistic basis has been replaced by a communal one, and there has arisen, as Crile points out, a desire in the public for information as to the progress of this science, just as it desires information as to the progress of all other sciences. It is not only permissible, but even desirable, to gratify this natural curiosity, provided that in so doing the interests of the individual are not sought in place of those of the public and of the profession at large.

There is, however, a further limitation, arising out of a regard for the interests of the public itself. Some would reply that the public best knows its own interests. That is not entirely true. If it were, why pass laws to interfere with absolute freedom of contract in regard to hours and conditions of labor, and many other similar points that will readily suggest themselves? This limitation arises from the fact that premature or inaccurate publication of supposed medical discoveries may do infinite public harm in various ways; e. g., by arousing unrealizable hopes, and so causing naturally anxious invalids to postpone until too late the resort to measures of efficiency, and even, may be, to expose themselves in addition to actual and positive danger. Moreover, not only themselves, but many others also, may be thus exposed, through the creation of a sort of "boom" in unconfirmed and possibly altogether harmful practices, based on theories of the most nebulous nature or on observations or experiments full of inaccuracy or defective in method.

The problem is so to draw the line as to permit of giving the fullest and earliest accurate information to the public, without pandering to the self-seeker or exposing the public to these insidious dangers.

VOLUNTARY CLOSING OF MEDICAL COLLEGES

During the past five years no less than thirty medical colleges, either through merger or otherwise, have voluntarily closed their doors, such action being taken chiefly that higher standards of medical education might prevail. The majority of these were fairly strong schools, and to close them required many sacrifices on the part of their faculties; nevertheless that action was deliberately taken. This was true in Indiana, in Kentucky, in Ohio, at Minneapolis and at other places, and the spirit thus manifested is the greatest promise that fair educational standards will eventually be established throughout this country.

The reasons for the closing of these medical schools are practically the same as those clearly set forth by the dean of another college which has voluntarily closed its doors and which is referred to on another page.¹ The action taken by this Nebraska college is another step in

the progress being made toward fewer but better equipped medical schools. When it is considered that a few years ago this country had almost as many medical colleges as all the rest of the world combined and that in general the standards were decidedly lower than in other countries, the mere fact that the number of our medical schools is gradually being diminished is in itself encouraging. But the fact that the medical faculties themselves are voluntarily closing their colleges, or raising their standards, influenced only by their recognition of the needs of modern medical teaching, is far more important. Reforms that come voluntarily from the colleges themselves are bound to be more certain, more enduring and more in the development of an improved medical pedagogy.

The advancement of medical standards during the past few years has been remarkable, and we are now entering on what may prove to be a great era of reconstruction in medical education. The number of medical colleges in five years has been reduced from 166 to 148. On the other hand, with few exceptions, those which remain have been elevating their standards, improving their facilities and methods of teaching, and in every respect have developed into stronger medical schools. The number of medical schools requiring one or more years of college work for admission has increased in five years from 4 to 25 and will be further increased to 48 or 50 by next year.

But the goal is not yet reached. The spirit that has already been manifested by our medical teachers in subordinating personal interests for those of higher educational standards leads us to feel that in a very few years the medical schools of the United States will be equal, if not superior, to those of any other country.

GELATIN AS A FOOD IN INTESTINAL DISEASE

Gelatin belongs to the group of substances known as albuminoids. It resembles proteids in that it is converted into peptones by digestion, gives the biuret reaction and has many amino acids in common with proteids; it differs from them, among other ways, in not having certain molecules, the tryptophan and tyrosin radicles. It is easily digested and readily absorbed by the intestinal mucosa and to many persons is palatable in moderate quantities for a long period of time.

Years ago, Voit, and later Munk, found that, while gelatin was not able entirely to replace proteids, it had great value in sparing them, in this respect far surpassing fats and carbohydrates. More recently others have called attention to the food value of gelatin, especially in certain gastrointestinal diseases. Murlin¹ found that under certain conditions as much as 63 per cent. of the total nitrogen necessary for the body could be supplied in the form of gelatin. Herter² discusses

1. *Am. Jour. Phys.*, 1907, xix, p. 285.

2. *Infantilism from Chronic Intestinal Infection*. Macmillan Co., New York, 1908.

1. Department of Medical Education, this issue.

at considerable length its value as food and the advantages it possesses in inhibiting certain forms of intestinal decomposition. Proteids contain the tryptophan and tyrosin molecules, and these substances may give rise to harmful products in the intestinal canal. Tryptophan, for example, in the process of decomposition, forms skatol, indol and other products harmful in excessive quantities; from tyrosin arise phenol derivatives of several varieties which in case of excessive putrefaction may be formed and absorbed in quantities sufficient to produce symptoms of intoxication. Again, carbohydrates can not be tolerated at times because of the excessive fermentation which they induce.

Herter calculates that one ounce of gelatin will yield about 120 calories, or from 10 to 15 per cent. of the entire calorie requirements of the organism in twenty-four hours. This amount of gelatin may easily be added to the milk of a child during the period of twenty-four hours, which at times may be of the greatest importance for nutrition. By applying these facts in a practical way in the feeding in cases of infantilism caused by intestinal intoxication, Herter obtains results which appear to indicate that the value of gelatin in such cases is considerable. For instance, in cases of excessive fermentation in which carbohydrates can not be tolerated, gelatin added to milk, fermented in order to remove the sugar, is found to be an excellent food for the child and also decreases the intestinal decomposition. And on account of the absence of the tyrosin and tryptophan radicals in gelatin the phenol, indol and skatol derivatives may be diminished when it is used to replace the proteid constituents of the food. Thus, without decreasing the nutritive value of the food, the toxic products are greatly lessened.

It is interesting that some organisms (*Bacillus bifidus* and *B. infantilis*), commonly found in the intestinal tract and probably associated with certain gastrointestinal disturbances, will not grow on gelatin media even outside the body, while on carbohydrate and proteid media they flourish luxuriantly. This is another reason for the substitution of gelatin for carbohydrates and a portion of the proteids in infections of this character.

Herter summarizes the value of gelatin as a food thus: It has a considerable degree of calorie value; as a partial substitute for carbohydrates, fats and common proteids, it is valuable; it is incapable of undergoing putrefaction based on the presence of the tryptophan or tyrosin molecules; it is promptly absorbed; it is unable to support certain specific forms of bacterial life associated with certain intestinal diseases.

Medical News

ALABAMA

Convicted of Manslaughter.—Dr. W. L. Noel, charged with killing Jesse E. Roberts, town marshal of Boaz, is said to have been found guilty of manslaughter, May 1, and sentenced to imprisonment for seven years in the penitentiary. The usual notice of appeal was given.

Elections.—At the annual meeting of the Alumni Association of the Medical Department of the University of Alabama, Mobile, the following officers were elected: President, Dr. Samuel G. Gay, Selma; vice-presidents, Drs. Parker J. Glass, Mobile, and W. A. Sellars, Montgomery; secretary-treasurer, Dr. Percy J. Howard, Mobile, and orator, Dr. J. Maxwell Austin, Wetumpka.

ARIZONA

Antituberculosis Association Organized.—On May 22, the Arizona Association for the Study and Prevention of Tuberculosis, in affiliation with the national association, was organized with the following officers: President, Dr. John W. Foss, Phoenix; vice-presidents, K. C. Babcock, Tucson; Dr. John E. Bacon, Tombstone, and Rev. J. E. Critchfield, Phoenix; secretary, Dr. John W. Flinn, Prescott; treasurer, Lloyd Christy, Phoenix, and consulting medical board, Drs. Otto E. Plath, Phoenix; Harry T. Southworth, Prescott; W. Vincent Whitmore, Tucson, and William D. Cutter, Bisbee.

State Society Meeting.—The eighteenth annual meeting of the Arizona Medical Association was held in Prescott, May 18-20, and the following resolutions were unanimously adopted:

Stimulated by the clear and comprehensive study on preventive medicine given this morning by Dr. W. Jarvis Barlow, of Los Angeles, we, the committee appointed to draw up resolutions embodying his suggestions, submit the following:

1. *Resolved*, That the Arizona Medical Association recommends the formation of an Arizona Public Health Association, whose object shall be a study of public health problems, the education of the public and cooperation with the various boards of health of Arizona.

2. *Resolved*, That the Arizona Medical Association recommends the compulsory registration of all contagious and infectious diseases, including tuberculosis and compulsory vaccination of school children and systematic revaccination.

3. *Resolved*, That the Arizona Medical Association recommends that such legal steps be taken as will insure thorough inspection and regulation of the milk supply.

4. *Resolved*, That the Arizona Medical Association appoint a committee of five to report through its official organ, the *Practitioner*, and to the secretaries of the county societies, such information as they can obtain regarding public health legislation and organization and to formulate a definite program to lay before the constitutional convention of Arizona, and that on the recommendation of this committee a special meeting of the Arizona Medical Association be called to adopt such a program.

The following officers were elected: President, Dr. Robert N. Looney, Prescott; vice-presidents, Drs. John W. Foss, Phoenix; William D. Cutter, Bisbee, and Edward S. Godfrey, Tucson; secretary, Dr. John W. Flinn, Prescott; treasurer, Dr. Enoch B. Ketcherside, Yuma, and essayist, Dr. W. Warner Watkins, Phoenix. Phoenix was selected as the place of meeting for 1910.

CALIFORNIA

State Board of Health Appointed.—The governor has appointed the following members of the State Board of Health: Drs. Martin Regensberger, San Francisco; Wallace A. Briggs, Sacramento; Newell K. Foster, Oakland; Frank K. Ainsworth, San Francisco; W. Le Moyne Wills, Los Angeles, and James H. Parkinson, Sacramento.

Alumni Meeting.—At the annual meeting of the Alumni Association of the College of Physicians and Surgeons, San Francisco, May 18, the following officers were elected: President, Dr. Thomas Fletcher; vice-presidents, Drs. Frederick C. Keck, and C. O. Forester; secretary, Dr. Charles M. Troppmann, and treasurer, Dr. Charles A. Faulkner.

Hospitals.—Construction work on the Peninsula Hospital, Palo Alto, has been commenced. The building and grounds will cost \$60,000, and the building is expected to be ready for occupancy October 1.—The Dempsey Hospital, Vallejo, is being enlarged, and the new part of the building will contain seven rooms, including a large operating room and accessories.

Personal.—The Board of Health of Fresno has elected the following officers: President, Dr. Warden T. Barr; health officer, Dr. George H. Aiken, and bacteriologist, Dr. Grace Hopkins.—Dr. Neil F. Robinson, Monrovia, who has been seriously ill with appendicitis, is said to be improving.—Dr. Asbury N. Loper has resigned as city health officer of Fresno.—Dr. William J. Hosford, Alameda, is reported to be critically ill as the result of being run over by a bicycle.

State Board Appointed.—The following appointments of members of the State Board of Medical Examiners were announced by Governor Gillette, May 12: Drs. D. L. Tasker, Los Angeles; W. H. Stiles, San Bernardino; William M. Mason, Lodi; Charles Clark, San Francisco; Charles L. Tisdale, Alameda; J. Henry Barbat, San Francisco; William W. Roblee, Riverside; Walter Lindley, Los Angeles; Fred R. Burham, San Diego; George F. Reinhardt, Berkeley, and W. W. Vanderburg, San Francisco.

Graduation Exercises.—The graduation exercises of the Oakland College of Medicine and Surgery were held May 27. The chief addresses were given by Hon. Henry A. Melvin, Dr. J. Wilson Shiels, San Francisco, and Rev. Homer J. Vosburgh. The commencement exercises of Cooper Medical College, San Francisco, were held May 11, when degrees were conferred by Mayor Edward R. Taylor, on a class of 21. The address was delivered by Rev. F. W. Clampett. A class of 11 was presented with diplomas at the thirteenth annual commencement exercises of the College of Physicians and Surgeons, San Francisco, May 19. The presentations were made by Dr. Winslow Anderson, president of the institution, and the doctorate oration was delivered by Hon. S. B. Woods.

DISTRICT OF COLUMBIA

Medical School Commencement.—The annual closing exercises of the Army Medical School were held May 29. A class of 29 was graduated, and the principal address was delivered by Dr. Roswell Park, Buffalo, First Lieutenant, Medical Corps, U. S. Army.

Hospital Contract Awarded.—The contract for the construction of the seven two and one-half story buildings for the Naval Medical School Hospital on the old observatory grounds, Washington, has been awarded to the Thompson-Starrett Co. for \$223,205.

Personal.—Dr. William C. Borden has been appointed dean of the Georgetown University School of Medicine, vice Dr. William F. R. Phillips, and Dr. John R. Wellington has been made clinical professor of surgery. Dr. J. C. Blackstone has been appointed physician to the poor, vice Dr. James A. Watson, retired.

ILLINOIS

Another Osteopathic Bill Defeated.—After one of the bitterest fights that has taken place in the House of Representatives this session, during which an unsuccessful attempt was made to remove the Secretary of the State Board of Health from the floor for leading the opposition to the bill, Senate Bill 351 failed of passage at 2:30 o'clock, May 30, four hours before the adjournment of the General Assembly. It appeared from the first roll-call that the bill had been passed. A verification was then demanded by the opponents of the measure, who charged that members who were not in the hall had been voted. The verified roll-call showed that only 63 members had voted for the bill, or 14 less than a constitutional majority. Senate Bill 351 was probably the most pernicious osteopathic measure ever introduced in Illinois. It aimed to confer on osteopaths "all the rights and privileges of physicians and surgeons"—to quote from the bill, and to require the State Board of Health to license certain osteopaths without examination.

Chicago

Drops Eclecticism.—Bennett College of Eclectic Medicine and Surgery announces officially the change of name to Bennett Medical College.

Fracture Clinic.—Dr. William Hessert conducts a fracture clinic every Saturday afternoon at 2:30 at Alexian Brothers' Hospital, corner Racine and Belden avenues, to which medical men are invited.

Illegal Practitioners Fined.—Mrs. C. Hanson and Stanislaw Sajowski, accused of practicing medicine without a license, are said to have been found guilty and fined \$100 each by juries in Municipal Judge Fry's court.

Personal.—Dr. and Mrs. Heman H. Brown have sailed for Europe. Dr. and Mrs. Arnold C. Klebs sailed for Europe May 23. Dr. Edward A. Fischkin has been elected president of the Chicago Hebrew Institute. Dr. William F. Rittenhouse has been elected president of the Menoken Club.

Zone of Quiet Invaded.—The superintendent of Wesley Hospital has made a protest to the Board of Education against the erection of a new school building on the block bounded by State, Dearborn, Twenty-fifth and Twenty-sixth streets, which is within the "Zone of Quiet" established around the Wesley Hospital.

MARYLAND

Personal.—Dr. Daniel B. Sprecher has been elected mayor of Sykesville. Dr. Victor F. Cullen has been re-elected superintendent of the Maryland State Sanatorium for Tuberculosis.

Bail Forfeited.—In the case of the State versus Dr. William B. Merritt, Easton, under indictment for criminal malpractice, and released on \$5,000 bonds, the defendant did not appear

when the case was called, May 25, and the bail was forfeited, the judge refusing to reduce the amount of the bond.

Legislation for the Insane.—The State Lunacy Commission has directed its secretary, Dr. Arthur P. Herring, Baltimore, to confer with the attorney general in drawing up two bills for presentation to the legislature; the first of which provides for an appropriation of \$400,000 for the erection of additional buildings for 400 new patients at the Springfield Hospital, and for the establishment of a special hospital for the negro insane; the second bill gives the Commission power to transfer insane patients from the county almshouses to the State Hospital, and makes it obligatory on county authorities to obey the orders of the Commission, and provides for supervision of the county asylums by the Commission.

Baltimore

Mayo to Lecture.—It is announced that Dr. Chas. H. Mayo, Rochester, Minn., on the invitation of the Faculty of Physic, will deliver a course of lectures at the University of Maryland in the fall on "Diseases of the Thyroid Gland."

Auxiliary Formed.—The wives of members of the Medical and Chirurgical Faculty of Maryland met at the new Medical Hall May 25, and organized the Ladies' Auxiliary of the Widows' and Orphans' Fund, and entered on an active campaign to raise a large fund, to be immediately available, for this excellent charity. The fund now amounts to \$1,074, invested in 5 per cent. securities; it is in the hands of the Faculty, and only the interest can be used for the charity.

Commencement.—The twenty-seventh annual commencement of the Woman's Medical College was held May 27. A class of 5 was graduated, and the address to the graduates was delivered by Dr. Howard A. Kelly. Dr. Guy L. Hunner, president of the board of trustees of the college, presided. The annual commencement exercises of the College of Physicians and Surgeons of Baltimore were held June 2. The University of Maryland, at its commencement, May 31, graduated a medical class of 89.

MASSACHUSETTS

Bequest.—By the will of the late William B. Rice, Quincy, \$20,000 is devised to the Quincy City Hospital, and the suggestion is made that \$200,000 be employed for the establishment of a hospital and home for aged, a home for unfortunates, or a technical school.

Society Meeting.—At the annual meeting of the Essex North District Medical Society, held in Lawrence, May 5, the following resolution was adopted: "The Essex North District Medical Society recommends to its fellows that when called to make an examination with other physicians of a case where testimony in court is likely to follow, they make this examination on the basis of a professional consultation." The following officers were elected: President, Dr. Charles E. Durant, Haverhill; vice-president, Dr. Warren W. Pillsbury, Newburyport; secretary-treasurer, Dr. J. Forrest Burnham, Lawrence; corresponding secretary, Dr. Roy V. Baketel, Methuen; auditor, Dr. William H. Merrill, Lawrence; supervising censor, Dr. Leyander J. Young, Haverhill; censors, Drs. Frank B. Pierce, Haverhill; Robert M. Birmingham, Lawrence; John A. Magee, Lawrence, and John A. Fitzhugh, Amesbury; councilors, Drs. Leyander J. Young, Haverhill; Israel J. Clarke, Haverhill; Charles G. Carleton, Lawrence; Frank M. Snow, Newburyport; J. Forrest Burnham, Lawrence; John A. Douglas, Amesbury; Ernest H. Noyes, Newburyport, and Frederick E. Sweetsir, Merrimac; commissioner of trials, Dr. John F. Croston, Haverhill; nominating councilor, Dr. Israel J. Clarke, Haverhill, and alternate, Dr. Charles G. Carleton, Lawrence.

NEW JERSEY

Camden Physicians Elect.—At the annual meeting of the Camden City Medical Society, Dr. William I. Kelchner was elected president; Dr. William H. Pratt, vice-president, and Dr. Joseph W. Martindale, secretary.

Addition to Sanatorium.—The authorities of the Newark Tuberculosis Sanatorium, which is located at Verona, have purchased for \$7,000 twenty-four and one-half acres to be added to the grounds of the institution.

NEW YORK

No Negligence Shown.—In the Supreme Court, April 8, the case of Charles Barton against Dr. John H. Martin, Binghamton, for \$5,000 damages for alleged malpractice, was decided in favor of the defendant, and motion for a new trial was denied.

Bequests to Hospitals.—By the will of the late Peter F. Collier, New York City, bequests of \$2,000 each annually for ten years were made to St. Joseph's Roman Catholic Hospital, Syracuse, and the Hospital for Incurable Consumptives in the Bronx.

New York City

Position of Pathologist Vacant.—The salaried position of pathologist in the German Hospital and Dispensary is vacant. Application with curriculum vitae may be sent to the president of the institution, Mr. August Zinsser, German Hospital, Seventy-seventh street and Park avenue.

Personal.—Dr. Hugh Angus Stewart, a graduate of Edinburgh, has been appointed adjunct professor of pathology in the College of Physicians and Surgeons.—Dr. Arthur H. Bogart was struck by a taxicab May 24, and suffered a fracture of the left leg and contusions all over the body.—Dr. Edward O. Park has been appointed attending physician of the fresh air department of the New York Association for the Improving of the Condition of the Poor.

Hospitals Benefited.—The Hospital Saturday and Sunday Association collected for the fiscal year \$85,752, or about \$2,000 more than for the preceding year. Of this amount \$72,000 was distributed among 43 hospitals in Manhattan and the Bronx. Montefiore Home and Hospital for Chronic Invalids received \$7,200; Mount Sinai Hospital \$7,200; St. Luke's Hospital, \$4,411; the German Hospital, \$3,439; the New York Infant Asylum, \$3,043; the Society of the Lying-in-Hospital, \$2,923; Hospital for the Relief of the Ruptured and Crippled, \$2,920, and the Post-Graduate Hospital, \$2,814. Eight additional hospitals received sums exceeding \$2,000, and seven others received over \$1,000. Smaller sums were divided among the remaining hospitals.

Quarterly Report of Bureau of Records.—This is a condensed quarterly report of the Bureau of Records, for the quarter ended March 31, 1909. The estimated population for the first quarter of 1909 was 4,564,792; for 1908, 4,422,685; the deaths in 1909 numbered 19,058; in 1908, 20,306; the death rate for 1909 was 16.94; for 1908, 18.43; the corrected death rates (non-residents and infants under one week not included) for 1909 was 16.04; for 1908, 17.24; the births in 1909 numbered 30,185; in 1908, 32,655; the marriages numbered in 1909, 9,632; in 1908, 9,557; the stillbirths in 1909 numbered 1,740; in 1908, 1,927. The total number of deaths in January, 1909, was 6,297; February, 5,743; March, 7,018; a total of 19,058, giving a death rate of 16.94 per 1,000 of the population against an average of 20,531 deaths and a death rate of 20.04 per 1,000 for the corresponding quarters of the preceding five years, a decrease of 3.10 points. If the numbers of deaths from the principal causes and at certain age groups are compared with those of the preceding quinquennial averages, corrected to correspond with the increase of population, the following increases and decreases will be found: Decreases—Typhoid fever, 23; smallpox, 1; measles, 33; scarlet fever, 54; whooping cough, 2; diphtheria, 80; influenza, 180; pulmonary tuberculosis, 323; other forms of tuberculosis, 57; meningitis, 305; cerebrospinal meningitis, 227; apoplexy, etc., 605—latter due to more accurate certification of cause of death—acute bronchitis, 180; lobar pneumonia, 890; bronchopneumonia, 140; diarrheal diseases under 5 years of age, 68; Bright's disease and nephritis, 306; old age, 79; violent deaths, 160 (deaths by accidents, 150; deaths by homicides, 20); congenital debility, 89; under 1 year of age, 404; under 5 years of age, 813; between 5 and 65 years, 2,320; 65 and over, 354. Increases—Cancer, 40; organic heart diseases, 156; suicides, 10.

NORTH CAROLINA

Commencement.—At the annual commencement of the Leonard School of Medicine of Shaw University, Raleigh, recently, a class of 23 was graduated.

Personal.—Dr. James R. Reitzel, High Point, was seriously injured in a runaway accident recently.—Dr. W. R. McCain, formerly of Waxhaw, S. C., has located at Charlotte.—Dr. E. C. Laird, formerly of Chase City, Va., has located at Greensboro.

District Society Meeting.—The third annual meeting of the Sixth District Medical Society was held in Chapel Hill April 29. Dr. George W. Long, Graham, was elected president; Dr. Isaac H. Manning, Chapel Hill, vice-president, and Dr. James M. Templeton, Cary, secretary.

State Society Meeting.—The annual convention of the Medical Society of the State of North Carolina will be held at the Battery Park Hotel, Asheville, June 15-17. The State Board of Medical Examiners will hold its annual examination at the same place, beginning June 9.

Communicable Diseases.—During April, 87 of the 95 counties of the state reported contagious diseases as follows: Measles, 29 counties; whooping cough, 47 counties; scarlet fever, 23 counties; diphtheria, 23 counties; typhoid fever, 25 counties; malarial fever, 6 counties; influenza, 18 counties; pneumonia, 63 counties; cerebrospinal fever, 4 counties; mumps, 5 counties; roseola, 1 county; chickenpox, 2 counties, and smallpox 22 counties.

Health Superintendents Elected.—Dr. James L. L. McCullers, McCullers, for Wake county; Dr. J. Rufus McCracken, Waynesville, for Haywood county; Dr. Daniel E. Sevier, Asheville, for Buncombe county; Dr. William S. Anderson, Wilson, for Wilson county; Dr. Marvin L. Smoot, Spencer, for Rowan county; Dr. Lawrie J. Arnold, Lillington, for Harnett county; Dr. John W. Wallace, Concord, for Cabarrus county, and Dr. J. K. Pepper, Winston-Salem, for Forsyth county.

Optometry Examiners Appointed.—The governor has appointed a state board of examiners in optometry as provided for by the recent session of the legislature. In the statute creating the board, optometry is defined as "the employment of any means other than the use of drugs, medicine or surgery for the measurement of the powers of vision, and the adaptation of lenses for the aid thereof." The passage of this act was unfortunate, will, it is believed, tend to lower the professional standard in the state, and emphasizes the need of alertness on the part of the legislative committee of the state society.

OHIO

Alumni Election.—At the election of the Starling-Ohio Medical College Alumni Association, May 18, Dr. A. C. Elder was elected president; Dr. Maybelle Richards, secretary, and Dr. Robert Drury, treasurer.

Tuberculosis Hospital to Be Erected.—It has been decided to erect a tuberculosis hospital for Franklin county to cost \$150,000, and to accommodate 150 patients. The present hospital is inadequate and there are already nearly 80 on the waiting list.—At a meeting of delegates from Montgomery, Preble, Greene, Miami, Darke and Shelby counties, held in Dayton, May 18, it was decided to establish a district tuberculosis sanatorium at the Brookside Sanatorium on the Covington Pike, near Dayton.

Commencement Exercises.—At the annual commencement exercises of the Cleveland College of Physicians and Surgeons, Medical Department of Ohio Wesleyan University, May 20, a class of 16 was graduated. The faculty address was delivered by Dr. Milton J. Lichty, and the commencement address by Rev. Frank W. Luce, and Rev. Herbert Welch, president of the university, presented the diplomas.—A class of 50 was graduated from the Starling-Ohio Medical College, Columbus, May 18. President O. W. Thompson of the Ohio State University presented the diplomas, and Rev. Washington Gladden delivered the annual address.

Personal.—Dr. Starling Loving, Columbus, of the class of 1849, Starling Medical College, was the guest of honor at the reunion and banquet of the class of 1898, May 18.—Dr. Edward V. Hug has resigned as a member of the staff of St. Joseph's Hospital, Lorain.—Dr. Ira J. Mizer, day physician at the state penitentiary, Columbus, has resigned.—Dr. Harry D. Belt, Kenton, has been commissioned Major Surgeon of the Second Infantry, Ohio N. G., vice Major Franklin B. Entrikin, Findlay.—Dr. E. H. Rorick, superintendent of the Athens State Hospital, has resigned.—Dr. John F. Jones, Columbus, has been made chairman of the Columbus-Lincoln Centenary Committee.

Cincinnati

Donation to Hospital.—Nicholas Walsh, Cincinnati, has donated \$1,000 to St. Elizabeth's Hospital to be used for the construction of a laboratory for the institution.

Personal.—At the meeting of the faculty of the Ohio-Miami Medical College, May 10, Dr. E. Otis Smith was elected secretary.—The Academy of Medicine on May 17, presented the names of the following ten physicians to the mayor, from which the new health board is to be selected: George A. Fackler, Julius H. Eichberg, Samuel E. Allen, Allan Ramsey, David I. Wolfstein, Charles H. Castle, Christian R. Holmes, John H. Landis, Alfred Friedlander, and John E. Griewe.

OKLAHOMA

Fires in State Asylum.—Fire at the Oklahoma Hospital for the Insane, Fort Supply, April 14, due to a prairie fire, destroyed several buildings and caused a loss of \$75,000. By the exertion of the attendants a panic was averted, and no casualty occurred. Another fire occurred a day or two later

which caused small damage, and a third fire, April 12, destroyed the main hospital building. No lives were lost, but it was necessary to carry 56 of the 59 patients out of the building.

OREGON

Commencement.—Degrees were conferred on a class of 15 graduates of the Medical Department of the University of Oregon by President E. L. Camp of the University, May 3.—The annual address was delivered by Prof. Samuel E. Elliott, and the charge to the graduates by Dr. Robert C. Yenney.

Personal.—Dr. Esther C. Pohl, health officer of Portland, has resigned.—Dr. and Mrs. Luther H. Hamilton, Portland, have returned from Europe.—Dr. John N. Smith, Salem, has been appointed physician of the state penitentiary.—Dr. Osmon Royal, Portland, has been appointed a member of the State Board of Medical Examiners, vice Dr. Byron E. Miller, Portland, retired.

To Build State Sanatorium.—The governor on May 22 announced the appointment of the following members of the tuberculosis commission: For four years, A. L. Mills, Portland, and Robert Booth, Eugene; two years, Mayor George F. Rogers, Salem, and Leslie Butler, Hood River. The commission will supervise the erection of a sanatorium for the treatment of tuberculosis, for which \$20,000 was appropriated by the legislature. The act also carries an appropriation of \$25,000 for maintenance of the institution.

PENNSYLVANIA

Susquehanna Officers Elected.—At the meeting of the Susquehanna County Medical Society, held in Montrose, May 11, the following officers were elected: President, Dr. H. Hewitt Hooven, Harford; vice-president, Dr. Asa L. Hickok, Rush; secretary, Dr. Edward R. Gardner, Montrose; treasurer, Dr. John G. Wilson, Montrose, and censors, Drs. J. G. Wilson, Abram E. Snyder, New Milford, and Arthur J. Taylor, Hopbottom.

Railroad Fatalities Increase.—The report of the state railroad commission on accidents on the railroads of Pennsylvania, during the three months ended March 31, shows a total of 1,999 casualties as compared with 1,998 in the corresponding quarter of last year. The fatalities number 236 as against 145 for the same period in 1908. Of the persons killed, 74 were employes, 5 passengers, and 144 trespassers. Of the injured, 1,369 were employes, 153 passengers, and 162 trespassers. As compared with a year ago there was an increase of 92.77 per cent. in the number of trespassers killed and a decrease of 31 per cent. in the grade-crossing fatalities.

Antituberculosis Campaign.—The North Penn Clinical Society has just closed a successful antituberculosis campaign of four weeks, the pioneer effort in that section along the lines of public education. The exhibit covered six towns in four weeks, the campaign opening at Quakertown, April 24, and closing at Lansdale, May 19, with a total attendance of 18,000. The exhibit remained two days in each town and included personal demonstrations during the day and lectures in the evening by the recognized state and national leaders in the work. The demonstrations were conducted by the various members of the society and local physicians. A number of the towns have followed up the work by organizing local societies to cope with local conditions. The executive committee of the society was as follows: Dr. Walter H. Brown, Richlandtown, chairman; Dr. Francis F. Borzell, Cressman, secretary and treasurer; and Drs. A. C. Biehn, Quakertown; Mahlon B. Dill, Perkasio; Alfred E. Fretz, Sellersville; LeRoy H. Saxe, Telford; Morris B. Oberholtzer, Souderton; and John J. Bauman, Lansdale.

Philadelphia

Typhus Patients Recovered.—The two men who came from Russia on the steamship *Russia*, April 11, and were seized with typhus fever soon after landing, were discharged from the municipal hospital, recovered, May 12.

Floating Hospital For Poor Babies.—Following the lead of Boston and other cities in the operation of a floating hospital for babies of the poor, plans are being made to start a similar institution in this city. One hundred children will be cared for daily on the ship. The total cost for the season is estimated at \$1,000. Mr. Robert K. Cassatt has offered the use of a properly equipped barge for the purpose.

College Commencement.—The fifty-seventh annual commencement of the Women's Medical College of Pennsylvania was held May 26, when 24 graduates received the medical degree and the annual address to the class was delivered by Dr. Frederick P. Henry. Dr. Clara Marshall, dean of the college,

delivered a congratulatory address, and Mary E. Mumford, president of the college, conferred the degrees.

Bequests.—The will of the late Samuel E. Appleton bequeaths \$10,000 to the Episcopal Hospital, to be used as an endowment for two beds as a memorial to his deceased wife.—The will of the late Anna N. Murpha bequeaths \$2,000 to St. John's Orphan Asylum; \$2,000 to St. Joseph's Orphan Asylum; \$2,000 to St. Vincent's Home; \$2,000 to the Little Sisters of the Poor; \$1,000 to the House of the Good Shepherd, and \$1,000 to St. Joseph's Home for Boys.

Ex-Resident Physicians Organize.—A reunion of former resident physicians of the German Hospital was held at the University Club, May 7. An organization was effected and the following officers were elected: President, Dr. Henry F. Payne; vice-president, Dr. Isador P. Strittmatter; secretary-treasurer, Dr. John C. Gittings, and historian, Dr. A. P. Miller.—The ex-resident physicians of the Samaritan Hospital, at a meeting held May 26, elected the following officers: President, Dr. William McKeage; vice-president, Dr. William A. Hitchler; secretary and treasurer, Dr. Ernest B. Mongel.

Personal.—The medical and pharmaceutical fraternity of the Fifteenth Ward gathered at the home of Dr. Reuel Stuart, who has practiced medicine for fifty-four years in the city, in honor of Dr. Stuart's eightieth birthday anniversary.—Dr. Ferdinand G. Angeny, formerly of Philadelphia, but more recently of Phoenix, Ariz., has gone to Avon-by-the-Sea, N. J., for the summer, and will return to Phoenix, in September.—Dr. Alexander C. Abbott, chief of the bureau of health, has resigned to resume the duties of professor of hygiene and bacteriology in the University of Pennsylvania.—Dr. A. C. Abbott was presented with a handsome colonial clock by the attaches of his office on his retirement, June 1.—Dr. Charles R. Heed sailed for Europe May 26.—Dr. George L. Megargee was given a farewell dinner by his medical friends, May 26, and was presented with a silver loving cup.

Municipal Hospital Opened.—Philadelphia's new Hospital for Contagious Diseases, comprising a group of 46 buildings, located on a tract of 58 acres at Second and Luzerne streets, was opened for formal inspection by Mayor Reyburn and the Director of Public Health and Charities, Dr. Neff, June 1. At the present time 21 of the 46 buildings are completed and will be ready for occupancy July 1. The buildings yet to be built will be exact duplicates of the buildings now ready, with the exception of the administration building and storehouse. The administration building is a three-story brick structure, provided in the rear with a three-story storehouse, which contains an ice manufacturing plant with a capacity of ten tons a day. There are four general wards for scarlet fever patients, each two stories high, a private ward for pay patients and an observation building, comprising fourteen small houses under one roof. The buildings are connected by an outside corridor, several hundred feet in length, by means of which entrance may be made to any one building without passing through another. Six brick cottages are provided for the isolation of malignant cases. Each is a hospital in itself with a ward for two to four beds; has a separate entrance and is provided with a nurse's room and diet kitchen. The observation building contains 14 miniature hospitals under the same roof, each separated from the other. These will be used to observe patients until a positive diagnosis has been made, when they will be transferred to their special department. The wards are so lighted that direct rays of light never fall on a patient.

TEXAS

Sanitarium Located.—The locating committee of the West Texas Baptist Sanitarium has decided to accept the bid made by Stamford, which offered \$56,000.

District Society Meeting.—At the annual meeting of the Northwest Texas Medical Association, held in Mineral Wells, April 20, Dr. Wade H. Walker, Wichita Falls, was elected president; Dr. Harold L. Warwick, Fort Worth, vice-president, and Dr. E. Perry Bass, Mineral Wells, secretary.

Ambulance Companies.—Under the reorganization of the medical corps of the Texas National Guard, San Antonio, Dallas and Houston are named as district headquarters, at which detachments of the hospital corps composed of twenty men each will be established. The detachment in San Antonio is under the command of Capt. Robert L. Dinwiddie, M.D.; that in Dallas is commanded by Lieut. Fred B. Johnson, M.D., and that in Houston by Major J. Lindsey Short, M.D.

UTAH

Hospital Notes.—Mrs. Thomas D. Dee, Ogden, has decided to build a hospital in that city in memory of her husband, to cost at least \$100,000, and to accommodate from seventy-

five to one hundred patients.—Drs. Thomas G. Odell, Murray, and Hardie Lynch, Salt Lake City, have leased and reopened the Murray General Hospital.

Health League Organized.—The Utah Health League, the object of which is to promote public health through sanitation and the prevention of disease, has been organized in Salt Lake City with the following officers elected by the board of directors: Dr. James E. Talmage, Salt Lake City, president; Dr. Fred E. Clark, Logan, vice-president, and Mrs. C. H. McMahon, Salt Lake City, secretary-treasurer.

State Board Election.—At a recent meeting of the newly appointed Board of Medical Examiners of the State of Utah, the following officers were appointed: President, Dr. David C. Budge, Logan; secretary, Dr. George F. Harding, Salt Lake City, and treasurer, Dr. Amasa S. Condon, Ogden. The regular meetings of the board of examiners are held on the first Monday of January, April, July and October.

Personal.—Dr. Herbert S. Pyne, Provo, has been elected secretary and executive officer of the Utah County Board of Health. The other medical members of the board are Drs. J. Franklin Noyes, American Fork, and Albert G. Stoddard, Spanish Fork.—Dr. George A. Dickson, Ogden, has been elected physician of the State Industrial School, his term of office to begin July 1.—Dr. Raymond J. Powers, Ogden, had a narrow escape from death April 15, by accidentally taking a large amount of carbolic acid.—Dr. Daniel H. Calder has been reappointed medical superintendent of the State Mental Hospital, Provo.

VIRGINIA

Sanatorium Opened.—The Johnston-Willis Sanatorium, completed at a cost of \$75,000, was opened for patients May 25. The hospital will accommodate 55 patients and will be under the charge of Drs. George B. Johnston and A. Murat Willis.

Commencements.—The seventy-first annual commencement exercises of the Medical College of Virginia, Richmond, were held May 19, and a class of 49 was graduated. Dr. Christopher Tompkins, dean of the faculty, delivered the faculty address, and the annual address was delivered by President Charles H. Denny, Washington and Lee University.—The annual commencement exercises of the University College of Medicine, Richmond, were held May 18, when a class of 41 was graduated. Joseph D. Eggleston, Jr., superintendent of public instruction, addressed the graduating class, and Dr. Stuart McGuire, president of the college, gave the faculty address.

Personal.—Dr. Stuart McGuire has been re-elected president of the board of trustees of the University College of Medicine, and Dr. John Dunn, secretary-treasurer.—Dr. Lewis C. Boshier has been re-elected president, and Dr. Charles R. Robins, secretary-treasurer of the Memorial Hospital Corporation, Richmond.—Robert F. Williams, superintendent of the State Sanatorium for Tuberculosis, has resigned.—Dr. S. H. Burton, Parnassus, has been elected district councillor.—Dr. S. Harrison Smith, Alexandria, who is now in Panama, has accepted a position as physician to a railway company in Brazil.—Dr. William F. Creasy, Newport News, has succeeded Dr. William F. Cooper as state quarantine officer.

WASHINGTON

Personal.—Dr. William L. Hall has retired as president of the board of health of Spokane.—Dr. John H. O'Shea has succeeded Dr. Burchard H. Roark as physician in charge of the Spokane City Emergency Hospital.

New Medical Society.—A medical society has been organized, consisting of physicians of Green Lake, Fremont, Ballard and University district of Seattle, with Dr. Josiah L. Millett, Mountainview, as temporary president, and Dr. Harry C. Dyer, Green Lake, as temporary secretary.

State Board Appointed.—The governor has appointed the following as the State Board of Medical Examiners: Drs. Frank P. Witter, Spokane; Edward J. Taggart, Bremerton; A. Macrae Smith, Bellingham; Howard R. Keylor, Walla Walla; E. Weldon Young, Seattle, and George H. Dow, Chehalis.

Medical Department of Alaska-Yukon-Pacific Exposition.—Dr. Edmund M. Rininger, in charge of the medical department of the Alaska-Yukon-Pacific Exposition, Seattle, announces that a modern equipped emergency hospital has been installed, and that a room has been set aside for visiting physicians where they may receive their mail, write letters, etc. He invites physicians visiting the exposition to have their mail sent in care of the Emergency Hospital.

Unlicensed Doctors Immune.—Judge John B. Yakey, of the King County Superior Court, decided, on May 16, that curative

theories of any character for the relief of human diseases may be put in practice in the state of Washington between that time and June 12, without requiring license from the State Medical Board. The decision was in the case of J. Meacham and Ronald Strath, charged with practicing medicine without license, and the court sustained the demurrer of the defendants, which resulted in the dismissal of the charge.

Hospital News.—Plans are being prepared for the additions to the new Fannie C. Paddock Memorial Hospital, Tacoma. The entire institution, when completed, will consist of nine buildings, and will have cost about \$300,000.—By the will of the late Mrs. Henry Fuhrman, \$10,000 is bequeathed to the Orthopedic Hospital, Seattle.—The new hospital for the Seattle Children's Home was formally opened May 4. The building has been erected at a cost of \$7,500, and is designed as an isolation hospital for contagious diseases. There are six beds in the dormitory and two separate wards, besides a sun room, physician's room, etc.

CANADA

Hospital News.—A woman's hospital has recently been established in Toronto by the Salvation Army, and another is to be established in Montreal, of which Dr. A. Lorne Gilday will be superintendent.

Tuberculosis Institute.—The Tuberculosis Institute has recently been chartered at Montreal. Dr. W. H. Drummond is president of the organization and Drs. Thomas G. Roddick, E. Persillier La Chapelle, and J. George Adami are vice-presidents.

Personal.—Dr. Frederick P. Drake, London, has been selected to represent the Ontario Medical Association at the International Medical Congress, Bucharest.—Dr. Edward W. Archibald, Montreal, has started for Naples.—Drs. Walter W. Chipman and J. R. Goodall, Montreal, have returned from Europe.—Drs. John L. Day and Hyman Lightstone, Montreal, have gone abroad for study.—Dr. Alexander McPhedran has been elected president of the Toronto Academy of Medicine.

Antituberculosis Convention.—The ninth annual meeting of the Canadian Association for the Prevention of Tuberculosis was held in Hamilton, May 20, and the following physicians were elected officers: President, Dr. J. George Adami, Montreal; vice-presidents, Sir James A. Grant, M.D., Ottawa, and Drs. Louis Laberge, Montreal; Gordon Bell, Winnipeg; and J. A. Hutchinson, Montreal; and lecturer, Dr. George D. Porter, Toronto. The name of the association was changed from the Canadian Association for the Prevention of Tuberculosis and Other Forms of Tuberculosis to the Canadian Association for the Prevention of Tuberculosis.

GENERAL NEWS AND COMMENT

Jefferson Alumni Elect.—The fourth annual meeting and banquet of the New England Association of Jefferson Medical College graduates was held in Hartford May 26. The following officers were elected: President, Dr. Adam S. McKnight, Fall River, Mass.; vice-president, Dr. John T. Farrell, Providence, R. I.; secretary, Dr. Angus MacOdrum, Boston, and treasurer, Dr. Whitfield N. Thompson, Hartford.

Much Quinin Used.—During the calendar year of 1908 more than a ton and a quarter of quinin was used by the department of sanitation in the Canal Zone for the prevention of malaria by administrative prophylactic doses, to supply a tonic to the employes, and in the treatment of the 12,372 cases in the hospital, and the 23,000 cases in the sick camps. Quinin is dispensed free to any one who applies for it, whether he be an employe of the commission or not.

Pediatricists' Election.—At the annual meeting of the American Pediatric Association, held in Lenox May 25 and 26, the following officers were elected: President, Dr. David L. Edsall, Philadelphia; vice-presidents, Drs. D. J. Miller, Atlantic City, and Edward W. Saunders, St. Louis; secretary, Dr. Samuel S. Adams, Washington, D. C. (re-elected); treasurer, Dr. Charles H. Dunn, Boston, and recorder and editor, Dr. Linnaeus E. La Fetra, New York City. Washington was selected as the next place of meeting.

Tuberculosis Foes Elect.—At the annual meeting of the National Society for the Study and Prevention of Tuberculosis, held in Washington May 13-15, the following physicians were elected to office: President, Dr. Edward G. Janeway, New York; second vice-president, Dr. Henry Sewell, Denver; secretary, Dr. Henry Barton Jacobs, Baltimore; treasurer, Dr. George M. Sternberg, Washington, D. C., and executive committee, Drs. William H. Baldwin, Washington; Herman N. Biggs, New York City; George M. Kober, Washington; John H. Lowman, Cleveland, Ohio, and Joseph P. Walsh, Philadelphia.

Health in the Canal Zone.—During March, there were 4 deaths among white employes in the Canal Zone, equivalent to an annual rate of 3.90 per 1,000. During the same month there were 32 deaths among the total force, equivalent to an annual rate of 8.76 per 1,000. Including the civil population of the zone, there were 72 deaths, equivalent to a death rate of 11.67 per 1,000, and taking the total population, there were 184 deaths or an annual mortality of 17.05 per 1,000. The constantly-sick rate of 20.60 per 1,000 is very small as compared with the statistics of similar bodies of men elsewhere.

Personal.—Dr. Walter B. Swift, Boston, was elected president of the Anglo-American Medical Association of Berlin, April 17, and has taken the apartment of the late president, Dr. Honan, at 78 Lutzowstrasse.—Dr. Raymond F. Bacon of the chemical division of the Bureau of Science, Manila, is spending five months in the United States.—Dr. Elijah J. Neathery, Sherman, Texas, has been made one of the vice-presidents of the 'Frisco System Medical Association.—Dr. A. E. Mayner, acting health officer at Panama, sailed for the United States May 4, and Dr. John G. Evans has been detailed as acting health officer during his absence.—Drs. John L. Phillips, Ancon; M. E. Connor, Cristobal, and F. R. Curney, Corozal, have been elected officers of the Canal Zone Branch of the American National Red Cross.

Mortality Statistics.—In the annual report of the census bureau covering 1907, it appears that during the registration area including 15 states and 76 large cities, there were 687,034 deaths, the death rate being 16.5 per 1,000 as compared with 16.1 per 1,000 for the year before. The highest death rate, 18.6 per 1,000, is reported from California, and New Orleans is said to have had the highest city death rate, 24 per 1,000, Denver coming next with 23.25 per 1,000, followed by Fall River, Mass., with 22.25, and Washington with 20.3 per 1,000. In every instance the cities had larger death rates than the country. Chief among death causes were pneumonia, tuberculosis, heart disease, violence, intestinal diseases and kidney diseases in the order named. Marked increases were shown in deaths from influenza, pneumonia and heart disease. The deaths of children under five years of age made up 26.8 per cent. of the total, and 19.1 per cent. was made up of deaths of infants under one year of age.

National Purity Congress.—The fifth annual congress of the National Purity Federation will be held in Burlington, Iowa, October 18-22. The officers of the association are: President, B. S. Steadwell, Lacrosse, Wis.; vice-presidents, Dr. Howard A. Kelly, Baltimore, and Hon. Ben B. Lindsey, Denver; corresponding secretary, Miss Julia E. Morrow, 104 Ralph street, Spokane, Wash., and treasurer, Charles A. Mitchell, Cherokee, Okla. The object of the congress is to secure the cooperation of all societies, national, state and local, that are considering the promotion of purity in the life of the individual and in social relations, and inaugurating a forward movement to arouse the conscience of the people to organized vice and the operations of its promoters, and assure to all a high standard of morality and a right knowledge of the pure life. A general invitation is extended to all interested in the cause, and organizations are requested to send delegates to the congress.

Health of the Philippine Islands.—During the fourth quarter of 1908, the acting director of health in the Philippine Islands, reports that there were 7,330 cases of cholera in the provinces with 4,292 deaths, equivalent to a death rate of 58.55 per cent. These cases were from 29 provinces and 186 municipalities, the largest number of cases and the lowest death rate being in northern Visaya. Cholera became epidemic in Manila in September; the maximum number of cases was reached September 20, when sixty cases were reported. Twelve days later the daily number of cases was reduced to five, and the epidemic may then be said to have been eradicated. The cases that appeared in December were probably due to infection introduced from Rizal provinces. The principal factor in the difficulty encountered in the eradication was insanitary conditions, namely, lack of sufficient public closets, lack of sufficient public hydrants, lack of proper street drainage, and insanitary nipa shacks in the district. During the quarter 24 lepers were transferred from San Lazaro Hospital, 2 from Mindoro, 4 from Romblon, and 97 from Cebu to the Culion Leper Colony.

The Carroll Fund.—The following subscriptions have been received since the last report:

Medical Officers of the Army.....	\$ 40.00
Sheridan Co. Medical Society, Sheridan, Wyo.....	10.00
Denver County (Colo.) Medical Society.....	11.15
Dr. Marshal Fabyan, Boston.....	10.00
Dr. George H. Weaver, Secy. Chicago Pathological Society.....	2.00
Dr. C. H. Bunting, Madison, Wis.....	5.00
Medical Society of the County of New York, Dr. Charles H. Richardson, Treas.....	150.00
Dr. Wm. S. Halsted, Baltimore.....	10.00

Medical Society of the County of New York..... 38.00

Contributors:

Dr. H. Seymour Houghton, Pres.....	\$ 5.00
Dr. Gerhard H. Cocks.....	2.00
Dr. F. Tilden Brown.....	5.00
Dr. Walter Mendelson.....	10.00
Dr. Frederic E. Beal.....	2.00
Dr. M. C. O'Brien.....	2.00
Dr. M. Mislig.....	2.00
Dr. S. M. Landsman.....	1.00
Dr. S. A. Knopf.....	5.00
Anonymous.....	2.00
Dr. H. E. Gardiner.....	1.00
Dr. J. V. D. Young.....	1.00
Dr. Harvey Cushing, Baltimore.....	10.00
Dr. St. Elmo Sanders, Kansas City, Mo.....	5.00
Saunders County Medical Society, Ashland, Neb.....	10.00
Dr. Guthrie McConnell, St. Louis.....	5.00
Dr. John Winters Brannan, New York.....	5.00
Dr. James E. Newcomb, New York.....	5.00
Dr. Henry G. Piffard, New York.....	5.00
Dr. W. Freudenthal, New York.....	2.00
Dr. Charles E. North, New York.....	1.00
Dr. Addison W. Baird, New York.....	1.00

\$ 330.00

Previously reported \$3,825.65

\$4,155.65

Twenty-one hundred and seventy dollars is still to be raised, of which nearly one thousand is in sight. Send all subscriptions to Major M. W. Ireland, Surgeon-General's Office, War Department, Washington, D. C.

FOREIGN

Typhus and Bad Economic Conditions in Russia.—A moving account of conditions in Russia is presented in a long letter from Moscow in the *Münchener med. Wochenschrift*, May 18, signed by Dr. A. Dworetzky. It states that the epidemic of typhus which has been raging in Russia during the last few months, and which has cost the lives of so many physicians and nurses, far surpasses the cholera epidemic both in its extent and intensity. The waves of the epidemic are growing constantly higher and spreading to new regions, as he shows by the official statistics from Astrachan, Odessa, Charkow, Kiev, and a dozen other widely scattered departments. Besides exanthematous typhus, relapsing fever and typhoid are making numerous victims. In Moscow alone there were 773 cases of typhus last November and December, January and February, and 1,223 of relapsing fever. In the Charkow district there were 1,880 cases of typhus during the last two months, with 3,150 cases of typhoid and 575 cases of relapsing fever. There are at present in the overcrowded Charkow hospitals 400 typhus or typhoid patients. All this epidemic of typhus and typhoid is unmistakably the result of conditions in the prisons, which even the authorities admit. In 1896 the prisons contained an average of 85,000 inmates, but ten years later, he says, "after the 'freedom' and 'constitution' manifestoes," the number of inmates jumped at once to 111,500; in 1907, it was 138,500; in 1908, 181,000, and the authorities estimate it at 200,000 at present. The appropriations for the current year for the salaries of officials and other expenses of the prisons are \$15,300,000, half as much as is paid out for educational purposes. About three millions are for the pay-roll and 789 additional prison guards have been appointed this year. In contrast to these sums, the budget called for \$3,570,000 for the support of the 200,000 prisoners, which averages less than \$1.53 per capita a month. The report recently prepared by a committee of the Duma in regard to conditions in the prisons states that exanthematous typhus is prevailing at present in sixty-five different prisons and is spreading thence to the general populace. The government issued a decree April 15, forbidding the physicians connected with the prisons, under penalty of discharge, to say anything to outsiders in regard to the health conditions of the inmates of the prisons. He adds the figures in regard to the number of persons hung; it has increased from 10 in 1905 to 825 in 1908, according to official statistics; the daily papers give the figure of 1,831 for the last two years. Suicides are occurring in constantly increasing numbers, not only among those condemned to death, but also in the general populace, the number recorded by the daily papers in 1908 averaging 239 a month. In the current year there were 352 in January and 364 in February—the list including all ages, from children of 10 to the very old. In St. Petersburg alone there were 1,442 suicides last year. He mentions in conclusion a decree recently issued by the chief magistrate of Odessa forbidding the use of any anesthetic except chloroform or ether, owing to the recent death of a patient under ethyl chlorid.

Isolation of Lepers in Japan.—The Japanese government has roused to the necessity of caring for the numerous lepers, and

our exchanges state that five leper colonies are to be organized and several thousand lepers in advanced stages of the disease are to be segregated. A leper hospital is to be provided at Osaka and a leper colony with asylum on the island of Kiu Siu.

Fine for False Medical Certificate.—A Berlin court recently imposed the mildest penalty, one month's imprisonment, on a physician who certified that an employée in a government office had influenza and was too sick to return to work for a week, when the truth was that the girl had just been delivered of a child. He claimed in his defense that the girl was actually too ill to return to work, and that he merely misstated the cause of her illness, which defrauded no one. The letter of the law, however, had to be upheld, and the mildest penalty was imposed, the judge expressing regret that he was unable to make it still lighter.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 22, 1909.

Friendly Societies and the Income Limit in Australia

A chronic struggle has gone on for some years between the medical profession in England and the "friendly societies" on the question of an income limit. For the small sum of about \$1 per annum a member of a "friendly society" is insured against the cost of medical attendance and medicine. The societies consist principally of workingmen who would under ordinary circumstances be unable to pay for anything like a prolonged medical attendance. Physicians who have not a wealthy *clientèle*, i. e., the majority of the profession, willingly undertake attendance on these terms which are not unremunerative compared with other poor-class practice, especially in the large towns where the working class much resort to hospitals in cases of serious illness and accidents. But sometimes friendly societies have a few wealthy members with annual incomes as high as \$5,000 or more who, under present conditions, are entitled to attendance for the small insurance. The profession has always resented having to attend them, but is powerless to refuse. An income limit above which a member would be unable to secure attendance on the club terms has been long suggested and is advocated by the British Medical Association and other medical societies, but the friendly societies have always preserved an obstinate resistance and regarded the suggestion as an unwarrantable interference with their management. They adopt the position that the physician must carry out his contract and that if he objects to the terms he can resign and that they will have no difficulty in finding a successor. At the antipodes the same struggle exists and the problem is even more serious, for there the friendly societies contain a large number of wealthy men. The British Medical Association of New South Wales has put forward the claim that in future the medical officers of friendly societies should not be compelled to attend members whose income exceeds a certain sum which has been decided as a fair one. The restriction is not to apply to the present members of the lodges, but only to those who may join in future. But the societies show no signs of yielding.

The Metropolitan Provident Medical Association

This association for many years has done good work by arranging for the medical attendance of members of the working class on a provident system. On payment of a subscription of about \$1 per annum a man or woman is entitled to medical attendance and the necessary medicine. In the case of a family a reduction is made in this rate. There are now 20 branches—16 dispensaries and 4 medical clubs, with a membership roll of 12,040. The association is almost self-supporting, receiving only a small grant from the Hospital Saturday Fund. The extension and development of the provident system appears to be the only barrier against the indiscriminate free treatment of the working class. It is thought desirable to make some modification of the present rules to meet the need which has been shown to exist for medical treatment among the 750,000 children of the school age in London. If this is not done school clinics under the management of the educational authorities will sooner or later be established. This prospect is viewed with great misgiving, and it is felt that the association should make every effort to prevent further relaxation of the sense of parental responsibility with its consequent effect on character. But the strong tendency to socialistic legislation which now exists is more likely to injure than to be stemmed by the provident system.

Total Abstinence and Longevity

The United Kingdom Temperance and General Provident Institution, an insurance company, has two departments—one for total abstainers and one for users of liquors. As the statistics of these departments are kept separately they afford a useful means of comparing the mortality of total abstainers with that of the general population. The report for the year 1908 shows that in the temperance section 457 claims were expected according to the ordinary life tables, but only 274 were made; whereas, in the general section 461 claims were expected and 407 were made. Thus the proportion of actual to expected claims in the former was only 46 per cent. as compared with 64 per cent. in the latter. The large sum of \$250,000 was thus saved in the temperance section and goes to swell the bonuses of the corresponding policy holders. Though both classes of lives showed good results there was a marked advantage in the case of total abstainers. These results are open to one criticism: Decisive as they are in showing the superior longevity of total abstainers, they are not decisive in proving the superiority of total abstinence; for those who adopt total abstinence are always prudent persons who regulate their lives in other ways much more carefully than the general population.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, May 20, 1909.

The Treatment of Ophthalmia Neonatorum

Professor Motais, of Angers, has just made, at a session of the Academy of Medicine, an interesting communication on the treatment of ophthalmia of the newborn. In place of silver nitrate, which must be used in elevated doses and is not without danger, Motais makes use of protargol, which he prescribes in the following fashion: After a simple washing with the eyelids widely opened, with a tampon of absorbent cotton moistened with a solution of potassium permanganate, 2 drops of collyrium of protargol, 1 to 5, are instilled into each eye. This instillation is repeated every three hours, night and day, until the secretion becomes scanty and less thick. The instillations are then made every six hours; and at the end of 5 or 6 days, when the secretion has become very weak and the swelling of the eyelids no longer exists, the collyrium of 1 to 5 is replaced by one of 1 to 10. If the cornea is ulcerated before the treatment the protargol immediately checks the destructive process and institutes from the next day on, cicatrization of the ulcer.

The academy has authorized the midwives themselves to make use of Crèdè's method, and to give an instillation of 2 per cent. silver nitrate solution to the newborn at the moment of birth. In point of fact, they have this solution at their disposition, and it is to be feared that they do not resist the temptation to continue the treatment themselves should ophthalmia declare itself. Therefore, Motais thinks, with some justice, that it would be prudent to leave in their hands only a solution of protargol, 1 to 5, which is innocuous while being perfectly active.

The Chair of Anthropology at the Museum

Dr. Vernean, assistant professor of anthropology at the Museum of Natural History, has been appointed professor of this chair in succession to Professor Hamy, deceased.

Death of Ernest Besnier

Dermatology has just lost one of its most illustrious representatives in France, Dr. Ernest Besnier. Born at Honfleur, April 21, 1831, hospital interne in 1853, doctor in 1857, he won at the *concours* in 1863 the position of physician of the hospitals. For ten years he devoted himself to study of general medicine and of hygiene. It was at this period that he published in Dechambre's *Dictionnaire encyclopédique des sciences médicales* a series of very remarkable articles. At the same time he laid before the *Société médicale des hôpitaux*, whose general secretary he was for a long time, annual reports of epidemics. As a hygienist, he wrote on the laws which govern epidemics; on glassmakers' syphilis; on the adulteration of foodstuffs, and on parasitic affections and their treatment—works which in 1880 gained him a membership in the Academy of Medicine. Ernest Besnier became physician of St. Louis Hospital in 1872, and thenceforward devoted himself entirely to the study of dermatology. He published many original papers in the *Annales de dermatologie et de syphiligraphie*, which he founded with his friend, Dr. Doyon. In collaboration with the latter, he published in 1881 the French edition of Kaposi's "Lessons on the Maladies of the Skin," enriched by numerous remarkably precise notes.

His talent and his vast erudition marked Besnier out for a chair in the College of Medicine, to which he was nominated; but an unforeseen ministerial change allowed politics to deprive the Paris College of Medicine of an eminent master. Dr. Besnier did not protest, but continued for years to give instruction at the St. Louis Hospital. Of irreproachable scientific and professional probity, Ernest Besnier remains a model of the physician faithful to his duty.

Election of Professor Brissaud to the Academy of Medicine

During its last session the Academy of Medicine elected an honorary member in the section of medical pathology to replace Professor Joffroy, who died last November. Dr. Brissaud, professor of internal pathology at the College of Medicine and physician at the Hôtel-Dieu, was elected by 54 votes against 5 for Dr. Babinski and 1 for Dr. Gilbert Ballet.

A Monument to Michael Servetus

In 1906 a committee was formed, consisting of Professor Osler, Lombroso, Brouardel, Brissaud, Dejerine, Charles Richet and others, to erect at Vienne, in the department of the Isère, August 14 next, a monument to Michael Servetus, who was a precursor of Harvey, through his description of the circulation of the blood in his book "Christianismi Restitutio," published in 1553. Professors Lortet, Mairat and Charles Richet, for the committee, whose headquarters is at the city hall of Vienne, Isère, issue a final appeal to the public.

The International Tuberculosis Society

In May, 1910, this society, under the presidency of Dr. Lancereaux, will distribute to the authors who submit the best works on tuberculosis the following prizes: (1) one of \$60; (2) one of \$20; (3) two of \$10 each; (4) two gold medals with a diploma of honor; (5) three silver medals with diploma of honor. Authors who wish to enter this contest should send their essays under sealed cover before Jan. 1, 1910, to Dr. George Petit, secretary-general of the International Tuberculosis Society, rue du Rocher, No. 51, Paris.

Inauguration of the Bligny Sanatorium

The bureau of popular sanatoriums of Paris, on the 9th of May, inaugurated at Bligny, near Versailles, its new institution for tuberculous women and young girls. A men's sanatorium, having 124 beds, has been in operation there since 1903. The sanatorium just inaugurated has 120 beds, giving a total of 244. Unlike Germany, where the organization of sanatoriums has developed remarkably, France possesses only 12 sanatoriums for tuberculous adults with a total of 860 beds. All these institutions are due to private initiative, with the exception of the sanatorium at Angicourt (148 beds), belonging to the *Assistance publique*.

Death of Dr. Dujardin-Beaumetz

Dr. Dujardin-Beaumetz, former medical inspector general of the army, died at Montpellier, where his military career began. As a *médecin-major* in 1870, he was taken prisoner at Sedan. On his release he immediately took service in the army of the Loire. In 1885 he directed at Tonkin the sanitary service of the expeditionary corps. On his return from Tonkin, Dujardin-Beaumetz was called to the post of director of the sanitary service at the ministry of war, which he occupied from 1887 to 1895. He rendered important services, notably in the judicious measures prescribed by him in the fight against typhoid fever in the army.

Dr. Maurice de Fleury Elected to the Academy of Medicine

At its last session, the Academy of Medicine proceeded to elect an associate member in succession to Dr. Hamy, deceased. On the first ballot Dr. Maurice de Fleury, author of many works on neuropathology and psychology ("Introduction à la médecine de l'esprit," "Le Corps et l'Âme de l'enfant," "L'Âme du criminel," etc.), was declared elected by 51 votes, against 21 for Dr. Voisin, 9 for Dr. Castex, 6 for Dr. Capitan and 2 for Dr. Valude.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, May 14, 1903.

Cultivation of *Spirochæta Pallida*

Although the etiologic significance of *Spirochæta pallida* for syphilis is recognized at the present by the great majority of dermatologists and bacteriologists, there is still lacking the

final proof, namely, the cultivation of the disease producers and the production of the disease by infection with the cultivated germ as proof of the etiologic relation of the pathogenic bacterium as it was furnished for the tubercle bacillus in a classical way for the first time by Robert Koch in 1882. Repeated attempts to cultivate the spirochete have been made since the discovery by Schaudinn in 1905, but so far without success. In the last number of the *Deutsche medizinische Wochenschrift*, a young bacteriologist, Dr. Schereschewsky, reports an apparently successful result of cultivation. He succeeded in securing a growth of the spirochete at 37 degrees C. in from three to five days on horse serum which had been brought to gelatinous consistency and subjected to a partial autolysis, by standing about three days in a thermostat at 37 degrees C. By dark-field illumination, as in stained preparations, the author could establish the identity of the spirochete forms grown by him (and which are figured in the article) with the *Spirochæta pallida*. To be sure, he has not succeeded so far in obtaining a pure culture of the spirochetes, but he could determine that they were motile even on a solid medium. Schereschewsky will continue his investigations at Neisser's clinic and will next undertake injections in apes.

The Tipping Business

In regard to this notorious affair, I am able to report a satisfactory outcome in one respect. May 10 a private damage suit by Professor Senator against the editor of a Berlin sensational paper, on account of an article published therein, was tried, and as a result of the expert opinions of Professors His and Goldscheider, an agreement was reached by which the accused editor admitted that he was convinced that the small and occasional sums paid by Professor Senator had not the character of tainted money or of commissions. The accused further assumed the costs of the proceeding. It is to be expected that a similar result will be reached in the remaining proceedings, this affair of Senator's, namely, the trial before the court of honor and the university authorities, which have been inaugurated at the request of the professor himself with the consent of the minister of education, and that Senator at least will come out of the whole affair exonerated, although it must be admitted that he has been somewhat incautious. Whether the other specialists will be able to justify themselves to an equal extent remains to be seen.

A Prussian Professional Ordinance for Medical Men

It is of special interest in connection with the foregoing, that the executive committee of the Prussian medical councils has just published an ordinance for regulating the professional relations of Prussian physicians, which is to be submitted to all the Prussian medical councils for discussion and determination. In a number of the German states there have been for some time ordinances of this sort. The Prussian medical councils have also for the most part adopted such regulations for the physicians of their own district. While there are no essential differences between these codes, there are some inequalities, and from a practical standpoint it is very desirable that a uniform code should be adopted for the entire profession of Prussia, so that what is regarded as permissible in one district should not be condemned in another, and *vice versa*. It would take too much space to give the entire proposed code, but I will mention the principal points which I assume will be of particular interest to American physicians, as it is well known that strict ethical principles are observed in their professional intercourse. Public advertisement and even private offer of medical services are forbidden. In this are included signs of private dispensaries, as well as those indicating hours for free treatment, the recommendation of private methods in the public papers, reports of cases in lay periodicals and the publication of testimonials. However, the beginning, interruption and resumption of practice, change of residence, etc., may be publicly announced for a few times. The owners of sanatoria and similar institutions may be permitted frequent notices in the newspapers by the executive committee of the medical councils. In addition, the buying and sale of medical practices, as well as the agency for such transactions, are forbidden; likewise, the treatment of patients exclusively by mail; also giving testimonials for secret remedies or for medicines in general for the purpose of commercial advertisement. Also the physician is not permitted to treat patients in conjunction with laymen. Offering or assuring advantage of any sort to a third person, as a midwife, porter, etc., in order to secure practice is not permissible. It is allowable to remit the fee in whole or in part to patients without means, but not to

those who are able to pay. The title of specialist is allowed only to a physician who has secured a thorough education in his specialty and who devotes himself particularly to it. Unfavorable criticism of a physician before the public is forbidden. Patients who are receiving medical treatment at their home may have the advice of other physicians only in case of imminent danger, and in that case the physician who was treating the patient at first must be notified in due time. Patients who are received by a locum tenens must be transferred to the principal on his resumption of practice. Written contracts or oral arrangements of any sort with private or public corporations must be submitted to an appropriate committee of the medical council for their sanction before they are finally signed, renewed or extended. This code will be dissemned by the medical councils at their next sessions; without doubt criticism will be offered in most cases as to one or other of the conditions, as each council is sovereign in this respect. Time will tell whether the executive committee will succeed in harmonizing the various wishes of the councils so as to secure a single code agreeable to all of the councils.

Pharmacology

GLYCOZONE

Report of the Council on Pharmacy and Chemistry, with Comments

A number of specimens of Glycozone purchased in the open market were examined by a sub-committee. The product was found to be a mixture of approximately 90 per cent. glycerin, 5 per cent. glyceric acid, a small amount of water and traces of undetermined matter. The absence of hydrogen peroxid or other peroxids was demonstrated.

In its report the sub-committee held that: (1) The name of the product is objectionable and misleading; (2) the statements made in regard to its composition also are misleading; (3) the claims for its therapeutic value are exaggerated and untrue. Since the objectionable statements have been given wide publicity among physicians as well as among the laity, the sub-committee recommended that attention should be called to the matter in *THE JOURNAL*.

The report of the sub-committee was adopted by the Council.

W. A. PUCKNER, Secretary.

COMMENT:—While the name gives the impression that ozone or some similar substance is an essential constituent of Glycozone, or else that the preparation is a compound or derivative of ozone, and while the earlier advertisements stated that Glycozone was "glycerin combined with ozone," the examination made by the Council shows that there is no basis of fact for such inferences.

In the advertisements the "chemical formula" $C_3H_6O_4 + C_3H_5O_3$ appears under the word Glycozone. From the Council's report it is apparent that $C_3H_6O_4$ stands for glyceric acid and the $C_3H_5O_3$ for glycerin, and, therefore, indicate the chief constituents of Glycozone. Few, doubtless, would recognize the first formula as being that of glyceric acid, a product practically unknown in medicine, nor would many associate glycerin with the second. The evident intent is that physicians should accept the formula as a badge of respectability.

According to the label on a trade package, Glycozone is "prepared only by Charles Marchand, chemist," and is "an absolute cure for dyspepsia, catarrh of the stomach, ulcer of the stomach, heart-burn," etc. The label further reads: "This remedy is positively harmless. By destroying the microbial element in the stomach it prevents the fermentation of food and stimulates digestion." An examination of medical literature fails to reveal any basis for these claims. While glycerin possesses some antiseptic properties, it is evident that the glycerin which constitutes 90 per cent. of this remedy is not the agent that gives the glycozone such phenomenal virtues. General literature contains nothing that would indicate that glyceric acid in any quantity, with or without glycerin, possesses these miraculous properties. If by "microbial element" is meant microbe organisms, the statement is without foundation. There is nothing in this product which possesses these bactericidal powers.

The circular which accompanied a trade package, envelopes the preparation in an air of mystery. Derivation from, or close relation to, ozone and hydrogen peroxid is vaguely hinted at, without definite assertion. Thus, the chief therapeutic properties of glycozone and hydrozone are compared as follows:

"Hydrozone instantly destroys the microbial element, leaving the tissues beneath in a healthy condition."

"Glycozone acts more slowly, but not less certain as a stimulant to healthy granulations."

There is no similarity between the action of hydrozone, which is a hydrogen peroxid preparation, and glycozone, which consists of a mixture of glycerin and glyceric acid. The representation is false and misleading. The following statement, also, is an unwarranted exaggeration of the facts:

"As an internal medication in fermentation of food, catarrhal and inflammatory conditions of the stomach, and intestinal disorders, its action is prompt and effective, giving immediate relief to the patient."

The following is another illustration of the vague statements made: After asserting that glycozone is hygroscopic and that it will deteriorate by absorption of water unless securely corked, it is stated that "Its healing properties increase with age." Whatever mysterious ingredient there may be present in this mixture to justify the statement that the healing properties increase with age can only be conjectured. To humbug the patient further he is advised to use only a "silver, glass or hard rubber spoon."

MIGRAININ

Report of the Council on Pharmacy and Chemistry Rescinding Acceptance of the Preparation

The Council having voted to rescind the acceptance of Migrainin and to omit it from New and Nonofficial Remedies (Appendix), directed publication of the report given below.

W. A. PUCKNER, Secretary.

SUPPLEMENTAL REPORT ON MIGRAININ

To the Council:—Koechl & Co., American agents for Migrainin (Meister Lucius & Bruning) asserted that this preparation was a mixture of antipyrin 85 parts, caffeine 9 parts and citric acid 6 parts. The experiments of F. Zernik (*Apoth.-Ztg.*, 1906, p. 686), however, showed that Migrainin consisted of antipyrin 90.88 parts, caffeine 8.4 parts and citric acid 0.45 parts. When the attention of Koechl & Co. was called to this they informed the Council, on June 20, 1907, that the formula they gave was given them direct by the manufacturers abroad and that they, Koechl & Co., did not question its accuracy. They, however, offered to "write abroad and have the manufacturers confirm the formula as given." On July 23, 1907, Koechl & Co. wrote the secretary of the Council that the manufacturers had informed them that Migrainin contains 90 per cent. antipyrin and 9.1 per cent. caffeine citrate. This being an acknowledgment that the former statement submitted was incorrect, the Council voted that the approval of Migrainin should be reconsidered. Examination of the product, therefore, was taken up in the Association's laboratory and an original specimen, purchased in Chicago, was found to contain moisture 0.7 per cent., antipyrin 90.93 per cent., and instead of caffeine citrate 9.1 per cent., citric acid 0.51 per cent., caffeine 8.53 per cent. This analysis agreed essentially with the composition of Migrainin as found by Zernik.

1. Caffeine citrate is readily hydrolyzed by water, but in the dry form the existence of three caffeine citrates is possible as follows:

- (1). $C_8H_{10}N_4O_2 \cdot C_6H_8O_7$ contains 50.28 per cent. caffeine.
- (2). $(C_8H_{10}N_4O_2)_2 \cdot C_6H_8O_7$ contains 66.91 per cent. caffeine.
- (3). $(C_8H_{10}N_4O_2)_3 \cdot C_6H_8O_7$ contains 75.18 per cent. caffeine.

If the "caffeine citrate" in Migrainin is present as in (1) there should, according to the statement of the manufacturer, be present 4.57 per cent. caffeine; if as in (2), 6.08 per cent. caffeine; if as in (3), 6.84 per cent. caffeine: the quantity found is 8.53 per cent. If the caffeine citrate is present as in (1), the citric acid present should be 4.53 per cent.; if as in (2), 3.02 per cent., and if as in (3), 2.26 per cent.: the citric acid found equals 0.51 per cent. This shows that the most recent statement of the firm, viz., that Migrainin contains 9.1 per cent. caffeine citrate, is incorrect, no matter what interpretation is given to the meaning of the term caffeine citrate.

While the discrepancies between the statement of the firm and the facts are perhaps not great, nevertheless they show that even the formula last given is incorrect, and that the statements of Koechl & Co., while no doubt made in good faith, were in this instance unreliable.

In recent advertising matter issued by Koechl & Co., "phenozon-cafein citrate" is given as a synonym for Migrainin, one circular stating that "Migrainin is phenozon-cafein citrate," etc. In the same circular the following also appears: "In the treatment of migraine with phenacetin or antipyrin, the attack is delayed, while with Migrainin it is usually permanently stayed." This will, no doubt, lead physicians to infer that Migrainin is not a mixture of antipyrin and cafein citrate, but that it is some new compound. While the firm disclaims any intention to mislead, it does not offer to withdraw or modify this circular. It is recommended, therefore, that the approval of Migrainin be rescinded and that it be omitted from New and Nonofficial Remedies.

SALIT

Report of the Council on Pharmacy and Chemistry Rescinding Acceptance of the Preparation

The Council was advised that Salit (Heyden Chemical Works), a preparation which previously had been approved, was being advertised to the public in Germany, and that it therefore should be classed with "patent medicines" intended for popular use. The following report was presented by a subcommittee:

SUPPLEMENTAL REPORT ON SALIT

To the Council:—The secretary reported to the Council that Salit is advertised to the laity abroad, but that the manufacturer had agreed that these advertisements should not appear in those foreign papers which are shipped to this country. The Council decided that in accordance with precedent the advertising of products in foreign lay journals should be held a conflict with the rules, and it voted that the acceptance of Salit be reconsidered. It is now recommended that Salit be refused recognition, and that it be omitted from New and Nonofficial Remedies.

The report was adopted by the Council and its publication directed.

W. A. PUCKNER, Secretary.

Association News

THE ATLANTIC CITY SESSION

Final Announcements for the Session to be Held Next Week

As this issue of THE JOURNAL reaches its readers, members of the Association are preparing to start for Atlantic City or are already on their way, while the Atlantic City profession is resting from its labors of preparation in anticipation of a most successful meeting.

The House of Delegates will be the first body to convene, and it will attempt to complete a considerable amount of work on Monday. It meets in the solarium of the Hotel Traymore. Its first session is at 10 a. m., June 7, and there will be presented the reports of the various officers and of the standing and the special committees.

The first and only General Session will be the Opening Meeting to be held in the Auditorium on Young's New Pier at Arkansas Avenue and the Boardwalk, Tuesday, June 8, at 10:30 a. m. At this meeting, after the addresses of welcome and reports of the committees of arrangements, the president-elect, Dr. W. C. Gorgas, Chief Sanitary Officer of the Isthmian Canal Commission, Ancon, Panama, will be installed into office and will deliver his address.

Tuesday afternoon the various sections will take up their work at 2 o'clock. The preliminary programs of these sections were printed in THE JOURNAL May 1. Each member is given, on registration, a copy of the official program, which details the proceedings at these section meetings, and gives abstracts of the papers so that all may know the scope of the articles to be read.

The Daily Bulletin

The A. M. A. Daily Bulletin will be issued on Tuesday, Wednesday and Thursday mornings with a list of names of those registered on the preceding day, and also with announcements of the events on the day of issue.

Mail Matter for Those in Attendance

Members should have their mail addressed to them in Atlantic City in care of the hotel in which they will stop. Those who neglected to secure hotel accommodations in advance may have mail addressed to them in care of the American Medical Association, Young's Old Pier, Atlantic City, N. J. A branch postoffice will be in operation adjoining the Bureau of Registration and the Scientific Exhibit and the Commercial Exhibit. There will also be telegraph and telephone booths, and a well-prepared Bureau of Information, whose attendants will be ready to answer questions on all points of interest.

Program of Entertainments

[The official members' badge, or one of those provided for ladies and guests, will be required for admission.]

TUESDAY, JUNE 8

4 to 5:30 p. m.—An informal tea will be given at the Chalfonte Hotel to the visiting ladies of the American Medical Association by the ladies' committee of Atlantic City.

7:30 p. m.—The Section on Nervous and Mental Diseases will give a dinner at the Hotel Marlboro. Members desiring to attend this dinner are requested to notify the chairman of the section at the Hotel Marlboro on Tuesday at noon.

7:30 p. m.—Harvard University alumni meeting and dinner at Hotel Windsor.

8 p. m.—Vanderbilt University Medical Department alumni banquet at Young's Hotel.

8:30 p. m.—Medico-Chirurgical College (Philadelphia) alumni reunion and smoker at Hotel Rudolf.

8:30 p. m.—The Section on Laryngology and Otology will hold an informal sea-food banquet, with vaudeville, at Hotel Rudolf. Price per cover, \$4.50. Those desiring to attend this dinner should notify the secretary of the section in ample time.

9 p. m.—Dartmouth Medical College alumni reunion at Hotel Chelsea.

9 p. m.—Jefferson Medical College alumni reunion and smoker at Hotel Royal Palace.

Alumni reunions for the medical departments of the University of Vermont and the University of Minnesota and for the Long Island Medical College and Tufts' Medical School to be announced later.

WEDNESDAY, JUNE 9

12 noon.—For visiting ladies: Exhibition of rescue by the Atlantic City Life Guards, directed by Beach Surgeon Dr. J. T. Beckwith, on beach opposite Tennessee avenue.

2:30 to 5:30 p. m.—Sailing parties for ladies will leave Ventnor Boat Club House at short intervals.

6:30 p. m.—"Wiener Studenten" will hold a reunion, supper and smoker at Old Vienna. Those intending to be present, address Dr. William N. Senn, Marlborough-Blenheim Hotel.

8:30 to 10 p. m.—Reception to the President, Dr. William C. Gorgas at Music Hall, Steel Pier.

10 to 12 p. m.—Dancing at Music Hall, Steel Pier.

THURSDAY, JUNE 10

11:30 a. m.—Public exhibition, hauling of seine (courtesy of Mr. John L. Young) at Young's Million Dollar Pier.

12 noon.—Alpha Omega Alpha Medical Scholarship Society members will meet for lunch; place to be announced later in the Bulletin.

4 to 6 p. m.—Ladies' reception at Plaza, Marlborough-Blenheim.

8:30 to 10:30 p. m.—Musical at Marine Hall, Steel Pier.

8:30 to 10:30 p. m.—Musical (Metropolitan Orchestra, with soloists), at Music Hall.

10:30 to 12 p. m.—Vaudeville and smoker for ladies and gentlemen at Islesworth Café, Virginia Avenue and Boardwalk.

10:30 to 12 p. m.—Vaudeville and smoker for ladies and gentlemen at New Berkeley Café, Kentucky Avenue and Boardwalk.

The Country Club House at Northfield will be open to the physicians and ladies during the entire meeting.

The Atlantic City Yacht Club extends the courtesy of its club house during the entire meeting.

The Meeting Places

The following are the meeting places announced by the Atlantic City Committee on Arrangements. It is to be noticed

that the Section on Practice of Medicine is to meet in Marine Hall, Steel Pier, in place of Casino Hall, Steel Pier, as first announced.

HOUSE OF DELEGATES—Traymore Solarium.
BOARD OF TRUSTEES—Marlborough-Blenheim (Committee Room).
JUDICIAL COUNCIL—Marlborough-Blenheim.
REGISTRATION—Young's Old Pier.
POSTOFFICE, TELEGRAPH, TELEPHONE AND BUREAU OF INFORMATION—Young's Old Pier.
COMMERCIAL AND SCIENTIFIC EXHIBIT—Young's Old Pier.

SECTIONS

PRACTICE OF MEDICINE—Marine Hall, Steel Pier.
SURGERY AND ANATOMY—Ocean Hall, Steel Pier.
OBSTETRICS AND DISEASES OF WOMEN—Casino Hall, Steel Pier.
DISEASES OF CHILDREN—First Presbyterian Church, Pacific and Pennsylvania Avenues.
NERVOUS AND MENTAL DISEASES—Brighton Casino.
PHARMACOLOGY AND THERAPEUTICS—Jewish Synagogue, Pacific and Pennsylvania Avenues.
HYGIENE AND SANITARY SCIENCE—Baptist Church, Pacific Avenue, near Pennsylvania Avenue.
PATHOLOGY AND PHYSIOLOGY—Central M. E. Church, 1213 Pacific Avenue.
OPHTHALMOLOGY—Parochial Hall No. 1, Top Floor, Tennessee and Pacific Avenues.
LARYNGOLOGY AND OTOTOLOGY—Parochial Hall No. 2, Second Floor, Tennessee and Pacific Avenues.
CUTANEOUS MEDICINE AND SURGERY—Olivet Church, Tennessee and Pacific Avenues.
STOMATOLOGY—Olivet Church Sunday School Rooms, Tennessee and Pacific Avenues.

Clinics in Philadelphia

The following clinics in Philadelphia for visiting physicians are announced in addition to those detailed in THE JOURNAL, May 22, page 1682:

METHODIST HOSPITAL, BROAD AND WOLF STREETS

Friday, June 11

10:00 a. m.—Dr. J. Torrence Rugh. Excision of Knee.
2:30 p. m.—Dr. Walter Roberts. Adenoids and Tonsils.
3:00 p. m.—Dr. Philip H. Moore. Foreign Bodies in the Eye.

Saturday, June 12

10:00 a. m.—Dr. James Hendrie Lloyd. Demonstration and Lecture on Nervous Diseases.
11:00 a. m.—Dr. Alfred Hand. Ward Walk.
11:00 a. m.—Dr. Harlan Shoemaker. Surgical Pathology of Uterine Cancer.
1:00 p. m.—Dr. Levi J. Hammond. Operative Surgery of Gall Bladder.

AMERICAN ONCOLOGIC HOSPITAL, 45TH AND CHESTNUT STS.

Daily

2:00 p. m.—Cases Treated by Ionie or Cataphoric Surgery by Dr. G. Betton Massey.
3:00 p. m.—Surgical Cases by Dr. Addinell Hewson and Dr. Samuel McClary.
4:00 p. m.—Cases Treated by X-Rays and Radium by Dr. William S. Newcomet.
4:00 p. m.—Medical and Pathologic Demonstrations by Drs. Charles A. E. Codman, John M. Swan and C. B. Longenecker.

Correspondence

A Home for Aged and Disabled Physicians

To the Editor:—In connection with the home for old and disabled physicians suggested by Dr. Magruder (THE JOURNAL, May 22, 1909, p. 1682) let me say that at one of our Christian County Medical Society meetings in 1908 the proposition to build such a home in Kentucky was made and the secretary of this society was requested to communicate with every other society in the state and to put the matter before them. This was done and a resolution to that effect was also passed at our state meeting at Winchester in October last. A committee (of which I am chairman) was appointed to investigate the matter and to report to our state meeting in 1909.

We now have in the hands of every county secretary in this state subscription lists, with letters and subscription blanks, soliciting initial subscriptions of \$10, and \$5 annually. These are to be collected by me and made the basis of my report to the Kentucky State Medical Society in October.

If we could make this a national home instead of a state affair I believe it would be better. From present indications I believe the Kentucky physicians are going to build their home. I agree with Dr. Magruder that "the matter of planning the institution on such broad lines that provision might

be made for the care of the families of those who seek its shelter is one that should be given the most careful attention."

J. PAUL KEITH, M.D.

Secretary Christian County Medical Society, Hopkinsville, Ky.

The Philadelphia Branch of the American Pharmaceutical Association

To the Editor:—In connection with its exhibition of drugs and pharmaceutical processes at the meeting of the American Medical Association, in Atlantic City, the Philadelphia Branch of the American Pharmaceutical Association will hold a scientific meeting for the purpose of presenting and discussing papers on topics relating to the U. S. Pharmacopeia, National Formulary and New and Nonofficial Remedies. The meeting will be held on Friday morning, June 11, and will be in charge of the officers of the Philadelphia Branch. The following is a partial list of the papers that will be presented:

"U. S. Pharmacopeia and National Formulary Preparations versus Nostrums," by Mr. Otto Raubenheimer, Brooklyn.

"The Relation of New and Nonofficial Remedies to the U. S. Pharmacopeia," by Mr. M. I. Wilbert, Washington, D. C.

"Improvements in the National Formulary," by Mr. George M. Beringer, Camden, N. J.

"The Tests of the U. S. Pharmacopeia," by Prof. I. V. S. Stanislaus, Philadelphia.

Other papers, the titles of which have not yet been announced, but which are related to the foregoing topics, will be presented by Prof. Joseph P. Remington of Philadelphia and Prof. H. P. Hynson of Baltimore. The various papers will be discussed by prominent pharmacists and physicians. Invitations to attend this meeting are extended to all who are interested in improving the standard formulas for medicinal preparations.

AMEROSE HUNSBERGER, Secretary, Philadelphia.

The Danger of Heavy Nitrogenous Diet in Tuberculosis

To the Editor:—I wish to call the attention of the profession to the grave danger of a too heavy nitrogenous diet in tuberculosis. My attention has recently been called to several cases of albuminuria and nephritis with tuberculosis, coming on after the patient had been on a diet consisting of eggs and milk in large quantities. A patient may believe that he is doing the right thing in consuming a dozen or more eggs per day when insidiously there develops a pronounced albuminuria and perhaps along with this a tuberculous kidney infection. When the kidney elimination is impaired such patients fail very rapidly and frequently this disturbance of the kidney function seems to be the beginning of the end.

F. J. WALTER, Roswell, N. Mex.

The Combined Course

To the Editor:—I much regret that in my paper on "The Combined Course Leading to the Degrees of A.B. or B.S. and M.D.," in THE JOURNAL, May 22, the quotation marks were omitted by the compositor from the quotations inserted. It is not fair to an author to quote separate paragraphs from a number of separate articles so as to make it appear that they constitute a continuous statement. In my paper each paragraph quoted should have been indicated as a separate quotation.

JOHN M. DODSON, Chicago.

Hat-Pin in the Male Urethra

To the Editor:—I wish to report a case similar to the case of Dr. Hazzard (THE JOURNAL, May 29, p. 1759). A man 60 years old, was referred by Dr. Louis Burckhart of this city. He had a 6-inch plain headed hat-pin engaged in the urethra, which had been introduced in an effort at masturbation. It was removed exactly as in Dr. Hazzard's case: the point having almost entirely penetrated the penile body, the puncture was completed, the pin drawn through, and the direction reversed to push the head forward and out at the meatus.

FREDERICK R. CHARLTON, Indianapolis.

Book Notices

DANTE: PHYSICIAN. By A. G. Drury, M.D., Cincinnati, Professor of Hygiene in the Medical College of Ohio. Cloth. Pp. 89. Price, 50 cts. Cincinnati: The Lancet-Clinic Press, 1908.

This little book is one of the latest, as it is one of the most analytically just appreciations of the great Florentine poet, and shows a wide range of research, not only into the literature, but into the history of the Dante epoch. The net result is to establish the fact that Dante was not only a politician, a poet and a learned theologian, but a physician who was fully abreast of the science of his times. The text of the *Vita Nuova*, the *Convito* and the *Divine Comedy* has been searched and made to yield a thousand or more intrinsic evidences of Dante's complete mastery of everything relating to medicine in the thirteenth century. Every student of Dante will be interested in this new marshaling of old facts which, by their new association, have come to have a new significance.

DANIEL DRAKE AND HIS FOLLOWERS. Historical and Biographical Sketches by Otto Juettner, A.M., M.D. Royal 8vo, pages 496. Illustrated. Price \$5. Cincinnati: Harvey Publishing Company, 1909.

The medical profession of the United States should greet with satisfaction the appearance of this work which does justice, as justice has never before been done, to the memory of one of the greatest medical characters of the nineteenth century. Daniel Drake was born in 1785 and died in 1852. His life, identified almost entirely with Cincinnati, is an essential part of the history of that city; but his activities reached beyond his city and state. He was a scientist in a broad sense of the word; he was a physician, not only of deep thought, but of almost prophetic insight into the problems of his profession; he was an originator, a builder of institutions and of communities; and he was a citizen who recognized and responded to every civic obligation.

These various attributes viewed in the light of their detailed manifestations, comprise the great body of Dr. Juettner's book, which, not only to the physician interested in his profession, but to the citizen interested in his country, reads like a romance of the realistic school. It is important to emphasize the realism of the book, for in its pages Drake is not a mere steel engraving—although an excellent one of him forms the frontispiece—but here he walks and talks, teaches and preaches, loves and hates, a veritable human being with a full assortment of human characteristics. Here you can shake hands with him, talk with him and know him and realize that he is all the time worth knowing.

Dr. Juettner in this work has exemplified an important principle that is new in the development of polybiographies. He has taken Drake as his strong initial character and has traced the influences that have emanated from him and that have largely co-ordinated the medical activities, not only of Cincinnati, but of an important part of the entire country for a whole century. In doing so he has given the history of every man who has been identified with medical Cincinnati during all that long period. In this way one encounters in this book the names and portraits of Gofroth, Eberle, Moorhead, Slack, Mussey, Shotwell, Delamater, Locke, Wright, Comegys, the Lawsons, Gross, Parker, Rogers, McDowell, Rives, Tate, Blackman, Graham, Armor, Bartholow, Conner and R. C. S. Reed, a group of which the last named is the only survivor. The history of medical institutions and of the contemporary profession of Cincinnati is traced with accuracy. This is not a work filled with the usual fulsome praise of its subjects, but one written in excellent literary form and with a just critical appreciation of the facts presented. It is, therefore, a distinct contribution to the history, not only of the medical profession, but of the country.

HINTS TO SHIPS' SURGEONS. By J. F. Elliott, L.R.C.S., L.R.C.P. Cloth. Pp. 64. Price, 2s. London: John Bale, Sons & Danielson.

A useful little book for those who wish to sail as surgeons from English ports. It gives practical suggestions on the method of procuring an appointment as a ship surgeon; duties at sea; what to do in various emergencies; the matter of fees; and a list of the shipping lines from England carrying passengers and surgeons.

PURE MILK AND THE PUBLIC HEALTH. A Manual of Milk and Dairy Inspection. By Archibald Robinson Ward, B.S.A., D.V.M., Assistant Professor of Bacteriology and Director of the State Hygienic Laboratory, University of California, Berkeley, Cal. With Two Chapters by Myer Edward Jaffa, M.S., Professor of Nutrition and Director of the State Food and Drug Laboratory, University of California. Cloth. Pp. 218, with illustrations. Price, \$2. Ithaca, N. Y.: Taylor & Carpenter, 1909.

The improvement of the milk supply is receiving much attention in this country at this moment, and the relative merits of certified, inspected and pasteurized milk are widely discussed, especially by physicians. The appearance of Professor Ward's book, therefore, is most opportune. After a general exposition of the origin of bacterial contamination of milk and the changes in milk caused by bacteria, Ward devotes two chapters to the discussion of epidemic diseases transmitted by milk, and gives special attention to the transmissibility of bovine tuberculosis to man. This most important and much-debated subject is treated with conservatism and impartiality, and a sane attitude in regard to it is taken. Since opinions as to the frequency of transmission are still divided, the correct course to be pursued is to take no chances, but to prevent as far as possible the distribution of milk containing tubercle germs. The only successful means to accomplish this object lies in the application of the tuberculin test.

The chapters on the municipal sanitary control of milk and on pasteurization are of special interest. Pasteurization is ably defended on the grounds of protecting consumers against pathogenic bacteria and as a step toward an ideal milk supply. In the chapter on the microscopic analysis of milk, attention is given to the danger of drawing fallacious conclusions from the presence of streptococci and leucocytes in milk, and the colony count is shown to be the most valuable method of controlling milk supplies. An interesting account is given of the present status of milk commissions, their objects, methods and the results accomplished. The chapters on the analysis and adulteration of milk by Professor Jaffa are useful additions, especially for those actively engaged in this work.

The information which may be gathered from this book is invaluable for all those interested in the all-important and difficult movement toward a sanitary milk supply.

T. E. K. A.—JARLIBRO, 1909. Vol. I. Eldonita de la Tutmonda Esperanta Kuracista Asocio. Kun la portreto de l'honora prezidanto de la T. E. K. A., D-ro L. L. Zamenhof. Pp. 66. Paper. Price, 0.4 sm (20 cents). Kötzensbroda-Dresden: H. F. A. Thalwitzer, 1909.

This is the first year-book of the World Association of Esperantist Physicians, an association inaugurated at the Fourth International Esperantist Congress at Dresden, August, 1908. It contains a preface by Dr. Zamenhof, an account of the origin of the association, by the president, Professor Dor, of Lyons, and a summary by the secretary, Dr. Robin, of Warsaw, of what the association has accomplished. The list of officers and members occupies 23 pages, the total number of members at the date the book went to press being 428, though it is said that some hundreds have been since added. Dr. H. F. A. Thalwitzer writes on "Esperanto and the Red Cross," and Dr. F. Uhlmann-Huttwil on "Esperanto Medical Nomenclature." A table of national moneys, and their relation to the international money system devised by the Esperantists, is added. The booklet contains a portrait of Dr. L. L. Zamenhof, inventor of the language.

HUMAN PHYSIOLOGY. An Elementary Text-Book of Anatomy, Physiology and Hygiene. By John W. Ritchie, Professor of Biology, College of William and Mary, Virginia. Cloth. Pp. 362, with illustrations. Price, 80 cts. Yonkers-on-Hudson, New York: World Book Co., 1909.

As a text-book for children in the public schools, this volume is necessarily elemental. In common with most books for the purpose, the use of alcoholic beverages is uncompromisingly condemned. The chapter on "consumption" emphasizes the importance of good food and fresh air in treatment. A chapter devoted to accidents gives a brief description of the methods of resuscitating persons apparently drowned, stopping bleeding from an artery, treating sunstroke, burns, etc. The book contains practical suggestions and is to be commended.

PARCIMONY IN NUTRITION. By Sir James Crichton-Browne, M.D., LL.D., F.R.S., Lord Chancellor's Visitor in Lunacy, London. Cloth. Pp. 111. Price, 75 cents. New York: Funk & Wagnalls Co., 1909.

This book is frankly polemical. It is a reply to the arguments of Horace Fletcher and of Professor Chittenden of Yale, who maintain that much less proteid food is needed than is prescribed in the standard diets of Voit and Atwater.

Chittenden's experiments and conclusions are interesting and the latter tempting to the medical man who frequently has to prescribe for patients with stomach disorders and who has learned that he can contribute greatly to their comfort and ultimately lead them to recovery chiefly by curtailing the quantity of food which they eat. Crichton-Browne's arguments are chiefly these: "First, that it is an initial objection to Chittenden's view which is not easily met that it contravenes all human experience." The standard diets of Voit and Atwater represent the average usage of civilized men; at least those of Europe and America. Crichton-Browne has collected statistics which seem to show that even in Japan to-day practically the same proportion of nitrogen per pound of body weight is consumed as would be used on Voit's standard. He raises the question whether the long ages during which they have been vegetarians has not led to their diminutive stature, apparently forgetting that Buddhists in China and India are large men but have been as strict vegetarians for as long or a longer time.

The second contention is that a diet rich in proteids makes for physical and mental energy.

Third, Crichton-Browne points to the ill effects, both mental and physical, of the insufficient diet of English prisons, where the proteids are furnished in about the quantity prescribed by Chittenden or a little larger. But he overlooks the fact that in diets one and two of the prisons the total calories is too small and may account for the ill condition of prisoners rather than proteid deficiency. Moreover, that other factors than the quantity of food have to do with it is shown by the complaints of star patients whose food furnished more than twice as much proteid as Chittenden recommends and 2,398 calories.

Fourth, Crichton-Browne urges that "busy men have not time to go to bed and starve for two or three days when they have not appetite, nor can they devote a large portion of their lives to mastication." His argument is not very conclusive.

Fifth, he says, "There has not yet been time for any convincing proof of the utility or even safety of the reduced proteid diet." He thinks that ill effects may develop in late life which can be ascribed to such dietetic restriction. But all this is problematic. If we do not know that the restricted diet is useful or safe, neither do we know that it is harmful. Chittenden's experiments, which extended over six months and more, show that there was no immediate ill effect and that none developed during that time. Crichton-Browne says of Chittenden's dogs: "They led a placid and cloistered existence and so asceticism probably suited them. Not until a pack of foxhounds have got satisfactorily through a winter's work on Chittenden's reduced diet can his experiments be accepted as anything more than a curious physiologic feat."

Sixth, he points to the natural diet of the infant at the breast, where the child gets of proteid what would be equivalent for a man of 150 pounds, from 122 to 145 grams; more than twice the allowance made by Chittenden for man.

Lastly, he points to the good effects of forced feeding in tuberculosis and neurasthenia and after infections. He believes that there is no evidence of an accumulation of clinkers because of the heavy stoking.

This little book is well worth reading and considering. As stated, the book is polemical, and like all such it has the faults of a debate and it awakes contention in its readers. It is well, however, for physicians and laymen to halt and consider carefully the pros and cons of this subject.

LIFE'S DAY. By William Seaman Bainbridge, A.M., M.D. Cloth. Pp. 308. Price, \$1.35. New York: Frederick A. Stokes Co.

The fanciful title of this book suggests that it was intended for non-medical readers; and the foreword explains that it is based on a series of lectures delivered at Chautauqua. It appears to be designed especially to enlarge the mental horizon of those who have much leisure and little information; it treats sketchily the subjects of heredity, environment, edu-

cation, infancy, childhood, the "irresponsible age," adolescence, middle age and old age. A little biology, a little physiology, a little hygienic theory and precept, liberally sprinkled with quotations from poets and men of science, make up a volume which will be found, by those who like that kind of thing, to be just the kind of thing they like. Dr. Bainbridge has an agreeable style, and says that he is not a faddist or an over-zealous enthusiast, but merely an earnest advocate of common sense and moderation in all things.

THE THEORY AND PRACTICE OF INFANT FEEDING. By Henry Dwight Chapin, A.M., M.D., Professor of Diseases of Children at the New York Post-Graduate Medical School and Hospital. Edition 3. Cloth. Pp. 350, with illustrations. Price, \$2.25. New York: William Wood & Co., 1909.

In this new edition of his book Dr. Chapin emphasizes as before the "biologic" aspect of infant-feeding with especial reference to the specificity of the milk of each mammal to its own young; devotes 100 very instructive pages to the subject of cow's milk, its composition, production, handling, examination, etc., and elaborates his views on the value and use of dextrinized (even standardized) gruels. The general recommendations about infant-feeding itself are in harmony with the views of the so-called "American school." The peculiar indifference of certain American writers on infant-feeding to what is being done abroad is nowhere exemplified better than here. The five years since the appearance of the last edition have been by far the most fruitful in this subject—the work of Budin and Heubner has been recognized, and that of Czerny and Keller and Finkelstein and others has revolutionized the whole subject in that time and has put it, for the first time, on a rational scientific basis. And yet in the 350 pages of this book no intimation is given of this truly epoch-making work. Except for the excellent chapters on cow's milk and for the originality of its ideas about the "biologic" aspect of infant-feeding and of the use of dextrinized gruels the book is disappointing so far as it relates to the present status of the science and art of infant-feeding.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, for the week ended May 29, 1909:

Baily, H. H., capt., ordered to accompany troops from Washington Barracks, D. C., to San Francisco, and then return to Fort Myer, Va.

Gostin, B. S., 1st lieut., granted leave of absence for three months, when relieved from duty in the Philippines Division.

Waterhouse, S. M., major, granted leave of absence for four months, when relieved from duty in the Philippines Division.

Ireland, M. W., major, ordered to proceed to New York City and return, on business pertaining to the medical supply department.

Harris, J. R., capt., relieved from duty at Fort Worden, Wash., and ordered to Fort George Wright, Wash., for duty.

Hall, J. F., capt., granted leave of absence for four months, about Oct. 15, 1909.

Shillock, Paul, major, ordered to Hot Springs, Ark., for treatment at the Army and Navy General Hospital.

Vose, W. E., capt., granted leave of absence for two months, about August 20.

McCulloch, C. C., Jr., major, granted leave of absence for four months.

Shockley, M. A. W., major, granted leave of absence for one month, about June 3.

Morse, A. W., major, relieved from duty at Fort Leavenworth, Kan., and ordered to the Presidio of Monterey, Cal., for duty.

Keefer, F. R., major, relieved from duty at the Presidio of Monterey, Cal., and ordered to Fort Wadsworth, N. Y., for duty.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended May 29, 1909:

Bogert, E. B., Jr., surgeon, detached from the Naval Academy and granted leave until Sept. 15, with permission to go abroad.

Ledbetter, R. E., surgeon, commissioned surgeon, with rank of lieutenant-commander, from Sept. 19, 1908.

Gill, J. E., P. A. surgeon, detached from the *Dubuque* and ordered home to wait orders.

Smith, C. W., asst.-surgeon, detached from the Naval Hospital, Norfolk, Va., and ordered to the *Dubuque*.

Rose, M. E., asst.-surgeon, ordered to the Naval Hospital, Norfolk, Va.

Fiske, C. H., surgeon, commissioned surgeon, with rank of lieutenant-commander, from Sept. 1, 1907.

Butler, C. St. J., surgeon, commissioned surgeon, with rank of lieutenant-commander, from Oct. 11, 1908.

Cole, H. W., Jr., P. A. surgeon, commissioned P. A. surgeon, with rank of lieutenant, from Oct. 5, 1908.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended May 26, 1909:

Kerr, J. W., asst.-surgeon general, detailed to represent the service at the meetings of the American Association of Medical Milk Commissions, June 7, and the American Medical Association, June 8-11, 1909, in Atlantic City, N. J.

Wasdin, Eugene, surgeon, granted 1 month's leave of absence from May 22, 1909, on account of sickness.

Cobb, J. O., surgeon, granted 2 months' leave of absence from June 15, 1909.

Billings, W. C., P. A. surgeon, relieved from duty at the Revenue Cutter School of Instruction and directed to report to the commanding officer of the practice cutter *Itasca*.

Fox, Carroll, P. A. surgeon, granted 7 days' leave of absence from May 13, 1909.

Currie, Donald H., P. A. surgeon, detailed as director of the Leprosy Investigation Station at Molokai, T. H., to take effect June 1, 1909, vice acting asst.-surgeon Walter R. Brinckerhoff, resigned, to take effect May 31, 1909.

Holt, J. M., P. A. surgeon, granted 1 month's leave of absence from July 5, 1909.

Herring, R. A., asst.-surgeon, granted 1 month and 4 days' leave of absence from June 5, 1909.

Hamilton, H. J., acting asst.-surgeon, granted 9 days' leave of absence from May 8, 1909.

Hunter, Sam. B., acting asst.-surgeon, granted 4 days' leave of absence from May 18, 1909.

Naulty, Charles W., Jr., acting asst.-surgeon granted 14 days' leave of absence from June 11, 1909.

APPOINTMENT

Kellogg, Dr. W. H., appointed an acting asst.-surgeon for duty in the office of the U. S. consul at La Guayra, Venezuela.

BOARD CONVENED

Board of medical officers convened to meet at the Bureau May 18, 1909, for the purpose of making a physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Asst.-Surgeon General W. J. Pettus, chairman; P. A. Surgeon, J. W. Trask, recorder.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 28, 1909:

SMALLPOX—UNITED STATES

California: Los Angeles, May 1-8, 1 case; Sacramento, May 8-15, 2 cases; San Francisco, May 1-8, 1 case; Stockton, April 1-30, 1 case.
Colorado: March 1-31, 81 cases.
Georgia: Macon, May 9-16, 2 cases.
Illinois: Danville, May 9-16, 10 cases; Galesburg, May 8-15, 1 case; Springfield, May 7-14, 1 case.
Indiana: Evansville, May 8-15, 1 case; Fort Wayne, May 1-8, 2 cases; South Bend, May 8-15, 1 case.
Iowa: Council Bluffs, May 9-16, 1 case; Davenport, May 2-9, 2 cases.
Kansas: Atchison, Feb. 27-April 17, 5 cases; Kansas City, May 8-15, 11 cases, 2 in vicinity; Wichita, May 8-15, 4 cases.
Kentucky: Lexington, May 8-15, 5 cases; Newport, 1 case; Paducah, May 1-15, 12 cases.
Louisiana: New Orleans, May 8-15, 6 cases.
Maine: Van Buren, May 8-15, 1 case.
Minnesota: Duluth, May 6-13, 9 cases.
Nebraska: Lincoln, April 1-30, 24 cases.
New Jersey: Perth Amboy, March 4-April 29, 30 cases.
North Carolina: Charlotte, May 7-14, 1 case.
Ohio: Cincinnati, May 7-14, 9 cases; Massillon, May 9-16, 1 case; Toledo, May 1-8, 1 case; Warren, 1 case.
Tennessee: Knoxville, May 8-15, 1 case.
Texas: Fort Wayne, April 1-30, 15 cases; San Antonio, May 1-8, 1 case; Waco, May 21, 4 cases, imported.
Virginia: Portsmouth, May 11-18, 4 cases.
Washington: Seattle, April 1-30, 4 cases.
West Virginia: Wheeling, May 8-15, 1 case.
Wisconsin: Milwaukee, May 1-15, 5 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, March 20-April 10, 35 cases, 1 death.

SMALLPOX—FOREIGN

Algeria: Bona, April 1-30, 23 cases, 13 deaths.
Argentina: Buenos Aires, Feb. 1-28, 2 deaths.
Brazil: Bahia, March 27-April 17, 21 cases, 6 deaths; Sao Paulo, March 15-21, 2 deaths.
Canada: Halifax, May 1-8, 5 cases; Vancouver, April 1-30, 1 case.
Chile: Santiago, April 27, epidemic.
China: Amoy, April 3-10, present.
Egypt: Alexandria, March 1-31, 8 cases, 4 deaths.
France: Marseille, April 1-30, 3 deaths; Paris, April 18-May 1, 4 cases.
India: Bombay, April 13-20, 18 deaths; Calcutta, April 3-10, 197 deaths; Madras, March 27-16, 6 deaths; Rangoon, April 3-10, 11 deaths.
Indo-China: Saigon, March 27-April 3, 7 cases, 5 deaths.
Italy: General, April 25-May 2, 12 cases; Genoa, April 1-30, 3 cases; Naples, April 25-May 2, 20 cases, 1 death.
Java: Batavia, April 3-10, 5 cases, 1 death.
Mexico: Chihuahua, May 2-9, 1 death; Guadalajara, April 22-29, 2 deaths; Monterey, May 2-9, 8 cases; Puebla, May 10, present.
Portugal: Lisbon, May 1-8, 12 cases.

Russia: Moscow, April 17-24, 35 cases, 8 deaths; Odessa, April 17-24, 1 case, 2 deaths; Riga, May 1-8, 2 cases; Warsaw, Feb. 27-March 6, 4 deaths.

Siam: Bangkok, March 1-31, 30 cases, 18 deaths.

Spain: Barcelona, April 27-May 3, 9 deaths; Valencia, April 24-May 1, 6 cases.

Straits Settlements: Singapore, May 27-April 3, 1 death.

Tripoli: Tripoli, April 10-24, 80 cases, 16 deaths.

Turkey: Constantinople, April 18-25, 4 deaths; Smyrna, April 8-15, 1 death.

YELLOW FEVER

Brazil: Bahia, March 27, 2 cases, 9 deaths; Para, April 18-May 1, 10 cases, 10 deaths.

Ecuador: Guayaquil, April 3-17, 36 cases, 10 deaths.

CHOLERA—INSULAR

Philippine Islands: Provinces, March 20-April 10, 245 cases, 126 deaths.

CHOLERA—FOREIGN

India: Bombay, April 13-20, 44 deaths; Calcutta, April 3-10, 111 deaths; Rangoon, 6 deaths.

Russia: St. Petersburg, April 29-May 6, 12 cases, 4 deaths.

PLAGUE

China: Amoy, April 10, present.

Ecuador: Guayaquil, April 3-17, 30 cases, 9 deaths.

India: General, March 27-April 10, 5,722 cases, 4,684 deaths; Bombay, April 13-20, 382 deaths; Calcutta, April 3-10, 85 deaths; Rangoon, April 2, 18 deaths.

Indo-China: Saigon, March 27-April 3, 2 cases, 2 deaths.

Japan: Kyoto, April 17-24, 1 case, 1 death.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

The Doctor as a Vicarious Philanthropist

In a recent issue of the *British Medical Journal* appears an unusually interesting editorial under the above title. As the problem considered is one which also confronts the American physician, the conclusions of our British contemporary will doubtless be of interest. After stating that "the position in which medical men are placed when called on to attend urgent cases of labor or street accidents, with the certainty that in most cases they will receive no remuneration, is fast becoming intolerable," the editorial says that two cases have recently occurred which forcibly emphasize this fact.

In the first case, a physician was severely criticized by the public press for not attending a street accident when sent for, notwithstanding the fact that he was not a police surgeon, that he had been refused payment by the police authorities in other cases to which they had called him and that he had notified them that he would not in the future respond to their summons. In spite of these facts, the newspapers made severe comments regarding his refusal to respond to the call.

In the second case, a physician was called late at night to go to a labor case and asked that his fee be guaranteed before he respond. The physician denies that he refused to go, but says that after some discussion the husband deliberately turned away. Another doctor was summoned and on his arrival found that twins had been born, but that the mother had died from heart failure through exhaustion. The coroner in his verdict on the case reminded the jury that the impression that a doctor is a public servant and is required to go whenever called is incorrect, as a doctor is entitled to payment for his services or to the assurance that he will be paid. The jury, in returning its verdict, stated that death was due to heart failure arising from exhaustion from want of proper attention and added a rider to its verdict that it was "unwise for doctors to raise the question of fees."

Commenting on the verdict, the editorial says: "What the jury probably meant but hardly liked to say after the coroner's remarks, was that doctors ought to go to cases whenever summoned without question, and trust to chance payment afterward." The editor then proceeds to state that if in a particular case the question were simply whether a doctor, knowing that refusal to attend a case would involve suffering or danger which he might prevent, yet refused to go on the sole ground that his fee was uncertain, he would fairly be deemed guilty of inhumanity, and that every mem-

ber of the profession will agree that, in the words of the Poor Law Commission, "the physical condition of the patient should be the first consideration."

But this is only half the question. The primary responsibility for making proper provision for medical attendance in confinement cases rests on the patient or on her husband. If they fail in their duty, it then falls on the community as a whole. This principle is clearly acknowledged in the case of paupers, who are cared for not only along medical lines, but in every way at the expense of the state, even though their poverty be their own fault. This is carried to such an extent that the medical treatment given paupers is actually better than that given those members of the working classes who are just above the grade of paupers. The editor consequently concludes that the duty of providing proper medical attendance in cases of labor, accident, etc., falls on the individual or on the state, and that if the individual does not make adequate provision for such services the state should do so. In the case cited above both the individual and the state had failed to do their duty and the burden of assuming this responsibility without any guarantee of proper compensation was thrust on the physician as a representative of the medical profession, which is thus made to carry the burden which should be borne by the whole of society instead of being placed on a part.

After commenting on the situation in England, in which the midwives act makes satisfactory provision for the care of women unable to pay for medical services, the editor asks, "In this state of things, what must medical men do? If they refuse to attend these cases without guarantee of a fee they are called brutal and inhumane. If they do attend, they are voluntarily taking on themselves the burden which the local government board acknowledges ought to be borne by the community. They are doing state work without state pay and, as experience shows, if they will do it, they may go on doing it indefinitely."

Regarding accident cases, in some of the larger cities in England definite arrangements are made for payment on a fixed scale of fees to medical men called by the police to attend cases of accident, but in by far the greater number of towns there is no provision at all. "The authorities simply evade their responsibility by trusting that the humanitarian feeling of medical men will compel them to do the work for nothing. It is impossible that this condition of affairs should continue. Humanity will always claim sacrifice and will always get it from the medical profession. It is freely admitted that a man's responsibilities for helping others increase with his ability to help, but it can never be conducive to the welfare of the community that any one section of the community should be systematically exploited for the rest. Sydney Smith says that philanthropy in practice generally meant that Jones thought that Smith should do something for the relief of people in distress and this view is generally held by the public in respect to medical practitioners. It is high time that even coroners and their juries should realize that however convenient it may be to be charitable at another man's expense, the doctor can not live if he is to be regarded as a vicarious philanthropist."

These principles are of the greatest importance. Obviously the duty of caring for the injured and suffering members of the community devolves either on the individual or on the community at large. If the individual does not provide or is not able to provide proper medical attendance, then it is plainly the duty of the community to furnish it for him. The obligation to furnish such relief rests on the physician the same as on any other individual member of the community, but it should be met by the doctor in the payment of exactly the same amount of taxes that is paid by every other citizen of the same degree of material prosperity and not by a special tax levied on him as a professional man, in the shape of unremunerated and gratuitous professional service. It is impossible to avoid the conclusion that the physician is every year becoming more and more a state health officer and that the community has cheerfully and unthinkingly allowed the medical profession to do the char-

itable work which by right should devolve on the community itself. The appeal is being made constantly to the humanitarian instincts of the individual physician and seldom, we are glad to say, without response, but this does not palliate the economic injustice perpetrated by the community in unloading its plain charitable duty on the medical profession, simply because he has heretofore tacitly permitted it.

Marriages

WILLIAM FRANCIS LARKIN, M.D., to Miss Lenore Beck, both of Chicago, June 2.

ROBERT J. BEEBE, M.D., to Miss Ida Schultzy, both of West Branch, Mich., May 19.

ARNOLD C. KLEBS, M.D., to Mrs. Harriet K. Newell, both of Chicago, in Connecticut, May 22.

CHARLES W. VROOM, M.D., Whitten, Iowa, to Mrs. Anna Vroom of Athens, Pa., February 4.

WILLIAM BUTLER LEE, M.D., Nashville, to Miss Robbie Church, of Franklin, Tenn., May 12.

W. HORACE WITHERSPOON, M.D., Harrodsburg, Ky., to Miss Margaret Stubbs, of New Orleans, April 12.

DAVID JUDKINS DICKSON, M.D., to Mrs. Katharine Griswold Winchester, both of New York City, May 20.

SAMUEL PIERSON BRUSH, M.D., North Creek, N. Y., to Miss Frances Lela Morse, of Troy, N. Y., May 27.

ELBERT A. AINSWORTH, M.D., to Mrs. Susie S. Ash, both of West Union, Iowa, at New York City, May 8.

ALEXANDER C. WENTZ, M.D., to Miss Mary C. Kemper, both of Hanover, Pa., at Camden, N. J., Dec. 1, 1908.

WILLIAM EDWARD MOSELEY, JR., M.D., Baltimore, to Miss Sadie Beatrice Armistead of Cleveland, at Baltimore, May 22.

Deaths

Oscar Otis Burgess, M.D. College of Physicians and Surgeons, New York City, 1857; formerly president of the San Francisco Gynecological Society, the City and County Medical Society of San Francisco, the Medical Society of the State of California; vice-president of the first Pan-American Medical Congress; and city physician of Rochester, N. Y.; assistant surgeon and afterwards consulting surgeon to the Womans' Hospital, San Francisco; assistant surgeon to St. Luke's Hospital and the Children's Hospital; at one time a member of the State Board of Health; died at his home in San Francisco, May 20, from cerebral hemorrhage, aged 77.

Charles Burnham Porter, M.D. Harvard Medical School, Boston, 1865; and later demonstrator of anatomy and professor of clinical surgery in his alma mater; a member of the Massachusetts Medical Society; for many years surgeon, and later consulting surgeon to the Massachusetts General Hospital; surgeon of the Armory Square Hospital, Washington, D. C., during the Civil War; formerly vice-president of the American Surgical Association, and president of the Boylston Society of Harvard Medical School; died suddenly at his home in Boston, May 21, from cerebral hemorrhage, aged 69.

Oscar Nettleton Taylor, M.D. University of California, San Francisco, 1899; a member of the American Medical Association; instructor in diseases of the eye, ear, nose and throat in the University of California; and one of the best known athletes of the West; died in Lane Hospital, San Francisco, May 23, from meningitis due to operation he attempted to perform on himself for the removal of a nasal spur.

Reuben Parsons Thompson, M.D. Long Island College Hospital, 1886; formerly of Red Bank, N. J.; who was sentenced to imprisonment for eighteen years for malpractice in 1881 and served during his sentence as head nurse and assistant physician in the hospital ward; died at the state prison, Trenton, N. J., May 16, on the eve of pardon, from pulmonary hemorrhage.

Adele Stuart Hutchinson, M.D. Boston University School of Medicine, 1877; for many years a practitioner of Minneapolis, Minn.; and a member of the staff of the City Hospital; for six years a member of the State Medical Examining Board; and for several terms president of the Medical Woman's Club; died at her home in Andover, Mass., May 20, aged 62.

Samuel Fisler Stanger, M.D. Jefferson Medical College, Philadelphia, 1875; formerly of Harrisonville, N. J.; for ten years a member of the Board of Prison Inspectors; resident physician at the New Jersey State Prison, Trenton; died at his home in Trenton, May 21, from heart and kidney disease, aged 59.

Julius C. Mills, M.D. University of Pennsylvania; Philadelphia, 1869; a member of the Medical Society of the State of North Carolina; surgeon of the Thirteenth North Carolina Infantry, C. S. A. during the Civil War; died at his home in Reidsville, N. C., May 18, from cancer of the stomach.

William Allen King, M.D. Minnesota Hospital Medical College, Minneapolis, 1888; a member of the Washington State Medical Association; city health officer of Blaine, Wash., and medical inspector in the U. S. Immigration service; died at his home, May 15, from pneumonia, aged 61.

Nels Gustaf J. Dahlstedt, M.D. University of Minnesota, Minneapolis, 1889; health officer and postmaster of Port Wing, Wis., since 1902, and town clerk, justice of the peace and secretary of the school board since 1904; died at his home, April 20, from locomotor ataxia, aged 60.

Max Julius Gerdes, M.D. California Eclectic Medical College, Los Angeles, 1900; College of Physicians and Surgeons, San Francisco, 1905; in the government service in the Canal Zone and stationed at Lobaco; died at Ancon, April 7, 1908, from typhoid fever, aged 38.

Luther Elsworth Zech, M.D. University of Maryland, Baltimore, 1892; a member of the Medical Society of the State of Pennsylvania and of the borough school board; died suddenly at his home in York New Salem, Pa., from angina pectoris, May 22, aged 47.

Eugene LaFon Nelson, M.D. Rush Medical College, Chicago, 1864; assistant surgeon of the Eighth Illinois Volunteer Cavalry during the Civil War; died at his home in Springfield, Mo., April 20, from general debility, following cerebral hemorrhage, aged 69.

Benjamin Frank Lansdale, M.D. University of Maryland, Baltimore, 1866; representative in the Maryland legislature from Montgomery county, Md., in 1904; died at his home in Damascus, May 21, from cancer of the stomach, aged 64.

Harold Emory Jones, M.D. Kentucky School of Medicine, Louisville, 1900; M.R.C.S. Edinburgh, 1895; formerly physician to the Santa Fe System Hospital at Las Vegas, N. M.; died in New York City, May 12, from pneumonia, aged 36.

Wyllie C. Ogden, M.D. Bellevue Hospital Medical College, New York City, 1885; of Colorado Springs; a member of the Colorado State Medical Society; died at his old home in Fairmont, W. Va., May 12, from tuberculosis, aged 44.

Preston J. Edwards, M.D. Western Reserve University, Cleveland, 1892; of Montville, Ohio; a member of the Ohio State Medical Association; died in the Lakeside Hospital, Cleveland, May 16, from malignant disease, aged 58.

Alexander Harmon McLeod, M.D. University of Maryland, Baltimore, 1866; for many years an official of the Cincinnati, Hamilton and Dayton Railroad; died at his home in Wyoming, Cincinnati, May 11, from pneumonia, aged 73.

Allen Swan King, M.D. Tulane University, New Orleans, 1902; formerly of New Orleans; commander of the Berwick Division of the Louisiana Naval Brigade; was shot and killed in his office in Morgan City, La., May 19.

Walter E. Hall, M.D. Jefferson Medical College, Philadelphia, 1878; a member of the American Medical Association; a prominent citizen and philanthropist of Burlington, N. J.; died at his home, May 22, aged 51.

Cyrus Pain Bryan, M.D. Jefferson Medical College, Philadelphia, 1855; of Savannah, W. Va.; died in the Greenbrier General Hospital, Ronceverte, W. Va., April 23, as the result of a fracture of the hip, aged 80.

Harry B. Clark, M.D. Chicago Homeopathic Medical College, 1903; a member of the Michigan State Medical Society; formerly of Mancelona, Mich.; died at his home in Jackson, Mich., May 16, aged 29.

Romnald Arthur Girardin, M.D. Laval University, Montreal, 1898; of Menominee; a member of the Michigan State Medical Society; died in a sanitarium in Montreal, from locomotor ataxia, May 9, aged 40.

James L. Hedleston, M.D. Medical College of the State of South Carolina, Charleston, 1855; of Woodlawn, Ala.; a Confederate veteran; died at the home of his daughter in Woodlawn, May 19, aged 78.

Edward S. Harrison, M.D. Medical College of Georgia, Augusta, 1872; a member of the Medical Association of Georgia; died at his home in Thomson, May 20, from cerebral hemorrhage, aged 63.

John Murray Jordan, M.D. University of Pennsylvania, Philadelphia, 1883; for the last fifteen years a publisher of Philadelphia; died at his home in Germantown, May 19, from heart disease, aged 45.

David Maple Barkley, M.D. University of Louisville (Ky.) 1861; for 38 years a practitioner of Sturgis, Ky.; died at the home of his son in Parkland, Louisville, May 24, from senile debility, aged 75.

John David Shanor, M.D. Western Reserve University, Cleveland, 1881; a member of the American Medical Association; died at his home in Allegheny, Pa., from paralysis, May 18, aged 54.

Charles King, M.D. American University of Pennsylvania, Eclectic, Philadelphia, 1878; of Seattle, Wash.; died in the Pacific Hospital in that city, April 26, from erysipelas, aged 58.

Horace Bentley, M.D. Eclectic Medical Institute, Cincinnati, 1848; one of the founders of Woodbridge (Cal.) College; died at his home in Woodbridge, June 27, 1908, from paralysis, aged 80.

Frederick Wesley Park, M.D. Beaumont Hospital Medical College, St. Louis, 1890; a member of the Illinois State Medical Society; died at his home in Fieldon, Ill., May 7, aged 42.

James S. Carter (license, Tenn., 1889); of Selmer, Tenn.; a Confederate veteran; died in Memphis, May 14, two weeks after an operation for the removal of gallstones, aged 64.

J. N. Cowden, M.D. Cleveland University of Medicine and Surgery, 1894; died at his home in Lowellville, Ohio, Nov. 14, 1908, from cerebral hemorrhage, aged 68.

William C. A. Blauw, M.D. Bennett Medical College, Chicago, 1895; of Chicago; died in Cook County Hospital, Sept. 28, 1908, from chronic nephritis, aged 75.

James Leonard Burroughs, M.D. Maryland Medical College, Baltimore, 1903; died at his home in Louisville, Miss., April 19, from cerebral hemorrhage, aged 42.

Isaac Guss, M.D. Jefferson Medical College, Philadelphia, 1866; died at his home in Philipsburg, Pa., Feb. 14, 1908, from chronic bronchitis, aged 71.

John W. Cooper, M.D. Barnes Medical College, St. Louis, 1895; formerly of Terre Haute, Ind.; died at his home near Roff, Okla., recently, aged 35.

John William White, M.D. Eclectic Medical Institute, Cincinnati, 1898; died at his home in West Alexander, Pa., March 25, from tuberculosis, aged 35.

George H. Hightower, M.D. Georgia Eclectic Medical College, Atlanta, 1884; died at his home in Dalton, Ga., May 13, from acute gastritis, aged 55.

Henry Kehm, M.D. Jefferson Medical College, Philadelphia, 1871; died at his home in East Berlin, Pa., March 21, from locomotor ataxia, aged 64.

Andrew Sproule Martin, M.D. Trinity Medical College Toronto, 1898; formerly of Lipton, Sask.; died in Regina, Sask., May 1, aged 36.

John Wesley Colburn, M.D. Missouri Medical College, St. Louis, 1875; died at his home in Kansas City, Mo., May 4, from nephritis, aged 66.

Henry S. Jones, M.D. Louisville (Ky.) Medical College, 1862; died at his home in Corydon, Ky., May 22, from peritonitis, aged 74.

Samuel R. Bass, M.D. University of Louisville (Ky.), 1861; died at his home in Campbellsville, Ky., May 21, from rheumatism, aged 73.

Thomas Irven Elliott, M.D. Cleveland, 1854; died at his home in Sutton, W. Va., May 31, 1908, from organic heart disease, aged 81.

William Hughes, M.D. New York University, New York City, 1869; died at his home in Lima, Ind., May 13, aged 70.

George Warren Wild, M.D. Boston University, 1878; died at his home in Rochester, N. Y., May 24, aged 54.

John Foote, M.D. University of Buffalo, N. Y., 1851; died at his home in Kansas City, Mo., May 17, aged 81.

A. J. G. Hall, M.R.C.S. Edinburgh, Scotland, 1845; died at his home in Kimmund, Ill., April 1, aged 90.

L. Young Hayes (license, Tenn., 1904) died at his home in Fayetteville, Tenn., May 18, aged 41.

Miscellany

PREMATURE BURIAL

Alleged Cases Usually Found to be Based on Hearsay and Presumptive Evidence

The subject of premature burial has long been a favorite theme for lovers of the gruesome and for those who find a delight in creating imaginative horrors on which to expend a perverted sense of sympathy. Like the vividly gory details to be found in antivivisectionist "literature," the testimony given by those whose hobby is "burial alive" is of the hearsay and presumptive order and invariably apocryphal. A case that would have furnished the basis for an elaborate "thriller" on the subject of premature burial, was discussed in the *Medical Press and Circular*, March 17, 1909.

While a grave was being filled, in an English village churchyard, sounds of rapping were heard which it was thought proceeded from the coffin. The lid of the coffin was immediately removed by the undertaker and a physician was summoned. The corpse, however, appeared exactly as when placed in the coffin, and there was not the slightest evidence that any movement had occurred. The coffin was replaced and as for the second time the grave was being refilled, rapping was again supposed to occur. As our British contemporary says: "Had the affair not been at once investigated, it would doubtless have added another to the bogus stories quoted in support of the gruesome assumption that live burial is of frequent occurrence."

We have investigated at different times some of the reports of premature burials or premature encoffinments that crop up perennially in the press. The following appeared in a Boston publication, *Our Dumb Animals*, February, 1908:

PREMATURE BURIAL

Wichita, Kan.—John Clark, an inmate of the Soldiers' Home, in Dodge City is said to have been buried alive for two days. He had been ill with typhoid fever. The doctor in attendance pronounced him dead, and he was buried in the soldiers' cemetery with military honors.

Some of his comrades declared that they did not believe Clark was dead. One soldier, named Hazen, persisted that Clark had been buried alive, and demanded that his body be taken from the grave. The doctor was recalled and asked what he thought about the case.

After consultation it was decided to open the grave. When the coffin was opened it was seen that Clark's hands were not in their former position and there was moisture on the glass above his mouth. Stimulants and careful nursing turned the tide for Clark and death was robbed of its victim.

When Clark was finally restored to consciousness he said that he had been half conscious of all that had happened and knew that he had been buried alive.

He was buried on Wednesday and taken out on Friday.—*Boston Herald*.

At the time this article appeared we looked into the matter and found the story an evident fake. A physician of Dodge City, in fact, writing to us about the report, said:

"I have made diligent inquiry and find that the story is entirely untrue. Nothing of this character has ever occurred at the Soldiers' Home at this place."

On October 21 of last year the following appeared in the *Chicago Tribune* and other papers:

WOMAN'S BURIAL ALIVE PREVENTED JUST IN TIME

Ells, Kan., Oct. 20.—The timely intervention of a physician who was not satisfied with the appearance of the body to-day prevented the burial alive of Mrs. Thomas Chapman, wife of one of the best known citizens of this part of Kansas.

Mrs. Chapman, who is 60 years of age, was supposed to have died suddenly from heart disease on Saturday last. The body was prepared for burial, but was not embalmed. The funeral was to have taken place this afternoon.

A few minutes before the casket was to be sealed a physician requested permission to see the body. After confirming his suspicions, the woman was removed from the coffin and placed in bed. While her heart is weak, it is believed Mrs. Chapman will recover.

On corresponding with the physician referred to in the news item, we received the following reply:

"On Saturday, October 17, I was called to see Mrs. Thomas Chapman. Examination revealed no signs of life, and naturally I pronounced her dead. On Tuesday, October 20, I was asked to visit again the body, as some of the relatives thought the death signs were not plain. In company with another physician, I returned and for the second time pronounced her dead. The funeral was delayed another twenty-four hours. There never were any signs of life in the body after she was first pronounced dead."

The following case illustrates a possible method of keeping up interest in the subject of premature burial. In the issue of *Our Dumb Animals* for February, 1909, this item appeared:

PREMATURE BURIAL

A prominent gentleman of Newport, R. I., sends us to-day from the *Newport Herald* an article of deep interest on this subject, describing how Mrs. Christina Hart, of 1131 St. Louis avenue, East St. Louis, was pronounced dead by her physicians and barely escaped being embalmed by the undertaker. She was entirely conscious during the whole trance of everything that was going on about her and of all that was said.

On making inquiries we found that no one of that name lived at the address given, and in following up the matter the editor of *Our Dumb Animals* was asked to give the date of the particular issue of the *Newport Herald* which contained the original account. It was then learned that though the article states that "A prominent gentleman . . . sends us to-day," etc., the facts were that the same article had appeared in the same magazine *nine years previously*. Any cause which requires the dishing up as current matter news items that are admitted to have been in cold storage for at least nine years, must be in a bad way!

From practical considerations alone the probability of premature burial is so remote as to be negligible. We have but to bear in mind the fact that the amount of air in the modern air-tight coffin would support life for but a few brief minutes at most, to realize that the stories of resuscitation occurring as the coffin is being placed in the grave are the sheerest of fiction. The very general employment of methods of embalment also tends to make premature burial, if not impossible, at least highly improbable. Last, but not least, the most careless of physicians is not at all likely to pronounce a person dead without having assured himself of the fact. Yet we read in a pamphlet issued by a society for the prevention of premature burial the following intemperate statement:

If the present practice is to be continued, establish slot machines, where, by putting in a cent, a [death] certificate may be ground out. The certificate would be equally valuable and possess all the elements of intelligence and medical knowledge that the present certificates possess at a vast saving of salaries for medical examiners and medical certificates.

What grounds this society has for gratuitously insulting physicians by impugning their intelligence and medical knowledge and accusing them of incapacity or worse, it is impossible even to guess. If its statistics will bear no closer scrutiny than the few cases which we have investigated, the society probably believes in making up in invective what it lacks in testimony. Such methods are common in cases of organized hysteria. Quoting our British contemporary again: "The life of man is already surrounded by a sufficiency of trials and difficulties without adding gratuitous terrors to the list."

Clippings from Lay Exchanges

PECULIAR LAY MEDICAL TERMS

Gastrojegimostomy.—*Rhyolite* (Nev.) *Bullfrog Miner*.

Ankerstealeal nephortitis. This disease makes the internal conditions worse than Bright's disease.—*Fort Wayne* (Ind.) *Journal-Gazette*.

Ossification of the tissues of the bone.—*Philadelphia Evening Bulletin*.

Chronic intestinal nefritis.—*Salem* (Ind.) *Democrat*.

Structure of the bowels.—*Davenport* (Iowa) *Democrat and Leader*.

Earamyoclonus, a form of nervous prostration.—*Fort Wayne* (Ind.) *Sentinel*.

Scurvy, a sort of bleeding at the lungs.—*La Junta* (Col.) *Democrat*.

MODERATE OR MODEST

Optical Co., — Buttercup St. Eye examinations free. Ability, Quality and prices moderate.—*Philadelphia Press*.

"AS WELL AS COULD BE EXPECTED"!

Dr. — performed two surgical operations last week and both patients are doing as well as could be expected.—*Clay Center* (Kan.) *Dispatch*.

STEAMING THE BLOOD, A NEW CURE FOR PRURIENCY

Berlin.—The Kaiser has given the highest medical post in Berlin . . . to Prof. A.—— B———, . . . the inventor of two valuable surgical processes—the artificial steaming of the circulation of the blood as a crure for prurient abscesses, and the injection of anæsthetics into the spinal marrow, which is used for rendering the lower part of the body unconscious.—*Los Angeles (Cal.) Examiner*.

Russian Researches in Metabolism.—Of recent years the activity of Russian investigators in problems of animal nutrition and metabolism have been to a great measure overlooked. Dr. Francis G. Benedict of the Nutrition Laboratory of the Carnegie Institute of Washington, has recognized these Russian researches as among the best (*Science*, March 5, 1909.) For this reason and on account of the comparative inaccessibility of Russian literature to American scientists, he has made arrangements with Professor Lihachev, whereby all articles in Russian dealing with problems of metabolism are to be sent to the nutrition laboratory for translation into English. Manifolded copies of these translations will be deposited in the library of the laboratory. Dr. Benedict promises that titles and short abstracts of the articles will be published from time to time in some scientific journal. In their digest of metabolism experiments Atwater and Langworthy (*U. S. Dept. of Agric., Bull. 45, Office of Exper. Stations*) review the Russian literature up to that date. Among the more recent the following excellent articles have appeared in Russian, "Investigations of Gas and Heat Exchange in Fevers," "Production of Heat by Healthy Man in a Condition of Comparative Rest," "The Influence of Alcohol on the Heat and Gas Exchange in Man," and "Metabolism During Fasting." Of Pashutin's treatise on experimental pathology the entire section (some 800 pages) has been translated. Bound typewritten copies are deposited in the Surgeon-General's library in Washington, the New York Public Library, and in the John Crerar Library of Chicago.

The Mechanical and Physiologic Effects of an Excessive Dilatation and Elongation of the Colon.—Dr. A. Campbell Geddes (*Jour. Anat. and Physiol.*, 1909, xliii, 182) describes with several good illustrations the effects of marked dilatation and elongation of the cecum, ascending colon and transverse colon on the abdominal and thoracic viscera and on the organism in general. Reference is made also to the effects of a similar condition in the transverse and descending parts of the colon, described by Professor Howden. The observations which were made in the anatomic laboratory of the University of Edinburgh show instances of remarkable dilatation. A maximum diameter of 220 mm. for the cecum, 280 mm. for the ascending colon and 170 mm. for the transverse colon, with a combined increase in length of over 100 per cent. for these three portions of the intestine are recorded. From his dissections, Dr. Geddes concludes there may be attributed to an excessive dilatation and elongation of the cecum, ascending and transverse parts of the colon the following effects: displacement of the heart to the left, backward displacement of the left lung, a shortening of the right lung, a translation and rotation of the liver, direct distortion of the stomach, indirect distortion and downward displacement of the right kidney, a partial functional obliteration of the abdominal venous system (inferior vena cava and abdominal veins), the establishment indirectly of a condition of general extra-abdominal congestion and indirectly a hypertrophy of the heart.

The Temperature in the Human Stomach.—Dodo Rancken and R. Tigerstedt, in *Skandin. Arch. f. Physiol.*, xxi, 80, record the temperature of the stomach, taken every four minutes for eighteen hours in the case of a woman of 62 years, with a stomach fistula. At the same time the temperature of the rectum was taken. Each series of temperature readings is graphically plotted in curves showing hourly and half hourly averages. The stomach and rectal temperatures ran in general parallel, the former showing an average of 0.09 C. higher than

the latter. Only on taking food of a lower temperature than that of the body did the temperature of the stomach sink below that of the rectum. The close similarity of the two curves and the fact that the maximal difference between them occurred twelve hours after taking food, are taken to indicate that during stomach digestion no perceptible increase in the temperature of the organ is experienced. It is probable that the surrounding viscera, especially the liver, may account for a higher temperature in the stomach than in the rectum.

Baths of Tiberias.—According to Consul-General G. Bie Ravndal of Beirut (Monthly Consular and Trade Reports, March, 1909), there is good opportunity for development, under American or European management, of a health resort near the hot springs of Tiberias in Palestine, which may rival Carlsbad. These springs have been noted for their healing properties since Roman times. The temperature is about 143 F. and the waters contain sulphur, magnesium chlorid and iron. Baths have been provided by the Turkish government, but the accommodations are inferior and lack cleanliness. In Galilee the climate is delightful in the spring and the season lasts from February to May. A resort offering such baths and such historic associations would seem to have a bright future.

Provision for Public Care of Epileptics.—An instructive little booklet on epilepsy entitled "Public Care and Treatment for the Epileptic" has been prepared by Dr. J. F. Munson, secretary-treasurer of the National Association for the Study of Epilepsy, and Mr. William C. Graves, executive secretary of the Illinois State Board of Commissioners in Charity. It is designed for the layman and gives the reasons for public care of epileptics, the superiority of colony to hospital care and a list of the states which have already provided institutions of this character. Unfortunately, the list is not a long one, only nine states being named as having established separate institutions for epileptics. The booklet ought to have a strong influence in stimulating legislators to make adequate provision for these people, who are unfortunate and disabled through no fault of their own.

Typhoid Fever and Venereal Disease in the British Army in India.—Among the points brought out in the Annual Report of the Sanitary Commissioner with the Government of India for 1907, one or two in connection with typhoid fever are of general as well as of local interest. A very conclusive instance of the bacillus-carrier is reported as follows:

"During August, 1907, five cases of enteric fever occurred in the detachment of the Bedfordshire regiment stationed at Kasauli. All the patients contracted the disease about the same time. They lived in different rooms and the only conditions common to all were the food supply and the latrine accommodation. The source of infection remained undiscovered until a bacteriologic examination of the excreta of all the cooks and 'contacts' in the detachment (42 in all) was made. The investigation proved that a cook of the detachment, who was apparently in perfect health, was excreting the typhoid bacillus in enormous numbers in his feces. The man was isolated and no further case occurred in the detachment. It was probable that he had been a typhoid bacillus-carrier for nearly ten years."

The committee of investigation also found that soldiers employed as nurses to typhoid patients may become bacillus-carriers without themselves being attacked by the disease. This was found to be the case with regard to three out of five nursing orderlies whose histories are recorded in the report.

Another observation which the report thinks has not had sufficient importance attached to it in general, except perhaps in India, is the danger of infection by contact during the very early stages of typhoid fever. In the tendency which there is at the present time to attribute the origin of so many cases of typhoid to the agency of convalescents and chronic bacillus-carriers, there is perhaps a danger that the importance of the infectiousness of patients in the early stages of the disease may be overlooked.

It is noteworthy that the hospital admissions for alcoholism and venereal diseases in the British troops show a considerable fall over 1906. Among the contributory causes of this fall are the official efforts to occupy the spare time of the men in healthy pastimes, to make the regimental institutes attractive and comfortable, as well as a better education and a higher moral tone among soldiers generally. The decline extends also through the native troops. The indication of the decline in syphilis among European troops is shown by the "syphilis register," which contains the names of all men who come under treatment for syphilis for the first time. It was started in 1904, and 2,947 men were entered. In 1905 there were 1,470; in 1906 there were 936; and in 1907 only 797 entered. Every man whose name is on this register has to attend hospital once a week for observation and treatment during a period of two years, and the continuous improvement and results of treatment are shown by the steady decrease in the proportion of cases requiring readmission to hospital while under observation.

State Dependency and Criminality.—In 1908 a commission was appointed in New Jersey to investigate the causes of dependency and criminality. That commission, finding it impossible to cover the entire field in the short time allotted, has recently issued a partial report, for a copy of which we are indebted to Dr. Charles A. Rosenwasser, chairman. The report contains some interesting suggestions, which, though naturally directed to the State of New Jersey, nevertheless bear on problems that exist in most of the states, and are therefore worthy of consideration. The commission recommends the abolition of all state boards of managers and the substitution in their place of a commissioner of charities, who should be a specialist in all phases of work in the institutions of the state, and who should work subject to a board of charities and corrections. The report strongly recommends the unification, with centralization of authority, control, and management, of all state institutions. The system of detaining in the county jail in close contact with criminals those who are merely accused or desired as witnesses, and also juvenile and first offenders, is properly and strongly condemned. The abolition of the Sunday restriction on sports and games, a relic of "harsh laws made to fit other times, other peoples, and other conditions," is urged. The disposition of the insane receives careful consideration. A law is recommended to provide for the voluntary commitment of the insane, on the ground that such a law would render it possible to get patients under treatment in the early stages of insanity. There can be little doubt that, as in other diseases, so in insanity, early treatment leads to more cures. Owing to the conflicts that occur between portions of laws enacted at different times and under different circumstances, the commission recommends a repeal of all the laws dealing with insanity from 1846 to date, and the enactment of one comprehensive law to embrace all features necessary to cover requirements in the commitment, detention and discharge of the insane. Other points of general interest considered in the report are the recommendation of a hospital for inebriates to replace the barbarous system of punishment, restriction of marriage in the case of persons physically or otherwise unfitted to marry, the education of the public in matters of health, especially sexual hygiene, the prevention of ophthalmia neonatorum, and records of the sale of dangerous weapons. A mode of equalizing the distribution of insane patients according to available accommodation in the various hospitals, is suggested. The report further discusses women's reformatories, state homes for boys, the harmfulness of dead-letter laws, the medical examination of prisoners (in the absence of which tuberculosis and other transmissible diseases may be spread), the separation of juvenile prisoners from adults and of male from female inmates in institutions. The report is one which shows good work and in the main inculcates sound principles.

The New Jersey Campaign Against Mosquitoes.—Prof. John B. Smith, in his report to the governor on the work carried on under the former's direction, for the two years ending

with the summer of 1908, discusses the problems encountered by the state of New Jersey in its attempt to exterminate the mosquito. It is his opinion that this pest can be practically exterminated if the campaign is continued. Drainage of 20,292 acres of salt marsh has been accomplished by 2,723,974 feet of ditching at an actual cost of \$44,058. Considerable money was also expended by municipalities throughout the state, which cooperated with the mosquito commission in its crusade. Breeding places were eliminated. Broods of wigglers in pools were destroyed with oil. In those localities where the marshes were well drained during or before 1907, the migrating marsh mosquitoes were practically absent during 1908. It has been found that the eggs of the species that are typical of these salt marshes are capable of hatching at least three years after a marsh is drained. Particular attention was also directed to water-barrels, catch-basins, cisterns, etc., in the larger towns. It is hoped that the legislature will extend the appropriation so that the crusade may be continued.

Economic Aspects of Animal Tuberculosis.—When a disease can be shown to inflict commercial loss its control or eradication is generally assured. According to a recent report of the Bureau of Animal Industry the meat inspection figures show that tuberculosis among live stock is increasing steadily and that nearly 1 per cent. of cattle and over 2 per cent. of hogs slaughtered are tuberculous, which is surely an alarming condition. Experiments indicate that hogs can be infected through the ingestion of feces and milk from tuberculous cows. There is, therefore, no doubt that the prevalence of the disease in hogs could be greatly reduced simply by eradicating it from cattle. The prevalence of the disease is further shown by results of the testing of dairy herds in Washington, D. C., and elsewhere. Tuberculin tests made in various states warrant the estimate that in the country at large at least 10 per cent. of the cows in dairy herds are tuberculous. The results of tests showed that in some of the pure-bred herds nearly 50 per cent. of the animals were diseased and in consequence sales were lost. This loss is inducing some buyers of breeding cattle to insist on having pure-bred animals tested before placing them in their herds. When this practice becomes general the breeder of strictly healthy cattle will be much sought after. The avoidance of loss due to the condemnation of a valuable animal on account of disease would compensate for the necessary expense of inspection and other means of prevention. Sooner or later the man who raises tuberculous animals must suffer the loss, unless the loss is paid for out of public funds; and when the loss is placed on the producer we may then know that the end of the disease is in sight.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

- DELAWARE: Dover and Wilmington, June 15-17. Sec., Dr. Henry W. Briggs, Wilmington.
- FLORIDA ECLECTIC: DeFuniak Springs, June 10. Sec., Dr. Hiram J. Hampton, Tampa.
- ILLINOIS: Coliseum Annex, Chicago, June 16-18. Sec., Dr. J. A. Egan, Springfield.
- IOWA: Des Moines, June 22-24; Iowa City, June 8-10. Sec., Dr. Louis A. Thomas, Des Moines.
- KANSAS: Kansas City, June 10. Sec., Dr. R. A. Light, Chanute.
- MARYLAND: Baltimore, June 15-18. Sec., Dr. J. M. Scott, Hagerstown.
- HOMOEOPATHIC: Baltimore, June 15-17. Sec., Dr. Joseph S. Garrison, 848 W. North Ave.
- MICHIGAN: Ann Arbor, June 8. Sec., Dr. B. D. Harrison, 504 Washington Arcade, Detroit.
- MINNESOTA: Minneapolis, June 15. Sec., Dr. W. S. Fullerton, St. Paul.
- NEW JERSEY: State House, Trenton, June 15-16. Sec., Dr. J. W. Bennett, Long Branch.
- NEW YORK: Albany, June 22-25. Chief of Examinations Division, Dr. Charles F. Wheelock, Albany.
- NORTH CAROLINA: Asheville, June 9. Sec., Dr. B. K. Hays, Oxford.
- OHIO: Columbus, June 8-10. Sec., Dr. George H. Matson, State House, Columbus.
- PENNSYLVANIA: Philadelphia and Pittsburg, June 22-25. Sec., Mr. Nathan C. Schaeffer, Harrisburg.

SOUTH CAROLINA: Columbia, June 8-10. Sec., Dr. H. H. Wyman, Aiken.
TEXAS: Cleburne, June 22-24. Sec., Dr. M. E. Daniel, Honey Grove.
VIRGINIA: Richmond, June 22-25. Sec., Dr. R. S. Martin, Stuart.
WYOMING: Laramie, June 23-25. Sec., Dr. S. B. Miller.

Nebraska College of Medicine Closes Voluntarily

Recognizing the rapidly increasing demands of medical education and the impossibility of its meeting these demands with the means at its disposal, the Nebraska College of Medicine has voluntarily closed its doors. This action was taken by the faculty at a meeting held May 19th. In an open letter to the president of the Nebraska Wesleyan University, with which the medical school was affiliated, Dr. J. F. Stevens, dean of the medical college, sets forth the reasons leading to the action taken. After giving a brief history of the opening and progress of the medical school, Dr. Stevens continues:

"We would respectfully call your attention to the fact that educators and physicians throughout the United States, recognizing the inferiority, on the whole, of the American medical school, as compared with those of Europe, have determined to raise the standard of medical education to such a point that our colleges will command the respect of the world. While academic training and opportunity have grown into magnificent and commanding proportions, the professional schools, with the exception of a small minority, have remained essentially elementary or even worse. The spirit of progress has at last become supreme and on all sides may be seen the work of destruction, re-organization, and rebuilding. The American Medical Association is doing a splendid work in securing and digesting statistics, and reflecting the strengths and deficiencies of our institutions. The Carnegie Foundation, in a different manner, lends its words of wisdom, and a multitude of smaller bodies and societies, including state examining boards, are working together with hardly a discordant note, for the same purpose. Standards of entrance requirements have been raised to such a point that one full year's work in an accepted college or university is required for matriculation. Soon it will be two years, and later a bachelor's degree will, without doubt, be the *sine qua non*. Small colleges that have found it impossible to stand the strain of such requirements have been forced either to step from the field altogether, or to merge with some other school. In several states nearly, or quite all, of the small schools have been blended with the state institution. At the same time the requirement is going forth that schools shall have at their disposal a dispensary and hospitals sufficiently patronized to permit of a very wide study of disease. These requirements can not be met in a small city. Again, with the rapid advancement in medicine has come the need of costly laboratories, under the direction of highly cultured men. Subjects, too, that once belonged to the 'mere mention' hour in the course of study, have developed into great fields with divisions and subdivisions, each demanding a special training for its comprehension and most certainly for its proper teaching. None of these requirements insisted on by educators and the medical profession generally is in excess of what it should be, and this institution is in full harmony with that view. . . . We fully realize that to maintain our standing and dignity as medical teachers, in the continuance of our college, it will be necessary to add to our working force a goodly number of trained instructors. This we can not do, and because of this, and for the reasons easily deduced from the above discussion, it has been decided best for our institution to voluntarily close our doors, in the interest of higher medical education."

The action taken by the faculty of this college is but another evidence that medical educators themselves realize the desirability that medical teaching in America be improved until it is at least on the same high plane held in other leading countries, and that they are willing to make great sacrifices, if need be, to attain that end. It is this spirit so frequently manifested by our medical educators, which is an inspiration to those working for better standards and which is sure to bring results.

AMERICAN CONFEDERATION OF RECIPROCATING, EXAMINING AND LICENSING MEDICAL BOARDS

Annual Meeting, held at Louisville, Ky., May 12, 1909

The annual meeting of the American Confederation of Reciprocating, Examining and Licensing Medical Boards was held at Louisville, Ky., May 12, under the presidency of Dr.

W. A. Spurgeon of Muncie, Ind., who is president of the Indiana State Board of Medical Registration and Examination, the secretary-treasurer being Dr. B. D. Harison, 504 Washington Arcade, Detroit, who is secretary of the Michigan State Board of Registration in Medicine. While the attendance was not so large as usual, owing to the fact that at this season medical colleges are holding or preparing to hold examinations, and medical boards are either conducting examinations or preparing to do so, a comparatively large number of state boards and medical colleges were represented. The local profession of Louisville was largely represented at the meeting, and also at the luncheon given to the delegates by Dean Evans of the Medical Department of the University of Louisville, at the Pendennis Club.

DR. JOSEPH M. MATHEWS, president of the Kentucky State Board of Health, gave an interesting address on "Preliminary Requirements," and advocated conservatism in medical boards adopting higher standards, suggesting that the present standard should be absolutely obtained prior to any such advancement.

The presidential address was delivered by Dr. Spurgeon of Indiana and the secretary's report by Dr. Harison of Michigan. The latter showed 827 licenses reported endorsed by the several reciprocating states in 1908, with eight states failing to report. Additional states reciprocating are, Texas, Oklahoma, Louisiana and New Hampshire. Information was also received by the secretary from the Board of Medical Examiners of Oregon, to the effect that this board would enter the reciprocating field in a short time, and that Washington and Idaho were also seriously considering medical reciprocity in the near future.

Article II of the constitution of the confederation was amended. It formerly read:

The object of this confederation shall be to establish reciprocal relations between the medical examining and licensing boards of the states, territories, districts and provinces of the United States; the purpose of which being that thoroughly worthy and well qualified physicians and surgeons who have been legally authorized to practice under the laws of one of said states, territories districts or provinces, may be given legal authority and be admitted to practice in any state, territory, district or province represented in this confederation without a repetition of the tests of qualification to which such practitioner has submitted.

The amendment added the following:

"This confederation shall also adopt, from time to time, suggestive standards of preliminary and medical education. It shall also suggest methods of making practical the reciprocal endorsement of licenses."

Detail of Academic (Secondary) Work and Examination

The following detail of academic value of a high school diploma was adopted:

REQUIRED GROUP		
MINIMUM 40 COUNTS. (TOTAL OF 60 COUNTS.)		
	Credits Accepted.	
	Minimum	Maximum
	Counts.	Counts.
English	10	15
Mathematics	10	20
Latin	10	20
Physics	5	5
History	5	15
Totals	40	75
ELECTIVE GROUP		
MAXIMUM 20 COUNTS		
Greek	8	10
French	8	10
Spanish	8	10
German	8	10
Chemistry	4	5
Botany	2	5
Zoology	2	5
Biology (see Note 5)	4	5
Physiology and Hygiene	2	5
English Literature (see Note 3)	4	5
Trigonometry (see Note 3)	2	5
Solid Geometry	2	5
Physical Geography	2	5
Drawing	2	5
Astronomy	4	5
Geology	4	5
Total elective	—	35

INSTRUCTIONS

1. As used in this table, a count is the measure of the work successfully completed in a secondary or high school pursued an entire

school year of 36 weeks in one weekly recitation period of not less than forty-five minutes.

2. The required group, 40 counts, must be presented by all applicants. Sufficient counts to make a total of 60 counts required may be selected from the elective group. The credit which will be accepted in the several studies is shown by the printed figures.

3. English literature of the elective group may not be counted unless a year has been given to that subject in addition to the required ten counts in English, and trigonometry may not be counted unless it is in addition to the required ten counts in mathematics.

4. Civics is not accepted as a subject, but may be counted as a part of American history.

5. Biology is the equivalent of botany and zoology, and it can be given no credit if an applicant is credited with botany or zoology.

6. The scope of the course is recorded under minimum standard of preliminary education.

The scope of such diploma was passed at the 1908 meeting. The committee having in charge the medical curriculum was continued and instructed to report at the next meeting. The officers of the previous year were re-elected.

Arizona April Report

Dr. Ancil Martin, secretary of the Arizona Board of Medical Examiners, reports the written examination held at Phoenix, April 5-6, 1909. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 7, of whom 5 passed and 2 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Northwestern University Medical School.....	(1903)		83.
College of Physicians and Surgeons, Baltimore....	(1885)		78.2
Medical College of Ohio.....	(1883)		75.6
Western Reserve University.....	(1903)		86.3
Jefferson Medical College.....	(1883)		81.2
FAILED			
Jefferson Medical College.....	(1885)		72.9
Chattanooga Medical College.....	(1908)		72.5

California April Report

Dr. Charles L. Tisdale, secretary of the Board of Medical Examiners of the State of California, reports the written examination held at San Francisco, April 6-8, 1909. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 67, of whom 44 passed and 23 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
College of Physicians and Surgeons, San Francisco, (1902)	75.2;		
(1906) 75.7, 76.6, 78.2, 80.5; (1907) 75, 76.2; (1908)	81.7,		
82.1.			
University of California.....	(1908) 78.6, 79.9, 80.8, 89.1		
College of Physicians and Surgeons, Los Angeles..	(1908) 75.		
University of Southern California, (1904) 75; (1906) 80.5; (1907)	75, 80.7; (1908) 75, 78.5.		
Hahnemann Medical College of the Pacific.....	(1908) 76.5		
California Medical College, Eclectic.....	(1906) 78.		
Cooper Medical College... (1905) 76; (1907) 79; (1908)	75.		
Yale Medical School.....	(1904) 86.4		
Dunham Medical College.....	(1902) 75.		
Northwestern University Medical School.....	(1899) 77.		
Rush Medical College.....	(1909) 90.9		
Medical College of Indiana.....	(1898) 81.3		
University of Iowa.....	(1892) 82.1		
Kentucky School of Medicine.....	(1893) 85.8		
Tulane University of Louisiana.....	(1908) 75.1		
Harvard Medical School.....	(1899) 83.5; (1907)		
University of Minnesota.....	(1896) 82.4		
St. Louis College of Physicians and Surgeons... (1908)	75.6		
Washington University.....	(1907) 87.4		
Marion Sims College of Medicine.....	(1898) 80.3		
Columbia University, College of Phys. and Surg. ..	(1907) 83.6		
Woman's Medical College of Pennsylvania.....	(1908) 84.2		
University of Vermont.....	(1900) 78; (1907)		
University of Toronto, Ontario.....	(1906) 87.		
FAILED			
University of Southern California.....	(1908) 72.4		
Hahnemann Medical College of the Pacific.....	(1908) 72.3		
College of Physicians and Surgeons, San Francisco, (1906)	45.5,		
72.3, (1907) 70, 72.1.			
College of Physicians and Surgeons, Los Angeles... (1908)	28, 52.		
Hahnemann Medical College and Hospital, Chicago, (1886)	75.8*		
(1898) 70.5.			
College of Physicians and Surgeons, Chicago.....	(1902) 73.4		
University of Iowa.....	(1890) 69.9		
Kentucky School of Medicine.....	(1889) 65.2		
Baltimore Medical College.....	(1908) 62.		
Harvard Medical School.....	(1898) 69.3		
University of Michigan.....	(1902) 70.8		
University of Michigan, Homeopathic College....	(1892)		66.

Washington University.....	(1901)	73.6
Creighton Medical College.....	(1904)	70.
University of Oregon.....	(1908)	73.8
Jefferson Medical College.....	(1894) 66.6; (1895)	56.2
University of Vermont.....	(1907)	73.4
* Five per cent. added for each ten years of practice.		

Wisconsin April Report

Dr. J. V. Stevens, secretary of the Wisconsin Board of Medical Examiners, reports the written examination held at Madison, April 13, 1909. The number of subjects examined in was 21; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 3, all of whom passed. Twenty-three reciprocal licenses were issued at this examination. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
College of Physicians and Surgeons, Chicago.....	(1902)	79, 84.	
Milwaukee Medical College.....	(1904)	79.	

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Denver and Gross College of Medicine.....	(1903)	Iowa
Northwestern University Med. School. (1907) (2, 1908)		Illinois
Rush Med. Coll... (1880) Minnesota; (2, 1907) (1908)		Illinois
Illinois Medical College.....	(1905) (1908)	Illinois
College of Physicians and Surgeons, Chicago, (1907)		Minnesota;
(3, 1908) Illinois.		
Bennett Coll. of Eclectic Med. and Surg.... (2, 1908)		Illinois
Hahnemann Med. Coll. and Hosp., Chicago, (1907) (1908)		Illinois
College of Medicine and Surgery, Chicago.....	(1907)	Illinois
Tulane University of Louisiana.....	(1903)	Louisiana
Ohio Medical University.....	(1898)	Ohio
New York Med. Coll. and Hospital for Women, (1887)		Illinois
Queen's University, Ontario.....	(1903)	Minnesota

Colorado April Report

Dr. S. D. Van Meter, secretary of the Colorado State Board of Medical Examiners, reports the written and oral examination held at Denver, April 6-10, 1909. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. Twelve applicants were examined, of whom 7 passed and 5 failed. Thirty-seven candidates were registered on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Denver and Gross College of Medicine.....	(1908) 78.5, 79.		
Baltimore Medical College.....	(1908)	76.	
Johns Hopkins Medical School.....	(1908)	85.4	
University of Maryland.....	(1904)	76.7	
University of Michigan.....	(1903)	79.5	
McGill University, Canada.....	(1908)	90.	

FAILED

Denver College of Physicians and Surgeons.....	(1908)	72.9
Chicago College of Medicine and Surgery.....	(1903)	72.3
Kentucky School of Medicine.....	(1906)	62.7
University Medical College, Kansas City.....	(1908)	69.5
Lincoln Medical College.....	(1908)	65.5

REGISTERED ON CREDENTIALS

College	Grad.	Licenses
Rush Medical College.....	(1895) Oklahoma;	Idaho
Denver and Gross College of Medicine.....	(1907)	New Mexico
Chicago Homeopathic Medical College.....	(1889)	Iowa
Chicago College of Medicine and Surgery.....	(1908)	Illinois
College of Physicians and Surgeons, Chicago... (1899)		Illinois
Northwestern Univ. Med. School, (1899) Texas; (1907)		Illinois
University of Iowa.....	(1881) Iowa; (1902)	Minnesota
Keokuk Medical College.....	(1891)	Iowa
University of Louisville... (1884) Tennessee; (1893)		Florida
College of Physicians and Surgeons, Baltimore.. (1889)		Arizona
Johns Hopkins Medical School.....	(1906)	New York
Michigan College of Medicine and Surgery.....	(1892)	Michigan
University of Michigan, (1873) Illinois; (1891) (1899)		Michigan;
(1897) New Mexico.		
Northwestern Medical College, St. Joseph.....	(1892)	Nebraska
Washington University.....	(1908)	Missouri
Missouri Medical College.....	(1878)	S. Dakota
University Medical College, Kansas City.....	(1897)	Kansas
Beaumont Hospital Medical College.....	(1888)	Nebraska
Creighton Medical College.....	(1907)	Iowa
Bellevue Hospital Medical College, (1896) Ohio; (1895)		R. Island
Long Island College Hospital, (1876) Iowa; (1895) (1905) (1907)		
New York.		
Columbus Medical College.....	(1883)	Ohio
University of Wooster, Cleveland.....	(1881)	New York
Western Reserve University.....	(1870)	Ohio
University of Pennsylvania.....	(1904)	Wisconsin
Trinity University, Ontario.....	(1897)	Indiana

Maine March Report

Dr. Frank W. Searle, secretary of the Maine Board of Registration of Medicine, reports the written examination

held at Portland, March 9-10, 1909. The number of subjects examined in was 10; total number of questions asked, 95; percentage required to pass, 75. The total number of candidates examined was 12, of whom 7 passed and 5 failed. Six applicants were granted reciprocal licenses. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Georgetown University, Washington.....	(1908)		84.7
Medical School of Maine.....	(1892) 89.5; (1908)		75.9
Tufts College Medical School.....	(1907)	87.4, 82.8	
College of Physicians and Surgeons, Boston.....	(1908)	83, 86.	

College	Year Grad.	Per Cent.
Medical School of Maine.....	(1908)	78.7
Baltimore Medical College.....	(1905) 73.4; (1906)	68.9
Coll. of Phys. and Surg., Boston....	(1901) 73.3; (1908)	67.6

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Medical School of Maine.....	(1888)	New Hamp.
Baltimore University	(1898)	New Hamp.
Johns Hopkins Medical School.....	(1904)	Dist. Colum.
Dartmouth Medical School	(1904)	Vermont
New York Homeopathic College and Hospital..	(1899)	Michigan
University of Vermont.....	(1907)	Vermont

Massachusetts March Report

Dr. Edwin B. Harvey, secretary of the Board of Registration in Medicine, reports the written and practical examination held at Boston, March 9-11, 1909. The number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 62, of whom 33 passed, including 1 non-graduate and 25 failed, including 8 non-graduates. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Hahnemann Medical Coll. and Hospital, Chicago.....	(1908)	77.2, 79.6	
College of Physicians and Surgeons, Baltimore ...	(1908)	79.2	
Baltimore Medical College.....	(1905) 79.3; (1908)	75.8	
Boston University, (1900) 76.2; (1906) 75.8; (1908)		75.9	
Tufts College Medical School, (1907) 75.3, 79.2; (1908)		75, 75, 75.5, 76.3, 77.7, 81.7.	
Harvard Medical School, (1906) 75; (1907) 75.1, 75.2, 77.2, 79, 81.7; (1908) 80.5, 80.8.			
Columbia University, College of Phys. and Surg..	(1893)	75.5	
Medico-Chirurgical College, Philadelphia.....	(1908)	77.5	
University of Pennsylvania.....	(1888) 77.6; (1906)	78.	
Jefferson Medical College	(1904)	78.5	
McGill University, Quebec.....	(1907)	79.	
University of Naples, Italy.....	(1890)	75.	
University of Leipzig, Germany.....	(1901)	78.5	

FAILED

Howard University, Washington	(1907)	66.7, 69.9
Maryland Medical College.....	(1908)	62.7
Baltimore Medical College	(1908)	68.1, 69.4, 70.2, 70.8, 72.
College of Physicians and Surgeons, Boston.....	(1908)	52.1, 54.1, 55.2
Long Island College Hospital.....	(1899)	59.8
University of the South.....	(1901)	65.
University College of Medicine, Richmond.....	(1907)	68.6
Laval University, Quebec.....	(1905)	48.6
University of Naples, Italy.....	(1900) 70.5; (1906)	65.

Minnesota April Report

Dr. W. S. Fullerton, secretary of the Minnesota State Board of Medical Examiners, reports the written examination held at St. Paul, April 6-9, 1909. The number of subjects examined in was 11; total number of questions asked, 105; percentage required to pass, 75. The total number of candidates examined was 10, of whom 4 passed and 6 failed. Twenty-one reciprocal licenses were issued at this examination. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Minnesota.....	(1908)	76, 76, 76.7, 79.4	

FAILED

Bennett College of Eclectic Medicine and Surgery, (1900)	57.5
Louisville and Hospital Medical College.....	(1908) 54.7
Hamline University, (1904) 63.8; (1907) 63.6, 68.6; (1908)	60.9

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Northwestern University Medical School, (1906) (1907)		Illinois
Hahnemann Medical Coll. and Hosp. Chicago, (1905)		Illinois
College of Physicians and Surgeons, Chicago... (1902)		Missouri
Chicago College of Medicine and Surgery, (1908) Illinois; (1908)		Wisconsin.
Indiana University	(1908)	Indiana
University of Iowa	(1904) (1907)	Iowa
Baltimore Medical College	(1893)	Maine

College of Physicians and Surgeons, Baltimore, (1896)	Illinois
University of Minnesota.....	(1906) N. Dakota
St. Louis University	(1907) Illinois
College of Physicians and Surgeons, Kansas City, (1896)	Iowa
Kansas City Hahnemann Medical College.....	(1906) Kansas
University of Buffalo.....	(1898) Michigan
Miami Medical College	(1889) Indiana
Medico-Chirurgical College, Philadelphia.....	(1906) New Jersey
Milwaukee Medical College.....	(1904) Wisconsin
McGill University, Quebec.....	(1887) Wisconsin
University of Christiania, Norway.....	(1894) Wisconsin

Montana April Report

Dr. William C. Riddell, secretary of the Board of Medical Examiners of Montana, reports the written examination held at Helena, April 6-8, 1909. The number of subjects examined in was 10; total number of questions asked, 50; percentage required to pass, 75. The total number of candidates examined was 41, of whom 34 passed and 7 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Columbian University, Washington.....	(1904)		87.3
Bennett College of Eclectic Medicine and Surgery, (1879)			75.4
Illinois Medical College.....	(1908)		84.4
Rush Medical College.....	(1886) 78.3; (1904)		85.
Northwestern Univ. Med. School....	(1906) 90; (1907)		85.
College of Phys. and Surg., Chicago..	(1907) 75; (1908)		84.
Tulane University of Louisiana....	(1906) 82.9; (1908)		76.4
University of Michigan..	(1895) 75; (1907) 80.4; (1908)	82.9, 85	
Harvard Medical School	(1907)		76.6
University of Minnesota	(1896)		78.
Hamline University, Minneapolis....	(1899) 79.3; (1902)		80.1
College of Phys. and Surg., Kansas City.....	(1902)		75.1
Kansas City Medical College.....	(1891)		80.7
University Medical College, Kansas City.....	(1905)		77.7
Creighton Medical College.....	(1908)		75.7
Columbia University, Coll. of Phys. and Surg....	(1903)		80.
Bellevue Hospital Medical College.....	(1887)		76.
University of Pennsylvania.....	(1893)		76.6
Western Pennsylvania Medical College.....	(1903)		79.4
University of Vermont.....	(1895)		80.3
Wisconsin College of Physicians and Surgeons...	(1905)		78.4
University of Toronto, Ontario.....	(1908)		77.8
University of Vienna, Austria.....	(1897)		78.
University of Turin, Italy.....	(1899)		79.1
McGill University, Quebec.....	(1908)		85, 90.

FAILED

Illinois Medical College.....	(1900)	68.9
University of Iowa	(1899)	72.7
Bennett College of Eclectic Medicine and Surgery, (1892)		69.2
Barnes Medical College	(1897)	68.3
Marion Sims College of Medicine.....	(1895)	67.9
Washington University, St. Louis.....	(1904)	73.4
Jefferson Medical College.....	(1907)	71.4

North Dakota April Report

Dr. H. M. Wheeler, secretary of the North Dakota State Medical Examining Board, reports the written examination held at Grand Forks, April 6-8, 1909. The number of subjects examined in was 14; total number of questions asked, 85; percentage required to pass, 75. The total number of candidates examined was 8, of whom 6 passed and 2 failed. Nine reciprocal licenses were issued at this examination. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
George Washington University.....	(1907)		88.
Rush Medical College.....	(1908)		88.
Northwestern University Medical School.....	(1908)		85.
University of Iowa, College of Medicine.....	(1905)		82.
Hamline University.....	(1904) 75; (1907)		75.

FAILED

Sioux City College of Medicine.....	(1906)	71.
Victoria University, Ontario.....	(1883)*	

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Northwestern University Medical School (1906) (1907)		Illinois
Illinois Medical College	(1905)	Illinois
College of Phys. and Surg., Chicago....	(1906) (1908)	Illinois
Bennett College of Eclectic Med. and Surg.	(1907)	Illinois
Hamline University, Minneapolis.....	(2, 1908)	Minnesota
Albany Medical College.....	(1906)	New Hamp.

* Percentage not given.

Nevada May Report

Dr. S. L. Lee, secretary of the Nevada State Board of Medical Examiners, reports the written examination held at Carson City, May 3-4, 1909. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 7, all of whom passed. Seven reciprocal licenses were issued. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
College of Phys. and Surg., Los Angeles.....		(1908)	86.
College of Phys. and Surg., San Francisco.....		(1908)	84.3
George Washington University		(1908)	91.6
Rush Medical College		(1902)	84.9
Keokuk Med. Coll., College of Phys. and Surg....		(1908)	88.5
University Medical College, Kansas City.....		(1906)	84.8
Willamette University, Salem.....		(1906)	81.7

College	PASSED	Year Grad.	Reciprocity with
Northwestern University Medical School.....		(1894)	Wisconsin
College of Physicians and Surgeons, Chicago...		(1903)	Illinois
Dearborn Medical College.....		(1905)	Illinois
College of Physicians and Surgeons, Keokuk....		(1888)	Iowa
Omaha Medical College.....		(1894)	Nebraska
Medico-Chirurgical College, Philadelphia.....		(1900)	Nebraska
Western University, London, Ontario.....		(1899)	Nebraska

Rhode Island April Report

Dr. Gardner T. Swarts, secretary of the Rhode Island State Board of Health, reports the written examination held at Providence, April 1-2, 1909. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 80. The total number of candidates examined was 7, of whom 4 passed and 3 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Tufts College Medical School.....		(1908)	80.6
Dartmouth Medical School.....		(1907)	84.7
Laval University, Quebec.....		(1895)	82.9
McGill University, Quebec.....		(1908)	84.1

College	FAILED	Year Grad.	Per Cent.
Baltimore Medical College.....		(1905) 72.5; (1908)	74.1
Laval University, Quebec.....		(1895)	64.

Utah April Report

Dr. G. F. Harding, secretary of the Utah State Board of Medical Examiners, reports the written examination held at Salt Lake City, April 7, 1909. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 4, all of whom passed. Three reciprocal licenses were issued at this examination. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Colorado.....		(1908)	81.
Northwestern University Medical School.....		(1908)	79.8
University of Louisville.....		(1907)	75.6
University of Michigan.....		(1900)	84.8

College	PASSED	Year Grad.	Reciprocity with
University of Iowa.....		(1899)	Iowa
University of Louisville.....		(1892)	Kentucky
University of Maryland.....		(1887)	Indiana

West Virginia April Report

Dr. H. A. Barbee, secretary of the State Board of Health of West Virginia, reports the written examination held at Huntington, April 13-15, 1909. The number of subjects examined in was 9; total number of questions asked, 120; percentage required to pass, 80. The total number of candidates examined was 22, of whom 21 passed and 1 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Kentucky School of Medicine, (1905) 80; (1907) 80, 86; (1908) 80.			
Louisville and Hospital Medical College... (1908)	80, 83, 85,		91.
University of Louisville..... (1893)			80.
Baltimore Medical College..... (1908)			85.
Maryland Medical College..... (1902) 87; (1908)			85.
College of Physicians and Surgeons, Baltimore.... (1908)			82.
Leonard School of Medicine..... (1908)			80.
Western Pennsylvania Medical College, (1899) 83; (1908)			82, 97.
Hahnemann Medical Coll. and Hosp., Philadelphia, (1906)			90.
Temple College Medical Department..... (1908)			89.
University of Vermont..... (1907)			89.
University of Virginia..... (1908)			91.

College	FAILED	Year Grad.	Per Cent.
Tennessee Medical College..... (1907)			78.

Wyoming February Report

Dr. S. B. Miller, secretary of the Wyoming Board of Medical Examiners, reports the written examination held at Cheyenne, Feb. 10-12, 1909. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. Only one candidate, a graduate of Starling Medical College, 1898, appeared for examination, who passed with a percentage of 75.9.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

American Academy of Medicine, Atlantic City, June 5-7.
American Assn. for Study of Alcohol, etc., Atlantic City, June 7-9.
Am. Assn. of Med. Milk Commissions, Atlantic City, June 7.
Am. Gastro-Enterological Association, Atlantic City, June 7-8.
American Ophthalmological Assn., New London, Conn., July 14-15.
American Orthopedic Association, Hartford, Conn., June 14-16.
American Proctologic Society, Atlantic City, June 7-8.
American Urological Association, Atlantic City, June 7.
Idaho State Medical Association, Seattle, Wash., July 19.
Maine Medical Association, Portland, June 16-17.
Massachusetts Medical Society, Boston, June 15-16.
Natl. Con. State Med. Ex. and Licensing Bds., Atlantic City, June 7.
New Jersey Medical Society, Cape May, June 23-25.
Medical Society of the State of North Carolina, Asheville, June 15.
Washington State Medical Association, Seattle, July 20.
Wisconsin State Medical Society, Madison, June 30-July 2.

AMERICAN THERAPEUTIC SOCIETY

Tenth Annual Meeting, held at New Haven, Conn., May 7-8, 1909
(Concluded from page 1782)

The Present Knowledge of the Action of Cathartic Drugs

DR. F. P. UNDERHILL, Yale University: Cathartic drugs act on the alimentary tract in a variety of ways, involving physical, chemical and physiologic activities. With the saline cathartics the essential factor is the production of an intestinal secretion by nerve stimulation, with simultaneous inhibition of absorption. Peristalsis is secondary. Most of the vegetable cathartics are peculiar in that they will produce their characteristic effects by whatever channel introduced, although certain untoward results may follow from subcutaneous injection. It is possible that the proposed derivatives of phenolphthalein will obviate this difficulty. Unlike the saline cathartics, the presence in the blood of vegetable purgatives appears to be the essential factor in bringing about purgation. The principal effect of this class is the production by local irritation of a very active peristalsis which hurries the intestinal contents along the bowel. From recent observations, it has been learned that different drugs may act on entirely different portions of the alimentary canal. Thus, the purgative oils, according to their condition (presence or absence of decomposition products) may influence the movements of the stomach and intestine or the intestine alone, while a drug like senna shows no action until the large intestine is reached.

SYMPOSIUM ON DIET

Chronic Constipation Clinically Considered

DR. L. M. GOMPERTZ, New Haven, Conn: In my studies I have been especially interested in experimenting with agar-agar, and its systematic use as a part of the patient's daily diet has been attended with good results in a number of instances.

The Relation of the Food Stuffs to Alimentary Functions

DR. LAFAYETTE B. MENDEL, Yale University: In place of the usual discussion of the effect of the digestive processes on foods, I take up the relations from a somewhat reversed viewpoint, namely, the influence of the foods on various alimentary functions, believing that such influences are worthy of consideration for their possible therapeutic significance. In connection with the modern theory of hormones, or chemical excitants, we have certain facts bearing on the importance of such agents in exciting secretory functions and regulating glandular activities. Thus, gastrin, a gastric secretagogue, is formed by the action of food substances like meat extract, dextrin, etc., and the clinician can provoke the flow of gastric juice by the appropriate selection of ingested foods, and re-

press it likewise (as by the use of fats) in dietetic as well as nervous ways. The effects which follow stimulation or inhibition of secretory glands along the digestive canal, and the interrelation of such activities, have now been studied. So, also, the secondary consequences of variations in secretory activity which are induced by dietetic factors. Examples of such are found in the relation of the gastric sphincters to acid contents in the stomach, intestinal putrefaction, and other similar phenomena. The possibilities of dietotherapy should be carefully considered, in distinction from that type of feeding which is guided by chance or ruled by tradition.

Diet as a Prophylactic and Therapeutic Agent

This paper, by DR. H. W. WILEY, Washington, D. C., was read by Dr. F. P. Morgan:

A perfectly healthy, well nourished organ becomes infected with any disease germ with great difficulty; in other words, it is self-protective. Hence, it is evident that the food, or diet, must play a most important part in the prevention of disease. It follows, necessarily, that the debasement of the diet, the addition of injurious substances thereto, or abstraction of valuable ingredients therefrom, must diminish the power of that diet to maintain the body in a state of hygienic equilibrium. All the constituents of the normal food of man have a useful function, and the sum of nutrition is the normal ingestion of the whole of these ingredients in their proper proportions. The first requisite we should make for foods for invalids is that they should be pure, and the next most important thing is to find a pure food which the invalid can digest. In the progress of medical education the near future, in my opinion, will see the professorship of dietetics in a medical school advanced to the same rank as that of medicine, and, further than this, I believe that in the future the practice of medicine will be largely a practice of dietetics.

Diet and Care of the Bowels in Typhoid Fever

DR. M. H. FUSSELL, Philadelphia: The clinical and autopsy evidence at command proves that a regulated milk diet does not irritate the bowel; neither does a diet of milk reinforced by carefully selected and prepared carbohydrate and nitrogenous diet other than milk. Common sense must be applied to both, and both may be used; but in semi-unconscious or wholly unconscious patients the diet must perforce be liquid. It is well to give divided doses of calomel if the patient is seen in the first week, in order to remove any irritating substance which may remain in the bowel. After that, a daily evacuation must be secured by enemas if there is a tendency to constipation. If diarrhea occurs, food must be stopped or regulated. If it then persists a mixture of salol and bismuth should be given, or an opiate if it is excessive.

DISCUSSION

DR. JAMES C. WILSON, Philadelphia: In typhoid, the great point is to treat each patient according to the special conditions of his case. It is often my custom to give a cup of coffee, more or less diluted with milk, in the morning, and then every two hours afterward milk in some form. I regard it as very important that the quantity should be moderate and that it should be taken very slowly. Various preparations may be employed from time to time, such as junket, knymys, custard and ice cream. In some cases bread may be given. I have never felt it desirable to give pieces of chicken, chops or beefsteak, as these would not be acceptable or be properly masticated. My position, I may say, is somewhere between the "liquid diet" and the "liberal diet;" sometimes a little more in the direction of one and sometimes the other. The rapid emaciation encountered in typhoid is, I believe, not a matter of diet, but due to the infection of the entire system; and it can not be wholly controlled by any kind of diet.

True Versus Spurious Opothorapy

DR. C. E. DE M. SAJOUS, Philadelphia: The title of this paper refers to true and pseudo animal extracts. By the "true" agents I mean those which can be used intelligently, that is, with knowledge of the physiologic effects produced,

because their active principles are known. Thyroid extract belongs to this class, since we know that its action is due to the iodine its secretion contains in organic combination. Adrenal preparations are, likewise, included, because their active principles, whether epinephrin, suprarenalin or adrenalin, are also known. Conversely, by "pseudo" agents I mean those animal extracts which are used blindly, without knowledge of their components, in almost any disease related directly or remotely with the organ from which the extract is obtained. Thymus and mammary extracts may be cited as examples of such agents. They are classed under the caption of "pseudo" until rendered fit by their sponsors, through chemical, pharmacologic and clinical researches, to be taken up by the profession as legitimate pharmaceutical agents. That so desirable a task is not impossible of accomplishment may readily be shown.

SYMPOSIUM ON PSYCHOTHERAPY

The Field of Psychotherapy and the Principles Involved

DR. MORTON PRINCE, Boston: There are certain principles, if not laws, which govern the functioning of the nervous system, namely: (1) Complex formation: By this is meant that associated ideas, feelings, emotions, sensations, movements, visceral functions of whatever kind, tend, after constant repetition or when accompanied by strong emotion, as well as under other conditions, to become linked together into a system or group in such fashion that the stimulation of one element in the group stimulates the activity of the rest of the group. Such a group is conveniently called a complex. The linking of functioning may be almost entirely of ideas or of physiologic processes, or of both. The path-breaking demonstrations of Pawlow furnish the key to the mechanism of many neuroses and psychoses, for the educated reactions of the gastric and salivary glands to ordinarily indifferent stimuli from the environment and to psychical states are in reality nothing but an artificially created psychoneurosis—a perversion of the normal reactions. (2) Conservation: By this is meant that all experiences (anything that has been thought, heard, seen or felt) tend to be conserved in the nervous system in such a way that they can be reproduced in a form approaching that of the original experience. This is the basis of memory. Conservation is fundamental for education, and on it the law of the linking of complexes depends. (3) Dissociation: This governs the normal psychoneurotic mechanism and is observed in a highly marked form in pathologic conditions. (4) Automatism: This plays a part in both normal and abnormal life. (5) Emotional energy: Intense sthenic emotions and feelings are accompanied by an increase of the vital functions, while certain depressive emotions are accompanied by a decrease of the vital functions. All these principles or tendencies are made use of in psychotherapy, which is educational in principle. We try to resynthesize the dissociated personality, from new healthy complexes, and organize them so intensely that they become a part of the organism and automatic.

Psychoanalysis in Psychotherapy

DR. ERNEST JONES, Toronto: In the first stage in psychotherapy, which most of the medical world is at present only entering, we clearly recognize that we have secured a new therapeutic weapon of the utmost value, which we may describe as the capacity to alleviate certain complaints by purely mental measures. A thoughtful person who employs any form of psychotherapy, however, soon realizes that a symptom which can be removed by mental measures is in all probability of a mental nature. Freud's psychoanalysis represents the second stage in the evolution of psychotherapy, and the psychoanalytic method is based on the knowledge that the symptoms present in the psychoneuroses owe their origin to a conflict between two groups of ideas which can not be brought into harmony with each other. One complex of mental processes is for some reason of such a kind as to be unacceptable to the main body of the personality. The personality, so to speak, fails to assimilate it, and the repressed complex then takes on an automatic existence and acts as an irritating foreign body. The central aim of the psychoanalytic method is to enable the patient to discover and appreciate the significance of the

mental process which manifests itself as a symptom. In carrying out this method several procedures may be adopted, according to circumstances. Under certain conditions the use of the hypnotic state undoubtedly has a legitimate place; but only a very few of those acquainted with the psychoanalytic method employ this at all extensively, as it has grave disadvantages. The procedure developed by Freud is the one most generally used, and gives by far the most satisfactory results. It is one of the ways of obtaining what is known as "free association," and is carried out by getting the patient to concentrate his mind on a given idea, generally in relation to a symptom, and asking him to relate truthfully in the order of their appearance the various thoughts coming to his mind. Among other valuable means of reaching buried mental complexes is the word-association method of Jung. By such ways the patient is able to free his personality from the constraining force of oppressing complexes, and, by taking up an independent attitude toward them, to gain a degree of self-control over his aberrant thoughts and wishes which was previously impossible. The method is thus in almost every respect the reverse of treatment by suggestion.

Simple Explanation as a Therapeutic Method

DR. E. W. TAYLOR, Boston: My aim is to show the possibility of the use of a psychotherapeutic procedure which involves no special technical knowledge and which is available for practitioners in all departments of medicine. It is a method which may be the means of alleviating many distressing conditions which simple encouragement can not accomplish. Its essential feature is the analysis of the mental state with reference to a search for the cause leading up to the developed neurosis. Many conditions regarded in their developed form as indications of an abnormal nervous system are, in reality, the normal reactions of a sound nervous system under special conditions of stress or misinterpretations of various events, in themselves innocuous. In the attempt to treat such cases the following general principles are suggested: (1) Diagnosis should be made; (2) this is best accomplished by allowing the patient to tell his complete story, rather than by a primary process of interrogation; (3) determination of the false point of view almost invariably reveals what has led up to the neurosis; the attempt is made to explain why such a series of events as that disclosed would be likely to lead to this result; (4) the patient having been impressed with the correctness of the physician's point of view, the process of readjustment begins, or, to use the more popular but possibly too comprehensive term, his re-education; (5) this is accomplished by pointing out in a painstaking manner the correct way to mental health, through a realization on the part of the patient of his previous misconceptions and through an accompanying effort toward the establishment of more rational mental adjustments.

Other Papers Read in This Symposium

"Psycho-prophylaxis in Childhood," by Dr. T. A. Williams, Washington, D. C.; "Character Formation in Relation to Psychotherapy," by Dr. J. J. Putnam, Boston; "Hypnoidal States and the Method of Hypnoidization in Psychotherapy," by Dr. Boris Lidis, Brookline, Mass.; "The Psychotherapy of Obsessions and Associated Conditions in So-called Psychasthenia," by Dr. J. E. Donley, Providence, R. I.

The Dietetics of Chronic Diseases

DR. WILLIAM H. PORTER, New York: All foods are divisible primarily into two distinct classes, the purely vegetable and the purely animal. Both these are divisible into five distinct groups of substances. Neither one is absolutely perfect in composition, but the animal class approaches more nearly to perfection than the vegetable. The animal class is more easily digested and assimilated, and it is also more economic, than the vegetable. To secure a perfect or ideal diet the two must be used together. Between the two extremes we have two other dietaries: one in which the two classes are blended perfectly, and one in which the two are less perfectly adjusted. The latter is often spoken of as a purely vegetable diet, while, in reality, it is a poor form of mixed diet; hence there is much

confusion in the minds of many who discuss the subject. When an ideal diet is secured, one which suits the individual case, marvelous results can be secured, and especially when this is used in conjunction with well-directed therapeutics.

DISCUSSION

DR. WOODS HUTCHISON, New York: As regards the dietary in chronic diseases, the attitude of late has been on the side of cutting down the amount of food; so that we are confronted with the danger of underfeeding. The bad effects of underfeeding are particularly noticeable in some of the races, like the Japanese and Chinese, who are accustomed to a diet lacking in the protein element. Consequently they suffer from such affections as beriberi.

The Effects of Modern Synthetics

DR. F. P. MORGAN, Washington, D. C.: The introduction of these synthetics has added very materially to the number of useful medicinal agents. Such substances, however, should never be recommended for general use until after they have been subjected to long and searching investigation. Even under these circumstances many of them appear to be peculiarly liable to produce occasional ill effects, and cases are not infrequently reported of the sudden and unexpected development of untoward results from the use of one or another of them. This seems to be particularly true of the group of substances commonly known as the coal-tar antipyretics. There can be no question as to their medicinal value, and I am of the opinion that whatever harm these agents may be doing to-day is not so much due to the drugs themselves as to the conditions characterizing their use. It can be said without hesitation that their promiscuous sale to the laity, which is carried on to an enormous extent in the form of headache powders, etc., is often productive of much harm. Reports from 400 physicians sent in reply to a circular from the Department of Agriculture show 814 cases of poisoning by acetanilid, antipyrin and acetphenetiden, with 28 deaths and 138 instances of habitual use.

Hypodermatic Medication in Modern Therapy

DR. S. L. DAWES, Albany, N. Y.: The administration of drugs hypodermatically is regarded as possessing distinct advantages over other methods, such as a more rapid rate of absorption, greater certainty of effect, quicker elimination, with less danger of cumulative action, and no derangement of the digestive processes. For several years it has been my custom to give all hypodermatic injections intramuscularly, rather than subcutaneously, my clinical observation having taught me that by this method the rate of absorption is much more rapid, the result more accurate, and the discomfort to the patient markedly less. That my conclusions are not at fault is borne out by the careful and accurate investigations of Meltzer and Lauer made on rabbits. The occurrence of abscess, erythema, induration, or any other local disturbance in hypodermatic medication is almost without exception to be attributed to want of care or knowledge in selection of site and mode of operation, to unsterile instruments, or to unsterile, improperly prepared or preserved solutions.

Alcohol Injections in Neuralgias, Especially in Tic Douloureux

DR. O. G. T. KILIANI, New York: To Schlösser we owe the method of injecting alcohol with certainty into the trunk of the three branches of the fifth nerve, or, if necessary, into its roots. He employs alcohol, and in order to hit the nerve with certainty, advises that the injections be made into the foramina through which the different nerves emerge from the skull. Since September, 1906, I have thus injected alcohol into 190 patients with facial neuralgia, among which there were 5 failures. The other 185 were all entirely relieved of pain and of their anxiety over expecting pain (the mental effect is sometimes nearly as bad as the pain itself), and the average number of injections required was three to each patient. Of the 190 patients, 42 per cent. have had no recurrence to date. Taking into consideration the cases in which at least eighteen months have elapsed since the treatment, 21 per cent. of the

patients have remained free from pain for that length of time. In the other cases the time when the recurrence appeared varied from three months to two years.

Therapeutic Drainage in Two Hundred Cases of Uterine Obstruction. Presentation of a New Fenestrated Rubber Uterine Drain

DR. A. ERNEST GALLANT, New York: The relief of obstruction due to flexions and fixation has been accomplished by the following plan: (1) Stretching, by massage, of the bands or thickening whenever the uterosacral ligaments showed evidences of previous inflammation; painting the vault with pure ichthyol and tamponing the vagina every third day. (2) When the internal os is found tender to the passage of the sound, or the flexion is 90 or more degrees, forcible stretching of the adhesions under anesthesia, dilatation of the cervix, preferably by graduated sounds, and curetting of the mucous membrane, followed by irrigation of 1 to 2,000 potassium permanganate solution. (3) Introduction of a bivalve drain (in some instances suturing with silk gut) to remain for some months; a very necessary feature if permanent drainage and restoration of the cervix to its normal shape and caliber be desired. (4) Insertion in the vagina of a roll of gauze, its upper end being placed directly under the cervix, to serve the double purpose of a wick drain and uterine support. (5) The performance of trachelorrhaphy in instances of deep laceration into the fornices, and when the cervix is greatly hypertrophied and cystic.

Acapnia as a Factor in Disturbances of Function, and the Prevention of Acapnia

DR. YANDELL HENDERSON, Yale Medical School: For the proper performance of the various functions it is essential that the amount of carbon dioxide should be uniformly maintained. The object of the respiration is for this purpose, and the name acapnia has been given to the diminution in carbon dioxide met with in excessive respiration. I believe that acapnia is the cause of surgical shock, though this has not yet been proved. To avoid it in operations the initial stage of anesthesia should be made as short as possible, and it is equally important to bring the patient out of anesthesia without excessive respiration. Again, in laparotomies the exhalation of carbon dioxide from exposed viscera has been found to be forty times as great as that from the skin, and this should be prevented by keeping the organs protected by means of some impervious covering.

Other Papers Read

Other papers read at the meeting were the following: "Superficial Dermatitis of the External Auditory Canal," by Dr. C. J. Blake, Boston; "Medical and Surgical Treatment of Senile Enlarged Prostate," by Dr. O. C. Smith, Hartford, Conn.; "The Therapeutics of Some Obstetric Conditions," by Dr. B. A. Cheney, New Haven; "Recent Investigations as Related to the Therapeutics of Cardiac Arrhythmias," by Dr. T. E. Satterthwaite, New York; "Pain; Its Diagnostic and Therapeutic Value," by Dr. E. D. Fisher, New York; "Treatment of Stokes-Adams Syndrome," by Dr. R. W. Wilcox, New York; "Therapeutics of Calcium Creosote," by Dr. L. Kolipinski, Washington, D. C.

MONTANA STATE MEDICAL ASSOCIATION

Thirty-first Annual Meeting, held at Missoula, May 12-13, 1909

The President, DR. I. D. FREUND, Butte, in the Chair

Inability to Diagnose Appendicitis the Real Reason for the Mortality of Complications

DR. W. L. BISHOP, Butte: The mortality of appendicitis is in reality the mortality of the complications. Differentiation of the symptoms of uncomplicated appendicitis from the symptoms of complicated appendicitis is an urgent necessity. It should be impressed on physicians that the majority of cases are atypical and have only the one sign—tenderness—in common. The diagnosis should be made from tenderness alone, and operation should be advised in every case presenting localized tenderness.

Extrauterine Pregnancy

DR. E. F. DODDS, Missoula: Extrauterine pregnancy is of great importance to the man in general practice. Early recognition and prompt treatment are of the utmost importance. Mistakes in diagnosis are frequent in the early stages. Opinions of surgeons as to the best manner of treatment of this condition differ widely in relation to: (a) Shock; (b) hemorrhage. In nine cases which occurred in my practice, all the patients were operated on; eight by the abdominal route, one by the vaginal. In this last case there was hematocele. One death occurred after repeated hemorrhages.

Need for State Supervision and Care of the Consumptive

DR. MARY B. ATWATER, Helena: Six per cent. of all deaths in Montana are due to tuberculosis. All the older states have laws in regard to the prevention and control of this disease and Montana should not fall behind. One great means of prevention is found in the laws requiring inspection of school children, teachers, and schools. The state provides for the education of its citizens, it should also take cognizance of their physical welfare. Health and education should go hand in hand. There should be medical inspection of schools not only for the welfare of the children but for the protection of the community. Children showing a hereditary tendency to tuberculosis should be watched and guarded; those already infected should be placed in special outdoor schools. America is one of the last of civilized countries to appreciate the need of legal supervision of the tuberculous patient. Since impure milk and diseased meat are generally accepted as two of the chief causes of tuberculosis, the inspection of cattle is one of the most important problems confronting us to-day. Two per cent. of all range cattle are said to be infected and of dairy cows a very large percentage are said to be affected. Besides strict laws for the inspection of meat and milk supply we need an efficient and sanitary street cleaning system—the streets should be flushed, not swept. We need medical inspection of schools—children, teachers, and buildings. There should be laws compelling the registration of every case of tuberculosis—laws which would enable us to handle a case of tuberculosis legally as promptly as we now do cases of smallpox or diphtheria. In order to do this the more advanced cases should be segregated and to do this we should have the legal right to place these patients where they can have proper care and cease to be a menace to the community. Physicians should interest themselves in politics and either go to the legislature or see to it that the men who are sent will enact the laws which the people of Montana need.

Advances in Bacteriology and the Present Status of Opsonic Therapy

DR. SAMUEL T. ORTON, Anaconda, read a comprehensive paper on this subject in which he touched on the following points:

Bacillus-carriers: Recognition of the fact of the occurrence of pathogenic organisms in healthy persons. The tubercle bacillus: Its penetration of the intestinal mucosa in young guinea-pigs without causing a lesion and its presence in the blood and feces in human cases. The ocular and cutaneous tuberculin reactions: Description of methods; statistics and opinions. Yamagouchi's anaphylactic test for tuberculosis. Balanced toxin-antitoxin mixtures: Theobald Smith's observation on active immunity induced by this method. The *Spirochæta pallida*: dark-field method; inoculation experiments. Serodiagnosis of syphilis: Description of methods of Wassermann, Porges and Klausner; discussion of reactions in syphilis and the parasyphilitic diseases. Flexner's antimenigitic serum. Hiss and Zinsser's observations and experiments with leucocyte extracts. Opsonic therapy: Definition; theories; autogenous vs. stock vaccines; index reading vs. clinical method of control; diseases amenable to vaccine therapy.

Legal Regulation of Midwives and Importance of Proper Care of the Obstetric Patient

DR. W. H. JOHNSON, Billings, discussed physicians and legislative matters in general and laws relating to midwifery in particular. Among other things he said: Physicians should take more interest in the laws relating to the practice of medicine and the regulation of midwives. In Montana there are many women, neither physicians nor trained nurses, who, without a license or training of any kind are permitted to

visit, examine, and deliver or attempt to deliver pregnant women. While I must admit that 75 per cent. of all such patients could deliver themselves if left absolutely alone, there are, on the other hand, the other 25 per cent. who need assistance in some form and it is impossible to determine who those may be without examination; and while it is not in every case that a midwife ever goes so far as the examination there are those who do so and do so repeatedly and with absolutely no heed to asepsis in any way. We can all remember the time when sterile gowns were made to take the place of the dirty kitchen apron, and how he who advocated the plan was made the subject of many a jest as well as he who fought for the rubber glove in this kind of work, and I would like to say that not the midwife alone deserves criticism for uncleanness but many physicians as well who are regardless of the laws of asepsis and antiseptis. They will rush into a confinement with no thought of surroundings and personality, and attempt the delivery of women, even in forceps cases, who are surgically unclean and for whom, except in a life-saving measure, nothing should be done until aseptic precautions have been taken. It is more probable for septicemia to occur in this region than any other except possibly the peritoneum, and still we watch the dangerous work go on without one single word of protest. We allow the midwife to visit the woman in labor with the same clothing worn while on a recent visit to a contagious case, be it diphtheria, measles, scarlet fever or typhoid; or the busybody may have dressed a suppuration somewhere in the neighborhood and without a single preparation except a little soap and water on the hands, proceed to examine the woman about to be delivered. Is there any plausible reason why obstetrical patients should not have the same preparation accorded to surgical patients? I believe that many physicians become exceedingly careless about these important points and do not realize until too late that measures of extreme importance have been overlooked. I wish to emphasize the necessity for more precise and thorough work among physicians and a compulsory course and state board examination for midwives. I believe that we have no such regulations at the present time concerning midwifery and if such be the case the Montana State Medical Association should lose no time in setting the matter right. It ought to be the duty of every physician to use trained nurses in all confinement work or else to instruct his patients in regard to all utensils and dressings, and the method of thorough sterilization and to see that his instruction is scrupulously adhered to.

Other Papers Read

"Alcohol as a Cause of Disease and the Relation of the Physician to the Alcohol Problem," by Dr. H. F. Canaan, Anaconda; "Higher Education," by Dr. Dennison, State University of Montana; "Diplococcal Infections of the Skin," by Dr. H. D. Kisler, Butte; "Nervous Influenza and Nervous Conditions in Women," by Dr. J. R. E. Quires, Butte; "Some Suggestions in Regard to Hernia Operations," by Dr. T. C. Witherspoon, Butte.

NORTH DAKOTA STATE MEDICAL ASSOCIATION

Twenty-second Annual Session, held at Fargo, May 11-12, 1909

The attendance was about as large as there has been at any annual meeting. The program was replete with papers that were unusually good and instructive and the discussions were spirited and entertaining. Papers were also contributed by the following invited guests: Drs. A. McLaren, A. Gillette and T. W. Stumm of St. Paul, Minn. Dr. Stumm delighted his hearers with the masterful way in which he portrayed an uncompensated heart.

Organization

It was a source of gratification to find more physicians reported as in good standing than at any previous time. The lame part reported in organization seemed to be a lack of active work by the councilors who up to the present had not risen to the height of their opportunities. It was stated that so many physicians had not affiliated with the local societies that recruiting would be necessary and that the additional labor would fall on those who have been elected to counsel and advise and boost the membership.

President's Address

The President, Dr. H. A. Beaudoux, Fargo, congratulated the officers of the district societies for their untiring effort to interest and bring in new members, and to make the meetings instructive and profitable. He recommended such post-graduate courses as might be authorized by individual societies or according to the plans offered by the American Medical Association. He advised the invitation of laboratory men who, through the opportunities offered, could bring to the meetings new stimuli and special knowledge. In districts where distances are great and railroad communication inconvenient, the organization of sub-societies, subsidiary to the district societies to which they geographically belong, to meet with the district society annually for the purpose of making their report and participating in the election of officers. The profession as a whole, out of consideration for the public which it is to safeguard, should be awake to its manifold duties in sanitary legislation, anti-charlatanism and prophylactic measures of all kinds. Each member of the profession should consider himself a health officer in preventing the pollution of streams and the spread of disease to innocent people. The easiest way to rid a community of pollution is by preventing it, and this is much easier in a new community than in the older ones where it is already widespread. The echo of that great scientific body which met last fall in Washington, D. C., had barely faded away when the country, quickened by its deliberations, and believing in the earnestness of its participants, began an active campaign against our common foe. "Antituberculosis" has been the cry and the wave of education which is sweeping state by state has led us to believe that we are fully awake to the importance of Koch's discoveries and that we as an intelligent people have determined to rid ourselves of that plague. The North Dakota State Board of Health sought an appropriation for an antituberculosis crusade and although it was denied by the legislature, the secretary of the board, with the director of the state bacteriologic and pathologic laboratory, Dr. G. R. Ruediger, has nevertheless almost completed these preparations and planned a most thorough and efficient campaign through the state. To further and promote state legislation and appropriation and to assist the State Board of Health in carrying on its work unhampered, as well as to assist the committee on public policy and legislation, it has become necessary that as physicians we realize our position and medical influence in such matters. The members of the present legislative committee, well-trained and efficient in their work pertaining to such demands, have not met with the success they had hoped for, not because they are inactive or inefficient but from the fact that legislators like the great majority of the laity look on medical legislation from a commercial standpoint and through lack of education and appreciation of our work are too prone to label our demands with the stamp of personal greed and gain. We should return to our homes with the determination of impressing our prospective representatives with the importance and benefit of our work and if necessary to make our demands a political issue. By so doing we shall attain far better results than we have in the past by sending a body of medical men to the capital on the eve of defeat. We are better equipped to pass sane and important legislation than any other body of men and to make ourselves felt in public matters owing to our intimate relations, as family physicians and advisors, with the voters throughout the state. There is not a man who enjoys the confidence of his patients who can not in a few words convince him that what is being asked by the medical profession, is for the benefit of all with special privileges to none. Let us therefore trust that before we leave this meeting the sense of this society shall be that we are determined to bring such influence to bear on our representatives as may be necessary to secure the legislation recommended by this society as well as outlined by our legislative committee. One of the most important legislative acts which is focusing the attention of the intelligent people everywhere is the sterilization of defectives and habitual criminals as a necessary measure of social economy. Statistics show that the mentally defective classes, natural criminals, imbeciles, insane, and epileptics, have multiplied in the last thirty years more than twice as fast as the total population. The question has arisen in the past of the advisability of publishing our transactions in connection with some adjoining

state and to make their journal the mouthpiece of this association. It has occurred to me that there is no reason why we should not only publish our transactions but also edit a quarterly if not a monthly journal of our own. There is certainly ample material and brain and, it goes without saying, pride in this society to carry such a plan to a successful issue both scientifically and financially. The material from our annual meetings together with the report of committees, papers read at the different district societies with the work and report of the state board of health and state laboratories would provide ample interesting material if properly prepared.

The House of Delegates

The advisability of publishing a journal was considered, and while it was thought to be desirable to have such a medium in the state, the financial support was considered inadequate for such an undertaking and the project, with not a few advocates in its favor, was deferred. These resolutions were considered and approved:

Resolved: That this association heartily approves the action of the Board of Trustees in restricting advertisements of medical preparations to those approved by the Council on Pharmacy and Chemistry of the American Medical Association; and further be it

Resolved: That this House of Delegates requests all those state associations which now do or hereafter may publish or control medical journals to restrict their advertisements to such approved preparations, and that the General Secretary be requested to bring this resolution to the attention of all state associations.

The legislative committee was instructed to formulate and present at the next annual meeting some practical plan for the care of such medical legislation as would come before the next legislature for enactment. The sterilization of criminals and other defectives by vasectomy was considered and recommended to the careful consideration of the law makers of the state and referred to the legislative committee.

The committee on tuberculosis made an exhaustive report and requested that in the future it be permitted to work in conjunction with the public health committee of the state, the work being along similar lines—it was thought best to consolidate effort in the hope of achieving better results, and their request was granted.

APPROPRIATION FOR CARROLL FUND

The matter concerning the conditions under which the widow of Dr. James Carroll, Major and Surgeon, U. S. Army, is suffering was brought to the attention of the House of Delegates and on motion one hundred dollars was appropriated to assist in saving the home of the widow of this medical hero, whose self-sacrifice contributed so greatly toward the control of yellow fever.

DELEGATE TO PHARMACOPEIAL CONVENTION

The president was authorized to appoint a representative to attend the United States Pharmacopeial Convention to be held in Washington, D. C., May, 1910.

A list of the officers elected appeared in *THE JOURNAL*, May 22, 1909, p. 1674.

SOUTH CAROLINA MEDICAL ASSOCIATION

Sixty-first Annual Meeting, held at Summerville, April 20-22, 1909

The meeting of the county secretaries was held on the morning of April 20. The object of this meeting, as stated by the president, was to effect the organization of the county secretaries into a body which would eventuate in better work being done throughout the state. The name and county of each secretary was enrolled. A number of talks were made, the president emphasizing the point that the secretary was "the man who did the work," and was therefore the most important man in the county society. The president also earnestly recommended, as did several others, that the county societies report important cases to the state association, and also that the discussions on these papers be taken down by a stenographer.

A card index system was adopted, by which monthly reports could be sent in to the state secretary.

The by-laws of the Missouri county secretaries were adopted, with a few modifications, and the time of meeting was set as the morning of the first day of the session of the state association.

Chairman, vice-chairman and secretary-treasurer were elected, and an executive committee, composed of five members, of which the secretary and treasurer of the state association are members ex-officio.

A committee was appointed to read papers at the next meeting on work pertaining to the organization.

Relationship Between the County Secretary's Office and the State Secretary's Duties

DR. WALTER CHEYNE, secretary of the South Carolina Medical Association and president of the National Association of State Secretaries: The relationship between the state secretary's office and that of the county secretary's should be that of father and son, so to speak; there should be intimacy and that courtesy which should be extended to true relationship. Each county secretary should see that every man's name in his society is on file in the state secretary's office, etc.

Officers Elected

A list of the officers elected appeared in *THE JOURNAL*, May 8, 1909, p. 1506.

Educational Plans and Methods to Improve Sanitary Conditions

DR. S. C. BAKER, Sumter, in his presidential address, emphasized civic healthfulness, not only from the viewpoint of benefit to the individual, but to the state and nation. His plea was for the establishment of conditions that would not only alleviate the ills of present sufferers, but would safeguard unborn generations by the elimination of the possibilities of ill. For this reason he emphasized the need of restricting marriages between parties with blood taint. Imperfect drainage, water, food, house ventilation and isolation in contagion were also noted. He also spoke in behalf of improved and advanced medical education; first in behalf of South Carolina, then for the whole country. He advocated hospital internship or a year of general practice before postgraduate courses. Loyalty to and patronage of state institutions or hospitals he deemed the wisest and best way to afford mutual upbuilding as well as state-wide confidence on the part of possible patients. This carried with it the idea of personal research. In speaking of alcoholic beverages, he said:

"The question of the further limitation of alcoholic beverages has become almost a national issue. The wisdom of its forcible curtailment we will leave with the prohibitionist, the politicians and the people. We recognize the evils of over-indulgence. I believe that the craving for liquor is greatly augmented by the general depletion of our vitality. This question is one that intimately affects our people, and we are as competent to test and solve it as any. Let us, then, endeavor to work out the cure for the inebriate, but let us go further and solve the problem of how to eradicate the tendency to inebriety. At the same time we might strive to curtail the evil of gluttony, as one which possibly is filling more graves than whiskey."

With regard to the new cults, faith or semiprofessional, Dr. Baker urged leniency with watchfulness, since many individuals have been shown to have been relieved even when treatment by regular practitioners seemed to have failed. He paid marked tribute to the physicians and surgeons of the South, whose talents and energies have become known world-wide in the history of professional benefaction. Referring to the approaching centenary of Dr. J. Marion Sims of Lancaster county, S. C., in 1913, Dr. Baker recommended the erection of a monument within his native state, to honor appropriately a man whose labors have brought so much of relief into the world.

He suggested that a prize be given every year or two years for the best work in original research within the borders of South Carolina by a member of the association.

Tropical Diseases in the Canal Zone

DR. HAYNE discussed briefly the commoner tropical diseases that are met with on the Isthmus: Yellow fever, beriberi, leprosy, dhobie itch, elephantiasis, tropical neurasthenia, malaria, ankylostomiasis, dysentery and liver abscess. He

demonstrated the thoroughness with which the Panama sanitarians are destroying the breeding places of the anopheles, screening all the houses and using quinin prophylactically. He emphasized the routine examination of the stools. Ankylostomiasis, he said, was fast being eliminated with thymol. In Panama they had accomplished a first great step in the dysentery problem—the certain diagnosis of the amebic variety with its sequel of liver abscess. Dr. Hayne showed that the field of tropical medicine was a wide one and emphasized the need of a knowledge of zoology for the southern practitioner.

Problem of Pacific Quarantine, Which Will Apply to the Atlantic Coast When the Canal Is Completed

DR. COFER, P. A. Surgeon United States Public Health and Marine-Hospital Service: The Pacific is like a wheel, with ports all around the rim, and with lines of travel crossing it like spokes. These ports are centers of population and distribution, that may either import or export disease, as well as merchandise. The quarantinable diseases are yellow fever, smallpox, cholera, typhus and leprosy. Except typhus, these are more or less prevalent in South America and Western Asia. The non-quarantinable diseases are scarlet fever, diphtheria, amebic and bacillary dysentery, beriberi, trachoma and ankylostomiasis. The shorter the time of the voyage, the shorter the stay in port, the larger and higher out of the water the vessel, and the more completely the different parts of the vessel are separated, the less danger of carrying diseases. Hence, from a sanitary standpoint, steamships are vastly superior to sailing vessels. The tramp sailing vessel is the most dangerous; the army transport least so, because carefully inspected. As commerce increases between the South Atlantic ports and those of South America and Western Asia, it is possible we may send them malaria and yellow fever, in exchange for plague, cholera and leprosy. Quarantine is, at present, very efficient. Vessels are inspected, and at times disinfected or quarantined on leaving port, on entering port, and sometimes on the way. The condition of the public health of all ports is regularly reported to the surgeon-general of the Public Health and Marine-Hospital Service. Greater marine sanitation will be necessary when these ports communicate with the Pacific through the canal. The number of visitors will be increased, as well as insanitary, foreign population, living along the water-front. The Pacific ports have taken this matter up. The quarantine is a burden to commerce, but they realize that the better the sanitation, the less need for strict quarantine. However efficient the quarantine, occasionally an infected mosquito or rat will reach shore. If municipal sanitation against these pests is effective they will do no harm. If it is not effective, they will start an epidemic of yellow fever or plague.

The Common House Fly

DR. F. A. COWARD, Columbia: The house fly forms 98 per cent. of diptera in the civilized world, and is world-wide in distribution. Its only useful rôle is that of scavenger—which is of negligible value when compared to its annoyance and dangerous filth and disease-carrying habits. Its preferred breeding place is horse manure, the excrement of other animals, and human beings; decaying vegetable matter will serve, when proper warmth and moisture coexist. Ten days suffice for development of a brood; fifteen broods a season are possible in South Carolina's climate. Twelve flies surviving the winter may reproduce 40,000 during the following warm season. Two hundred larvæ have been observed in one cubic inch of manure. The fly's life is but a few weeks, but in a dormant stage it may live through the winter in closets and warm parts of houses. Efforts at extermination should be made through the cold season—to catch the relatively few hibernating insects. Traps, sticky fly paper, poison, and killing by hand are recommended.

Address on Surgery: Urogenital Tuberculosis

DR. BRANSFORD LEWIS, St. Louis: An easier, clear conception of urogenital tuberculosis is obtained when the general scheme or plan of attack on these organs by the infection is

understood. Transmitted in any one of five different ways, the tubercle bacilli reach the urinary or genital organs; certain of these organs habitually receive the brunt of the attack first, while others invariably stand secondary in this respect. In the majority of cases, one or the other kidney is the organ first attacked; in a small proportion an epididymis is the point of initial attack. From these respective foci the infection spreads in the direction of the physiologic secretions (the urine and semen); that is, from the kidney downward, along vas deferens, seminal vesicle, ejaculatory duct, prostate and urethra to the vesical neck. Thus the bladder stands in the line of secondary attack from either direction, and likewise stands a most excellent chance of ultimate infection, no matter how resistant it may show itself for a time. Vesical tuberculosis is therefore an affection invariably secondary to tuberculosis of some other urogenital organ; and must be so considered in respect to diagnosis, prognosis, therapy and management.

The marital relation is not considered an important or frequent factor in the transmission of tuberculosis, notwithstanding that coincidences of that kind are often reported. While demonstration of the tubercle bacillus is usually the crucial factor, its demonstration is not absolutely essential; and on the other hand, the presence of bacilli in the urine does not necessarily indicate vesical tuberculosis, as the bacilli may float for long periods in the urine of persons whose urinary tract is innocent of any pathologic lesion. All the staining methods in vogue for the differentiation between smegma and tubercle bacilli are liable to lead to error and disaster in diagnosis. In obtaining the urinary specimen for investigation, smegma bacilli should be absolutely excluded by cleansing methods and careful catheterization, no dependence being placed on the specimen passed voluntarily. Cystoscopy is the other necessary factor for fixing the diagnosis of vesical tuberculosis, and it should be employed for both diagnosis and treatment. I am decidedly opposed to the rather broadly disseminated view that urinary tuberculosis means interdiction of such instrumentation. The cystoscopic picture, while often characteristic, is not always typical or certain. The condition called lymphoid tubercle often simulates real tubercle, but without having any relation to Koch's bacillus. The positive evidence presented by the appearance of a ureteral orifice is valuable, but the negative evidence is of little import. Tuberculous kidneys have been removed in cases in which the corresponding ureteral orifice showed nothing abnormal to the cystoscope. The segregator is of little value, as compared with the more exact method of ureteral catheterization. The latter is free from the theoretical danger attributed to it, that of conveying infection into the healthy ureter. The treatment of vesical tuberculosis is divided into palliative and curative, by hygienic, systemic, local and operative measures. The modes of treatment embrace, besides general systemic and hygienic measures, tuberculin treatment, operation on the original foci of infection, operation on the bladder, without perhaps extirpation of the organ and transplantation of the ureters; uretting of the organ, with application of medicaments and drainage; local applications to the vesical mucosa; cystoscopy and ureteral catheterization, and applications into the bladder or ureters. The profession should no longer consider cases of urinary tuberculosis as beyond the reach of assistance or beyond reclaim. Many such patients are brought back to health and strength and comfort, both with and without operation. Tuberculosis of these organs is amenable to judicious care and treatment as it is of other parts of the body.

Sources and Modes of Infection in Tuberculosis

DR. M. P. RAVENEL, University of Wisconsin: For practical purposes, the only modes of infection that will be considered are through the respiratory and the digestive tracts. All the early experiments on respiratory infection were defective in the fact that no effort was made to prevent the swallowing of material inhaled, and much matter which entered by the nose finally reached the stomach and intestine. The tonsils are a frequent port of entry. It has been proved that the tubercle bacillus may penetrate the unbroken mucous membrane, without leaving any mark at the point of entrance. It

has been necessary to revise our ideas, in view of modern experiments which have shown that inoculation into practically any part of the lymphatic system may produce tuberculosis of the lung. It has also been shown that inoculation of tubercle bacilli into the tail of an animal may produce pulmonary tuberculosis. Experiments in feeding have demonstrated the same thing. Further experiments with the injection of the tubercle bacilli directly into the stomach through an opening in the abdomen have demonstrated that the tubercle bacilli can arrive in the lung in large numbers within from three and a half to twelve hours. The route from the intestine to the lung is through the thoracic duct, and after entrance into the blood, the tubercle bacilli are retained in the capillaries of the lung through the filtration action of the lung. Two principal sources of infection must be recognized. The chief danger to man is the tuberculous man. Careless expectoration is probably the chief mode by which human tubercle bacilli are distributed. Tuberculous cattle infect a considerable number of persons. Of 306 cases of human tuberculosis including those given by the German Imperial Commission and British Royal Commission, 63, or more than 20 per cent., were due to bovine bacillus. Of the 84 children examined by the German commission, 21, or 25 per cent., showed infection by the bovine bacillus. The physician who allows a child to drink the milk of a tuberculous cow is criminally responsible. It is a duty of cities and states to enact laws requiring that all dairy cattle shall be tested and found free from tuberculosis. In stamping out the disease, both sources of infection must be taken into consideration. If only one is considered, the work will be incomplete.

Retropharyngeal Abscesses

DR. E. W. CARPENTER, Greenville: This is a rare surgical affection of the throat, more prevalent in children, and while the symptoms are prominent, they are often misinterpreted. Medical literature contains very few mentions of the condition, though it was described as early as the second century of our era, by Galen. The points emphasized are the necessity for early recognition and correct method of treatment.

Pellagra

DR. G. A. NEUFFER, Abbeville: The treatment of the majority of these patients is interesting, in that it is on somewhat original lines. Hydrogen dioxid was used internally for the relief of gastrointestinal symptoms, while at the same time arsenic was given for the skin lesions. The most important pathogenic symptom was pellagral erythema, which appears almost always in the spring and attacks the exposed surfaces. Pellagra is not contagious or communicable. Its immediate cause is supposed to be the use of diseased maize, which forms a toxin. Bad hygienic conditions, lack of proper food and exposure to the sun are the essential requisites for the contraction of the disease. There are digestive troubles in connection with the cutaneous manifestations—dyspepsia, ptyalism and diarrhea, which is frequently of a dysenteric nature. The milder cases improve after a few months, there being apparently a complete recovery during the winter. In the more severe forms there are pronounced nervous symptoms: headache, backache, spasms and then paralysis and mental disturbance. Suicidal mania and melancholia are frequently encountered in the third and fourth attack. There is rapid emaciation and the mucous surfaces from the mouth to the anus are affected, the tongue becomes red and denuded of epithelium and the gums swollen and sore, the genitalia are also affected, the vagina and cervix are red, inflamed, and itch, and there is considerable discharge. Usually there is elevation of temperature. This disease is rarely seen save in the poorer classes, and in women between 30 and 50. In the first case here reported stomatitis was diagnosed, but treatment for that did no good. This patient was seen in 1906. There was an eruption on the back of the hands, and fever ranging from 100 to 102 F. The tongue was red and slick and there was pain over epigastrium, etc., finally resulting in acute mania. Consulting physicians could not make diagnosis. Patient died three months after being seen. The second patient, a negress of 27, there were the same clinical symptoms, and about the same

treatment was given. The patient grew steadily worse and another physician called in failed to effect a cure, patient dying in three months. There was acute mania for several days before death. The third patient, 50 years old, complained of sore mouth, and medicine did no good. There were characteristic symptoms, but no typical eruption on backs of hands. Patient died in a short time. There was intense nausea all the time. A fourth patient, aged 40, had suffered for some years with articular rheumatism. In 1907 she had what she supposed to be "chapped hands." On May 3, 1908, she complained of dysentery and sore mouth and was treated for several days without improvement. Then eruption appeared on the backs of hands. Consulting physicians thought she would not live longer than sixty days. A mouth wash of hydrogen dioxid had done her good, and this suggested internal treatment. I gave 15 drops in water every three hours. She began to improve at once, and one month later all symptoms of pellagra had disappeared. The patient is living and is kept on tonic of iron, quinin and strychnin. All maize products are forbidden her and a generous meat diet is given.

The Surgical Significance of Angiosclerosis in the Eye

DR. CHARLES W. KOLLOCK, Charleston: I wish to emphasize the importance of the early recognition of the causes of disease, in order that preventive treatment may be pushed at a time when most useful and necessary. It is important to make a careful study of the retinal vessels in all cases in which sclerosis might be present. Arteriosclerosis, however, may affect vessels in one part of the body and not another; one portion of a vessel may be affected and the other not, but when sclerosis of the retinal vessels is present in many instances it exists also in the smaller vessels of the brain. Stengel has said that even more important than the four well-known facts for increased arterial tension, is a knowledge of the conditions of the retinal vessels as seen by the aid of the ophthalmoscope. The "corkscrew twigs," flattened veins, "silver wire" arteries and hemorrhages are signs of arteriosclerosis that are never wrong, and are, in most cases, a reliable indication of the condition of the vessels of the brain. A most careful search should be made for the above conditions in all persons over the age of 40. Great risks are taken by those who, when in need of glasses, consult an optician or refractionist, rather than an educated physician who not only understands the art of refraction, but also knows and appreciates the importance of a thorough ophthalmoscopic examination.

The Campaign Against Tuberculosis

At the meeting of the antituberculosis committee, on April 20, in connection with the state association, encouraging reports were made with reference to the work of the organization.

Dr. Dawson, chairman of the state antituberculosis committee, presided over the meeting. The following is a brief outline of his report to the association:

At a meeting held in Columbia, Oct. 29, 1908, the committee of the South Carolina Association for the Study and Prevention of Tuberculosis was organized. A standing committee was appointed, consisting of one member from each county inside of the state of South Carolina. Members of such committee were instructed and empowered to organize, in their respective counties, such organizations to consist both of laymen and physicians, to aid and cooperate in the fight against tuberculosis, and also to instruct, so far as possible, the public in general as to the method of conveyance of tuberculosis, as well as its prevention and cure. The aid of civic clubs was also invoked and arrangements were made that the poorer classes would be visited and instructed in their homes. It was provided that this committee meet annually on the day before the regular meeting of the state association, at such a place as that organization should have chosen for its annual meeting.

Reports from sixteen counties were made and funds were raised by applying to the state legislature for an appropriation in Sumter county. In several other counties individual subscriptions have contributed a sufficient fund for next year.

OHIO STATE MEDICAL ASSOCIATION

*Sixty-fourth Annual Meeting, held at Cincinnati, May 5-7, 1909**(Concluded from page 1688)*

A New Method of Gastroenterostomy

DR. EDWARD A. HAMILTON, Columbus: In doing this operation, a portion of the posterior wall of the stomach is pushed through the transverse mesocolon in the usual way and together with a loop of the jejunum is surrounded by an ordinary rubber catheter. The catheter is held firmly to the enclosed tissues by two rubber-sheathed hemostats to keep the parts from slipping through the rubber loop. A circular portion of the stomach wall and an oval part of the intestine are excised, these openings are then joined by a single suture of von Brun's linen inserted by the Connell method, which makes a firm and substantial union, bringing into the bite of each stitch all the coats of the bowel, so that leakage need not be feared. I have forced water under considerable pressure into the stomach and intestines so joined, and found that even in the cadaver this stitch makes a water-tight joint, and as peritoneal exudate occurs in the living in four hours so strong as to wall off liquids, the fear that one row of sutures may not be strong enough is groundless. There is nothing to prevent a reinforcing outside peritoneal layer of sutures if there is any fear that the line of union is not sufficiently firm.

Ocular Signs of Arteriosclerosis

DR. WILLIAM E. BRUNER, Cleveland: Study of the retinal vessels is important in ascertaining the condition of the general arterial system. Some of the ocular symptoms are: (1) Tortuosity of the retinal vessels; (2) irregularity in the caliber of the retinal arteries; (3) "silver-wire" appearance of the retinal arteries; (4) loss of translucency in the vessels; (5) compression of the veins by overlying arteries; (6) white lines along the vessels; (7) edema of the retina; (8) retinal hemorrhages; (9) thrombosis of the central retinal vein or some of its branches; (10) obstruction of the central artery or some of its branches; (11) spasm of the retinal artery; (12) lesions of the optic nerve, as congestion or edema of the nerves, retrobulbar neuritis and optic atrophy; (13) glaucoma; (14) paralysis of one or more of the ocular muscles; (15) lenticular opacities; (16) vitreous opacities; (17) subconjunctival hemorrhages; (18) asthenopia.

Submucous Incision for Reduction of Hypertrophied Turbinals

DR. C. P. LINHART, Columbus: The method of establishing a permanent reduction of hypertrophied turbinals is as yet an unsolved problem in nose surgery. Cautery and caustics are transient in their effect and have to be repeated. The removal of a section of the inferior turbinal destroys a part of an important functioning membrane, and, while it permits the passage of air through the nose, it does not give the anticipated improvement of the condition. The chief advantages of submucous incision is that it shrinks the vascular tissue of the turbinals, allowing free respiration of air through the nose; cutting across the walls of the venous sinuses causes their obliteration, and a permanent shrinkage results from the inflammatory adhesions; the base of the scar is on the turbinate bone, the seat of greatest traction; there is no destruction of mucous membrane, and no open wound to heal by granulation; it requires but a short time for surgical treatment (usually two or three days), and on account of no destruction of mucous membrane, there is no interference with the physiologic functions of the nose.

Radical Operation for Cancer of the Uterus

DR. J. H. JACOBSON, Toledo: The chief reason for the high primary mortality accompanying the radical abdominal operation for uterine cancer may be summed up in one word, "shock." The various factors concerned in its causation may be eliminated for the most part by the employment of spinal anesthesia, which I consider especially adapted for this operation. The afferent impulses or sensations can not be referred to the peripheral vasomotor centers and nerves, and thus produce shock. Spinal anesthesia may be said to be about

as safe as chloroform, but more dangerous than ether. The roentgenologist should, if possible, witness the operation, in order that he may plan the after-treatment to the best advantage. About forty very thorough exposures are made in the after treatment with the *x*-ray. The points in favor of the postoperative *x*-ray treatments are: (1) The ray has shown that certain superficial forms of cancer are amenable to cure by its employment; (2) theoretically it would seem that if the pelvic structures could be technically rendered superficial, and directly accessible to the ray, the same results could be accomplished here as are obtained elsewhere; (3) the ordinary *x*-ray treatment of uterine cancer has heretofore been tried and proved a failure, but not so with postoperative treatment with the *x*-ray; (4) the technic, when properly applied, allows of direct treatment of every part of the pelvis, the dose can be easily regulated, and the tubular lead glass speculum, when properly directed to all parts of the vaginal fornix, permits of a systematic and thorough exposure in every direction; (5) cancer of the uterus does not have a tendency to metastasis into other organs as other forms of cancer; (6) it is now an established fact that recurrence after the vaginal operation for uterine cancer occurs in the vaginal cicatrix, whereas in the abdominal radical extirpation the recurrence is usually in the lymphatic glands of the pelvis. The main object of the paper is to emphasize the good results which are obtainable by the radical abdominal extirpation for uterine cancer and to make a plea for its more general employment; no other operation is comparable to this method; further, that spinal anesthesia greatly reduces the mortality, and that thorough systematic postoperative *x*-ray treatment can be effectively employed.

DISCUSSION

DR. H. G. SUTTON, Zanesville: I doubt the advisability of carrying out such extensive dissection of neighboring parts as would necessarily be required in the radical abdominal operation for uterine cancer advocated by Dr. Jacobson. I have met men with large experience, men of no mean ability in this country doing abdominal surgery, but they have never been able to satisfy me that they could diagnose uterine cancer by the microscope before it can be done macroscopically.

DR. R. B. HALL, Cincinnati: I do not think it right or just, or the best thing for the patient, to advocate this extensive dissection, enucleating all the glands by dissecting up the ureters, for carcinoma of the cervix, because the primary results following vaginal extirpation of the uterus are better and a larger percentage of the patients recover. High mortality attends the abdominal radical operation as compared with the low mortality attending the vaginal method of dealing with such cases. The ultimate results of this wide dissection are not so very much better regarding prevention of recurrence than vaginal extirpation. In almost all the patients there is recurrence and they die, no matter which operation is done.

DR. EDWARD RICKETTS, Cincinnati: In waiting until a cancerous nodule can be detected in the cervix or in the uterine walls, Dr. Jacobson in reality advocated a late operation, when the best results are to be obtained by early operation. But even at that I can not consistently advocate such wide and extensive dissections. I consider them beautiful from a scientific standpoint, but disastrous from a practical one. Some men get good results from the method of simple extirpation, while others get equally good results from the swallow-tail operation as advocated by the late Dr. T. A. Reamy. Shock from the vaginal operation is far less severe than from the radical abdominal operation.

DR. GEORGE W. CRILE, Cleveland: Cancer of the uterus should be considered from the standpoint of each individual case. For instance, cancer of the fundus in its early stage is a curable disease. There ought to be a difference made in the prognosis as to the location of the growth as well as to the degree of its advancement. Cancer of the uterus, as a rule, gives a favorable prognosis, but like cancer of the breast, and elsewhere, the virulence of the disease itself can not be predicted. Sometimes a small cancer of the breast will be fol-

lowed by internal metastasis in a very short time, while a much larger growth in the same region may not show metastases at all. In late cases of uterine cancer I think simple curettement of the tumor mass the wiser procedure, but in those cases in which a radical operation is to be considered, the very large statistics available should lead us to give preference to the abdominal radical method rather than to the vaginal method. With the vaginal method there is more liability to force the cancer cells mechanically into adjoining tissues. With the radical abdominal method I have been able to obtain a three years' cure in about 24 per cent. of my operations.

Traumatisms of the Sacroiliac Joint and Their Sequelæ

DR. ROBERT CAROTHERS, Cincinnati: The sacroiliac joint is a true joint, known to be subject to the same diseases as other joints, and movable ordinarily in a slight degree. It is subject, therefore, to a wrench or sprain, a true luxation, or a relaxation or looseness. In the first cases, the symptoms are usually diagnosed as lumbago, on account of the pain and limitation of motion in the back; pain may be in the back, thigh or leg. A correct diagnosis is sometimes confirmed by an *x-ray* examination. The luxation cases are rare, and are produced by some violent injury to the lower portion of the spine. The relaxed or loose sacroiliac joint is the most common, the least often recognized and more lasting and difficult to treat. When these patients present themselves they are confirmed neurasthenics. A diagnosis is to be based on inspection, pain, limitation of motion, and mobility. Rectal examination will not infrequently elicit a tender point on either or both sacroiliac joints. It is to be differentiated from sciatica by absence of pain on pressure along the sciatic nerve and the presence of the signs enumerated. In the same way it is to be differentiated from lumbago by the absence of pain on pressure over the lumbar muscle, free motion of these muscles, and the presence of the signs of sacroiliac injury. In the mild cases, massage, properly directed exercises, stimulating baths and electricity often improve muscle tone and add materially to retention thereby of a relaxed joint. More severe cases require the application of some form of retention apparatus, and probably the simplest is the adhesive strap. When this fails a proper support of elastic webbing may be used. In extreme cases some mechanical brace will be necessary, which should be devised with special reference to holding the pelvis securely, grasping the trochanters and making some pressure on the sacrum; then extended on to the back and chest like any ordinary spinal brace.

Chronic Pancreatitis

DR. CHARLES N. SMITH, Toledo: Chronic pancreatitis presents two distinct pathologic and clinical pictures, depending on the location of the fibrosis. Thus we have the interlobular and the intralobular forms. In the first-named form, the islands of Langerhans are involved early, while in the last-named form they are involved late in the course of the disease. In the majority of instances the diagnosis of chronic pancreatitis is not impossible, nor is it difficult. In my experience, the Cammidge pancreatic reaction has proved a valuable and thoroughly reliable indication of the presence of pancreatic inflammation. As practically 80 per cent. of the cases of chronic pancreatitis occur as terminal and sequential events in gallstone disease, the relations between the common bile duct and the head of the pancreas, and between the common and the pancreatic ducts, as well as the methods of termination of these ducts in the duodenum, become of more than passing importance. Drainage of the biliary tract is the essential element in the cure of the pancreatitis and must be continued over a period sufficiently long to assure a decided abatement in, or disappearance of, the biliary infection. In mild cases temporary drainage is indicated. Such operations performed early are attended by a mortality of about 1 per cent.; performed late the mortality may reach 18.5 per cent. When the disease has been of long standing, permanent drainage is indicated, which is obtained by cholecystenterostomy. The intestinal

site for the anastomosis should be in the duodenum, whenever possible, in order that the bile may enter the intestine and become mixed with the pancreatic fluid near the outlet of the stomach, as was Nature's intention and provision.

DISCUSSION

DR. FRANK E. BUNTS, Cleveland: In two-thirds of all cases the common duct goes through the pancreas, while in one-third it goes under the pancreas, and the enlargement of the head of the pancreas pressing on the common duct accounts for the frequent occurrence of jaundice as a symptom of pancreatitis. In stone of the common duct, in a large percentage of cases, there is a small gall bladder with persistent jaundice, while a large gall bladder with persistent jaundice is in all probability due to a carcinomatous condition or to trouble in the pancreas. Of course, in obstruction of the cystic duct, there is enlarged gall bladder, but not ordinarily. Pancreatitis may be an accompaniment of alcoholism, syphilis or mumps, but it is usually then of an acute form, and not chronic, although in syphilis it may sometimes assume a chronic form.

DR. LEVISOHN: The Cammidge reaction is of value and the profession should have recourse to it more frequently.

DR. BROWN, Toledo: I worked with Dr. Smith in his effort to study surgical cases of chronic pancreatitis, associated with biliary disease. I made 93 urinary examinations from 39 different individuals suffering from various ailments. Of the 39 patients, 10 gave positive and 29 negative reactions to the Cammidge test. The positive reactions were obtained from 7 patients with gallstones, from one case of catarrhal duodenitis with occasional icterus, from one case of diabetes of pancreatic origin, and from one case of gastric ulcer with adhesions to the pancreas. Out of 17 cases of cholelithiasis 7 gave positive and 10 negative reactions. While my own observations have been limited, still the consistent results secured and their confirmation in 15 cases has convinced me that we have at our disposal one of the most valuable diagnostic aids that has recently been introduced into medicine. My experience in malignant conditions of the pancreas has been limited to two cases. In both the reaction was negative. Cammidge believes that the reaction in this condition is dependent on the presence or absence of any coexisting pancreatitis, which view is generally accepted.

DR. J. H. SCHROEDER, Cincinnati: The cases resolve themselves into two classes: One in which there is no jaundice, but digestive disturbances, and no symptoms of gall-bladder disease; and the other, in which there are jaundice and symptoms of gall-bladder disease. When Cammidge first published his reaction in 1904, I followed it closely, and presented an analysis of 85 cases at the Chicago Session of the American Medical Association meeting last year. When the reaction was positive, it was usually in connection with gall-bladder disease. I obtained the reaction in one case of intestinal influenza and in one case of measles, but there was no jaundice and tenderness over the pancreatic region and no gastric disturbance. As a whole, I think the test a valuable one, but not pathognomonic.

Interilio-Abdominal Amputation

DR. JOSEPH RANSOHOFF, Cincinnati: The patient in this case was a colored man, aged 45, who six years before his admission to the hospital, sustained a kick in the groin. Three years later an osteoma developed, which was removed. The patient returned to the hospital a year later with the wound opened and many sinuses leading to a tumor which involved the part of the ilium and the upper end of the femur. The diagnosis of osteosarcoma was made. Although the patient was in a condition of chronic sepsis, an interilio-abdominal amputation was made March 8, 1909. Hemostasis was provided for by tying the common iliac artery. Owing to many sinuses on the outer side of the hip and gluteal regions, and the position of the tumor, a long internal flap operation was the only one feasible. The ilium was chiseled through from crest to sacrospinous notch just in front of the synchondrosis, and the ramus of the pubes and ischium were chiseled through in the same way. At this time the fall of blood

pressure necessitated an intravenous injection. The operation was completed in forty-five minutes and the patient left the operating table in fair condition. With the varying symptoms of sepsis, the patient survived for thirty-nine days.

Other Papers Read

"The Technic of the Modern Radical Mastoid Operation, with Sims Thrombosis Complications (stereopticon illustrations)," by Dr. Frank Allport, Chicago; "Further Observations on Bismuth and Other Paste Treatments in Suppurative Diseases of the Nose and Ear (stereopticon illustrations)," by Dr. Joseph C. Beek, Chicago; "Ophthalmia Neonatorum, from the Standpoint of an Obstetrician," by Dr. William E. Gillespie, Cincinnati; "Blindness in Hamilton County, with Special Reference to Ophthalmia Neonatorum," by Dr. Louis Stricker, Cincinnati.

ASSOCIATION OF AMERICAN PHYSICIANS

Twenty-fourth Annual Meeting, held at Washington, D. C., May 11-12, 1909

(Continued from page 1781)

Clinical Experiments with Homologous Vaccines in Septic Endocarditis and Pyemia

DR. W. GILMAN THOMPSON, New York: Following the method described by Wright, I have treated a series of seven patients with septic (streptococcal) endocarditis and one with pyemia with results which have again demonstrated its effectiveness. Three of the patients with septic endocarditis were cured, also the one with serious pyemia. In several other cases of septic endocarditis there was clinical evidence that the septic process had been completely controlled, although subsequently death ensued from such complications as tuberculosis or pneumonia, which as yet are beyond the influence of vaccine treatment. In several of the cases, polyvalent vaccines were employed, but without benefit, before homologous vaccines could be obtained, which latter subsequently proved effective. In fact, in no case in which the homologous vaccines were used was there failure to produce some degree of reaction, such as a downward temperature movement, and several patients who came under treatment after months of illness in a condition in which a fatal issue seemed imminent, gave evidence of an arrested progress of the disease for many weeks. The three patients with endocarditis who recovered had a type of the disease in which I have never previously seen recovery take place. The dosage of the vaccines used varied between 50,000,000 and 300,000,000 at intervals of two, three or four days, according to the circumstances of the case. There is much yet to learn about the dosage and the intervals.

A Study of Achylia Gastrica

DR. CHARLES G. STOCKTON, Buffalo: Achylia gastrica is defined by Einhorn as "A class of cases in which there is permanent absence of gastric secretion," and "in which clinically the diagnosis of atrophy of the gastric mucosa seems to be justifiable." He does not include cases depending on pernicious anemia. Apparently, this definition describes a result following a variety of causes. Hence, we are led to conceive of the condition not as a disease, but as the result of diseases. If this be true, I fail to understand why the condition when occurring in pernicious anemia should not be included. I have attempted to state in this paper some conclusions reached in the study of 132 cases. Some of these did not fall strictly within the definition above given. If, however, we are to form an opinion as to the causes leading up to achylia gastrica and of cases in the stage of development, then these cases should be included. I believe that it is wise to include them and to attempt the explanation of a pathologic change that is not very uncommon.

DISCUSSION

DR. THEODORE JANEWAY, New York: Our knowledge of the anatomic changes associated with disturbances of gastric se-

cretion is very scant, because on account of the postmortem digestion which usually takes place the histologic examination of the stomach after death is attended with considerable difficulty. In the few cases of achylia gastrica which I have been fortunate enough to see come to autopsy, the presence of a true atrophic gastritis has been rather conspicuously absent. The two most striking groups of cases are those associated with pernicious anemia and those associated with certain types of persistent diarrhea. A number of persons coming especially from Cuba and South American countries have chronic diarrhea, and on careful examination they will be found to have achylia gastrica. These cases are the ones which offer most hope therapeutically. They respond admirably to the administration of hydrochloric acid.

Locomotor Ataxia and Paralysis Agitans in the Same Patient

DR. AUGUSTUS A. ESHNER, Philadelphia: Locomotor ataxia and paralysis agitans have little or nothing in common, etiologically, anatomico-pathologically or symptomatologically. Their associated occurrence in a given patient must, therefore, be looked on as a mere coincidence. While by no means rare, neither disease is common, and their association is correspondingly infrequent. Only a small number of cases have been placed on record in which both diseases have been present in the same patient. In my case, which occurred in an elderly man, the symptoms of paralysis agitans were observed while the patient was under treatment for locomotor ataxia, although members of the family stated that they had noted some shaking of the hands for many years.

Further Observations on the Third Heart Sound

DR. W. S. THAYER, Baltimore: During the past year I have examined 231 consecutive normal individuals in various places—schools, child's nursery, city jail, etc. In those individuals 65 per cent. under 40 years of age showed a characteristic third sound of greater or less intensity. In the first three decades of life the sound is the rule. It is apparently a normal sound in a large proportion of adolescents and young adults. Our studies rather tend to support the suggestion made by Dr. Hirschfelder, Dr. Gibson and myself independently that the sound is probably due to a slight tension of the mitral valves associated with the rapid filling of the ventricle. The sound is certainly coincident with the inrush of blood from the auricle into the ventricle. The diastolic galop is present in the majority of individuals under 30, in the recumbent and left lateral postures, and is not, *per se*, a pathologic manifestation.

DISCUSSION

DR. JAMES L. WILSON, Philadelphia: Students of cardiac diseases must have been since the time of Laennec more or less incompetent as regards their hearing to have overlooked this sound until recently when our attention was called to it. In a considerable number of instances I have recognized the third sound under circumstances in which the possibility of my having overlooked it up until recently could scarcely have occurred. Of course, I have recognized the first element of the diastolic galop rhythm very often, but while this occupied the time of the third sound as now observed, that this could under any circumstances have been a normal sound had never occurred to me. The subject is certainly one which deserves very systematic clinical investigation, and in which the correlation of the clinical observations and postmortem observations should be systematically made whenever practicable. The idea of the occurrence of a third sound of the heart under normal circumstances, after nearly a century of clinical study of the heart by physical diagnosis, comes with overwhelming force, and impresses on us the fact that we have to have things pointed out to us from day to day before we understand them.

Normal Auscultatory Differences Between the Sides of the Chest

DR. RICHARD C. CABOT, Boston: If we study the slightest auscultatory differences in different portions of the chest, we will have to recognize not merely that there is a difference

between the two apices, but very frequently a difference between the two bases. I recently went over 250 chests that were normal so far as I could find. In 64 per cent. of those cases there was a difference between the two bases, and substantially the same difference. At the left base behind the breathing in these 64 per cent. of cases was harsher, rougher and slightly louder than at the other base. It was almost exactly what the Germans call rough breathing, as compared with the smoother, gentler breathing at the other base. It is only of importance in that it should modify slightly what we otherwise might take as a pathologic sign in the same way that our attention to signs at the right apex always has to be slightly modified by our knowledge of the physiologic conditions there. The other point to which I wish to call attention is not new, but I am convinced sufficient attention has not been paid to it. We have all of us known for a long time that it is unwise to examine patients in the lateral posture, because the sounds of the two sides of the chest are modified very much by the lateral decubitus. In 50 chests which I examined, the results were practically identical and precisely what we should suppose from the physical conditions. Lying on the side diminishes the excursions of that side of the chest and increases the density of the lung. On palpation we get a slightly increased fremitus; percussion shows a slight dullness combined with tympany; on auscultation we get a slight increase of the whispered and spoken voice, a slight prolongation of expiration and a slight increase in its intensity.

DISCUSSION

DR. W. S. THAYER, Baltimore: In a good many cases, particularly in febrile diseases, one hears numerous crisp râles on the recumbent side of the chest, while on the side of the chest which is up there are no similar sounds. If the patient is changed from side to side the râles entirely disappear, and not infrequently appear on the other side of the chest. It is familiar enough to most of us that fine, crisp râles occur with the expansion of the thin borders of the lung in various parts of the chest. I have not infrequently seen the attention of clinicians attracted to râles which were heard in the axilla. If the individual is lying on his back and turns on one side the râles will entirely disappear in a large proportion of cases. If we percuss the lung at the same time, we will find that it has come down two or three fingers' breadth, and with the filling up of that portion of the lungs the râles disappear. I know of at least one patient who was sent to the mountains with a diagnosis of tuberculosis based solely on a manifestation which is really not abnormal nor uncommon.

Orthodiagraphy in the Study of the Heart and Great Vessels

DRS. THOMAS A. CLAYTOR and WALTER H. MERRILL, Washington, D. C.: From our experience with the orthodiagraph we draw the following conclusions: While orthodiagraphy should not be looked on in any way as a substitute for the other well-known methods of examination of the heart and great vessels, it is, at the same time, a valuable aid. It can be used to make fairly accurate outlines and measurements of the heart and great vessels, thus enabling us to make comparisons with the normal and subsequent diagrams of the same case. The use of the instrument may also serve to prove that the size of the heart is not influenced to any appreciable degree by a single effort of exertion, or by a single therapeutic or gymnastic treatment.

(To be continued)

MISSISSIPPI STATE MEDICAL SOCIETY

Forty-second Annual Meeting, held at Jackson, April 13, 1909

(Concluded from page 1689)

Errors of Refraction and Results to Be Expected from Their Correction

DR. W. S. SIMS, Jackson, maintained that the fitting of glasses should not be left to the optician or to the optometrist. In young subjects the work should be done with the eyes under the influence of some reliable cycloplegic. Glasses

would be found beneficial in reviewing poor vision, headaches, certain forms of conjunctivitis, vertigo and nausea after long use of the eyes, but of little or no benefit in migraine, chorea or epilepsy.

DISCUSSION

DR. H. FLOWERS, Brookhaven: Though the general practitioner is not expected to understand the various complications of the eye, he should know more than he does on the subject, and should at least warn his patients against the opticians who call themselves doctors. They know nothing about the eye, do not use atropin, and can not refract. They frequently put glasses on people whom a specialist would relieve by treatment. Again, they put glasses on which positively injure the eye. Therefore, the general practitioner would do a great deal of good by advising his patient against these opticians, and referring them to some competent specialist, if it is a trouble he can not treat himself.

DR. WILLIAMS: When the eyes are constantly breaking out with styes, the lids become inflamed, and the patient complains of burning of the lids and watery eyes, it is safe to say that that patient has an error of refraction, and if that error is properly corrected, good results will follow. When the general practitioner sees these cases, he should advise his patient to go to a specialist and have this trouble corrected at once.

DR. E. A. CLARK, Arcola: In small places opticians are particularly annoying. I have had some very disagreeable experiences with them, and think that physicians should warn their patients against them.

DR. TURNER: After I left college it did not take me long to find out that I did not know anything about the eye, and I am still of that opinion. I made it a point to send my patients to a reliable specialist when I discovered anything wrong with the eyes. I have had a number of disagreeable experiences with men who called themselves "Doctor." One came to my town and tried to prevail on my clerk to buy his outfit, promising him that he would stay there two weeks, and at the end of that time, he would have made a first-class oculist out of him. I cite this case to show how necessary it is to put a stop to these men going about misrepresenting facts, and doing a lot of harm.

DR. HAMILTON, Schlater: I wish to call attention to the reflex nervous symptoms from strain of the ciliary muscle, causing headache and nausea. This can frequently be relieved by wearing glasses, but I believe that a great many cases of eyestrain can be relieved by a dose of calomel.

The Relation of the Specialist to the General Physician

DR. D. G. MOHLER, Gulfport, contended that the specialist should limit his work strictly. He must observe ethics and never lose sight of the rights of the general physician. The specialist and general physician should work in harmony in all cases and can give each other great help in the diagnosis and treatment of many obscure cases.

DISCUSSION

DR. W. B. DOBSON, Jackson: The general practitioner and the specialist should work together for the best interests of their patients. I have heard some general practitioners say that they felt perfectly competent to treat the eye, and why should they send their patients away when they could treat them. When the specialist discovers that his patient is suffering from some physical trouble, not in his line, he sends him to his family physician for treatment, then why should not the general practitioner give the specialist the same courtesy. The best interest of the patient can only be obtained in that way. In twenty-five years from now we will see the general practitioner only in small towns and villages; each physician will be a specialist along some line, such as lungs, stomach, eye, etc.

DR. M. ALEXANDER, Tunica: Most cases of eye troubles came under the notice of the general practitioner first, and he should know whether he is able to treat those cases or not. If he feels that he can not treat a patient successfully he should send him to a specialist.

DR. J. A. ROWAN, Wesson: No man is competent to be a specialist, unless he has first been a general practitioner. He should certainly have a general knowledge of the practice of medicine. I desire to endorse what Dr. Hamilton said in regard to a dose of calomel helping the vision in some cases. When one is bilious the sight certainly becomes dimmer, and a dose of calomel will certainly clear the vision in these cases.

DR. J. T. H. POSEY, Enterprise: Recently a physician referred to himself as being loaded with junk, and I want to say that this junk is very necessary to the country physician who is miles away from a city, and who certainly should know something about treating the eye. Most country patients are not able to go to a specialist, and in simple eye trouble the physician should know what to do for his patient. He should also know when he meets an eye trouble that he does not understand.

A Plea for the Proper Treatment of the Cross-Eyed Child

DR. M. H. BELL, Vicksburg, said that speaking only of esotropia, glasses should be fitted as early as possible and treatment should not be delayed trusting that the patient will outgrow the trouble or while waiting to have an operation done later. The family physician is the one who sees these cases at a time when proper treatment offers much hope and he should give them more attention.

DISCUSSION

DR. H. FLOWERS, Brookhaven: When a child squints it is very unwise to wait until that child is 6 or 7 years of age to correct the squint. I consider it most important to see that that child uses both eyes. When a child only sees with one eye, by the time it has reached the age of 6 or 7 years it will have lost the vision in the eye it did not use. To force the child to use both eyes, the eye the child uses should be rendered useless with atropin, and it will have to use the other eye. An examination should be made every few weeks, and the child should be kept using first one eye and then the other. It is not usually satisfactory to put glasses on a child 2 or 3 years of age, but it can be done if necessary.

DR. WILLIAMS, Jackson: I do not agree with Dr. Flower in regard to the child with the alternating squint. I think that such a child should have attention at once. Glasses can even be tied on. The general practitioner should not lose sight of this fact, as they are looked to for advice on these matters, and they should tell parents that this condition can be relieved, and at once, and thus save a child from going through life with one eye looking in one direction and the other looking in another direction. By urging on the parents the necessity of having this trouble attended to at once, the general practitioner can do an enormous amount of good.

DR. KENNEDY: My experience has been that glasses are of very little advantage. In my youth I was very cross-eyed and glasses were tried. I stood them as long as I could, but they caused me such suffering they had to be discarded. In after years, when I began the study of medicine, I gave this trouble close attention and again tried glasses, without success. Finally, I went to Memphis, where an operation was performed, but I was then too old for it to do much good; it relieved me, however, and put me in condition where I could wear glasses. Therefore, I would recommend that a child be operated on at once.

DR. BRISTER, Greenwood: What does Dr. Bell consider the best age to operate on a child?

DR. BELL: It is my practice to let the other man do the operating. In reply to Dr. Kennedy, I would say that I do not think he will find many specialists who would operate without first treating with glasses.

Quinin Amaurosis

DR. J. B. ELLIOTT, JR., New Orleans, reported two cases of quinin amaurosis. In the first 690 grains had been given in ten days, part by needle and part by mouth, and in the second 410 grains in eight days. These were contrasted with a case of pernicious malaria controlled by 280 grains in eight days.

The object in presenting the cases, as stated by the author, was to bring up a discussion as to the frequency of quinin amaurosis and more especially to get the views of the members of the association as to the maximum dose of quinin to be used in pernicious malaria.

DISCUSSION

DR. H. L. SUTHERLAND, Rosedale: I have lived in a malarial district for thirty-six years and have never had a case of quinin amaurosis. This is probably due to the fact that I do not advocate giving such heroic doses of quinin in malaria; I see no use in giving such enormous doses. I can accomplish just as much good by giving from 20 to 30 grains a day to the average adult. In lobar pneumonia, I have given 60 grains in a space of ten hours, and repeated the dose in twenty-four hours, and also have given doses of that size in some forms of puerperal fever, but not in malaria. I have never seen a case of malarial fever that 30 grains of quinin daily, for four days, would not cure, but I never gave it more than four days in succession, for if the fever still continued, I looked around for another diagnosis.

DR. FRIZELL: Does Dr. Elliott give quinin by enema or by needle?

DR. LONGINO: What solution is necessary to saturate the blood and kill the more persistent parasites?

DR. ELLIOTT: I give the quinin by the needle. Administered by mouth and through the bowels it is not always absorbed. In a case of a man on whom a postmortem examination was made, forty-eight 5 gr. pills were found in the bowels. That man died with his bowels full of quinin and his blood empty of quinin. A solution of 1 to 5000 will destroy persistent parasites.

Uncinariasis and Its Relation to State Medicine

DR. J. A. MCCOY, Picayune, discussed the prevalence of uncinariasis in south Mississippi. The disease was much more common than was generally supposed. He described two cases he had seen that terminated fatally on account of complications—the second, a girl of 8 who had developed an abnormal appetite, going to autopsy. There was found in the stomach a matted mass of human hair. He summarized his article as follows: "Uncinariasis is the most prevalent chronic disease existing in south Mississippi; it retards mental and physical development of all affected persons; it is a curable disease, also preventable; it exists principally among the poorer people of rural districts who are not able to pay for treatment, therefore the state should provide means whereby it may be eradicated."

A State Bacteriologic Laboratory

DR. W. S. LEATHERS, University, described the uses of a state bacteriologic or hygienic laboratory and considered the reasons why the physicians of Mississippi have failed so pitifully in their efforts to secure legislation.

What Bacteriology Has Done for Medicine and Some of the Handicaps to Its Study

DR. G. H. WOOD, Batesville, enumerated some of the benefits conferred on medicine by bacteriology, advocated the necessity for a public, state laboratory and blamed the medical fraternity for the absence of one in Mississippi.

Discussion on Bacteriologic Laboratory

DR. S. L. BRISTER, Greenwood: Though I am not a bacteriologist I fully appreciate the benefits the general practitioner derives from bacteriology. In any tuberculous trouble the bacteriologist comes to the assistance of the physician most materially. I am in favor of some effort being made to get the legislature to make an appropriation sufficient to establish a state laboratory in Mississippi.

DR. W. STEPHENSON, Landerdale: Every effort should be made to secure a state laboratory, but while waiting for this laboratory I wish to call attention to what is being done in east Mississippi. Through the activity of Dr. Buchanan the

physicians there have obtained an appropriation from the legislature to build and equip a modern laboratory. It is large, and has every convenience for making examinations. They intend to get out a little book on the subject of how to send specimens, how to prepare specimens of blood, and how to preserve specimens for examination.

DR. J. B. BULLITT, University: Every effort should be made to establish a state laboratory, but the physicians should also be fitted to make examinations himself. The majority of physicians do not know how to make the simplest examinations. They would then acquire a deeper interest in securing a state laboratory. It is astonishing how careless many physicians are in sending specimens to be examined. Some wrap the tissue to be examined, in a piece of paper, stuff it in the pocket, and in the course of time send it on to be examined; or they drop the blood on the center of the slide, and then stir it up, and are much astonished when the bacteriologist sends word that it is impossible to make an examination of the specimen sent. The establishment of a laboratory would at least enable the physician to learn how to send the specimens to be examined, even if he never attempts to make an examination himself.

DR. H. L. SUTHERLAND, Rosedale: It is necessary to make some effort to get the legislature to pass an act authorizing the establishment of a state laboratory, but to do so it is necessary to have literature for distribution among the legislators, and such papers as these that have been read should be printed in such form as to distribute to the legislators when they next meet in Jackson.

DR. S. W. SCALES, Starkville: With a microscope and a simple course of study, the physician would soon learn to make a few examinations for himself. I am glad that Dr. Stephenson has called attention to the work being done in Meridian.

The Prevalence, Prophylaxis and Economic Importance of Tuberculosis

DR. J. M. ALFORD, Ellisville, considered tuberculosis from the standpoint of its prevalence, prophylaxis and economic importance. The scourge was everywhere, it might be prevented and ultimately eradicated. Its cost to the community and nation, both in loss of lives that had an economic value and in cost of caring for tubercular invalids, was exceedingly great.

DISCUSSION

DR. H. L. SUTHERLAND, Rosedale: This plan of educating the people on the prevention of a disease, which is known to be preventable, is necessary. There is a law requiring a physician to report all these cases to the state board of health, and the physician who fails to do so commits a great wrong. Though something of a pessimist in regard to the treating of tuberculosis in the negro, in one instance I treated successfully a tuberculous negro—a very intelligent negro boy. At first I thought of sending him to New Mexico. I gave him a copy of the *Mississippi Medical Journal*, containing an article on tuberculosis and told him to read it carefully and to follow out the line of treatment laid down in it. He was then having high temperature, night sweats, and cough. He persisted in the diet of sweet milk, raw eggs, etc., combined with perfect rest and sleeping outdoors. The results were better than I could have expected. When I saw this man in October, had I not known the history of his case, I would have passed him for life insurance. If the people could only be reached with such literature as that article, instead of all this "patent-medicine" literature, while it might result in no good to some, it might be the means of saving the lives of a good many.

DR. ROSAMOND, Memphis, Tenn.: I think it is time that the physician recognized the importance of being able to diagnose tuberculosis in its incipency. I also think that the time is coming when it will be required that every child should be inoculated with tuberculin. Everyone should learn more about tuberculin and its possibilities and more about the exact diagnosis of incipient tuberculosis, and when they do this they will strike at the root of the trouble.

DR. J. ROWAN, Wesson: Every disease that is stamped out is stamped out by isolation—yellow fever, smallpox, diph-

theria, etc. How can tuberculosis be stamped out otherwise? And this can only be done by prohibiting the marriage of consumptives.

DR. JONES: The people of the South suffer through tuberculosis in the negro more than do the northern cities. It is no uncommon thing for negro nurses, employed by society people, to be sent to be treated for tuberculosis while holding little white children in their arms. It behooves the South to direct particular attention to this class of consumptives and to protect its little children from such a menace.

DR. HOLDER, Memphis, Tenn.: One form of tuberculosis that has not been discussed is tuberculosis of the bones and joints. The little child will complain of pains in its knees and the mother will think that it has growing pains. He will begin to limp and to cry out in his sleep, and there is just a little rigidity of the muscles of the thigh, and that child will develop tuberculosis of the hip joint. If this trouble can be diagnosed in time, the pressure taken off, the child given the proper diet, plenty of outdoor air and moderate exercise, he may get well. Let it alone until the second and third stages, no power on earth can save bones and joints from total destruction. The treatment of tuberculosis of the joints and bones is the same as tuberculosis of the lungs. We do not contract this disease in the day time; it is in the darkness of the night, shut up in ill-ventilated rooms. A law should be passed appointing health inspectors of all public buildings, theaters, churches and all public places, and every private house should have an open-air chamber, where the child should sleep. People should not wait until they have tuberculosis to begin to fight it, but prevent it by living sensibly.

DR. J. M. ALFORD: The question of legal prohibition of the intermarrying of consumptives is a very serious one. If the trouble is diagnosed in its incipient stage, there is no need of such a prohibition. But who shall say at what stage it shall stop? I do not think that it would be wise legally to prohibit the individual with incipient tuberculosis from marrying.

Other Papers Read

The following papers were also read: "Some Valuable Medicinal Agents in Diseases of Women," by Dr. W. A. Carnes, Kosciusko; "Some Neglected Gynecologic Disorders," by L. C. Feemster, Nettleton; "Report of a Case of Extrauterine Pregnancy," by Dr. J. C. Armstrong, Water Valley; "Some of the Nervous and Mental Arrangements of Alcoholics," by Dr. J. A. Tullos, Raleigh; "Hereditary Syphilis as an Etiologic Factor in Dementia Præcox," by Dr. M. J. Ferguson, Jackson; "The Prophylaxis of Insanity," by Dr. J. M. Buchanan, Meridian; "Disturbances of the Organs of Generation as a Causative Factor in Insanity," by Dr. A. E. Kennedy, Magee; "Criminal Irresponsibility," by Dr. E. L. Green, Carpenter; "The Diagnosis of Labor," by Dr. A. L. Chapman, Lyon; "Electricity as a Therapeutic Agent in Gynecology," by Dr. Rosa Wiss, Meridian; "Typhoid Fever in Infancy and Childhood, with Analysis of Eighty Cases," by Dr. W. W. Butterworth, New Orleans; "Our Hygienic Duty," by Dr. C. S. Pettus, El Dorado, Ark.

ILLINOIS STATE MEDICAL SOCIETY

Fifty-Ninth Annual Meeting, Held at Quincy, May 18-20, 1909

The President, DR. J. W. PETTIT, Ottawa, in the Chair

An address of welcome was delivered by Dr. R. J. Christie, Quincy, which was responded to by President Pettit.

Serum Treatment of Epidemic Cerebrospinal Meningitis

DR. FRANK SPOONER CHURCHILL, Chicago: I have been able to watch the effect of the serum in 41 cases of meningitis, 29 of which were proved to be of the meningococcic type. Of these 29 patients, 16 recovered, 13 died, a mortality of 44 per cent. Closer analysis of the series showed that of 15 patients receiving the serum within the first week, 6, or 37 per cent., died. Of these 6 cases, 3 were fulminating cases, and the patients died within the first two days. The fourth patient was a bartender, aged 43, and the other two were not closely followed up,

but received each only one dose of the serum. The following conclusions were reached: 1. In all cases clinically suggesting meningitis, a lumbar puncture should be done as early as possible. 2. If the fluid thus obtained be turbid, at least 30 c.c. of Flexner's serum should be injected directly into the spinal canal without waiting to hear the bacteriologic report of the fluid. 3. The spinal fluid should be examined bacteriologically. Smears are more important than cultures. If the diplococcus intracellularis be found, the injections should be repeated daily for the three or four following days. In severe cases the second dose should be given twelve hours after the first. 4. After the first series of doses, two or three days should be allowed to elapse, and then, if necessary, the series repeated. 5. The serum is a specific and of value in meningococcic meningitis only. 6. It is useless to give the serum subcutaneously.

DISCUSSION.

DR. S. E. MUNSON, Springfield: Through the courtesy of Dr. Churchill, I had the privilege of using the Flexner serum in two or three cases of cerebrospinal meningitis. One of the patients was moribund at the time the serum was injected, and died within an hour or two afterward. I speak of this as being a case of cerebrospinal meningitis owing to the character of the spinal fluid and the differential cell count, particularly as to turbidity, etc. A second case I saw with another physician who had called me to administer the serum, and it was clear from the history of the case that it was one of tuberculous meningitis, and on spinal puncture the fluid was perfectly clear. After the serum had been used for some twelve hours a fine coagulum was found, and on removing fluid and staining for tubercle bacilli, they were found in numerous quantities. A third case was one of cerebrospinal meningitis. This patient received the serum at about 3 o'clock in the afternoon of the fifth day of the disease, and about midnight the temperature became normal, with profuse sweating, and after that time there was no rise in temperature. This patient, a child, rapidly improved, and in six weeks' time returned to school again, having fully recovered. It was as severe a type of fulminating cerebrospinal meningitis as I have ever observed.

DR. FRANK BILLINGS, Chicago: Anyone who has seen these meningitis patients treated by old methods, as, for instance, by drugs or hygienic means alone, will be struck with the specificity of this treatment when they have had some experience with it. I want to relate briefly two cases to show how quickly the disease manifests itself. A little over a year ago a Greek, between 20 and 30 years of age, was brought in from South Chicago. He was so nearly unconscious that he recognized nothing. He was unable to speak English, but manifested the site of pain by placing his hand at his head. His muscles were all rigid. There was opisthotonos. Spinal puncture was made and turbid fluid obtained, which showed the meningococcus. Serum was immediately injected, and within twelve hours of that time this young man sat up in bed, and indicated by his motions that pain was gone. The muscles were less rigid. He was given subsequent injections and steadily improved until recovery ensued. A patient now in the Presbyterian Hospital, Chicago, a man of 26, twenty-four hours before admission, was taken with violent headache. When brought in he was semiconscious; his muscles were rigid; his head retracted; his belly scaphoid, and the right external rectus muscle paralyzed. Immediately spinal puncture was made and some fluid obtained. No serum was on hand at the time, but that night 30 c.c. were injected. His symptoms were not much relieved by morning, and again a second spinal puncture was made, and over 30 c.c. of spinal fluid was withdrawn. The next day, again, about 40 c.c. of fluid were withdrawn from the spinal cord, and 45 c.c. of serum injected. By this time the man showed great improvement. Paralysis of the right external rectus had diminished very much. He was conscious; talked in broken English, and expressed himself as feeling better. He still had some headache and stiffness of the muscles of the neck. Since that time he has had injections every day for five days. After the last injection his temperature was taken and found to be 99 F., and pulse below 90. His respirations were normal. Still he showed rigidity of the neck muscles, and some rigidity of the erector spinae muscles, and

rigidity of the hamstring muscles is still present. Otherwise he seems to be much better. The remarkable thing was the effect of the leucocytes in the blood and in the spinal canal. When he entered the hospital, his white blood count was 23,000. After the first injection it fell to 2,000. By the next day it went to 32,000, and then fell steadily. The spinal canal fluid contained 13,000 plus white cells per cubic millimeter when he came in. This patient will undoubtedly make a good recovery.

DR. JOHN M. DODSON, Chicago: I believe we shall do better, in the present status of the serum, if we establish the diagnosis before we make an injection of the serum. I am not at all certain that the use of the serum is absolutely unattended with unpleasant results. In one of the cases cited by Dr. Billings, after one or two injections, a skin eruption was noticed. In one case last autumn one of my assistants injected the Flexner serum in a case of tuberculous meningitis, and the injection was followed by a distinct intensification of the symptoms.

The Surgical Treatment of Appendicitis

DR. CLIFFORD U. COLLINS, Peoria: 1. The best time to remove an inflamed appendix is during the first thirty-six hours of the attack, before it becomes perforated. 2. The physician who does not see or hear from his patient for twenty-four hours after his first visit in a case of suspected appendicitis is not doing his full duty to his patient. 3. After the appendix has become perforated, the patient will do better if its removal is deferred and he is placed on his right side with the head of the bed elevated and treated according to the principles of the Ochsner treatment, with the Murphy method of continuous rectal saline infusion. 4. After the appendicitis or the succeeding peritonitis has subsided, the appendix may then be removed more safely. 5. If a localized abscess forms, the pus should be evacuated under nitrous-oxid-gas anesthesia. 6. As soon thereafter as the pulse and temperature have remained normal for one week the appendix may be safely removed.

DISCUSSION.

DR. A. J. OCHSNER, Chicago: The most important point in the surgical treatment of appendicitis is the diagnosis. It is inexcusable to leave a patient, who has an acute intra-abdominal condition, without a diagnosis having been made for twenty-four hours, we will say, to give him something for the pain, and then make the diagnosis the next day. I believe that that is the primary cause of the still high mortality in the treatment of this disease. If a patient receives a careful physical examination at first, then it is likely that this examination will result in a positive diagnosis provided an acute appendicitis is present. If this is not possible, nothing should be given that may interfere with making the diagnosis. I agree that opiates should never be given, and that if anything is given at all, it should be in the form of a placebo until the diagnosis is made. Opium should never be given to a patient suffering from any intra-abdominal condition until the diagnosis has been made and until gastric lavage has been resorted to. After the diagnosis has been made, treatment should be instituted.

DR. CHRISTOPHER GRAHAM, Rochester, Minn.: If a patient presents himself early and a diagnosis of appendicitis is made, the appendix should be taken out early, and that is the practice of St. Mary's Hospital, Rochester. This country is full of surgeons of two classes. To the one class it is safe and sound to send our patients. Then there are others, called surgeons, whose judgment is not so ripe and whose skill is not so great. There is much in the judgment of the physician or surgeon as to when an operation should be done.

DR. JOHN B. DEEVER, Philadelphia: I believe in the early application of the scalpel in the treatment of appendicitis. Opium and salts should be relegated to the past. They have no place in the modern treatment of appendicitis. McBurney pointed out a number of years ago that there was but one treatment for appendicitis—the knife, and I can only reiterate the statement of that magnificent man, that pathfinder.

DR. CARL E. BLACK, Jacksonville: In the country we have to contend with the timidity which still exists among general practitioners. We must try to overcome this. General prac-

tioners still wait and wait to find out what is the matter when they ought to know the true nature of the case in a short time. The crux of the whole matter consists of early and prompt diagnosis and early operation.

DR. M. L. HARRIS, Chicago: One of the most pernicious practices which is prevalent to-day is the administration of cathartics. A patient with a pain in the belly should never under any circumstances be given a cathartic of any kind or description until it is absolutely certain that he or she, as the case may be, is not suffering from appendicitis or from any other intra-abdominal condition which is going to produce or may produce a peritonitis. Another most pernicious teaching which has been promulgated is an attempt to divide cases of appendicitis into those of so many hours and so many days. There is no condition in the abdomen which is so variable in its manifestations as that of appendicitis. I have seen a patient with appendicitis die within twelve hours from the first symptom. Another patient may go from ten to twelve days without serious symptoms being present. There is no such a thing as being able to divide cases of appendicitis into twenty-four or thirty-six hours, or three or five days. There is no trouble in telling what to do in appendicitis in those cases that are distinct and unmistakable. When the diagnosis is clear, operate. The question of abscess formation does not enter into consideration. If there is an acute appendicitis, get at the appendix if you can before the infection has extended beyond the appendix. If you can not get it out at once, do so just as soon as you have an opportunity.

DR. FRANK BILLINGS, Chicago: Diagnosis is important. It is up to the surgeon to say when to operate after a diagnosis has been made. One phase of the disease is seen by medical men alone, namely, general conditions that are produced by chronic appendicitis. I thoroughly agree with Dr. Graham that an appendix which interferes with digestion with the constant absorption due to the disturbed metabolism produces general changes of a degenerative nature; hence the reason for removing the local infecting point and saving the patient from the chronic changes. I recall the case of a patient, a man of 55, who had chronic appendicitis with severe angina pectoris. He was greatly improved, and had no further attacks after the removal of the appendix. There was more than an immediate reason for the removal of the appendix.

The Value of Diabetic and Prepared Foods

DR. R. T. WOODYATT, Chicago: The objects for which prepared foods are theoretically intended are the nutrition of those who for some reason are handicapped in their power to get sustenance from foods ordinarily available. The selection of a prepared food depends on the nature of the case. The fundamental requirements, which a suitable food must fulfill and on which any individual foods are to be judged are its content of matters capable of yielding energy in the body—fuel value; its digestibility; its availability, which includes steady market supply and price. The prepared foods now on the market are considered specifically in accordance with the foregoing principles under two main groups, namely, convalescent, invalid and infant foods, and diabetic foods. The essence of dietetic treatment in diabetes, save in very severe cases, is the limitation of carbohydrate food. The craving for bread based on the cry of the tissues for sugar is best ameliorated by improving the tolerance of the body for sugars. Breads which satisfy this craving contain starch. Bread without starch is a paradox. The legitimate uses to which substitutes for bread may be put are the supply of a vehicle on which bread, cheese, etc., may be spread and which “bites” like bread; the supply of a greater variety of forms in which a patient may take his non-carbohydrate fare. There is a great tendency among physicians to prescribe gluten flours *ad libitum*. Free use of all except a very few diabetic flours leads to a high aggregate of starch ingestion *per diem* at high price and in spite of restrictions on the use of the common amylaceous foods.

DISCUSSION.

DR. JAMES B. HERRICK, Chicago: I think all of us are inclined to be more or less careless in paying attention to the

proper diet for adults, and while many illnesses do not need very careful and strict attention to diet, general directions being sufficient, all of us make mistakes in not being explicit in telling patients what to eat and what not to eat, and we all err, I think, if not in prescribing, at least in allowing to be prescribed or to be used many of these so-called prepared foods without knowing their nutrient value. Many of these foods are not what they are claimed to be, and when we think we are giving patients nourishing food we are perhaps giving little better than nothing. In diabetes the diet is all-important. The more one sees of this disease, the more he feels that there is a certain group of cases in which, in spite of the utmost care as to diet, fatal results will follow.

DR. ARTHUR R. ELLIOTT, Chicago: It is hard to kill a therapeutic fallacy once it has become established in the minds of the profession, and nowhere is this more emphatically demonstrated than in the fallacy of diabetic foods, this fallacy persisting in spite of the emphasis and the repetition with which the fraud of the so-called gluten breads has been shown by chemical analyses. The mistakes made in the care of the diabetic by many physicians are the administration of specific medication and the employment of gluten flours. Seldom does the internist see a case of diabetes that has not been permitted the use of gluten bread without any specific restriction as to the quantity. The objection to gluten bread does not consist so much in the fact that it contains carbohydrates, because every diabetic must receive a certain amount of carbohydrates. The error in giving gluten flour is that its administration is not restricted, so that we know how much carbohydrate the patient is securing. A much better end can be secured by employing honest bakers' bread, the carbohydrate content of which we know, and the quantity of which we can restrict within certain definite boundaries.

DR. FRANK BILLINGS, Chicago: I am glad that Dr. Woodyatt has shown us the absence of food value from many of the liquid beef extracts. I wish he had gone on and shown us something of the want of value of the ordinary beef, chicken, veal and other broths so commonly used in the sickroom. Nearly twenty years ago, Fothergill called attention to the fact that by chemical analysis the ordinary beef extract as used at that time in the sickroom was nothing more than concentrated urine. It had no nutritive food value whatever. The fact of the matter is that these things have less food value than some urine. Diabetic urine would be far better food than many of these extracts. Not only that, but these extracts are frequently poisonous. How many times do we find in the sickroom beef extracts used in conditions in which the excretory organs of the individuals are not throwing out their own waste, and we are increasing the purin bodies in the bodies of those individuals by the use of such things.

DR. FRANK S. CHURCHILL, Chicago: So far as the feeding of babies is concerned, we have learned to be accurate in this matter, and all the extracts that have been referred to by Dr. Woodyatt have been thrown out of the window. We rely on taking a milk which we know is as clean as possible, and with that milk prepare a food for the individual baby adapted to its digestive powers so far as fat digestive capacity, sugar digestive capacity, and proteid digestive capacity are concerned.

DR. CHARLES S. WILLIAMSON, Chicago: I wish to emphasize the point that the various extractives have slight nutritive value. Not only are some of them worthless, but they are exceedingly toxic, as demonstrated by experiments. They have injurious effects, both on the cardiovascular system and heart, and these are points which should not be lost sight of in considering the acute infections.

The Responsibility of the State in the Care of the Mentally Deficient and Insane Dependents

DR. FRANK BILLINGS, Chicago: This paper deals with a statement of the condition of the mentally deficient and insane dependents in the state hospitals for the insane, the school for the feeble-minded, and in the various county almshouses. An attempt is made to show that the true economy in the care of these patients may mean, in the beginning, the expenditure of a greater amount of money, but that the final result will be a saving to the state. Physicians have much responsibility in

these matters, especially in the recognition of deficient mental states and of acute insanity and the proper method of managing this class of people.

Early Pulmonary Tuberculosis Treated by Different Tuberculins

DR. E. H. BUTTERFIELD, Ottawa: Tubercle bacilli of the human and of the bovine types have been identified in man. The bovine type is more common in children than in adults. I report briefly a series of 23 cases of early phthisis in which the bovine tuberculin was administered. The other series comprises 8 incipient cases in which Koch's bacillus emulsion was administered, and 17 incipient cases in which tuberculin was not used. My conclusions are: 1. In view of the results obtained in this series of cases and from observation of cases now under treatment, I am convinced that a tuberculin prepared from bovine sources has a marked and healing effect in tuberculosis of the lungs. Experience teaches that there is frequently a marked disproportion between the physical signs and the general condition of the patient. Many with slight activity of the tuberculous process and with slight lesions, in the presence of other virulent micro-organisms, have been forced to an irresistible decline. These are not suitable cases for the administration of tuberculin, and although there is some uncertainty in the action of the autogenetic vaccines, the desperate character of the cases to which these are given is a justification for their employment. 2. If the patient's natural resistance to tuberculosis is lowered, efforts must be made to improve this condition by complete rest, nutritious food and pure air. Tuberculin will not help if these potent agents fail. 3. The tuberculous infection must be limited either to one lobe of a lung or two small areas in both lungs. If cavities have occurred, and general constitutional involvement has taken place, tuberculin has little or no lasting effect. 4. The age of the patient must be considered. The younger the patient, the more readily does he or she respond to the action of tuberculin.

Cutaneous Reactions of Tuberculin

DR. FREDERICK TICE, Chicago: The tests employed were: (1) Scarification, vaccination, or cutaneous method of v. Pirquet; (2) the ointment or percutaneous method of Moro; (3) the dermo reaction method of Lignieres; (4) the differential scarification method of Detre for diagnosis and therapy. Some one or more of these tests were employed in 235 cases. Based on the observations in these cases the following conclusions appear justifiable: 1. Tuberculin as a means of diagnosis is a most valuable agent, but must be considered only from the standpoint of corroborative evidence. A positive reaction to tuberculin indicates the presence of a tuberculosis, but physical findings and symptoms must be considered, for a tuberculosis may exist and fail to give a reaction. 2. The cutaneous tests are to be preferred to the subcutaneous or the ocular methods, as there are no associated dangers or undesirable results. 3. The percutaneous method of Moro, for certain reasons, seems to be preferable. It is easily applied without objection on the part of the patient or relatives. This is not the case with the v. Pirquet test owing to the general antipathy to any form of vaccination and as the test in children is not infrequently associated with excitement and crying. The results are quite as constant and when a difference occurs it is in favor of the ointment. The dermo test is not so reliable and this may be due to the difficulty in applying as compared to the ointment, as the upper layer of the epidermis forms in rolls. 4. The more youthful the patient, the more valuable the test. When autopsy records are examined, with the view of determining the frequency of some form of tuberculosis, practically present in all adults, the unimportance of a positive test, without other findings become evident. A negative test in the adult, all circumstances considered, is more valuable than a positive one. The non-value of the scarification in the adult has been pointed out by v. Pirquet, v. Emmerich and Hamburger. 5. The type of the reaction bears no relation to the type of the disease. It is true, however, that the slowly developing mild reaction occurred in the apparently arrested, cured or old cases. The most active reactions took place in the surgical forms of tuberculosis. 6. Concerning the Detre reaction, the number of cases examined is not sufficient for conclusions, but it would appear

that much information is to be obtained by such a test. The frequency of the old tuberculin producing the dominant reaction would indicate that, therapeutically, one of the filtrates or a combination should be employed.

Discussion on Tuberculosis

DR. S. E. MUNSON, Springfield: Nine years ago I read a paper in regard to bovine tuberculosis as affecting the milk supply, and at that time there was scarcely enough evidence to show that bovine tuberculosis is transmissible to the human being. After reading that paper, I corresponded with men of wide experience and observation, and among them with Professor Holt, of New York, who wrote me that he did not believe bovine tuberculosis was transmissible to the human being. There were many physicians, however, who believed that it was transmissible, and I am glad to know to-day that the opinion prevails among those who have had opportunity to investigate that it is communicable from cattle to human beings. I think the source of our milk supply in each community rests largely on physicians, and it is certainly of great importance to the medical profession in their work and in the care of their families that they know something about the milk supply children are fed on.

DR. E. F. INGALS, Chicago: Remembering that practically every adult has tuberculosis or has had it, it is very important that we should be able to make a diagnosis of active tuberculosis as soon as possible, and, it seems to me, the statement of Dr. Tice is conclusive of the fact that these cutaneous tests are of value in determining whether or not the case is active. Perhaps we can not prove it, but taken in connection with the other means of making a diagnosis the cutaneous test is of much value.

DR. W. C. BOUTON, Waukegan: I have had but little experience with the tuberculin tests. Dr. Watterson has had a good deal of experience with this test. He developed tuberculosis himself five years ago, went to Colorado, and after a year, all symptoms disappearing, he returned to Waukegan last spring to practice. He started a tent colony for the treatment of tuberculosis, has had a number of patients, and has obtained good results. He has used the Moro test in every case, and with one or two exceptions has obtained a positive result in every case in which the patient showed any symptoms of tuberculosis from the physical examination. In other patients who came to him in whom tuberculosis was suspected on account of anemia or run-down condition, but in whom there were no physical signs of tuberculosis, there were no results from the Moro test.

SYMPOSIUM ON NEPHRITIS

Significance of Albumin and Casts in the Urine

DR. ARTHUR R. ELLIOTT, Chicago: As a symptom, albuminuria is to be distinctly held in mind as not only an accompaniment of Bright's disease, but of acute and chronic inflammatory conditions of other portions of the genitourinary tract. It is frequently noted as a concomitant of disorders of digestion and elimination. In the zymotic diseases and acute infections it is very common. Certain static circulatory states, such as result from heart lesions, hepatic cirrhosis, and abdominal tumors produce albuminuria. Notwithstanding the diversity of its etiology, albuminuria, whether transient or permanent, must be regarded as pathologic. The so-called functional albuminurias (cyclic, orthostatic) constitute no exception to this rule. Although albuminuria may not necessarily mean serious organic mischief in the kidneys, it invariably points to some urinary or systemic perversion, and its presence, however slight, demands serious care and consideration before a decision is reached as to its being of no clinical significance. A form of albuminuria that is encountered during childhood and early adult life is so-called functional albuminuria. The characteristics of this form of albuminuria are that it is transitory, usually intermittent, and dependent on some special factor, such as muscular exercise, posture, cold bathing, or some particular article of diet, and, moreover, is not accompanied by the systemic and urinary indications of a true nephritis. There has been much

dispute regarding the nature and origin of tube casts. The oldest view is that they consist of coagulated fibrin derived from an exudate such as is found in inflammatory elsewhere in the body. This view is no longer tenable in consideration of the fact that casts unquestionably occur in the urine in conditions in which there is not the slightest sign of inflammation, such as renal congestion, and simple amyloid kidney. Moreover, casts do not give the same chemical reactions as fibrin. Their failure to occur in many cases of albuminuria and their appearance without albuminuria seem to indicate that they do not consist of coagulated albumin, as some have held. There is no fixed ratio between the amount of albumin in the urine and the number of casts. The occurrence of casts without albumin in those forms of infection and intoxication in which degeneration and disintegration of the tubular epithelium have been proved suggests that they are formed from these epithelial elements. Casts are always indicative of a pathologic process in the kidney, more particularly in the epithelial elements, ranging from a mere nutritional or functional disturbance to extensive destruction of the parenchyma. The freer from degenerative markings the cast cells are, the more acute it may be inferred is the degree of inflammation. A trace of albumin and hyaline casts in the urine are too often magnified in importance, and the clinical condition as a whole is often not sufficiently considered. Albuminuria and cylindruria have not the fixed diagnostic value they were once supposed to possess. In suspected renal disease the urine should be repeatedly examined and its fluctuations taken into account; no clinical construction should be placed on urinary findings until a careful investigation has been made of the symptoms and physical signs presented by the patient.

Value and Limitations of Salt-Free Diet and Restriction of Fluid in Nephritis

DR. CHARLES SPENCER WILLIAMSON, Chicago: The general consensus of opinion seems to be that chlorid retention does not occur to any considerable degree in the atrophic type of nephritis, as it does in parenchymatous forms. The French writers are still strongly impressed with the value of the milk diet. The *régime lacté* has become almost a fetish with them. The administration of water in nephritis is a more complicated subject, as more factors have to be considered. The necessity of obtaining a correct judgment in regard to the administration of water is imperative, because it is possible to bring about irreparable injury by a failure to recognize the indications for either its withdrawal or free administration. Following the work of Oertel and v. Noorden, the recent tendency has been to restrict the use of water on the ground that by reason of its absorption into the circulation, it increases the tension, thus adding to the work of the already overburdened heart. To summarize, it would seem that the restriction of the total fluids below 1,500 c.c., exclusive of the amount contained in food, may be quite as injurious as the excessive quantities formerly prescribed. In my opinion, when the extensive edema finally occurs in the contracted kidney, it is to all intents and purposes a cardiac edema and should be treated primarily as such.

Discussion on Nephritis

DR. JAMES B. HERRICK, Chicago: We should regard albumin and casts as always pathological, but not necessarily indicating disease of the kidney, or as indicating that the disease of the kidney, even though it be present, is serious. There is a tendency for us either to overestimate their importance, as was done several years ago, or to underestimate the importance of traces of albumin and the finding of a few casts in the urine. I fear we are inclined even now to overestimate the importance of these things and to condemn a man perhaps to Bright's disease when we find a trace of albumin or a few casts in his urine. With the electric centrifuge, casts are found in the urine of nearly every individual over the age of 40 or 45. A trace of albumin may be found under various circumstances, and is really not of much pathologic importance. The only way we can readily estimate such findings in the urine is to individualize, not to dogmatize, as Dr. Williamson has pointed out, or to estimate on the basis of any hard and fast rule. We must study, in other

words, the patient as a whole, and when we find albumin and casts in the urine, we should look on this as something that needs careful investigation. In one case we may find no other evidence of nephritis; we may find none of the cardiovascular changes, no anemia, no retinal changes, which can be looked on as due to uremic intoxication; while in another case, with no more albumin, no greater number of casts, we may put a serious interpretation on that case, in that we find deterioration of the blood, loss of weight, urinous odor to the breath, and definite cardiovascular changes.

DR. E. J. BROWN, Decatur: I have under observation what I consider a remarkable case of chronic parenchymatous nephritis. The patient came to me with albuminuric retinitis so advanced that the amblyopia was almost complete. The man could not read newspapers. He could barely walk around the house. I gave a bad prognosis. I put him on a milk, vegetable and fruit diet, and told him he could eat anything that came out of the ground. I was surprised at the ease with which he took this diet, which reduced his salt. There was a remarkable improvement in his eyesight, so that he can now read the morning papers. But I regard this improvement as only temporary. We are sometimes astonished at the length of time nephritics will live. I recall a patient with chronic parenchymatous nephritis whom I saw eight years ago, with profound anemia, and universal anasarca; the man is now well and running a store. He ascribes his cure to a six years' course of urotropin (hexamethylenamin). He said he took seven and a half grains a day for six years. I do not believe that the drug had much to do with the cure which was effected in his case; but he also took the treatment recommended for him, namely, a milk diet, and egg restriction. At any rate, the result has been remarkable in regard to the length of time the man has lived.

DR. H. J. STEWART, Chicago: In chronic interstitial nephritis more attention should be paid to the action of indican in the urine. We all know that indican is the result of intestinal putrefaction, and that probably the toxemia which results irritates the kidneys to such an extent that uremia, retinitis, etc., may be due to the presence of indican, or the intestinal putrefaction arises from toxemia in the intestinal tract.

DR. A. BELCHAM KEYES, Chicago: In our work on the peritoneum we have cases of peritonitis in which there is an enormous autointoxication from the peritoneal cavity, and we try by the use of opiates to bring about localization after operation and drainage. In these cases it is necessary for the kidneys to eliminate as freely as possible, and in many cases there are albumin and casts from the febrile condition and autointoxication disturbance. There is a dearth of knowledge as to what to feed such patients on to get results. For years I have used peptonized milk, which was not mentioned by any of the essayists. I would like to know what they think about it.

DR. ROBERT H. BABCOCK, Chicago: In chronic nephritis, anyone who has seen many cases must have observed that there are edemas that are hard and some that are soft; whereas in all cases of cardiac disease in which there is edema one should estimate the volume of chlorids in the urine. Nevertheless, in a purely empirical and rough fashion it will give considerable information as to the value of restricting or entirely eliminating salt from the diet. If the edema is soft, restriction or total abolition of salt from the diet will usually prove most efficient in its reduction. In the hard edemas dechloridization of the diet is of small value, in my experience. In many cases of chronic nephritis, without much edema, we see patients who suffer a good deal from a sort of paroxysmal dyspnea. In some of these the heart does not seem so much at fault, and it is rather difficult to determine just why we look on it as toxic, and perhaps in some cases it is purely toxic, but it has been my experience that the restriction of salt in the diet is many times most happy in its effect in the relief of some of these cases of dyspnea. In a case of chronic nephritis in which there is no edema, I believe it is a good plan to impress on such patients the importance of cutting down their salt, else the time will come when they will develop edema.

(To be continued)

Medicolegal

Telephone Company Not Liable for Death Due to Inability to Use Line to Call Physician

The Court of Civil Appeals of Texas says, in *Southwestern Telegraph & Telephone Co. vs. Solomon*, that the evidence showed that at about 2 a. m. Mrs. Solomon was taken violently sick in childbirth, and that her husband tried to call the family physician over the company's telephone in which he had a rental interest, but could not get connection with the central office because the telephone was out of order, due to the negligent condition of the ground wire. He then got on his horse and went to the house of the family physician, the one he had been trying to get over the telephone, and found him sick and unable to go. He then tried to get the central office from this physician's house to get another physician, but could not get central from there. He then went to the central office, found it locked and tried to get in, but could not. He then went to a nearby telephone, called central, and summoned another physician, who went to the house, but got there too late to save Mrs. Solomon's life. She had given birth to a child and died from hemorrhage of the womb, which might have been stopped if a physician had arrived sooner.

Was the telephone company liable for damages? The court holds that it was not. It thinks the damages in the circumstances were too remote and were not such as both parties would reasonably have understood and contemplated as likely to result from the breach of the contract or the negligence of the company.

If there had been a specific contract with the telephone company by which it had agreed to transmit or to furnish facilities for transmitting this particular message to the physician, or if the object and purpose in having the physician summoned over the telephone to immediately attend the woman was previously made known in proper time to the company under the general contract of telephone service, then there might have been some analogy between this case and the various telegraph cases where telegraph companies have been held responsible for such damages for failure to promptly transmit and deliver the message. But here the unusual situation and condition of the woman was not known to the company, and it had no notice or previous notice of the importance or urgency of a communication to a physician and his summons to come at the time to attend her.

Nor could the suspense and anxiety suffered by the woman because of the fact that a physician failed to reach her sooner than he did be fairly and reasonably considered in the circumstances as arising naturally and in the usual course of things from the failure of general telephone service in the absence of notice to the company of the object and purpose of the deceased in having the physician summoned to come and attend her.

Changing View of Power to Order Physical Examinations in Federal Courts

The United States Circuit Court of Appeals, Eighth Circuit, says, on the appeal of *Chicago & Northwestern Railway Co. vs. Kendall*, a personal injury case brought by the latter party, that on the trial the plaintiff took the witness stand in his own behalf, and while undergoing cross-examination was asked to expose his knee to the jury for inspection. After some colloquy his counsel directed him to comply with the request. A question was then raised as to whether the injured knee was different from the other knee, and a jurymen suggested that the matter could be better determined by an examination of the other knee, and, thereupon, the plaintiff exposed that knee also. Counsel for the railway company then stated that he had in the courthouse two reputable physicians, and asked the plaintiff if, with his knees exposed, he would permit these two physicians, in the presence of the jury, to examine him. This the plaintiff refused to do.

A motion was then made that the plaintiff be required to submit his knee to the examination of physicians selected by the defendant company, either in open court, or at some other

place, before the conclusion of the trial. This was overruled on the ground that a United States court has no power to require a party to submit to a physical examination, except in those states where the local statute authorizes it, and there is no such statute in Iowa, where the trial took place.

But the United States Court of Appeals holds that it was error to refuse to compel the plaintiff to submit his knee to surgical examination under the circumstances. It says that in this case it was not dealing with an application for a surgical examination in advance of the trial. Here the plaintiff at the trial voluntarily exhibited his knee in open court for inspection. Having done this, it was beyond his power to arrest the investigation. The defendant and the court were entitled to employ any agency in its examination which would aid in the determination of the issue on trial. It is universally held that where an inanimate object is produced on the trial of a case it is subject to any legitimate examination and test which will elucidate the matter in dispute. It may be submitted, for example, to chemical treatment, or to examination by the microscope. Simply looking at the plaintiff's knee with the eye of a layman furnished little aid in determining its condition. He himself maintained that there were no external evidences of injury. Whether there were hidden ailments could only be discerned by the skill of a surgeon, and the defendant and the court were as much entitled to turn the eye of a surgeon on the plaintiff's knee as they would have been to look at a blood stain through a glass. Having exhibited his knee to the jury, it became a part of the evidence, and the mere accident that the thing exhibited was part of a human body could only qualify, and not defeat, the right of complete investigation.

With regard to *Union Pacific Railroad Co. vs. Botsford*, 141 U. S. 250, in which the Supreme Court of the United States decided that federal courts do not possess power, independent of statute, to compel a plaintiff in an action for personal injuries to submit his body to the examination of physicians, it is pointed out that there the application was made in advance of the trial, and that the Supreme Court has already limited the *Botsford* decision in *Camden Railway Co. vs. Stetson*, 177 U. S. 172. Also, that the decision is at variance with a large majority of the state courts. The rule which it declares has been abrogated by statute in many jurisdictions where it once prevailed. This is the case in New York, New Jersey, Great Britain, Canada and Australia. Therefore this court does not feel disposed to extend the decision beyond the facts there involved.

When Insanity or Delusion No Defense to Crime

The Supreme Court of Kansas says, in the homicide case of *State vs. Arnold*, that it is the condition of the mind of the accused which determines whether he is criminally accountable for an act denounced by the statute as criminal, and not the name of the mental infirmity, if such infirmity exists. The law recognizes every form of insanity or delusion which renders an accused mentally incapable of knowing the nature and quality of an act he is doing, and that what he is doing is wrong, as relieving him of criminal responsibility for the act; but no delusion or mental weakness which falls short of rendering the mind incapable of such discernment obviates the criminal character and penalty of the act. That is to say, no delusion or impulse excuses one from the penalty for an act committed which the statute denounces as criminal, unless such delusion or impulse unseats the reason and judgment so far that it can be said beyond a reasonable doubt that the accused at the time of the act did not know the nature and quality thereof and did not know that what he was doing was wrong.

Implied Power of President of Corporation to Employ Physician

The St. Louis Court of Appeals affirms a judgment for the plaintiff in the case of *Weinsberg vs. St. Louis Cordage Co.*, which was brought by a physician and surgeon to recover compensation for surgical services rendered in performing an operation on one of the defendant company's employees, at the instance and request of its president. The court says that it was conceded that the defendant was a manufacturing com-

pany, incorporated under the laws of Missouri, and, in view of that fact the court entertains no doubt whatever as to its being within its power to employ a surgeon to attend an employé seriously injured in its factory.

In volume 5 of his Commentaries on the Law of Corporations, section 5840, Judge Thompson says: "An implied power will be ascribed to any corporation employing labor to incur expenses on account of injuries received by its employés in the line of their employment, in the absence of any express statutory grant of such power. This implication rests on the most obvious grounds of justice and humanity." There certainly ought not to be any question of doubt, with respect to the authority of the chief executive officer of an incorporated company, of the character here involved, to execute the power. When a catastrophe occurs in its factory, the corporation ought not to be expected to assemble its board of directors in order to exercise the implied power referred to. There is certainly an emergency power, incident to the office of president of such an institution.

It is no doubt true that where a physician or surgeon renders services to one at the mere request of a third person, on whom there rests no obligation to provide such service, the law will not imply a contract to pay on such mere request. On this question the law is succinctly and accurately stated as follows: "When a person requests a physician to perform services for a patient, the law does not raise an implied promise to pay the reasonable value of the services so rendered, unless the relation of the person making the request to the patient is such as raises the legal obligation on his part to call in a physician and pay for his services."

In view of the law thus stated it was contended that no recovery should be allowed in this case, for the reason that the trial court found there was no express promise to pay. That is to say, it was argued that the case was one in which the law declined to imply a contract, and therefore to sustain a recovery an express contract must be shown. Had the trial judge found a mere request on the part of the defendant company, and nothing more, the argument would have been persuasive indeed. However, this court does not understand that because there was no express promise it followed that there might not be an actual contract, as distinguished from one implied by law. Although the law will not imply a contract, if there be an actual one, it need not be express.

It appeared that the trial court found, not only that the president requested the services, but that he intended the defendant company should pay therefor. It also conclusively appeared that the plaintiff intended to charge. In these circumstances the fact of a contract between the parties was established by the testimony. Although not express in all of its details, it nevertheless constituted a contract. There were present competent parties, the subject matter, a sufficient consideration, and, above all, the meeting of minds; for it appeared that the physician intended to charge, and the company intended to pay. Under these circumstances it was unnecessary to refer to the law for implication, for the contract was established as a matter of fact.

In the absence of express terms as to the amount of compensation, the law would imply a reasonable one. Whether the injured employé received his hurt through the negligence of the employer or not was immaterial. A physician, called by the employer in an emergency to treat a man severely injured, ought not to be required to inquire first as to whether the man was injured through the negligence of the employer, by accident, or as a result of his own carelessness. And then, too, if such were to be treated with as an element of the defendant's liability in a case of this character, it would introduce the collateral issues of negligence, into every case in which a physician seeks to recover on a contract with the employer for compensation in treating an injured employé at its request.

Admissible Evidence in Abortion Case

The Supreme Court of New Jersey holds, in the case of *State vs. Fletcher*, that on the trial of an indictment for abortion, evidence of the physical condition of the woman at a time some ten days subsequent to the time when it is alleged the operation was performed is admissible. More

particularly, the testimony in question in this case related to an operation performed by surgeons on the woman some ten days after the abortion, the testimony being as to what this operation revealed as to the woman's physical condition. Such testimony was clearly admissible.

Mortuary Tables Not Applicable to Asthmatics

The Supreme Court of Mississippi holds, in *Mississippi Cotton Oil Co. vs. Smith*, that it was error to admit mortuary tables in evidence when the testimony clearly showed the decedent to be an asthmatic and a witness expressly testified that, being an asthmatic, he was not in the class embraced by the mortuary tables. It was expressly held in the case of *Railroad vs. White*, 82 Miss., 471, the court says, that these mortuary tables only show the probable age which a sound and healthy person belonging to the class may expect to reach whose age is given, and that it would be error to permit the introduction of mortuary tables to show the life expectancy of one not within the class of persons for whom such tables are prepared. The same doctrine is laid down in *Telephone Company vs. Anderson*, 89 Miss., 745, and *Railroad vs. Crudup*, 63 Miss., 303, and is well settled.

Transfers from Prisons to Insane Asylums

The Supreme Court of New Jersey says, in *re Herron*, that where a person under sentence of imprisonment as a punishment is transferred from a penitentiary to an asylum, it is not a transition from imprisonment to liberty. Whether in a hospital or a prison, the convict is a prisoner. Indeed a prison may have a ward for insane patients, and an asylum a ward for insane convicts. It is true that in the asylum he may escape hard labor, but so may any sick convict in the state prison. The removal of a prisoner, who is to serve out his sentence of imprisonment, to a place provided with all the appliances for medical treatment, is a humane provision, having a practical purpose. As remarked by Justice Parker: "The prisoner has his life to live, and public policy requires that he be so treated as to live it to the best advantage." That the prisoner remain in confinement in an asylum until fully restored to reason is a humane substitute for confinement in a prison where there are no adequate means for mental treatment. When, however, a person is confined to await the execution of a death sentence, the conditions are radically different. The removal to an asylum for treatment in such a case would be merely a removal for the purpose of restoring him to that degree of sanity which, at common law, was not inconsistent with his execution.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

May 22

- 1 *The Medical Importance of the Study of Anthropology. C. E. Woodruff, Ft. Wadsworth, N. Y.
- 2 Diagnostic Value of the Intrusion Tuberculin Reaction in Cutaneous Tuberculosis. W. B. Trimble, New York.
- 3 Electricity in Genitourinary Diseases. S. Tonsey, New York.
- 4 *Blood Pressure Observations and Life Insurance. F. A. Faught, Philadelphia.
- 5 The Alkyl Compounds, or the Ethereal Oil of Garlic. P. Bartholow, New York.
- 6 Deficient Oxidation in Its Relation to the Etiology, Pathology and Treatment of Nephritis. N. E. Ditman, and W. H. Walker, New York.
- 7 Therapeutic Use of Alcohol in Internal Medicine. G. B. Twitchell, Cincinnati, O.

1. **Study of Anthropology.**—Woodruff says that while biologists for half a century have been talking about adaptation to environment, the medical profession has entirely ignored it, commonly regarding the differences between types of men as of no significance; consequently no investigations have been made. A great obstacle to the determination of characters due to the selection of variations, is the fact that a modification may appear generation after generation so long as the cause acts, though such acquirements are never hered-

itary. Another disturbing factor is the effect of use or disuse. This, too, is non-hereditary in character. It behooves us, then, to take up each character and determine why it exists. Speaking generally, there is something about tallness and bulk which makes it an advantage in cold places and a decided disadvantage in hot ones. We lack adequate data to form a scientific theory concerning this, but the hypothetic explanation is that surface varies as the square, and weight as the cube, of length, so that heavy men have less radiating surface than thin men of equal height. This is a decided advantage in retaining body heat in cold climates, but prevents sufficient radiation and breaks down the nervous system in the tropics. This is a practical matter. Among thousands of cases investigated, not one overweight attained 80 years, while 44 underweights passed it. What is the cause? This is a typical instance where preventive medicine is waiting for an acceptable theory from anthropology and anthropology is waiting for pathologic facts on which to form a judgment. The nasal index—or the width of the nose divided by the length—which is greater in tropical natives than among inhabitants of cold climates, and its relation to respiratory diseases, also demand an investigation. Woodruff's own investigations have been entirely confined to the use of the pigments of the skin, hair and eyes. We are dependent for health on small amounts of light, but light in large amounts is lethal, and even in small doses may be unduly stimulating, so that the limit of safety is far below the point generally accepted by the medical profession. Nature is always removing the specimens insufficiently protected, so that in any place people in time become pigmented in proportion to the maximum intensity of light. The evidence is fairly conclusive that blonde races tend to disappear when they migrate to lands of excessive sunshine. These phenomena are occurring in America, and attention has repeatedly been called by anthropologists to the increasing brunette character of our population. While it is true that there are more blondes in the United States than ever before, that is due to the new arrivals. In New England the blondes do not maintain their proportion, because of a higher death rate or a lower birth rate, or both. What diseases are carrying them off in the rest of the country? Here the medical profession can be of immense value to anthropology by simply recording the complexion of patients of each group of diseases, whereby a study can be made of those most affecting brunettes and blondes, respectively, and preventive and therapeutic measures be developed. The United States affords a great field for investigation in these problems, for it offers many types of people, many varieties of diseases, and all kinds of climates, in each of which there are specimens from every region of the globe. Woodruff calls the idea that we are producing a new type by mixture, a "prevalent delusion." Nature has been mixing Europeans for thousands of years, and has been unable yet to produce a type fit to live everywhere, from Scotland to Sicily, and she will be equally unsuccessful here. Amalgamation is a biologic absurdity. No American type has yet been produced, and Woodruff finds, by a daily experience of twenty-two years with soldiers, all of whom are dressed alike, that until questioned it is impossible to distinguish recently arrived foreigners from natives of many generations' residence. The same types are found in each class.

4. **Blood Pressure on Life Insurance.**—Faught says that recent increase in clinical data, which is the result of finer methods of observation, demands greater recognition by the practicing physician and the medical examiner. To facilitate a better understanding of the conditions encountered, more care should be exercised in the employment of clinical terms. More careful study should be made of the vessels in an effort to distinguish atheroma, hypertension, and arteriosclerosis. The sphygmomanometer is a valuable aid in determining arterial tension, and in differentiating diseases of the cardiovascular system. Our present knowledge of the subject of diseases of the circulatory apparatus demands a critical revision of the present examination questions to be answered by the life insurance examiner. He describes a sphygmomanometer of his own devising.

Medical Record, New York

May 22

- 8 *Neurogenic and Myogenic Theories and the Modern Classification of Cardiac Arrhythmias. S. J. Meltzer, New York.
- 9 Infant Mortality. W. L. Stowell, New York.
- 10 *Instantaneous Radiography in Less than One Hundredth Second: A New Method of Radiography. F. Dessauer, Aschaffenburg, Germany.
- 11 Economy in Major Anesthesia; More Particularly as to Ethyl Chlorid. R. H. M. Dawbarn, New York.
- 12 *Smoked Torics—A Menace to Health. P. R. Wood, Marshalltown, Iowa.

8. **Neurogenic and Myogenic Theories.**—Meltzer presents a careful review of the evidence in the question between the neurogenic and myogenic theories of cardiac action from the viewpoint, "not of a warrior taking sides with one of the camps," but simply from that of "a war correspondent telling the news from the battlefield." He reports that the myogenists have won the day, the majority of physiologic and medical investigators being converted to their views. The theory amply justifies its existence by its productivity. Fruitfulness is the only criterion and the only requirement of an efficient theory. The myogenic theory recently exerted a wholesome influence on medical investigation, and will continue to reign so long as it is productive. Meltzer then discusses the pathologic aspects of the problem, namely the arrhythmias. He briefly outlines the indispensable facts in physiology for the understanding of their modern interpretation. He discusses briefly, the methods employed in studying human arrhythmias; and finally, the classification and interpretation of the arrhythmias as they are advocated at present by leaders in this new field of clinical research.

10. **Instantaneous Radiography.**—Dessauer reviews the advances made in the question of shortening exposure, by Rosenthal, Rieder and Eykmann. Dessauer has made a series of pictures of the extremities of the thorax, the left superior part of the lung and the heart, in less than one-hundredth of a second. These were only slightly, some even not at all, under exposed. The advantage of this method is that it is no longer necessary to fix the patient carefully. The entire manipulations in radiographing do not require more trouble than the pulling of the trigger of a gun.

12. **Smoked Torics.**—Wood scores the smoked toric coquille much used and even prescribed by the profession as a shade for weakened sore eyes. It has an unmeasured and irregular refraction index ranging from 1/12 to 1/2 diopter minus. This is enough to cause pathologic local conditions and reflex functional neuroses in neurasthenics as is shown by the way that such conditions disappear on correction of such a defect. He describes a case in point. Glasses of the proper kind are plain and possessed of no refracting power.

Boston Medical and Surgical Journal

May 20

- 13 *Functional Relation of the Tonsil to the Teeth. G. H. Wright, Boston.
- 14 Short Description of Wertheim's Radical Abdominal Operation for Cancer of the Cervix Uteri, with Report of Eight Cases. H. T. Hutchins, Boston.
- 15 *Value of Ethyl Chlorid as a General Anesthetic. A. H. Miller, Providence, R. I.

13. **The Tonsils and the Teeth.**—Wright describes 19 cases and discusses the lymphatic anatomy of the region to show the connection between the teeth and the tonsils, and in conclusion offers the following observations:

1. When a tonsil is normal, infection from the external surface is rare.
2. Secondary infection through the lymph channels is the usual source.
3. There are four periods of molar eruptions, with some variations in time when the tonsils may enlarge without infection or inflammation viz., at two years, six years, twelve years and seventeen years.
4. Tonsils though slightly enlarged when not infected return to normal with complete eruption of the teeth.
5. Diseased teeth are a prolific source of enlargement of the glands through proximity of membranes, either directly, by infection, or by toxins.
6. In the treatment of the tonsil by the specialist, may we not include as a routine the observation as to carious teeth and a recognition of these four periods of eruption coincident with slight enlargement?

15. **Ethyl Chlorid as a General Anesthetic.**—Miller has administered ethyl chlorid by the handkerchief method 6,648

times. He briefly discusses the history of ethyl chlorid, its advantage as a general anesthetic, and the records of supposed fatalities due to ethyl chlorid, and shows the proportion of deaths to be 1 to 8,759 cases. In conclusion he says that the relative danger from an anesthetic depends on two factors: (1) The margin of safety of the drug; (2) the character of the danger signs. The margin of safety of an anesthetic may be represented by the proportion of the drug which may be administered beyond the amount required to produce anesthesia without causing symptoms of danger. Nitrous oxid has a small margin of safety, but the danger signs are so marked that nitrous oxid anesthesia is the safest known. Ether has a fairly large margin of safety and well-marked danger signs, so it is a safe anesthetic. Chloroform has but a small margin of safety and the danger signs are readily overlooked. It is always a dangerous anesthetic, but especially so in inexperienced hands. Ethyl chlorid has a large margin of safety, but the danger signs are not marked. While it is very safe when administered by an expert, it may be very dangerous in unskilled hands. With an expert administrator, it should be safer than ether but less safe than nitrous oxid. With an unskilled or careless administrator it is probably more dangerous than ether, but not so dangerous as chloroform.

Lancet-Clinic, Cincinnati

May 22

- 16 Syphilis of the Throat. A. B. Thrasher, Cincinnati.
- 17 Syphilis of the Nose. W. Thrasher, Cincinnati.
- 18 Syphilis of the Face. A. Ravogli, Cincinnati.
- 19 Endowment and Environment. G. B. Jenkins, Louisville.
- 20 Expectant Treatment of Labor. T. A. Dickey, Middletown, O.

Virginia Medical Semi-Monthly, Richmond

April 23

- 21 Superstition and Gem Therapeutics of the Ancients. E. L. Morgan, Washington, D. C.
- 22 Extensive Lacerations of the Cervix Uteri, Involving the Parametrium—Their Significance and Treatment. G. T. Harrison, New York.
- 23 Some Accepted Facts and Moot Points in the Management of Appendicitis. S. McGuire, Richmond, Va.
- 24 Inebriates and What to Do with Them. J. S. de Jarnette, Staunton, Va.
- 25 *The Different Rings Obtained with Heller's Test for Albumin. E. F. Rodriguez, Sagua la Grande, Cuba.
- 26 *Medicinal Treatment of Tic Douloureux. B. R. Tucker, Richmond, Va.
- 27 Infection by Antitoxin. R. Mason, The Plains, Va.
- 28 The Up-bringing of American Children a Factor in the Comparative Rarity of Psychasthenia among Them. T. A. Williams, Washington, D. C.

May 7

- 29 Personal Experiences in Prostatic Surgery. R. C. Bryan, Richmond.
- 30 Larval Tapeworm in Human Flesh: or, *Sparaganum Proliferum Gatesius* (Stiles). H. Gates, Manatee, Fla.
- 31 Penetrating Injury of the Brain. Recovery. W. A. Gills, Richmond.
- 32 Intestinal Perforation in Typhoid Fever. C. C. Tennant, Charlottesville, Va.
- 33 Face Presentation. G. H. Thomas, Romney, W. Va.

25. **Heller's Test.**—Rodriguez says that in bilious remittent fevers with albuminuria, the liver not being deeply affected, there is to be noticed, underneath the milky ring, a wide, deep-red band, which, together with microscopic examination of the blood, settles the diagnosis. When albumin is absent the red ring is replaced by another, almost black, but with a red shade on refraction, which he considers characteristic. When the liver tissue is affected the ring is reddish black. In yellow fever he presents the following as a new sign: The white milky ring of Heller's test due to albumin, which is early visible in yellow fever, is to be observed on top of a greenish band, which is of fatal omen if it becomes deep green. He reports a doubtful case in which diagnosis was made by means of this sign and subsequently verified.

26. **Tic Douloureux.**—Tucker reports 13 cases, from which he draws the following conclusions:

1. Malaria and rheumatism were prominent factors in causing the tic in these cases.
2. Sodium salicylate in the rheumatic cases, and quinin in the malarial ones, pushed to limit of tolerance is of marked benefit.
3. The effect of treatment is enhanced by a week's rest in bed, purgation, and a nourishing, but not too rich diet.
4. As a rule medical means should be first tried, then alcoholic injection. If these are not effective the peripheral operation should first be performed, and the Gasserian ganglion operation only as a last resort.

Kentucky Medical Journal, Bowling Green

May 15

- 34 Postoperative Paralysis. M. B. Halpern, Louisville.
- 35 Brain Tumor with Exhibition of Specimen. J. D. Trawick and S. G. Dabney, Louisville.
- 36 Treatment of the Fauical Tonsil. W. J. Leach, New Albany, Ind.
- 37 Casualties of Copulation. J. T. Windell, Louisville.
- 38 General Paresis. E. D. Burnett, Louisville.

Archives of Internal Medicine, Chicago

May

- 39 *Occurrence of Fat in the Islands of Langerhans. D. Symmers, New York.
- 40 *Method for Hemolysis and Agglutination Test. A. A. Epstein and R. Ottenberg, New York.
- 41 Papilloma of Chorioid Plexus with Hydrocephalus. S. R. Slaymaker and F. Elias, Chicago.
- 42 Incidence of Glycosuria and Diabetes in New York between 1902 and 1907. T. B. Barringer, New York.
- 43 *The Moro and von Pirquet Tuberculin Reactions. H. S. Paterson, New York.
- 44 *Cutaneous and Conjunctival Tuberculin Tests in Diagnosis of Pulmonary Tuberculosis. L. Hamman and S. Wolman, Baltimore.
- 45 *Buckwheat Poisoning. H. L. Smith, Baltimore.
- 46 Studies in Inaccessible Internal Hemorrhages. C. J. Wiggers, Detroit.
- 47 *Artificial Respiration in Treatment of Edema of the Lungs. H. Emerson, New York.
- 48 Pulmonary Edema Treated by Artificial Respiration. T. B. Barringer, New York.

39. **Fat in the Islands of Langerhans.**—Symmers reports a study of the fat content of the islands of Langerhans from a purely morphologic view, in a series of 73 unselected autopsies, with Sudan 3 as a stain. His observations, he believes, justify the following conclusions:

1. The presence of fat in appreciable amounts in the islands of Langerhans, contrary to certain observations recorded by Stangl, is invariably pathologic.

2. Fat accumulates in these situations in individuals at or beyond middle life in response apparently to certain changes brought about in the cells by the prolonged use of alcohol. Thus, out of 32 alcoholic subjects excessive accumulations of fat were present in the islands of Langerhans in 24 instances (75 per cent.), while in 41 non-alcoholic subjects varying in age from a seven months' fetus to 68 years the islands were wholly free from fat or occasionally fat was to be made out in isolated islands in entirely negligible quantities.

3. The islands of Langerhans may be completely devoid of fat in genuine diabetes mellitus.

4. There would also seem to be sufficient data to warrant the suggestion that the occurrence of fat in excessive quantities in the islands of Langerhans is a factor in the production both of the intolerance for sugar manifested by alcoholic subjects and of the alimentary glycosuria so frequently to be observed in individuals of this type.

40. **Hemolysis and Agglutination Tests.**—Epstein and Ottenberg point out that the quantity of blood necessary for controlled tests in all serum reactions exercises a great limitation. They record a means for performing a large number of tests with a very small amount of blood. Two methods of obtaining the blood are described, one with a small syringe (10 to 15 c.c. capacity) from a vein at the end of the elbow, and the other by deeply pricking the lobe of the ear. One or two c.c. of the blood are then put in a tube containing an excess of salt citrate solution, centrifuged, washed, and made up to the desired percentage in normal saline solution. When sufficient blood has been drawn by the syringe, the remainder is placed in small slanted test tubes and the serum allowed to separate by clotting. Small glass capillary capsules are used to obtain the serum, and when three-quarters full, the capillary end is sealed, the blood allowed to clot, and the capsule centrifuged. When it is nicked with a file it is broken open and the serum can be pipetted off. For making the mixtures, small pipettes (from four to five millimeters' caliber), fitted with rubber nipples, are used. The tips of these pipettes, drawn to a length of two or three inches, are marked at an arbitrary point with a blue pencil. The suspension of erythrocytes is drawn up to the mark. By drawing this a little farther into the pipette one allows a small bubble of air to enter the tip, and then, in a similar manner, one or more volumes of the serum are drawn into the same pipette. Thus definite proportions of the ingredients can be accurately measured. By running the cell suspension and serum gently up and down in the pipette they become thoroughly mixed. The entire mixture is then drawn up into the body of the pipette and the tip is sealed in a flame. The pipettes may be kept upright by sticking them into a tumbler

of sand. These narrow tubes serve in every detail the purposes of the larger test tubes generally used.

43. **The Moro and von Pirquet Reactions.**—Patterson reports the results of a comparative investigation in 171 cases, and concludes that the Moro reaction is absolutely harmless and simple; better adapted to adults than the von Pirquet test, and while it produces a reaction about as frequently as the ocular reaction in the tuberculous and in the clinically free cases it is devoid of danger.

44. **Idem.**—Hamman and Wolman report in detail a lengthy investigation into the cutaneous and conjunctival reactions and the relations between these and the subcutaneous test. Their experiments are tabulated and their conclusions are summarized as follows:

1. In adults the cutaneous tuberculin test is of value in diagnosis only when it is negative.

2. The frequency of its occurrence runs roughly parallel with that of the subcutaneous test.

3. The conjunctival test is of value principally on the positive side, a definite reaction indicating the presence of an active tuberculous lesion.

4. The most satisfactory results are obtained by using the two tests simultaneously. Both being negative speaks for the absence of any active tuberculous focus; both being positive, for its presence; the conjunctival negative and the cutaneous positive give no information of value.

5. We can not admit that the conjunctival or cutaneous reactions have any prognostic value.

6. The same conjunctiva should never receive a second instillation. The reaction so obtained is valueless for diagnosis and the procedure not without danger.

7. We believe that with proper precaution the conjunctival test may be used without danger of permanent injury to the eye.

8. We have been unable to confirm in any particular the claims Detre makes for his differential cutaneous reaction.

45. Abstracted in *THE JOURNAL*, May 29, p. 1785.

47. **Edema of the Lungs.**—Emerson urges artificial respiration, which he believes would prove more prompt and effective than any medication whenever the edema and cardiac incompetence are of sudden development and due to causes likely to prove of brief duration or removable by appropriate treatment; and it would at least give mechanical relief to the overloaded heart muscle while arterial relaxation and cardiac stimulation are being effected by drugs. Edema due to cardiac failure in pneumonia, or the inevitable terminal feature of chronic endocarditis, naturally can not be expected to respond to such temporary relief measures.

Cleveland Medical Journal

May

49. *Opsonins and Other Antibodies. L. Hektoen, Chicago.

50. The Enmanuel and Allied Movements. W. C. Bunce, Oberlin, Ohio.

51. *Medicine and the Press. G. W. Crile, Cleveland.

52. Diagnosis and Treatment of Brain Tumor. A. Peskind, Cleveland.

53. Rupture of the Vaginal Vault During Labor. A. J. Skeel, Cleveland.

54. Anemia Due to Recurrent Nasal Hemorrhages. M. Metzbaum, Cleveland.

55. Locomotor Ataxia with Abductor Paralysis of the Vocal Cords. W. B. Chamberlin, Cleveland.

49. **Opsonins.**—Hektoen discusses the final results of research in its general bearing on the work on opsonins. He outlines the theory and discusses the resistance offered by microbes under different conditions to antibodies, and more particularly to opsonins, as exemplified in the bacillus carrier. Recent experiments have resulted in complete harmony with the early teaching of Metchnikoff, that as a microbe grows in virulence, its resistance to phagocytosis increases. The passage of pneumococci, streptococci, and other bacteria through suitable animals makes them at the same time more virulent and more resistant. Cultivation outside the body causes reversion to less virulent states. Investigating this property of pneumococci to develop such strong defense against phagocytosis, Rosenow found that extraction of autolysis of virulent pneumococci brings into solution a substance or group of substances that neutralize the pneumococcal opsonin in human serum, but not other opsonins. After extraction of this substance, which is thermostable and insoluble in alcohol or ether, virulent pneumococci unite with opsonin and become phagocytatable, while avirulent pneumococci, on treatment with extracts of virulent strains, not only become resistant to phagocytosis in the test tube, but also, to some degree, virulent for animals. It may be said, then,

that the properties called virulence in pneumococci appear to depend, to a very large extent if not wholly, on the formation of an actual substance—"virulin"—which may be extracted and studied by itself. It is hoped that this demonstration may prove a basis of departure for new and fruitful work in pneumococcus and similar infections.

51. This article is discussed editorially in this issue of *THE JOURNAL*.

Journal of Biological Chemistry, Baltimore

May

56. *Composition of Dilute Renal Excretions. A. B. Macallum and C. C. Benson, Toronto.

57. Depression of the Freezing Point of Water Due to Dissolved Caseinates. T. B. Robertson, and T. C. Burnett, Berkeley, Calif.

58. Cerebrospinal Fluid in Certain Forms of Insanity, with Special Reference to the Potassium Content. V. C. Myers, Middletown, Conn.

59. *Human Pancreatic Juice. H. C. Bradley, Madison, Wis.

60. Modification of Lunge's Method for the Quantitative Estimation of Urea. C. Quinan, Berkeley, Calif.

61. Relation of Different Acids to the Precipitation of Casein and to the Solubility of Cheese Curds in Salt Solution. J. L. Sammis, and E. B. Hart, Madison, Wis.

62. Endeavor to Account for the Transfer of Proteid in Inanition. A. Woelfel, Chicago.

56. **Dilute Renal Excretions.**—Macallum and Benson undertook to solve the question as to the filtration or secretion theory of the formation of urine by analyzing the dilute urine produced by drinking large quantities of water. They reason that if the production of urine is due simply to filtration, such urine having passed through the tubules too rapidly to be modified by reabsorption should contain the inorganic salts in the same proportion as does the blood plasma. They found, however, that the relative value of potassium and chlorin is never that which obtains in the blood plasma, and is usually much greater than that which is obtained in the concentrated urine, formed immediately before the experiment began. This increase in the value of potassium as related to chlorin is due to a "lag" in the diminution of the secretion of the potassium, as compared with that of the chlorin during the decrease in the concentration. This lagging behind, or "hysteresis" may be found again, though not always, when the urine begins to increase in concentration,

K

the value of $\frac{K}{Cl}$ then falling because the potassium slowly,

Cl

and the chlorin (especially of sodium chlorid) rapidly, increases. In some cases, notably toward the end of a series, the rate of the excretion of the potassium, relatively to the chlorin, may rapidly increase or rapidly decrease. The elimination of water is due not to filtration, but to the physiologic activity of the renal membranes involved in the elimination. The removal of potassium salts and of chlorids from the blood by the kidneys is due not to filtration, but to forces which may be termed "secretory," that is, it is caused by an activity which is apparently selective, or differential, but which may be explained as due to difference in solubility of the different inorganic constituents of the plasma in the secreting membrane. The solubility, either relatively or absolutely, or both relatively and absolutely, would be altered by changes in the constitution of the membrane brought about by the action on it of unusual constituents of the plasma or of constituents of unusual proportions.

59. **Human Pancreatic Juice.**—Bradley had the opportunity to examine human pancreatic juice, derived from a traumatic fistula which probably communicated with the accessory duct of the pancreas. He summarizes a part of his results as follows:

1. The specific gravity averages about 1010.

2. Alkalinity is due to normal and bicarbonates, chiefly the latter. The secretion varies from a $\frac{N}{20}$ to $\frac{N}{10}$ bicarbonate solution.

3. No definite relation could be established between diet and enzyme content. The enzymes are found to vary considerably, with the exception of amylase, which appears to be more constant in amount from day to day. A slowly secreted juice is more concentrated in its solid content, its carbonates, and lipase.

4. Rennin, invertase, and lactase were not found.

5. Manganous sulphate was not found to accelerate starch digestion, nor was bile.

6. Trypsin was found in about half of the samples collected. Inactive samples could be readily activated with enterokinase prepared from the intestines of dogs and cats. Inactive samples be-

came gradually active on standing, though saturated with toluol and in some cases chloroform.

7. The lipolysis of olive oil and ethyl butyrate varies in parallel directions in the different samples. The author believes that a single enzyme accomplishes both digestions.

Journal of Cutaneous Diseases, New York

May

- 63 *Chronic Itching Papular Eruption of the Axillæ and Pubes; Its Relation to Neurodermatitis. J. A. Fordyce, New York.
64 Therapeutic Testing of Dermatologic Remedies. H. Fox, New York.

63. Itching Papular Eruption of the Axillæ and Pubes.—In a well-illustrated article, Fordyce reports a case and refers to two others of a condition of thickened skin, attended by an excessive amount of itching, and made up of papules or diffuse patches, not corresponding to typical lichen planus lesions, which, by many, are considered as secondary eczema on the one hand or as related to the lichen group on the other. He urges that more attention be given to Brocq's conception of this group under the term lichenification. He includes his case under the class of eruptions described by Brocq under the name *névrodermite chronique circonscrite*. The symptoms are a limited pruritus with subsequent pigmentation and exaggeration of the natural lines, the skin becoming by degrees thickened, and distinct lesions more prominent as a result of scratching. The regions most often attacked are the neck, upper and internal surfaces of the thighs, the loins, intergluteal folds, inferior and external part of the leg, the scrotum, labium majus, the waist line in women, the popliteal and axillary folds, and the palms and soles. He discusses the histology and states that the similarities between his case and those of Brocq are more marked than the differences. Pending a more positive knowledge he feels justified in calling this distressing affection a variety of neurodermatitis, probably of toxic origin.

American Journal of Urology, New York

May

- 65 Orchitis from Infection of the Prostate. Based on the Analysis of Eleven Cases. P. Loze, Paris, France.
66 Conclusions in Regard to Ureter Due to Nephroptosis. B. Robinson, Chicago.
67 *Renal Complications of Acute Gonorrhea. Dr. Stoyantchoff, Velico-Tirnov, Bulgaria.
68 *Simple Method of Estimating Ammonia in the Urine, Suitable for Clinical Purposes. G. C. Mathison.

67. Renal Complications of Gonorrhea.—Stoyantchoff says that the frequency of albuminuria in the acute stages of gonorrhea demands more attention than it has hitherto received. In most cases the nephritis is metastatic, though in some it is due to extension. He discusses these types and states his belief that the charge that they are due to the use of balsams is greatly exaggerated. The prognosis in albuminuria arising during gonorrhea is usually favorable, though some cases of ascending infection and of general infection with edema and anasarca are of serious prognosis. The treatment of renal complications during gonorrhea is that of acute nephritis, with an absolute milk diet as its basis. In the ascending type the cystitis should be treated at the same time.

68. Estimation of Ammonia in the Urine.—Mathison describes Malfatti's simple and rapid method of estimating the ammonia in the urine. It depends on chemical reaction that takes place when a solution of an ammonium salt is treated with formaldehyd. He has found that the accuracy of the method can be increased by adding 15 grams of powdered, neutral potassium oxalate to the urine and shaking before titrating. In all the urines examined the formaldehyd method gave higher results—about 15 per cent.—than the Folin method.

Archives of Pediatrics, New York

May

- 69 *An Epidemic of Acute Poliomyelitis. H. Koplik, New York.
70 *Early Symptoms in Sixty-Three Cases of the Recent Epidemic of Anterior Poliomyelitis. L. E. La Fétta, New York.
71 *Occurrence of Pepsin in the Infant Stomach, and Dependence of its Digestive Power on the Presence of Hydrochloric Acid. W. R. Ramsey, St. Paul.
72 *Sea-Water Treatment Given by Subcutaneous Injection, with Results Obtained in Children. T. Le Boutillier, Philadelphia.

69, 70. Abstracted in THE JOURNAL, July 11, 1908, p. 156.

71. Pepsin in the Infant's Stomach.—Ramsey reports a

series of observations and laboratory investigations, from which he draws the following conclusions:

1. The gastric juice of normal breast infants contains pepsin.
2. The stomachs of infants suffering from acute digestive disturbances usually contain pepsin.
3. The stomachs of infants suffering from pylorospasm contain both pepsin and hydrochloric acid in greater quantity than the stomachs of normal infants of the same age.
4. The stomachs of chronic atrophic infants frequently contain no pepsin.
5. When these chronic atrophic infants begin to improve in health and to gain in weight, the stomachs again contain pepsin.
6. The gastric juice of normal infants is capable of transforming proteid into peptone, and it is able to do this without the addition of any other acid than that found normally in the stomach.
7. The pepsin in the gastric juice is capable of active digestion when lactic acid and no hydrochloric acid is present.
8. Both hydrochloric and lactic acid may be present in the gastric juice without pepsin, and pepsin may be present without either hydrochloric or lactic acid.

72. Abstracted in THE JOURNAL, April 17, 1909, p. 1276.

Bulletin of Lying-in Hospital of City of New York

December

- 73 *Gynecology and Obstetrics in America. B. C. Hirst, Philadelphia.
74 *Gangrene of the Vulva, Vagina and Cervix Following Abortion at the Sixth Month. J. W. Markoe, New York.
75 *Comparison of Lesions Found Postmortem in Cases Diagnosed Clinically as Eclampsia and Toxemia of Pregnancy. J. E. Welch, New York.
76 Simple Method for the Instillation of Normal Saline Solution into the Rectum. R. McPherson, New York.
77 Importance of the Antepartum Vaginal Examination. E. S. Gushee, New York.
78 Imperfect Development of the Large Intestine and of the Lower Part of the Small Intestine. C. G. Burdick, New York.
79 Growth of the Babies' Class. E. L. Coolidge, New York.
80 Pregnancy Complicated by Dermoid Cyst of the Ovary with Twisted Pedicle. (Operation.) J. W. Markoe, New York.
81 Abdominal Cesarean Section, as Performed at the Society of the Lying-In Hospital of the City of New York, with an Analysis of 186 Cases. R. McPherson, New York.

73. This article was published in THE JOURNAL, May 1, 1909, p. 1390.

74. Gangrene of the Vulva Following Abortion.—Markoe reports a case, with colored illustration, of moist gangrene of the vulva, vagina, and cervix, which was operated on, all the gangrenous tissue being cut away and care taken not to invade the underlying normal tissue. The conditions came on about ten days after an abortion at six months. The value of fresh air in the treatment of this case is emphasized and a plea is made for the extension of the method in all septic cases. The pathology of the condition is discussed.

75. Eclampsia and Toxemia of Pregnancy.—Welch contrasts the opposing views in relation to the various forms of toxemia of pregnancy, one school recognizing two clinically distinct entities, the other considering the different forms of toxemia of pregnancy, including eclampsia, as closely related, if not identical, conditions. He presents the findings in 12 cases in which the clinical diagnosis was made of either eclampsia or toxemia of pregnancy. He discusses the various etiologic suggestions that have been made.

American Journal of Surgery, New York

May

- 82 *Surgical Importance of Visceral Crises in the Erythema Group of Skin Diseases. H. M. Silver, New York.
83 *Use of Fluorescent Salts (Eosin, Scarlet Red, etc.) in the Practice of Surgery. V. Pleth and V. W. Pleth, Guadalajara, Mexico.
84 Operation for Ingrowing Toenail. J. E. Jennings, Brooklyn.
85 *Scar Tissue—Its Prevention and Obliteration. C. H. Duncan, New York.
86 Electrically Lighted Pharyngoscope. A New Method of Examining the Nasopharynx and Larynx. H. Hays, New York.
87 Treatment of Habitual Scoliosis by Passive and Active Correction. T. Toepel, Atlanta, Ga.
88 Ligation of Common Iliac Artery Under Unfavorable Conditions. E. Lanphear, St. Louis.
89 Penetrating Wound of Abdomen without Symptoms. C. H. Jaeger, New York.

82. The Visceral Crises in Skin Diseases.—Silver discusses the importance to the surgeon of the visceral crises in the erythema group of skin diseases. He quotes Osler's classification, into 5 groups, of which 3 are of importance to the surgeon, as being likely to lead to operation on a mistaken diagnosis. He has found 9 cases, on examination of the literature, in which the patients were operated on, and adds a case of his own in which the patient was recently operated on, with

2 cases examined after death. He reports his own case in full. The groups of importance to the surgeon are (1) those cases in which the colic occurs in connection with pure angioneurotic edema (Quincke's disease); (2) those in which there is arthritis, associated with erythema or purpura and colic—the group described by Henoch; (3) a group most difficult to recognize, in which there is only recurring colic and nothing else. Silver discusses angioneurotic edema and Henoch's purpura, with the differential diagnosis between the latter and intussusception and appendicitis respectively. His experience with one case and studies of reported cases, lead him to emphasize Osler's practical lesson, namely, "first, in children with colic the greatest care should be taken to get a full history, which may bring out the fact of previous attacks, either of skin lesions or of arthritis, or of intestinal crises; and secondly, make the most careful inspection of the skin for angioneurotic edema, purpura or erythema," and Silver adds, in an accurate examination of the blood, with a differential count, we have the most important aid in differentiating those cases which need surgical treatment.

83. Fluorescent Salts in Surgery.—Pleth and Pleth report results of the application of a 5 to 10 per cent. watery solution of eosin, covered with a thin layer of cotton to exclude dust and exposed to sunlight in stitch abscess, suppurating incised wounds after operations for osteomyelitis, in infected joints and eczema; also by injection in gonorrhea, and in combination with copper sulphate internally in actinomycosis. They report also the usefulness of scarlet red suspended in olive oil, vaselin or zinc ointment in proportion of from 5 to 10 per cent. The wound should be thoroughly dried, and the salve applied, not too thickly, and allowed to remain for from 12 to 24 hours, when it should be removed, and the wound covered with plain vaselin or olive oil. This treatment is renewed every 2 or 3 days. Enormous skin defects have been remedied by this method. In spite of the filthiness of the Mexican Indians and of their insanitary surroundings the good results uniformly obtained speak for the value of the treatment. The non-toxicity of eosin and scarlet red permits of their use in almost any place. The only drawback is that they stain the clothes.

85. Scar Tissue.—Duncan describes the technical details in operating which tend, by reducing irritation and producing accurate approximation, to bring about scar-free healing. The incision should be made with the scalpel at an angle of 60 degrees with the perpendicular. The advantages are cosmetic, lessened cause for pain and deformity, and less liability to keloid. He particularly states that the technic of wound treatment given in no way interferes with aseptic technic. The original article must be read by those interested, as it scarcely lends itself to abstracting.

New York State Journal of Medicine, New York

May

- 90 *Diagnosis and Operative Treatment of Simple Fracture. L. A. Stimson, New York.
- 91 Treatment of Fractures. D. L. Kathan, Schenectady, N. Y.
- 92 *Radical Conservatism in the Treatment of Compound Fracture. M. B. Tinker, Ithaca, N. Y.
- 93 *Further Exposition of Abduction Treatment of Fracture of the Neck of the Femur. R. Whitman, New York.
- 94 *Volkman's Ischemic Paralysis and Contracture. R. H. Sayre, New York.
- 95 *Relative Aortic Incompetency of Muscular Origin. J. M. Anderson, Philadelphia.
- 96 *Ophthalmia Neonatorum. J. A. Gehring, New York.
- 97 *Thorax Transfixion. E. E. Hyland, Utica, N. Y.
- 98 *Physical Training of Children. F. W. Sears, Binghamton, N. Y.

90, 92, 93, 95. Abstracted in THE JOURNAL, Feb. 20, 1909, pp. 655, 656.

94. Volkman's Ischemic Paralysis.—Sayre reviews the literature of the development of our knowledge on this subject, and says that the typical cases are almost all the result of fractures of the upper extremity, the great proportion being the bones of the forearm, and almost all in children. It commonly results from pressure applied in treatment. The Es-march bandage is responsible for many cases. The pain is often severe. The prognosis is grave and depends largely on

the amount of injury to the muscles. Electricity and massage have proved almost universally useless in restoring vitality. He describes the operative procedures.

96, 98. Abstracted in THE JOURNAL, Feb. 6, 1909, pp. 496, 497.

97. Thorax Transfixion.—Hyland reports a remarkable case of a man of 38, who, while operating an edging machine, was struck in the chest and thrown unconscious to the floor by a piece of "edging," which was found protruding from both sides of the body. It was part of a rough board, 1 by ¾ inch at the end which entered the body and 1 by ¼ inch at the other end, and 23 inches long. It entered the chest through the left nipple, breaking the rib and depressing it, punctured both lungs, and passed through the arm about three inches below the shoulder joint, posteriorly to the humerus, pinning the arm to the body. The man was taken 50 miles by train to St. Elizabeth's Hospital, Utica. He had recovered consciousness and was perfectly conscious up to the administration of the anesthetic. Hyland enlarged the openings, and with a great deal of force drew the edging loosely (? sic) through the body in the direction in which it had started. The resulting hemorrhage was insignificant. The right lung collapsed below the seat of injury. On inspiration and expiration, the air passed freely through both openings. Free drainage by gauze and tubes was installed. The highest temperature recorded was 102.2 F. on the second day. At no time were there any pronounced symptoms of pneumonia. An eighth of a grain of morphin gave relief from the pain. Traumatic pleuritis on the right side set in, ultimately becoming empyematous, but with the well-established drainage it ran an uneventful course, and the man returned home ten weeks after the injury, the wounds having nearly healed. He suffered at first intensely from pain and swelling in the arm, which he was unable to move. The forearm extensors were paralyzed, but he has now regained his usual health and vigor. A photograph of the edging in the body before removal accompanies the article.

California State Journal of Medicine, San Francisco

May

- 99 *Intestinal Obstruction. C. G. Levison, San Francisco.
- 100 *Reminiscences of Indian Practice. F. Grinnell, Pasadena.
- 101 Vaccines. R. Patek, San Francisco.
- 102 Weak Foot. J. T. Watkins, San Francisco.
- 103 Treatment of Gonorrheal Inflammations by Use of Serums and Vaccines. G. E. Ebricht, San Francisco.
- 104 Major Emergency Operations with Reference to Fracture of Skull and Wounds of the Abdomen. W. I. Terry, San Francisco.

99. Intestinal Obstruction.—Levison discusses acute and chronic bowel obstruction and on the basis of an experience with a large number of patients treated by the various methods in use emphasizes the fact, that those treated with most success were those operated on early and in whom he has not hesitated to explore the abdomen after the diagnosis has been established. If the obstruction is easily and quickly found, all that is done is to open the distended loop, express the intestinal contents and perform an enterostomy as follows: Two sharp hemostats grasp a spot on a loop of distended intestine, the beaks being in juxtaposition. The intestine is then opened by a knife puncture between the two points; the loop of intestine, having been drawn out of the abdominal cavity, is held close to a basin, so that the fluid can escape from the gut without any soiling of the abdominal cavity. As clamps are attached to the loop or gut, there is no possibility of the intestine escaping back into the abdominal cavity, and the opening, therefore, is under absolute control. This opening may be closed with a purse string suture or an enterostomy can be made. He has treated a number of patients, seen early, in this manner and intends to continue the method, as it is rational, simple and easily carried out without much shock. Drugs, such as atropin and eserine, in his experience, have been of no avail.

100. Indian Practice.—Grinnell's paper is an interesting folklore article drawn from his experience among American Indians. The methods of the quack indicate as high a degree of civilization among them as among ourselves. He pays particular attention to child-birth and the existence of a period of isolation for menstrual uncleanness.

Northwest Medicine, Seattle, Wash.

May

- 105 Leukemia. B. Thomas, Walla Walla, Wash.
 106 *Treatment of Tetanus. C. M. Doland, Spokane, Wash.
 107 *Industrial Eye Injuries. W. Johnston, Spokane, Wash.
 108 Fracture of the Greater Tuberosity Complicating Dislocation of the Shoulder. B. Hahn, Seattle, Wash.
 109 Three Important Time-Saving Urinary Tests. H. R. Harrower, Chicago.

106. **Tetanus.**—Doland, after discussing the bacteriology and pathology of tetanus, reports cases and considers the various methods of treatment of recent suggestion. He recommends the opening and closing of all punctured wounds and the use of tetanus antitoxin in suspicious cases and all Fourth-of-July wounds, together with a 2 per cent. solution of magnesium sulphate, preferably by intraspinal injection. Should these measures fail, Baccelli's carbolic-acid injections should be used. If the magnesium sulphate does not subdue symptoms he advises giving large doses of chloral, and finally stimulates the patient, preferably with whiskey, and shuts out all external stimuli to nervous excitation.

107. **Industrial Eye Injuries.**—Johnston divides the injuries, in a territory devoted to agriculture, lumbering and mining, into the following four classes:

1. Those occurring as the result of handling high explosives in mining and railroad construction.
2. Those occurring from the bursting of locomotive oil and water gauges.
3. Those occurring in mills, foundries, machine shops, and the building trades.
4. Those occurring in the agricultural pursuits.

He discusses each class separately, with analysis of cases. The majority of these injuries are preventable, and he advocates: (1) Government inspection of the manufacture of all explosives; (2) licensing of "powder men"; (3) protection of water and oil gauges by wire or plate glass screens; (4) the placing of guards on all emery wheels, lathes, etc.; (5) education of the laity as to the seriousness of even slight injuries when infected.

Alabama Medical Journal, Birmingham

May

- 110 The Sanatorium in its Application to Tuberculosis. S. G. Bonney, Denver.
 111 Rabies and the Pasteur Treatment. E. M. Mason, Montgomery, Ala.
 112 *Relations of Medicine to other Learned Professions, Economics and Government. G. T. McWhorter, Riverton, Ala.

112. **Relation of Medicine to Other Professions.**—McWhorter discusses the changes that have been brought about in the practice of medicine by those of environment, the crowding of population in the cities, the discoveries of science, etc., and considers the relation of the physician with the lawyer, the press, the legislature, the engineer, the educator and the social economist. He particularly contrasts the results of the old French Canal Company at Panama, with its disregard and ignorance of hygienic conditions, with those of the brilliant, hygienically conducted enterprise of Colonel Gorgas, and remarks that "the adverse forces of Nature may be scientifically controlled; they may not be ignored." To the general practitioner McWhorter says: "Do not misapprehend the dignity and importance of your efforts because of the humble station in life of your patients. The country doctor whose homely science restored Abraham Lincoln to health in boyhood days, probably made a larger contribution to the needs of humanity than did the brilliant surgeons who operated on Napoleon III or the Emperor Frederick. It might be well to remember this, gentlemen, as you sit at the bedside of some bare-ankled girl or some freckle-faced boy. Only a large perspective reveals the true relations of things."

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

May 8

- 1 *Rheumatic Fever and Valvular Disease. N. Moore.
- 2 *Gallstones. H. F. Waterhouse.
- 3 Urachal Cyst Simulating Appendicular Abscess; Arrested Development of Genital Tract. A. H. G. Doran.
- 4 *Alcohol Injection Treatment for Neuralgia and Spasm. W. Harris.
- 5 Simple Operation for Complete Removal of Tonsils, with Notes on 900 Cases. G. E. Waugh.

- 6 Rare Cardiac Condition: Mitral Stenosis with Ball Thrombus in Left Auricle. A. M. Kennedy.
- 7 Sudden Death from Unsuspected Cardiac Lesion. H. Galt.
- 8 **Bilharzia Haematobia* and Circumcision. J. F. Allen.
- 9 Rupture of the Pregnant Uterus from *Contre Coup* in a woman not in Labor: Operation; Recovery. J. Phillips.

1. **Rheumatic Fever.**—In the third Lumsden lecture Moore sums up the points which in this course of lectures he has endeavored to impress on the profession at large as follows: (1) Rheumatic fever is a single definite disease; (2) endocarditis is always an essential part of it; (3) its duration may extend over many years, and these circumstances, but half demonstrated as they necessarily are at present, are still the safest indications of method in the treatment of the disease.

2. **Gallstones.**—Waterhouse discusses the causation, the symptoms, results and the prognosis of gallstones. His firm belief is that the majority of flatulent dyspeptic women who attend medical out-patient rooms with such wondrous regularity are really suffering from gallstones. Jaundice is the exception in gallstone, save when the stone is impacted in the common duct. We must distinguish between (1) inflammatory—i. e., microbic—jaundice, such as may result apart from cholelithiasis, e. g., as a sequel of cholecystitis; and (2) lithogenous jaundice, which is, at first, at any rate, a mechanical process due to blockage of the common duct by a calculus. Biliary colic is the most prominent trouble, but most patients do not complain of it, because the gallstones commonly remain in the bladder and do not enter the duct. Vomiting is a fairly frequent symptom and a usual one in biliary colic. During an attack of biliary colic the liver may be swollen and the gall bladder exceedingly tender. In treatment, besides morphin and hot fomentations, Waterhouse is convinced that antipyrin, 10 grains every hour until 40 grains have been taken, is a useful drug. The administration of chloroform and massage of the gall bladder he recommends with confidence, but only when all signs of inflammation are absent. He next discusses permanent obstruction of the biliary duct and infective cholecystitis. The most frequent causes of death are (1) microbic cholangitis; (2) perforation of the gall bladder and ducts; and (3) carcinoma of the gall bladder. He insists on promptness of operative intervention as soon as it appears indicated. He is convinced that an early cholecystotomy is a satisfactory operation and far less dangerous to the patient than the passage of a single stone *per vias naturales*; on the other hand, he knows none more difficult than choledochotomy or extraction of a stone from the common bile duct in a long-standing case.

4. **Alcohol Injections in Neuralgia and Spasm.**—Harris discusses this subject in relation to trigeminal neuralgia, clonic facial spasm and sciatica. He describes in detail the technic for trigeminal neuralgia, and is of the opinion that this method affords certain relief. It is also of great service in controlling chronic facial spasm, postinfluenzal supraorbital neuralgia, the facial pain of inoperative carcinoma of the tongue, tabetic neuralgia, etc.

8. **Bilharzia Haematobia.**—Allen contends that the entrance of the parasite is principally effected during bathing, and in his experience he believes that in the majority of instances the invasion took place through the urethra alone, but it is possible that it may enter the intestinal canal by the anus, or the lungs by infested water being sniffed in, but wherever it is found it has got to its final resting place directly from outside and has not reached it from the vascular system. The parasite undoubtedly does enter the stomach in drinking water, but it appears fairly certain that the gastric juice destroys it. The great majority of those infected are boys under the age of puberty, which fact he attributes partly to their greater bathing habits, partly to the ease with which the parasite can enter the urethra before the prepuce is retracted. During the act of bathing, the sac formed by the prepuce becomes filled with water, and a parasite would therefore have moisture, guidance, protection and time, everything in fact to enable it to seize on a position so suited to it. He endeavored experimentally to establish the fact that the

parasite can not develop within the body, but must enter it in the mature form from without. With the consent of a patient, he injected many eggs of the parasite containing vigorous embryos into the bladder of one of the Indian hospital attendants. The man did not become affected, and remained at the hospital for some years, perfectly free from the complaint. This condition adds immensely to the importance of preventing it from entering the system. He considers it likely that the origin of the practice of circumcision in Egypt, as shown in sculptures dating 2,000 years before the captivity of the Jews, was really a sanitary measure, possibly directed largely against this particular infection. He insists on the importance, when bathing, of wearing close-woven drawers fitting tight round the waist and thighs, and not open anywhere; and also of drying the body thoroughly, particularly about the orifice of the urethra, on leaving the water. These measures, with circumcision, he believes would stamp out the disease in bilharzia infected regions, as the ova can not develop in the body.

British Medical Journal, London

May 8

- 10 Myopathy and Syringomyelia. Sir W. R. Gowers.
- 11 Antispasmodics and the Cure of Spasms. E. Smith.
- 12 Amaurotic Family Idiocy. F. J. Poynton.
- 13 An Epidemic of Tinea Cruris. J. O. Symes.
- 14 Landry's (Acute Ascending) Paralysis; Recovery. C. H. Cattle.
- 15 *Use of Certain New Chemical Tests in Diagnosis of General Paralysis and Tabes Dorsalis. G. W. Ross and E. Jones.
- 16 Treatment of Facial Paralysis Due to Mastoid Disease or to the Mastoid Operation. F. Sydenham.
- 17 Epidermolysis Bullosa. L. B. Cane.
- 18 Spirochaeta Pallida. A. C. Coles.

15. New Chemical Tests in General Paralysis and Tabes.—

Ross and Jones review our present knowledge concerning the cerebrospinal fluid in general paralysis, and describe two new diagnostic chemical tests for readily recognizing an excess of globulin in the cerebrospinal fluid, thus determining the presence of some parasyphilitic affection of the nervous system. It is essential to be sure that no blood or pus has contaminated the fluid to be examined. The tests are as follows: The Noguchi reaction consists in the addition of 0.5 c.cm. of a solution of 10 per cent. butyric acid in normal sodium chlorid solution to 0.1 c.cm. of the fluid to be examined; the application of heat; subsequent addition of 0.1 c.cm. of 4 per cent. sodium hydrate solution, with a further application of heat. The test tube should be read within three hours. A distinct opalescence is frequently found to occur, even in the normal, but in cases of general paralysis and tabes a characteristic precipitate of a peculiar flocculent character forms. The flocculi tend gradually to fall, so that after 24 hours at the latest the bottom of the tube is occupied with a fairly bulky precipitate, while the supernatant fluid is clear. In performing this test care must be taken to ensure the absolute purity of the butyric acid. The second test referred to is as follows: Two c.cm. of a saturated solution of ammonium sulphate are placed in a test tube, and 1 c.cm. of the cerebrospinal fluid is gently run on to the surface in the way done in the Heller nitric test for albumin. The formation of a ring at the junction of the two liquids constitutes a positive reaction. The ring is clear cut, thin, grayish-white, and has the thickness of a thin piece of paper. It should form within three minutes, and within half an hour it may be observed that the surface of the ring shows a delicate mesh appearance resembling a fine cobweb. Indirect illumination must be used, or it may escape detection.

The Noguchi test was applied in 15 syphilitic cases and 12 non-syphilitic. It was negative in all the latter except in one case of tuberculous meningitis. Among the negative cases were 5 of dementia praecox and 4 of tumor cerebri, conditions which are frequently difficult to distinguish from general paralysis. Among the 15 syphilitic patients were 12 untreated and 3 had been treated. None of the latter gave a positive reaction, while all the former did so. The 12 positive cases comprised 3 of tabes, 5 of general paralysis, 1 of tertiary syphilis, and 3 of syphilis of the nervous system. The test was thus positive without exception in all the cases of syphilis or parasyphilis in which the patients had not had recent

treatment, and negative in all other cases examined. The ammonium sulphate ring test was applied in all the above cases, except 2 of tabes. The results agreed absolutely with those obtained by the Noguchi test, being positive whenever this was positive and negative whenever this was negative.

Medical Press and Circular, London

May 5

- 19 *Direct or Indirect Effects of Surgery or Surgical Lesions in Mental or Nerve Disturbances. W. Alexander.
- 20 Oatmeal in Treatment of Diabetes Mellitus. C. von Noorden.
- 21 Treatment of Gonorrhea in General Practice. J. E. McCracken.
- 22 Iodin in Treatment of Disseminated Sclerosis. W. Murrell.

19. Effects of Surgery in Mental or Nerve Disturbances.—

Alexander relates five cases representing several classes of mental and nervous disease in which cure was effected by operative intervention, illustrating the following facts:

1. The mysterious effects of pressure on the heel in producing insanity, and its immediate cure when the pressure was removed.
2. The direct effects of a depressed fracture of the skull on the onset of acutely maniacal symptoms and the immediate relief through the elevation of the depressed bone.
3. The presence of a retroverted uterus in a case of delusional suicidal insanity, and the good effect of the cure of the displacement on the insanity.
4. The baneful influence of metrorrhagia on the mental state and the probable rescue of the patient from a lunatic asylum by operation.
5. The failure to connect as cause and effect a lipoma of the back and intense intercostal neuralgia, and the complete cure of the patient by operation.

In regard to the question of operating, therefore, in mental and nervous conditions, Alexander considers intervention indicated in cases in which the condition of the patients is beyond their control, and not in that class in which the patient will refer to his "terrible agony" with a placid face. The really suffering patient does more writhing in agony than talking about it. In the second place, Alexander holds that if there is a distinct disease that ought to be treated in an ordinary sane individual, and if that disease occurs intercurrently in mental disturbance of unknown causation and acute character, then that disease should be treated, and can be treated successfully notwithstanding the mental condition, and with the hope that the mental symptoms also may be cured.

Clinical Journal, London

May 5

- 23 Common Affections of the Skin: Their Exact Diagnosis and Treatment. J. Galloway.
- 24 Pernicious Anemia. H. French.
- 25 Extraperitoneal Ruptures of the Bladder. E. W. Roughton.

Journal of Tropical Medicine and Hygiene, London

May 1

- 26 *Rice and Beriberi. W. Fletcher.

26. Beriberi.—Fletcher describes the various modes of examination used at the Kuala Lumpur Lunatic Asylum. He points out that in communities where beriberi occurs, those who eat "cured" rice appear to escape. This "cured" rice is a yellow rice prepared as follows: The unhusked grain or paddy is soaked in water for from twelve to twenty-four hours, or even longer. It is then heated in vessels containing water over a slow fire until the husks burst. The third stage in the preparation consists of spreading out the grain and drying it in the sun; when this has been completed, it should be possible to separate the husk from the seed by light rubbing between the palms of the hands. The rice is then husked by pounding or taken to the mills, where the same process is effected by the millstone, but it is not polished by the rapidly revolving stones against the fine wire gauze after the manner of the "white rice." Fletcher considers it proved that the elimination of white uncured rice from the diet prevented the occurrence of beriberi in the "cured" rice group of patients at the Kuala Lumpur Lunatic Asylum, and he recommends the adoption of this rice and the avoidance of the highly polished white variety, no matter how good the quality.

Practitioner, London

May

- 27 Use and Abuse of Proprietary Foods in Infant Feeding. E. Cautley.
- 28 Surgery of Inguinal Hernia. R. Morison.
- 29 Therapeutic Value of Radium and Its Application. J. M. H. MacLeod.

- 30 *Diagnosis of Transitory Hemiplegia in Elderly Persons. F. H. Edgeworth.
 31 *Acute Appendicitis. A. E. Maylard.
 32 *Variations of Arterial Blood Pressure in Arteriosclerosis. O. K. Williamson.
 33 *The Rheumatic Infection. W. H. M. Telling.
 34 *Labyrinthine Nystagmus and Labyrinthine Disease. D. McKenzie.
 35 Signs and Symptoms of Thoracic Aneurism. H. L. Tidy.
 36 Diet of the Tuberculous Patient. S. H. Hall.
 37 Advances in Clinical Pathology. W. D'E. Emery.
 38 Value of Mouth Washes. S. P. Mummery.
 39 Chloroform Anesthesia. R. E. Humphry.

30. Transitory Hemiplegia.—Edgeworth reports four cases of transitory hemiplegia in elderly persons, and says that on consideration of these cases, it is seen that temporary attacks of aphasia, or aphasia and right hemiplegia, or left hemiplegia, or vertigo, or mental confusion, may be associated with (1) no arteriosclerosis, no general hypertonus, no rise in blood pressure; or (2) arteriosclerosis, but no general hypertonus or rise in blood pressure; or (3) arteriosclerosis, general hypertonus, and rise in blood pressure. The theory of a localized hypertonus, an arterial spasm, in cerebral blood vessels affords an adequate explanation of these various cerebral phenomena. It accounts for their often sudden appearance and for their equally sudden and complete disappearance. Such arterial spasm may be limited apparently to one or more cerebral arteries, or may form a part of a more general vascular constriction. In the latter case, it must be supposed that it is more marked in cerebral than in other arteries. Such a theory may be supported by the facts that (1) localized arteriospasm may occur in parts of the body other than the brain; (2) in some cases the paralysis may be preceded by chronic spasm in the subsequently paralyzed limb or the attack may consist of chronic spasm only, resembling the unilateral chronic spasms producible by digital pressure on one carotid; (3) a striking parallelism between the state of the radial artery and the cerebral phenomena; (4) the discovery of vasoconstrictors in cerebral arteries discloses a path for the passage of impulses, which may pass through these fibers. The accurate diagnosis of such cases is important, lest they be mistaken for cases of cerebral hemorrhage or thrombosis. Vasomotor dilators will rapidly effect a cure in a case due to vascular spasm, but they constitute the worst possible treatment for cases of thrombosis or hemorrhage. With regard to the tendon jerks and skin reflexes, all that can be said is that if the plantar reflex is extensor in a case of suddenly occurring hemiplegia, the cause is organic; if not extensor, the disease may exceptionally be organic, or it may be due to vascular spasm. A similar uncertainty attends any deduction drawn from the state of the tendon jerks. The onset of hemiplegia due to vascular spasm is usually unattended by loss of consciousness, but loss of consciousness does not always occur in hemorrhage or thrombotic cases. Hemiplegia due to vascular spasm is in some, but not all, cases attended by a rise of blood pressure. The differential diagnosis of the first attack of hemiplegia is therefore difficult. Recurrent cases of vascular spasm may end in permanent palsy due to cerebral softening. The administration of vasodilators in quantity sufficient to make the pulse soft, rapidly cures the spasmodic form, and probably postpones the day of permanent paralysis.

31. Acute Appendicitis.—Maylard investigates the following questions: 1. Should aperients or sedatives be administered in the early stage of the attack? 2. Should heat or cold be applied locally? He concludes that the early stage of acute appendicitis is best treated by (1) the administration of small doses of saline aperients—one dram of magnesium sulphate every hour till the bowels move; (2) the local application of heat to the iliac region; (3) the subcutaneous injection of a small dose—say 1/6 grain—of morphin, for the sole purpose of relieving the immediate acuteness of the pain.

32. Arterial Blood Pressure in Arteriosclerosis.—As the result of comparative investigation in cases with and without arteriosclerosis, Williamson concludes that the main difference between the arteriosclerotic and the non-arteriosclerotic cases would seem to be that there is produced in the former, owing to an abnormal degree of arterial constriction, as the

result of influences which diminish this constriction and produce vascular relaxation, a more marked effect than usual, and, in consequence, either a greater fall of pressure, or a fall of pressure when in the non-arteriosclerotic cases there would be a rise. This difference is evidenced more especially in the diurnal variations, but also to a less degree as the result of the ingestion of food.

33. The Rheumatic Infection.—Telling discusses the theory of rheumatism in relation to other affections that are commonly considered rheumatic. Rheumatism is essentially a disease of childhood and early adult life. He describes the mental and physical type of the rheumatic child, who has long lashes, clear, bright-colored complexion, hair not infrequently reddish or auburn, and is "pretty"—possessing certain refinement and delicacy of features. He does not believe that iritis occurs as a manifestation of rheumatism; it is generally due to gonorrhea, syphilis or gout. He discusses the arthritic phenomena, chorea, the heart lesions and the skin lesions, particularly erythema nodosum, the organic connection of which last with rheumatism he doubts.

34. Labyrinthine Nystagmus.—McKenzie sums up his investigations as follows:

1. When destructive processes cause perceptive deafness they generally cause a proportionate amount of damage to the vestibular organ of equilibrium.
2. An exception to this rule is found in otosclerosis, in which the amount of loss of hearing seems to bear but little relation to the amount of impairment of the vestibular sense.

Annales de Dermatologie et de Syphiligraphie, Paris

April, X, No. 4, pp. 225-289

- 40 *Morbid Fluxions and Alternations in Disease, especially in Dermatology. (Les fluxions et alternances morbides.) L. Brocq.
 41 The Newer Microbiologic and Serologic Means for Diagnosing Syphilis. C. Levaditi. Commenced in No. 2.

40. Fluxions and Alternations in Disease.—Brocq applies the term of *poussée fluxionnaire* to the element in pathology which determines the outbreak of symptoms in certain cases. The simplest form is the reaction which follows the ingestion of some substance which the organism is unable to tolerate; there may be a rash or gastrointestinal disturbances or both as the manifestation of the reaction to the disturbing substance. The individual susceptibility, generally inherited and familial, decides the nature and intensity of the reaction. Gout is a typical example of the other form of the *poussée fluxionnaire*: After a longer or shorter period of freedom from symptoms, the explosion occurs apparently spontaneously. In both these forms it seems that the intoxications and auto-intoxications of the organism, defective functioning of certain viscera, state of the nervous system, etc., pile up to induce a condition in which the slightest occasional cause may supply the spark and induce the explosion, the fluxion, the wave of congestion; and the wave flows to the point of least resistance at the moment. This point of lesser resistance determines the localization of the symptoms in each individual case, but this point may vary each time. This assumption throws light on many otherwise inexplicable morbid and therapeutic phenomena.

Annales de Gynécologie et d'Obstétrique, Paris

April, XXVI, No. 4, pp. 193-256

- 42 *Treatment of Pernicious Vomiting of Pregnancy. (Traitement des vomissements incoercibles de la grossesse.) V. Wallich.

42. Pernicious Vomiting of Pregnancy.—Wallich recommends isolating the patient in the care of a nurse and abstention from anything by the mouth for twenty-four or forty-eight hours. Fluids may be supplied by enemas of physiologic salt solution or possibly by very cautious subcutaneous injections. Drugs must be given prudently on account of the insufficiency of the emunctories, giving the preference to chloral by the rectum and to inhalation of oxygen. The diet can be regulated as tolerated, first nothing, then water alone, then half milk, gradually returning to a full milk-vegetable diet. Pinard advises interrupting the pregnancy as soon as the pulse rate is over 100 or keeps permanently about 90, even if the amount of urine approximates normal, if the incessant vomiting and the nervous symptoms persist unmodified.

Bulletin de l'Académie de Médecine, Paris

April 20, LXXIII, No. 16, pp. 443-460

- 43 *Significance of Reactions to Revaccination. (Des réactions revaccinales et de leur signification.) Kelsch, Camus and Tanon.

43. Summarized in Paris Letter May 8, page 1509.

Presse Médicale, Paris

April 17, XVII, No. 31, pp. 273-280

- 44 *Amyloid Degeneration of the Kidneys. (Dégénérescence amyloïde des reins.) J. Castaigne.

- 45 Apraxia. (Valeur sémiologique de l'apraxie.) G. Dromard and Pascal.

April 21, No. 32, pp. 281-288

- 46 *Inflammation in Testicles in Staphylococcus Sepsis. (Orchitepididymite au cours des staphylocoécémies.) Quénu.

- 47 Diagnosis of Facial Neuralgia. J. A. Sicard.

- 48 *Spengler's Immunizing Bodies (I. K.). (Les Corps immunisants de Carl Spengler.) A. Bergeron.

April 24, No. 33, pp. 289-296

- 49 The Wire Filament Galvanometer and Electrocardiography. (Le galvanomètre à corde.) G. Weiss.

- 50 Hematocele from Rupture of Small Blood Cyst in the Ovary, Simulating Ruptured Extranterine Pregnancy. F. Jayle.

- 51 Septic Gastritis of Buccal Origin. G. Mahé.

April 28, No. 34, pp. 297-304

- 52 Negative Results from Red Light in Measles. (Rougeole et lumière rouge.) A. Gouget.

May 1, No. 35, pp. 305-312

- 53 Serum Anaphylaxis. (La séro-anaphylaxie.) M. Arthus.

44. Pathogenesis of Amyloid Degeneration of the Kidneys.

—In connection with a case of purulent pleurisy accompanied by intense albuminuria, Castaigne discusses the effects produced on the organism by an alien albumin introduced into the circulation. The injected albumin retains its alien characteristics wherever it is reformed in the blood; the organism discriminates between the albumin that belongs to it and the alien albumin and retains the former while striving to get rid of the latter. The pus in purulent pleurisy contains large amounts of alien albumin, and if the pleura retains its normal absorbing power, this alien albumin is absorbed into the blood and is eliminated through the kidneys. The absorbing power of the pleura is much reduced in pneumococcus and tuberculous affections, but seems to be retained unimpaired in streptococcus pleurisy. The alien albumin is thus absorbed and is liable to injure the arteries on its way to the emunctories. The kidneys are overtaxed by this extra work imposed on them and the parenchyma suffers sooner or later. The resulting amyloid degeneration of the kidneys is always accompanied by chronic nephritis from the same cause, but the kidneys retain their permeability. Consequently, there is no necessity for restricting the proportion of nitrogen in the diet. These patients need food rich in albuminoids to compensate for the losses of nourishing materials, avoiding merely sodium chlorid and albumins difficult of digestion; such as raw white of egg. The prognosis depends on whether the purulent process is acute or chronic, as in the acute cases, without cachexia, the tendency is for the amyloid degeneration to subside in time after the cause is removed. On the other hand, an acute process may entail the severest changes in a few weeks. He found amyloid degeneration of liver, kidneys and spleen in three patients who had succumbed in three, four and six weeks to purulent pleurisy.

46. Orchitis and Epididymitis in Staphylococcus Septicemia.

—In a case described the *Staphylococcus aureus* was cultivated from the blood of a previously healthy man of 34 presenting signs of severe general infection about a week after development of a carbuncle on the back. He was convalescing a week later when signs of inflammation of the testicles and epididymis were observed and the staphylococcus could also be cultivated from the puncture fluid. The organism seeking to get rid of germs tries to eliminate them not only through the liver and kidneys, but also by the glands, which explains the orchitis in certain affections. Roger found the testicles involved in 48 of 55 smallpox cadavers in 1901-2. The orchitis, parotitis and tonsillitis in certain diseases, such as mumps and smallpox, are not complications, but localizations of the infection. Quénu has been unable to find any case on record, however, in which orchitis was recorded in

connection with a primary staphylococcus septicemia in the absence of urethritis.

48. The Red Corpuscles as the Receptacles of the Antibodies.—Bergeron presents and discusses the conceptions on which Spengler bases his treatment of tuberculosis. The latter assumes that the tuberculous individual is almost invariably infected with both human and bovine tubercle bacilli, and that treatment should be directed against both. He also insists that the red corpuscles are the principal receptacles for the antibodies, not the serum. The antibodies pass into the serum only when the red corpuscles become destroyed and they stay free in the serum only a very short time as they are rapidly taken up by the leucocytes. Consequently, Spengler asserts, specific treatment of tuberculosis should be by means of the red corpuscles of animals which have been powerfully immunized against tubercle bacilli of both types, human and bovine. The red corpuscles of these animals contain the antibodies, agglutinins, precipitins, bacteriolysins and antitoxins needed for effectual treatment of the infection, and by isolating and dissolving the red corpuscles we have a preparation, the Spengler I. K. (*Immunkörper*) which seems to be giving highly encouraging results in the clinic. Bergeron's own experience with it has not been sufficient for definite conclusions, but to date his results confirm the statements of others in regard to the frequent benefit even in the advanced and the clinical cure in the mild and moderate cases.

Semaine Médicale, Paris

May 5, XXIX, No. 18, pp. 205-216

- 54 Improved Stain for Neuroglia: Victoria Blue-Osmo-chrom-acetic Technic. (Nouvelle méthode de coloration pour l'étude de la névroglie—cellules et fibrilles.) J. Lhermitte and A. Guccione.

- 55 *Arrest of Hemorrhage in Palliative Operations on Cancerous Cervix. (L'hémostase dans l'abrasion du col utérin cancéreux.) R. de Bovis.

55. Arrest of Hemorrhage in Palliative Operations on Cancerous Uterine Cervix.—Instead of curetting, de Bovis amputates the lower part of the cervix, keeping inside the limits of the cancerous tissue, believing that the smooth surface left is an improvement over the ragged results of curetting. To ensure hemostasis or arrest hemorrhage he clamps with narrow bladed forceps the wall of the cervix in the groove made preliminary to the amputation. The results have been very good. In one case a young woman survived for a year at least after this palliative amputation. It obliterates the vessels in the cervix and leaves a smooth wound which oozes very little. The Museux forceps used for the purpose are generally left in place for a day or two, but may be left for a week without inconvenience.

Berliner klinische Wochenschrift

May 3, XLVI, No. 18, pp. 813-860

- 56 *Experimental Tuberculosis with Cavity Formation in the Lungs. (Experimentelle kavernöse Lungentuberkulose.) P. H. Römer.

- 57 *Plastic and Cosmetic Operations. E. Holländer.

- 58 Intracellular Parasite the Alleged Cause of Yellow Fever. (Zur Aetiologie des gelben Fiebers.) H. Seidelin.

- 59 *Rachitis from Lime Starvation. (Der Kalk in der Pathologie der Rachitis.) J. A. Schabad.

- 60 Theory and Technic of Serodiagnosis of Syphilis and Testing of Serums. (Zur Theorie und Technik der "Wassermann'schen Reaktion" und zur Wertbemessung der geprüften Seren.) L. Meyer.

- 61 *Differential Stain for Tubercle Bacilli. (Weiterer Beitrag zu meiner neuen Differentialfärbungsmethode der Tuberkelbacillen.) D. Gasis. (Athens.)

- 62 Needle Fulguration as Aid in Cancer Operations. (Anwendung der Forest'schen Nadel zur Unterstützung von Krebsoperationen.) M. Cohn.

- 63 Study of Partial Situs Inversus. C. Schelenz. Commenced in No. 17.

56. Experimental Tuberculosis with Cavity Formation.—Römer relates experiences which show that guinea-pigs previously rendered tuberculous respond to a severe new infection by production of cavities in the lungs. Animals with chronic tuberculous processes display exceptional resistance to new tuberculous infection, and the appearance of cavities in the lungs seems to be thus to a certain extent an immunity phenomenon. In long series of experiments the guinea-pigs all developed this tendency to cavities in the lungs under the same conditions with great constancy, thus confirming the assertions of von Behring and Orth in regard to the produc-

tion of cavities. The facts observed suggest also that in the majority of cases of pulmonary tuberculosis in man the disease is a reinfection from some old tuberculous process elsewhere—a metastatic autoinfection.

57. Cosmetic Operations.—Holländer gives illustrations of a number of cases of deformity of the nose or breast, causing much disfigurement, which he was able to correct with gratifying results. In one case paraffin injected to fill out the breasts had settled into knobs adherent to the skin and very disfiguring. He made a circular incision in the mamilla through which he was able to scrape out the twelve paraffin lumps without a visible scar and with excellent results. In other cases he filled out shrunken breasts with a mixture of human fat and mutton tallow. The absorption proceeded more slowly and the reaction was the more intense the smaller the amount of human fat in the mixture. The effect a year later was excellent in every instance; the human fat was obtained from excised lipomas. In another case disfiguring hypertrophy of one breast was remedied by turning back the breast from a long incision below and scraping out about 2.2 pounds of the breast tissue, which was found in fatty degeneration. The breast was then replaced, pushing it up to be on a level with its mate, cutting out a strip of superfluous skin below, about 3 cm. wide. He recommends this operation even for bilateral hypertrophy. He has been able to remove glands in the neck even down to the chin through an incision above the edge of the hair and thus invisible. Tumors in the brow were removed through a small incision in the eyebrow. By applying superheated air to wounds after suture, the epidermis on each side is mobilized for a little distance without injuring the suture or ligature. When the edges of the wound meet without the least tension the resulting scar is practically invisible, and this is ensured by the application of superheated air. His experience with paraffin in the treatment of deformity of the nose has been disappointing. In case of loss of the bridge of the nose he cuts out the bone and turns the flap over downward, in such a way that the skin of the nose forms the under lining and the bone the support for the tip of the nose. He then draws down from the brow a flap of skin and forms the nose of it. If there is too little bone he implants one or more slices from the tibia. By this technic the tip of the nose has a most natural aspect. The transplantation of a piece of the tibia has many advantages. Some of his rhinoplastic operations were done eight or ten years ago, and the new-formed nose has proved its permanency and cosmetic appearance. He generally works from within the nose to save a scar.

59. Rachitis from Lime Starvation.—Schabad remarks that the deficit in lime may result from inadequate intake or from defective absorption with normal intake. Breast milk may be deficient in lime, and it is important, he says, to note the lime contents of breast milk, as well as its proportion of fat, albumin and carbohydrates. It is possible that a preparation of lime, phosphorus and cod-liver oil might increase the retention of lime, although in his experience no benefit was derived from them except in rachitis. It is important to change the wet nurse in case the lime content of the breast milk can not be kept normal. If cow's milk is given it should not be diluted too much, giving at least one-third milk. The slightest deviation from normal in digestion or the digestive tract should be promptly treated to ward off disturbances in the intestinal functions which might affect the lime metabolism unfavorably. Rachitis due to lime starvation is liable to induce clinical phenomena more readily than true rachitis, but severe rachitic disturbances in a child exclude the pseudo-rachitis from lime starvation. During the onset of rachitis there is increased elimination of lime and phosphorus, the latter predominating, but in pseudo-rachitis from lime starvation the elimination of lime predominates.

61. Differential Stain for Tubercle Bacilli.—Gasis' stain is based on the property of tubercle bacilli to resist the action of alkalis. He regards this "alkali-proof" condition as the only property peculiarly restricted to tubercle bacilli. Smegma bacilli, etc., are not "alkali proof."

Deutsche medizinische Wochenschrift, Berlin

April 29, XXXV, No. 17, pp. 745-784

- 64 *The Large Intestine. (Zur Physiologie und Pathologie des Dickdarms.) T. Rosenheim.
- 65 Progress in Esophagoscopic Treatment of Swallowed Foreign Bodies. (Ueber Fortschritte in der oesophagoskopischen Behandlung verschluckter Fremdkörper.) W. Brünings.
- 66 *Research on the Mechanism that Stimulates and Checks the Work of the Gastric Glands. (Zur Analyse des Erregungs- und Hemmungsmechanismus der Magendrüsens.) B. Molnar.
- 67 *Blue Electric Arc Light in Treatment of Suppurating and Granulating Wounds and Leg Ulcers. (Der therapeutische Wert der Bestrahlung granulierender und eitriger Wunden und Unterschenkelgeschwüre mit blauem Bogenlicht.) P. Richter.
- 68 Contraindications to Finsen Treatment of Lupus. (Kontraindikationen des Finsen Verfahrens.) M. Piorkowski.

64. Pathology of the Large Intestine.—Rosenheim demonstrates that the different segments of the colon have a peculiar independence in both normal and pathologic conditions. There may be localized disturbance in the functions, causing retention of feces in the segment involved. Obstinate constipation may occur localized solely in the sigmoid flexure or at some point in the colon. The diagnosis requires palpation of the large intestine during the period of constipation. He allows the patient to go for two or three days without a passage, in order to examine instructively the large intestine in detail. This is the only way to learn the exact condition in the bowel and the seat of the disturbance as a guide to treatment. The comparative emptiness of the segment of the intestine below the point is instructive. These localized disturbances are sometimes the most distressing symptom of a general neurosis or they may reveal some affection in adjoining organs.

66. Analysis of the Excito-Inhibiting Mechanism of the Stomach Glands.—This article is supplementary to Bickel's, summarized in these columns, page 1800. The details of the experiments and metabolic findings in the dogs with "nerveless" blind pouch stomachs are tabulated and compared.

67. Blue Arc Light in Treatment of Wounds and Leg Ulcers.—Richter claims that an ordinary arc light with reflector and blue glass screen has the same healing action as sunlight, and that it has a powerful influence in promoting the healing of granulating and suppurative wounds and leg ulcers. It cleans up the infected and dead masses, stimulates the production of granulations and the growth of epidermis, and relieves pain and makes cauterization, powders and salves unnecessary. The scar left is more elastic and resistant, softer and painless. All this is the result of the direct influencing of the arterial blood supply and of the stimulation thus provided for the regenerating tissues.

Medizinische Klinik, Berlin

April 25, V, No. 17, pp. 613-648

- 69 Alcoholic Changes in Muscles. (Alkoholische Muskelveränderungen.) R. Bing.
 - 70 *Tests of Pancreas Functioning by Determination of Trypsin in the Stools. (Prüfung der Pankreasfunktion durch Trypsinbestimmung in den Fäzes.) E. Müller and H. Schlecht.
 - 71 *Jerky Expiration from Pulsating Aneurism. (Exspiratio aneurysmatis pulsatione saccata.) N. Ortner. Commenced in No. 16.
 - 72 Ordinary External Use of Chrysarobin Free from Danger. (Birgt die übliche äussere Behandlung mit Chrysarobin irgend welche Gefahren für den Kranken in sich?) Wolters.
 - 73 *Coincidence of Epigastric Hernia with Gastric Ulcer. (Zusammentreffen von Hernia epigastrica mit Ulcus ventriculi.) H. Ury.
 - 74 Easily Improvised Apparatus for Saline Infusion. (Einfacher leicht selbstherzustellender steriler Infusionsapparat für physiologische NaCl-Lösung.) F. Orland.
 - 75 Artificial Extract for Serodiagnosis of Syphilis. (Ein künstlicher Extrakt zur Anstellung der Luesreaktion.) W. Schürmann.
 - 76 *Diuretic Action of Potassium Bitartrate. (Wirkung des Tartarus depuratus.) O. Burwinkel.
- May 2, No. 18, pp. 649-686
- 77 Immunity Processes from Surgical Point of View. (Chirurgie und Immunitätslehre.) G. Schöne.
 - 78 Mode of Infection in Congenital Syphilis. (Gibt es eine Syphilis congenita ex patre?) H. Rietschel.
 - 79 Chronic Glanders in Man Cured by Injection of Killed Glanders Bacilli. (Ueber chronischen Rotz beim Menschen und seine spezifische Behandlung und Heilung durch abgetötete Rotzbazillen.) K. Zieler.
 - 80 Physical Therapy. Loewenthal.
 - 81 Hydrotherapy of Pulmonary Tuberculosis. (Die Hydrotherapie der Lungenschwindsucht.) A. Moeller.

- 82 Complication of Delivery by Myoma. (Geburtskomplikation durch Myom.) E. Hartog.
83 Chemistry of the Sputum. (Zur Chemie des Sputums.) F. Falk.

70. Improved Tests of Pancreas Functioning.—Müller has applied to the stools his method of determining the proteolytic action of a ferment by the eating out of a hole in solidified serum on which the drop containing the ferment has been deposited. This dimpling (*Dellenbildung*) reveals the proteolytic strength of the ferment in the drop and the absence of dimpling shows that the ferment is absent or inactive. A drop of thin stool causes dimpling or not according as it contains pancreatic trypsin or not. The dimpling demonstrates that the pancreatic duct is permeable and that the pancreas tissue is functioning more or less normally. Negative findings indicate complete occlusion of the pancreatic duct or some severe disturbance in the secreting function of the pancreas. In his research, absolutely negative findings were never obtained except with organic affections of the pancreas, but it is possible that they might occur with purely functional insufficiency. This serum plate dimpling test is reliable but rather inconvenient for the general practitioner, and he has accordingly, with Schlecht, devised a still simpler method based on Sahli's test of pancreas functioning by having the patient ingest a "glutoid" capsule containing iodoform or salol. These capsules are hardened in formaldehyd and resist the action of the gastric juice and are dissolved only by the pancreatic juice. The appearance of the iodine or salicylic reaction in the saliva or urine indicates that the capsule has been dissolved. Positive findings after a certain interval reveal that the pancreas is probably functioning normally. Müller has simplified this test by transferring it from the living body to the test-tube. He uses a capsule hardened in an alcoholic solution of formalin, which dissolves readily in a fluid containing pancreas trypsin while resisting almost indefinitely the action of other organic fluids. The capsules used are filled with charcoal, and 10 or 15 c.c. (about a tablespoonful) of stool as thin as can be obtained is placed in a test-tube wide enough to allow the capsule to float in the fluid stool without touching the walls. The stool must not be filtered and the tube must not be heated above 98 F. If the stools contain the normal proportion of trypsin, the capsule will dissolve in about half an hour and the charcoal will stain the fluid, but if no trypsin is present the capsule will remain unaltered for a day or so before it finally dissolves. This method also permits quantitative estimation of the functioning by comparing the findings when the stool is diluted with 5, 10, 20, 50 and 100 times its bulk with a 10 per cent. aqueous solution of glycerin. Control tests with the serum plate dimpling method gave parallel findings in every case. The Gross method can also be applied as a functional test for the behavior of the pancreas. This is based on the fact that casein in an alkaline solution is readily precipitated by diluted acetic acid, while there is no precipitation if the casein has been subjected to the action of trypsin. The thin stool is mixed with three parts 1 per thousand soda solution and filtered. The test is made simultaneously with graduated amounts of the stool in a series of test-tubes containing each 10 c.c. of a solution of 0.5 gm. pure casein in a liter of 1 per thousand soda solution. For all the above tests the patient is prepared with an enema, fasting, then, after defecation, a test breakfast, followed by a little carmin or charcoal to limit the stools, and an hour or so later is given a purgative. A little chloroform is added also to the stool in the test-tubes to prevent bacterial action, and the stool used for the tests is the most fluid portion that can be obtained. He urges others to compare with the Cammidge reaction the findings with the serum plate and test-tube capsule methods as liable to prove exceptionally instructive, but does not mention any experience of his own in this line.

71. Jerky Respiration as Sign of Pulsating Aneurism.—Ortner reports a case which confirms the possibility of a disconnected respiration of a staccato type from the hammering of the trachea by an aneurism resting against it. His curves of the pulse and respiration reveal the mechanism and type of disturbance in question.

73. Coincidence of Epigastric Hernia and Gastric Ulcer.—Ury reports two cases and refers to four mentioned by Strauss and states that he has found three others in the records of Boas' polielinie. There seems to be an unmistakable connection between the traction and disturbance resulting from an epigastric hernia and the development of an ulcer in the stomach. He warns further that the symptoms may be referred to the evident hernia, when in reality they are due to an unsuspected gastric ulcer. On the other hand, it is possible that symptoms ascribed to an assumed gastric ulcer may in reality be the work of an insignificant and overlooked hernia. In one of his cases the patient was a workman of 56 with inguinal, umbilical and epigastric hernia, and, finally, symptoms of gastric ulcer. Ury has advised operative treatment of the epigastric hernia, at least, in this case, hoping thus to improve conditions for the gastric ulcer.

76. Diuretic Action of Potassium Bitartrate.—Burwinkel confirms from his own experience the commendation of potassium bitartrate, as a diuretic, from the pen of Eichhorst, summarized in these columns April 24, page 1369.

Münchener medizinische Wochenschrift

April 27, LVI, No. 17, pp. 841-896

- 84 Treatment of Fixation of Retroflexed, Pregnant Uterus. (Zur Therapie der Retroflexio uteri gravidæ fixata.) M. Henkel.
85 Normal Starting Point for Action of Heart and Changes in it in Pathologic Conditions. (Ueber den normalen Ausgangspunkt der Herztätigkeit und seine Aenderung unter pathologischen Umständen.) H. E. Hering.
86 *Nature's Attempts to Heal in Case of a Brain Tumor. (Ueber Selbstheilungsvorgänge bei Gehirngeschwülsten.) Anton.
87 *General Syphilis without Primary Manifestations and Professional Syphilis in Medical Men. (Ueber Syphilis d'emblée und die Berufssyphilis der Aerzte.) L. Waelsch.
88 Flatfoot and Psoriatic Arthropathy. (Plattfuss und Arthropathia psoriatica.) A. Stoffel.
89 New Bandage for Supra-acromial Dislocation of the Clavicle. E. Hartung.
90 *Influence of Streptococcus Infection on Leucocyte Blood Picture in Monkeys. (Einfluss der Streptokokkeninfektion auf das leukozytäre Blutbild beim Affen, nebst Bemerkungen über die Untersuchungsmethode.) W. Zangemeister. Continued in No. 16.
91 The Physician and the School. (Arzt und Schule.) E. Doernberger.

86. Self-Healing Processes in Brain Tumors.—Anton discusses the fact that tumors are liable to soften and become cheesy in the center, reduced in size and thus cause less pressure. He has also encountered cases in which hydatid cysts subsided and degenerated, and cases in which tumors became encapsulated with reduction in size. In some cases a spontaneous hemorrhage occurred in the tumor, checking its growth and followed by the absorption of the blood. The cerebral fluid may make its escape through the nose, or, as in one of his cases, through the orbit. He has witnessed excellent results from an artificial opening in the corpus callosum to permit communication between the ventricle and subdural space. This is an important aid in operating, to prevent hernia of the brain when the dura is incised. In four cases of this kind the severe symptoms subsided and the focal symptoms remained stationary. In a case described in detail, a large glioma in the cerebellum with hydrocephalus caused severe symptoms, but suddenly the headache became less, the respiration freer, the pulse more regular, and psychic improvement was also observed. The patient succumbed to pneumonia and autopsy revealed besides the glioma a blood-filled cyst on the other side. The hemorrhage had evidently caused the destruction and encapsulation of this tumor, the resorption afterward reducing the compression on the brain and thus improving the clinical picture.

87. Professionally Acquired Syphilis in Physicians.—Waelsch states that during the last ten years he has encountered in his practice at Prague six cases of professional syphilis in physicians, half of the total number of his cases of extragenital infection during that period. He remarks that it is a universal experience that the most remarkable cases, the rarest complications, and the most unexpected course of diseases are always encountered in physicians or their families. He mentions as a special example of this the chronic, non-gonorrheal urethritis which affects almost exclusively medical men and has a very bad prognosis, both as to its course and its permanent cure. In each of the professionally

acquired cases of syphilis it is evident that the infection might have been avoided with a little care. The primary lesion was on the fingers in all but one case, its cause not suspected until the lack of tendency to heal and the appearance of glandular involvement aroused the suspicion of syphilis. There were no serious manifestations in any case, and no tertiary phenomena. He warns that the hands should be manieured cautiously, not pushing down the skin at the base of the nail, to avoid minute lesions. On the slightest suspicion of a defect in the protecting skin, a rubber cot or glove should be worn, after covering the defect with collodion or fluid plaster. Every patient operated on should be examined for syphilis, whether the operation is gynecologic, obstetric or general, and on suspicion of syphilis gloves should always be worn. Syphilitics should be warned of the necessity of informing the surgeon before any operation in regard to their syphilitic history, both in their own interest and in that of the surgeon. The syphilitic should always inform his dentist of his infection before his teeth are treated. In case the physician injures his hand while operating on a syphilitic, he must burn out the lesion at once with the actual cautery, or if the injury was made with the syringe needle, leave the needle in place and connect it immediately with the negative pole for electrolysis of the tissues around. Simple washing with a corrosive sublimate solution is not effectual here.

90. Influence of Streptococcus Infection on Leucocyte Blood Picture.—The findings in Zangemeister's ten monkeys showed a characteristic curve of the mononuclear neutrophils in the first twenty-four hours from which the further course of the infection could be foretold with absolute certainty. The polynuclears and the eosinophiles also showed a characteristic curve, but less pronounced. The mononuclears increased from 40 to 60 per cent. in the mild and from 45 to 67 per cent. in the moderate cases in the twenty-four hours, while in the fatal cases the mononuclears dropped abruptly from 45 to 42 per cent. If these findings in monkeys can be applied to man we have an easy method of determining the outlook in streptococcus infection in operative and obstetric cases. The leucocytosis ranged from 18,000 to 25,000 in the mild cases and from 17,000 to 13,000 in the moderate, while in the fatal cases the leucocytes dropped from 23,000 to 9,000 within six hours.

Wiener klinische Wochenschrift, Vienna

April 29, XXII, No. 17, pp. 589-624

- 92 *Temperature Relations between Heart and Lungs. (Temperaturbeziehungen zwischen Herz und Lunge.) S. Exner.
- 93 *Present Status of Tendon Transplantation. (Sehnentransplantation.) R. R. v. Aberle.
- 94 Scarlet Fever. (Scharlachfieber.) K. Preisich.
- 95 Hypophysis Tumor. (Zur Kasuistik der Hypophysengangesgeschwülste.) F. Formanek.
- 96 Unreliability of Stain Diagnosis of Syphilis. (Luesnachweis durch Farbenreaktion.) M. Blach.

92. Temperature Relations Between Lungs and Heart.—Exner calls attention to the admirable provision for keeping the heart cooled that is afforded by its being imbedded in lung tissue which is constantly being cooled by the air inhaled. The heart has been estimated to produce 70 calories on an average during the twenty-four hours—an enormous proportion in relation to its size of the average 2,800 calories produced by the entire organism. It is protected against the evil effects of overheating during exertion by the inhaled air; during exertion the breathing is apt to be through the mouth, which brings the air more directly to the heart. Animals after running pant with open mouth and lolling tongue. He suggests that this provision for keeping the heart cool might serve as a guide to treatment of pathologic conditions in the heart.

93. Tendon Transplantation.—Aberle presents arguments to sustain his view that transplantation of tendons is superfluous in the milder cases of flaccid paralysis and useless in the severer cases. In the mild cases the benefit derived and attributed to the tendon transplantation is in reality due to the supplemental fixation, massage and manipulations correcting and overcorrecting the deformity. These should be given a thorough trial first, before tendon transplantation is even considered.

Zentralblatt für Chirurgie, Leipsic

April 24, XXXVI, No. 17, pp. 593-624

- 97 Arthrodesis of Ankle. (Zur Technik der Arthrodesse des oberen Sprunggelenkes.) A. Wittek.
- May 1, No. 18, pp. 625-664
- 98 Resection of Elbow. (Osteoplastische Resektion des Ellbogengelenks.) W. Levy.
- 99 Forceps for Trephining and Laminectomy. (Ueber Trepanations- und Laminektomiezangen.) F. de Quervain.

Zentralblatt für Gynäkologie, Leipsic

April 24, XXXIII, No. 17, pp. 585-616

- 100 *Glycerin Sterilizer for Rubber Gloves and Silk Catheters. (Neuer Desinfektionsapparat für Gummihandschuhe und Seidenkatheter.) Heusner.
- 101 Obstetric Extraction by Both Arms. (Extraktionschwierigkeiten.) R. Teuffel.
- 102 Treatment of Tubal Pregnancy. (Behandlung der Eileiterschwangerschaft.) T. H. van de Velde.
- May 1, No. 18, pp. 617-648
- 103 *Coagulating Properties of Placenta Juice and Their Inhibition. (Bedeutung gerinnungshemmender Stoffe für die Wirkung des Placentarpresssaftes im Tierexperiment.) F. Engelmann and C. Stade.
- 104 Prophylaxis of Hemophilia. (Weibliche Helden.) L. Pincus.

100. Disinfection of Rubber Gloves and Silk Catheters.—Heusner has found that rubber gloves can be boiled in glycerin as long and as frequently as desired. He has the disinfector made with an outer and inner chamber between the walls of which is a wire netting. The gloves are placed in a closed wire netting box in the bottom of the disinfector to keep them covered with the glycerin. The double walls and wire netting act like a safety lamp, allowing the penetration of the heat without danger of overheating. Numerous tests showed that the gloves were always sterile after heating to 110 or 115 C. for thirty minutes in this apparatus over a gas stove or alcohol lamp. Not a trace of injury or change was seen in any of the gloves, silk catheters and instruments thus sterilized. The only objection is the expense of the glycerin, but the same glycerin can be used repeatedly.

103. Coagulating Action of Placenta Tissue and Eclampsia.—Engelmann and Stade state that of 19 rabbits injected with filtered placenta juice in the most diverse concentrations and quantities, 17 died, generally in a few minutes. The fatal action of the placenta juice was evidently the result of excessive coagulating power. In another series of 13 cases the simultaneous or immediately preceding injection of a substance that checks coagulation saved the animals after the injection of placenta juice. Thrombosis developed in every case in which the injection of the coagulation-inhibiting substance was omitted or an inadequate amount injected. It seems evident that the placenta juice contains some blood-coagulating substance, and that it is possible to check its action by injecting some coagulation-impeding substance. The research reported included experiments on 49 rabbits and 31 white mice. The results apparently throw some light on the etiology of eclampsia.

Gazzetta degli Ospedali e delle Cliniche, Milan

April 20, XXX, No. 47, pp. 497-504

- 105 Two Cases of Large Femoral Hernia. (Ernia crurale voluminosa.) L. Fioravanti.
- April 25, No. 49, pp. 513-528
- 106 Ten Cases of Epidemic Cerebrospinal Meningitis. E. Crocco.
- 107 The Pain in Heart Disease. (Il dolore nelle cardiopatie.) A. Rossi.
- April 27, No. 50, pp. 529-536
- 108 *Epidural Injections in Enuresis in Children. (Della puntura epidurale nell'enuresi essenziale dei bambini.) G. B. Allaria.
- April 29, No. 51, pp. 537-544
- 109 Classification and Symptomatology of Syphilids on Female Genitalia. (Sifilide del sistema riproduttore nella donna.) G. Franceschini.
- May 2, No. 52, pp. 545-560
- 110 Calcium in Treatment of Hemorrhage. (Il calcio nella cura delle emorragie.) L. Sabbatani.

108. Epidural Injections in Treatment of Enuresis.—Allaria has applied Cathelin's method of injection of salt solution in twenty-two cases of involuntary micturition at night in children, and obtained good results in about half the little patients. Examining these successful cases more closely he has become convinced that the effect was merely the result of suggestion, and that probably equally good results can be obtained by the usual measures supplemented by suggestion without the necessity for the epidural treatment. Children inclined to idiopathic enuresis are generally neuropathic and

frequently present physical signs suggesting degeneracy, and the tendency to enuresis generally improves under the influence of the stay in the hospital.

Policlinico, Rome

March 28, XVI, No. 13, pp. 389-420

- 111 Diagnostic Auscultation of the Mouth in Respiratory Affections. (Contributo all'ascoltazione della bocca nelle malattie dell'apparato respiratorio.) C. Achille.

April 4, No. 14, pp. 421-452

- 112 *Alleged Specific Changes in the Leucocytes in the Blood in Purulent Inflammations. (Sulle pretese alterazioni specifiche dei leucociti del sangue in casi di infiammazioni purulente.) M. Pavesi.

- 113 Three Puzzling Gallstone Cases. (Calcolosi biliare.) U. Bartera.

April 11, No. 15, pp. 453-484

- 114 *Acute Decubitus Following Spinal Anesthesia. (Il decubito acuto consecutivo alla rachianestesia con la stovaina.) G. Bilancioni.

April, Medical Section, No. 4, pp. 145-192

- 115 *Pathogenesis of Cirrhosis of the Liver in Certain Cases. (Patogenesi di certe cirrosi del fegato con speciale riguardo alle alterazioni epatiche nel morbo Pick.) A. Baduel.

- 116 Fluctuation of the Phenol in the Urine in Certain Affections of Digestive Apparatus and Connected Glands. (Oscillazioni del fenolo nelle urine in alcune malattie dell'apparato digerente e glandole annesse.) T. Cepparello.

112. **Alleged Specific Changes in the Leucocytes in Purulent Inflammation.**—Pavesi gives the findings in 92 cases of purulent inflammation, in 32 with other lesions without suppuration, and in 10 healthy individuals. He followed Cesaris-Demel's directions but was unable to find these changes in the leucocytes so constantly as the latter, and, on the other hand, he found them in some cases free from any suppurative focus.

114. **Acute Decubitus After Stovain Spinal Anesthesia.**—Bilancioni reports three cases in which men between 25 and 50, operated on under stovain spinal anesthesia, developed acute decubitus whose course, site and other characteristics left no doubt as to the connection with the toxic action of the stovain, the patients not being debilitated or bedridden. He discusses the origin and nature of these lesions, comparing them to the paralysis from the toxic action of the drug.

115. **Pathogenesis of Certain Forms of Cirrhosis of the Liver.**—Baduel ascribes the cirrhosis in certain cases to a primary chronic torpid peritonitis involving the liver by the lymphatic route. The same explanation applies also to certain cases of pericarditis, both cirrhosis and pericarditis being of lymphatic origin from some primary source in the peritoneum. The changes in the liver in these cases are too extensive to be referred to congestion alone, and his experimental research has confirmed the assumption of a lymphatic route for direct communication between the peritoneal sac and the interior of the liver. A stain injected into the peritoneal cavity was found after eight or ten hours in spleen and liver, and in still larger amounts after twenty-four hours, while not a trace could be detected in the kidneys, lungs, heart or veins. This etiology of the disturbances in the syndrome described by Pick as "pericarditic pseudocirrhosis of the liver" is confirmed by the findings in two cases reported and the absence of other probable causes. One patient was a girl of 14, the other a man of 40; the autopsy findings in each case are compared.

Riforma Medica, Naples

April 5, XXV, No. 14, pp. 365-392

- 117 Conditions at the Sulphur Mines of Avelli. (Il lavoro nelle zolfare dell'Avellinese.) L. Ferrannini. Commenced in No. 12.

April 12, No. 15, pp. 393-414

- 118 *Tumors of the Base of the Brain. (I tumori della base dell'encefalo.) G. Rummo.

- 119 *Polyneuritis from Chilling. (Sulla patogenesi della polinevrite a frigore.) S. Mancini.

- 120 The Toe Dorsal Reflex in Young Children. (Il riflesso di Mendel-Bechterew nella i. e ii. infanzia.) A. Acquaderni.

118. **Tumors at the Base of the Brain.**—Rummo concludes his long study of the anatomic and physiopathologic aspects of tumors of the base of the brain with a tabulation of the various syndromes caused by tumors in the anterior, posterior or median portions of the cranial fossa and in the three subdividing zones in these parts. The article is accompanied by 61 illustrations, the last one showing instructively the course of the various cranial nerves as they pass through this region and their liability to injury from tumors at various

points. A large number of personal cases with comparison of the clinical and autopsy findings are reported, some demonstrating anew how a tumor in the frontal lobe, by compression from above, may induce a "base" syndrome. The topography and nature of the tumor and the age of the patient are the criteria for treatment, and a course of antisiphilitic medication should be instituted even when there is nothing in the case to suggest syphilitic antecedents, unless the patient is to be operated on at once. A solitary tubercle, glioma or osteosarcoma develops much more slowly than a sarcoma or carcinoma, the latter proving fatal generally in two years and in a few months in children. A cavernous angioma, however, may persist without fatality for a couple of decades and a tubercle may enter a stationary phase or even undergo retrogressive metamorphosis, ossification and calcification. Other things being equal, young individuals bear tumors at the base of the brain better than adults owing to the superior elasticity and yielding capacity of the bones and sutures of the skull. Operative treatment may give great relief from palliative puncture of the ventricle or lumbar puncture or resection of compressing bone, but he regards tumors of the base of the brain as beyond the reach of the surgeon for radical surgical measures.

119. **Polyneuritis from Chilling.**—Maneini reports three cases of acute polyneuritis for which no other cause could be discovered except exposure to cold and dampness. There was no fever in any of the cases and the patients recovered completely in from two to eight months. The Lasègue sign was pronounced in each case, that is, flexion of the thigh on the hip was painless. He discusses the literature on the subject and suggests that the chilling may induce the production of a cytotoxin specific for the peripheral nerve cells.

Hospitalstidende, Copenhagen

March 24, LII, No. 12, pp. 361-392

- 121 Mucus in the Stool and its Diagnostic Importance. (Slim i Afføring, dens Paavising i alm. Praxis og diagnostiske Betydning.) C. Thorsen.

March 31, No. 13, pp. 383-416

- 122 *Graphic Record of the Phases of Respiration and their Proportionate Length. (Om Registrering af Respirationsfaserne og Studier over disses indbyrdes Laengdeforhold.) C. Sonne.

- 123 *Influence of Emotions on Fluctuations of Leucocyte Count. (Psykiske Forhold som Aarsag til Svingninger i Leukocyt-tallet.) V. Ellermann and A. Erlandsen.

April 7, No. 14, pp. 417-440

- 124 *Sarcoma Treated with Coley's Fluid. V. Hertel.

- 125 *Vernon's Method of Treating Hemorrhoids. H. von Thun.

122. **Registration of Phases of Respiration.**—Sonne has devised an ingenious little mask apparatus in which a constant current of air is forced through a tube to a Marcy recording drum but with a gap opposite the mouth so that the current of air has to jump this gap to enter the wider continuation of the tube that leads to the drum. The current of air does this regularly, jumping the gap without effort and continuing on its way in the tube, except when the current is interrupted by the breath passing in and out from the mouth. These interruptions are recorded on the drum and thus graphically register the phases of respiration. He tabulates the findings in 25 healthy persons examined reclining and standing, during physical exertion and at rest, and discusses the influence of the varying types of respiration on the blood pressure, etc.

123. **Influence of Emotions on Variations in Leucocyte Count.**—Ellermann and Erlandsen examined the blood of fifteen persons, taking a fresh drop of blood every minute or so, for four or five blood counts in each case. They found that the drop of blood obtained first always contained the largest number of leucocytes. The difference between the number in the first and the following drops sometimes amounted to 35.6 per cent., ranging from 3.5 to this percentage, although the interval between the first and the fifth drops was less than ten minutes in every instance. They ascribe the larger number in the first drop to the emotional shrinking from the incision, believing that the psychic condition is able to influence the number of leucocytes in the peripheral blood by the same mechanism as in other physiologic variations in the blood count.

124. **Sarcoma Treated with Coley's Toxins.**—Hertel reports several cases of sarcoma in which such benefit was derived from injections of Coley's fluid that he regards it as a duty henceforth to apply it in every such case, especially after removal of a sarcoma, to prevent or attenuate recurrence. He describes three cases in detail. One patient was a man of 29, with sarcoma in the testicle, which was removed, as also a metastatic recurrence a year later. He was then free from recurrence for two years, but then two metastatic tumors in the pelvis required removal but only a partial excision was possible. The operation was supplemented by injections of Coley's fluid and during the ten months since there has been no sign of recurrence. In another case there were signs of a tumor in the spinal canal and the rapid development of symptoms suggested malignant disease. Nothing was found to indicate a primary cancer elsewhere, and, on the assumption of a possible sarcoma, a course of injections of Coley's fluid was instituted. As no improvement was perceptible after about a month, the tumor was sought and removed by a laminectomy. The peculiar appearance of the tumor suggested a fibroma more than sarcoma, but the physicians who saw it concluded that it must be a sarcoma which had been modified by the action of the Coley's fluid. He cites this case as showing that an intradural sarcoma could be so influenced by the injections that it was practically cured, all growth was arrested, and the tumor was modified almost beyond recognition. The patient might possibly have been spared the laminectomy with a little more patience.

125. **Vernon's Method of Treating Hemorrhoids.**—von Thun gives an illustrated description of Vernon's technic, summarized in *THE JOURNAL*, Nov. 2, 1907, page 1560, and states that he has applied it with gratifying results in ten cases of hemorrhoids. Among its advantages are the cleanliness of the technic, the rectum being shut off from the field of operation, the linear scar, and the freedom from danger of injuring the sphincter of the anus and tendency to stricture later.

Hygiea, Stockholm

March, LXXI, No. 3, pp. 194-288

- 126 *Experiences with Serodiagnosis of Syphilis. (Några erfarenheter med Wassermanns serumreaktion vid syfilis.) I. Jundell, J. Almkvist and F. Sandman. Id. K. Marcus.
127 Ferments Causing Autodigestion. (Om autolys.) S. G. Hedin.
128 *Connection of Diabetes with Changes in the Pancreas. (Till frågan om diabetes mellitus och förändringar i pankreas.) C. Heijl.
129 *Diagnostic Importance of Lumbar Puncture. (Lumbalpunktionens diagnostiska betydelse, särskildt vid börjande paralyse générale.) J. Billström.

126. **Serodiagnosis of Syphilis.**—Among the 200 persons tested, 41 were certainly not syphilitic, and a positive response to the test was obtained in this group only in a few lepers. The findings on the whole confirm those reported by other writers. Marcus has examined nearly 500 persons with similar conclusions in regard to the valuable information to be derived from the test, although, he remarks, it is not specific for the syphilis virus but for the disease itself and possibly for an entire group of protozoon affections.

128. **Connection Between Alcoholism, Diabetes and Changes in the Pancreas.**—Heijl describes the autopsy findings, with three illustrations, in a case of moderate diabetes in a man somewhat addicted to alcohol. The pancreas was found much degenerated; scarcely any of the Langerhans islands were normal. He is inclined to accept the opinion that the alcohol injures the pancreas and thus induces the diabetes, although the symptoms of cirrhosis of the liver may predominate during life. He urges systematic research in every case of alcoholism in respect to the condition and functioning of the pancreas.

129. **Diagnostic Importance of Lumbar Puncture.**—Billström summarizes sixteen cases of general paralysis in which the cerebrospinal fluid was examined, the findings confirming the value of lumbar puncture in psychiatry. The globulin reaction is particularly instructive; it was positive in 100 per cent. of 34 cases of general paralysis, and the simplicity of the test commends it for general use, according to the technic of Nonne and Apelt for fractioned precipitation of albumin.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE INFLUENCE OF HEREDITY ON DISEASE, with Special Reference to Tuberculosis, Cancer and Diseases of the Nervous System. A Discussion opened by Sir William S. Church, Bt., K.C.B., M.D., President of the Royal Society of Medicine, Sir William R. Gowers, M.D., F.R.S., Arthur Latham, M.D., and E. F. Bashford, M.D. [From the Proceedings of the Royal Society of Medicine, 1909, Vol. II.] Cloth. Pp. 142, with illustrations. Price, \$1.50. New York: Longmans, Green, and Co., 1909.

THE STEREO-CLINIC. By Dr. Howard A. Kelly, Baltimore, Md. Vol. I., Gynecologic Examination, Hypertrophy, Conglutination, Pessaries, Fibroma. 41 Stereos. Cloth. Price, \$10.25. Vol. II., Examination of Bladder and Catheterization of Ureters, Dilatation and Curettage. 45 Stereos. Cloth. Price, \$11.25. Vol. III., Perineal Tear, Pelvic Abscess, Dermoid Cyst, Parasitic Myoma, Dysuria. 42 Stereos. Cloth. Price, \$10.50. Troy, N. Y.: The Southworth Co.

TEXT-BOOK OF HYGIENE. By George H. Rohé, M.D., Late Professor of Therapeutics, Hygiene and Mental Diseases in the College of Physicians and Surgeons, Baltimore, and Albert Robin, M.D., Professor of Pathology, Bacteriology and Hygiene, Medical Department Temple University. Fourth Revised Edition. Cloth. Pp. 582, with illustrations. Price, \$3. Philadelphia: F. A. Davis Co., 1908.

A TEXT-BOOK ON PRACTICAL OBSTETRICS. By Egbert H. Grandin, A.B., M.D., Gynecologist to the Columbus Hospital. With the Collaboration of George W. Jarman, M.D., Gynecologist to the General Memorial Hospital and Simon Marx, M.D., Late Surgeon to the New York Maternity Hospital. Edition 4. Cloth. Pp. 538, with illustrations. Price, \$4.50. Philadelphia: F. A. Davis Co., 1909.

DISEASES OF THE NOSE, THROAT, AND EAR AND THEIR ACCESSORY CAVITIES. By Seth Scott Bishop, M.D., D.C.L., LL.D., Professor of Diseases of the Nose, Throat, and Ear in the Chicago Postgraduate Medical School and Hospital. Edition 4. Cloth. Pp. 564, with illustrations. Price, \$4. Philadelphia: F. A. Davis Company, 1908.

ESSENTIALS OF LABORATORY DIAGNOSIS. By Francis Ashley Faught, M.D., Director of the Laboratory of the Department of Clinical Medicine, Medico-Chirurgical College, Philadelphia, Pa. Cloth. Pp. 309, with illustrations. Price, \$1.50. Philadelphia: F. A. Davis Co., 1909.

T.E.K.A.-JÄRLIBRO, 1909. 1 Vol. Eldonita de la Tutmonda Esperanta Kuracista Asocio. Kun la portreto de l'honora prezidanto de la T.E.K.A., Dr. L. L. Zamenhof. Pp. 66. Paper. Price, 0.4 sm (20 cents). Köttschenbroda-Dresden: H. F. A. Thalwitzer, 1909.

GENETIC PSYCHOLOGY: An Introduction to an Objective and Genetic View of Intelligence. By Edwin A. Kirkpatrick, B.S., M.Ph., Author of "Fundamentals of Child Study." Cloth. Pp. 373. Price \$1.25. New York: Macmillan Company, 1909.

A TEXT-BOOK OF PRACTICAL GYNECOLOGY. By D. Tod Gilliam, M.D., Emeritus Professor of Gynecology in Starling-Ohio Medical College. Third Revised Edition. Cloth. Pp. 642, with illustrations. Price, \$4.50. Philadelphia: F. A. Davis Co., 1908.

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY, Twentieth Session, 1908. Edited by Linnaeus Edford La Fêtra, M.D. Volume XX. Reprinted from *Archives of Pediatrics*, 1908-09. Cloth. Pp. 238. New York: E. B. Treat & Co., 1909.

HANDBOOK OF OBSTETRICS. By R. Cadwallader, A.M., M.D., Assistant in Obstetrics, University of California, Medical Department, San Francisco. Cloth. Pp. 370, with illustrations. Price, \$2. Philadelphia: F. A. Davis Co., 1908.

MEDIZINAL-BERICHTE ÜBER DIE DEUTSCHEN SCHUTZGEBIETE, FÜR DAS JAHR 1907-08. Herausgegeben vom Reichs-Kolonialamt. Cloth. Pp. 528, with illustrations. Price, 9 marks. Berlin: Ernst Siegfried Mittler und Sohn.

PHYSIOLOGY AND PATHOLOGY OF THE URINE. By J. Dixon Mann, M.D., F.R.C.P., Physician to the Salford Royal Hospital. Edition 2. Cloth. Pp. 324, with illustrations. Price, \$3.25. Philadelphia: J. B. Lippincott Co.

REPORT OF THE SEVENTY-EIGHTH MEETING OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. Dublin, September, 1908. Cloth. Pp. 1212. London: John Murray, Albemarle St., 1909.

SEVEREST ANEMIAS. By William Hunter, M.D., Fellow of the Royal College of Physicians of London. Vol. I. Cloth. Pp. 226, with illustrations. Price, \$3.25. New York: The Macmillan Co., 1909.

THE ELEMENTS OF HYGIENE FOR SCHOOLS. Compiled by Isabel Melsaac, Collaborator of the *American Journal of Nursing*. Cloth. Pp. 172. Price 60 cents. New York: Macmillan Company, 1909.

HISTORY, EFFECT AND CONDITION OF THE MASSACHUSETTS MILK STANDARD: REVISED LAWS, CHAPTER 56, SECTIONS 55 AND 56. Paper. Pp. 64. Worcester, Mass.: Charles W. Wood, 1909.

DANTE: PHYSICIAN. By A. G. Drury, M.D., Cincinnati, Professor of Hygiene in the Medical College of Ohio. Cloth. Pp. 89. Price, 50 cents. Cincinnati: The Lancet-Clinic Press, 1908.

TWENTY-SECOND ANNUAL REPORT OF THE BOARD OF MANAGERS OF ST. LAWRENCE STATE HOSPITAL, Ogdensburg, N. Y., for the Year Ending Sept. 30, 1908. Paper. Pp. 105.

CONFESSION OF A NEURASTHENIC. By William Taylor Marrs, M.D. Cloth. Pp. 114, with illustrations. Price, \$1. Philadelphia: F. A. Davis Co.

SEVENTEENTH ANNUAL REPORT OF THE BOARD OF HEALTH OF SPOKANE, WASHINGTON, for the Year Ending Dec. 31, 1908. Paper Pp. 24.

THIRTY-FIFTH ANNUAL REPORT OF CHRIST HOSPITAL, 176 Palisade Avenue, Jersey City, N. J., 1908. Paper. Pp. 115.

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Address

RELATION OF THE PHYSICIAN IN PRIVATE PRACTICE TO THE PUBLIC HEALTH *

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Before entering on details or discussing the more practical phase of my subject, it will be of interest, I trust, to consider briefly the relation of the public health movement to the general welfare and to the still broader theme of human progress.

SCOPE OF THE PUBLIC HEALTH MOVEMENT

Human welfare may be described under three heads: physical, mental and spiritual. These three elements are correlated, each bound closely with the others, and together they represent the scope of all human endeavor. Without minimizing in the least the other two, it seems to me that at the present time our principal needs relate to the physical.

Physical welfare is the foundation of race welfare in its broadest sense. It may be likened to the Constitution in our legal system. The Constitution is the foundation of our laws. There is not a state law, or a city ordinance, or police regulation, that does not rest on it or is not in conformity therewith, unless it be one that is voidable. Yet we think little about the Constitution, as we are enacting or enforcing our local ordinances, because we take the Constitution as a matter of course, or because it is so intimately connected with our political system that it requires no special thought.

Again, we look on the beautiful dome of the national capitol at Washington, and the legislative chambers beneath, and have scarcely a thought of the foundation on which it all so securely rests; yet it is there, and without it the dome and the chambers could not meet our vision. So physical welfare seems to me to be the necessary foundation for the general welfare; and we should so perfect it that we may lose sight of it and give our contemplation and efforts to higher welfare. In other words, physical welfare is only a means to welfare on a higher plane.

A sound mind in a sound body, *mens sana in corpore sano*, is an aphorism that has come down to us from antiquity, expressing both a truth and a goal to be attained; but in the light of modern thought it is insufficient as a guiding sentiment, since it contains no mention of the spiritual, and this latter is included in the modern thought of human progress.

Just what human progress is, just what it means, can not be defined. Writers of the day speak frequently of the uplift of the race, but there is no definition in this term; and yet, without understanding it, there is no doubt that we are all engaged in furthering human progress, in the uplift of humanity.

There is in astronomy what is known as the true stellar motion. By this is meant that, while the stars are revolving in their orbits, and the planets are also revolving on their axes, and some stars seem fixed, there is a general movement of them all, a progress through space; whither they are going and whence, we do not know, but we do know they are moving. So with human progress and the uplift; it exists. We do not understand it, and the best we can do is to catch its trend and keep ourselves in proper relation to it.

In this movement, the private physician endeavors to keep the individual in line—in his correct place as an individual in the ranks of humanity, as humanity is pressing forward to its destination. If the individual weakens, or meets with accident, the physician discovers the cause of the weakening and applies the remedy, or applies his surgical skill to repair the results of accident.

Analogous service is rendered by the lawyer, whose ideal function is to preserve justice in the ranks; and by the minister of the gospel or priest, who promotes morality and spirituality, these also being essential to human progress.

The physician, then, while ministering to the physical, is also contributing to the mental and spiritual, performing his part as others are performing theirs, absolutely necessary for the general welfare, yet only one of several units.

I fear that these somewhat abstruse thoughts may fail to interest, but I have endeavored to ascertain just where the physician stands in the realm of humanity—what is his relation to the world's work and progress. For with an understanding of our proper relations we are better able to perform our allotted part.

Now, in attempting to show the duties of the physician engaged in private practice in his relation to public health, I would not detract in the slightest degree from the importance and nobility of his ministrations to his individual patients. A qualified physician is a boon to any community. He is more: he is a necessity. Said a distinguished professor of the medical college which I was attending, during one of his lectures: "If I had a son who wished to study medicine, I would advise him against it, but, if he insisted, I would tell him to go ahead, not because of the honor there is in the profession; not because of the money there is in the profession; but simply because doctors must be."

* Address delivered at the graduation exercises of the Atlanta School of Medicine, Atlanta, Ga., April 26, 1909.

I was also once much impressed, during a conversation with the late Dr. Gilman, who was then President of the Johns Hopkins University, with his estimate of the character of the practicing physician in the many communities, large and small, which in the interest of education he had been obliged to visit. Although I do not quote him exactly, he said that he always found the representative physician of the community to be also the representative of its best intelligence in matters relating to education, general science, and the important questions of the day.

The physician must do, and generally does, more than to minister personally to the sick and injured. It is not incompatible with his calling to interest himself in other matters; in fact, to do so both broadens and helps him. The old idea that the practicing physician when not visiting his patients should be reading and informing himself from the books of his profession and should think of nothing else is not in conformity with the modern idea. It is well that he should interest himself in some science or subject akin to his own, or some other special study, which will divert his mind and make it fresher to meet the demands of his calling. Such diversion is really a mental rest. True, it should not be carried too far, but with proper limitation it is helpful and beneficial. Thus we see eminent physicians as authors on topics related or unrelated to their profession; as students of law and ordinances, as members of the legislature, as governors, and holders of other high civic offices.

It seems to me that one should resent the idea that a professional calling requires one to be indifferent to what is interesting his family and his neighbors, to the general interests of the community in which he lives, and particularly to his duties as a citizen. The physician, as well as all others, has his civic duties to perform, which should not be neglected.

A most natural sequence of a doctor's practice is an interest in sanitation and hygiene, sanitation having to do with the environment of man, and hygiene with his physical development. While the physician at the bedside is observing the fever or delirium or the racking pain of his patient, as he notes the anxiety and anguish of the family while the little one hovers between life and death, as he bends over the wasting form of the once strong man, and reflects on the financial distress and difficulties of ordinary existence facing those dependent on this man so stricken with disease, what more natural than that he should ask himself, could not this have been prevented? and that his mind should turn to thoughts of sanitation and hygiene? If the case is one of typhoid fever, he will naturally fear lest others of the family may become afflicted with the same communicable disease, due to the same cause; he will think of the dangers of contact and necessity of disinfecting all discharges, of the possible presence of a bacillus-carrier, and begin a mental study embracing the water and milk supplies, drainage and sewerage, soil pollution, and the need of screening against the typhoid-bearing fly, and the adoption of measures to prevent the breeding of flies.

If the case is one of malaria or yellow fever, for the protection of others, he will think of the mosquito and search for and destroy its breeding-places, whether they be stagnant pools or house rubbish such as old tin cans, which on their indented external surface may hold water so small in quantity as to escape ordinary observation, yet sufficient for the breeding of thousands of mosquitoes.

If the case should be one of plague, he would search for insanitary conditions of house and stable favoring the breeding of rats and fleas which are the parasites of rats and which convey the plague from one rat to another and from rat to man. If the disease be *uncinariasis*, caused by the hookworm, which invades the intestinal tract either through the mouth or the skin of the lower extremities as the victim walks over infected grounds, and is discharged again in multiplied numbers with the alvine secretion, he will think of soil pollution, the chief cause of the prevalence of this disease, and the necessity of sanitary constructions to prevent it.

If the disease be tuberculosis, the great white plague, whose suppression is now engaging the activities of the whole civilized world, his mind will turn to the sanitation of the dwelling; to sufficiency of air space, sunlight and ventilation; to the prevention of flying germ-laden dust, and the disinfection or destruction of sputum.

TUBERCULOSIS AND PREVENTIVE MEDICINE

In view of the great public interest in this one disease, tuberculosis, and the relation which the private physician sustains to it through preventive medicine, it is pertinent to give it here a more than passing notice.

The awakening, both of the medical profession and of the general public, to the importance of this disease, to its fatality and undermining influence on human strength and prosperity, is one of the most notable features of the present century. Its curability and prevention have been demonstrated, and everywhere the popular mind is being aroused, and activities inaugurated and continued for its elimination.

An illustration of this fact may be observed here in Atlanta, where, in addition to other popular and municipal effort, there has recently been displayed a tuberculosis exhibition for the purpose of spreading knowledge and awakening an interest in the general antituberculosis campaign. This particular exhibit is one of a number which have been displayed in the last few months in Florida, Kansas, Nebraska, Missouri and Porto Rico, under the auspices of the National Association for the Study and Prevention of Tuberculosis. Like exhibitions have been held in Maryland, Texas, New York, Pennsylvania and in many other states.

Within the last three months 56 new associations have been organized for the prevention of tuberculosis, making a total of 273 such organizations with which the national association is in correspondence. Of thirty-nine state legislatures in session during the past winter, thirty had under consideration bills relating to tuberculosis, a majority of which gave promise of being enacted into laws.

In September and October last there was held in the city of Washington an International Tuberculosis Congress and exhibition which brought together the leading investigators and workers in this field from four continents. It was the most notable event of its kind in the history of the United States, a great world convention devoted to but one subject—one disease. The stimulating effect of this congress is felt to-day in crowded cities and isolated hamlets.

There has been increasing interest in the prevention and suppression of tuberculosis in this country since 1892, when there was organized in the city of Philadelphia, by Dr. Lawrence F. Flick, the Pennsylvania Society for the Prevention of Tuberculosis, the first or-

ganization of its kind in America. The movement has been actively carried on in a great many countries under philanthropic and governmental auspices.

Its importance from a hygienic and economic standpoint is demonstrable in many ways. Yellow fever, notwithstanding the many panics it has produced, has not caused in the United States, in the past 115 years, as many deaths as occurred last year from tuberculosis in this country. It is estimated that since the year 1793 there have been approximately 100,000 deaths from yellow fever; whereas tuberculosis is estimated to have caused 160,000 deaths last year alone. The mortality from tuberculosis is further emphasized when compared with the epidemic of bubonic plague in India, which has not, for the whole period since its first outbreak in 1896, caused as many deaths in that country in proportion to the population as were caused by tuberculosis in the United States in the same period. Statistics show that tuberculosis in the last four years caused more than three times as many deaths in this country as occurred in action, and from wounds received in action, during the entire period of the Civil War. The figures which sustain this statement are as follows: deaths from tuberculosis in the United States during the last four years, 640,000; deaths in action and from wounds received in action during the four years of the Civil War, 205,070 (federal, 110,070; confederate, 95,000).

I quote from an address delivered by Professor Victor C. Vaughan, of the University of Michigan, before the Tuberculosis Congress in Washington:

Please do not understand from what I have said that I am a pessimist, for such I surely am not, but we must see and appreciate our weakness if we are to relieve ourselves of it, and grow stronger. This crusade against tuberculosis is the greatest work that man has so far attempted. We of this generation are starting it and those who come after us will, we hope, complete it. I certainly believe that the time will come when tuberculosis will no longer curse our race. How soon this time will come it would be folly to predict, for that depends on the intelligence and earnestness of the effort that is put into the work. The eradication of this disease is by no means solely the medical man's problem; it demands the combined intelligence and labor of all men who are interested in the welfare of the race, and the individual who regards it with indifference should find no place in our legislative halls, either national or state. To take the life of a fellow man wilfully or maliciously is murder, the greatest of all crimes; to do so through ignorance or carelessness is manslaughter. In effect it is the same as murder, although in guilt it may be less heinous. The great majority of deaths from tuberculosis are due to manslaughter, and this fact should be recognized. The man who carelessly or ignorantly expectorates infected sputum, which, after drying, may be inhaled and may infect another, is guilty of manslaughter. The same is true of the dairyman who sells infected milk, or of the owner who lets an infected house. It is essential that we recognize these truths before we can be successful in our crusade against tuberculosis. The man who would put arsenic in milk or drinking-water would be regarded by the law as either a criminal or a lunatic, and in either case he would be so dealt with that he could not repeat the offense. The man who sells milk or other food infected with the tubercle bacillus or other disease-producing germs is distributing a more deadly poison than arsenic, and he should be forbidden the continuance of such a practice. We need wise laws in order to restrict and eradicate tuberculosis, and their adoption and enforcement are sure to come as soon as the mass of the people see the matter in the true light.

Our state governments should place tuberculosis on the list of diseases dangerous to the public health, require that all cases be reported, and the local health authorities should see that the disease is not disseminated. I do not think that any

medical man holds that the homes of the tuberculous should be placarded or quarantined, but the tuberculous individual should be minutely and carefully instructed as to the care that he must take with his excretions in order that he may not transmit the disease to others.

The foregoing words of Dr. Vaughan are strikingly impressive.

TUBERCULOSIS AMONG GOVERNMENT EMPLOYÉS

The government of the United States has taken some action with regard to this matter as it relates to its own employés. In an executive order of Feb. 28, 1906, President Roosevelt declared that the non-observance of certain rules by departmental employés should, in the discretion of the head of the department, be considered a just cause for separation from the service. These rules are as follows:

1. All persons in government employ are positively forbidden to spit on the floors.
2. Such persons (employés with tuberculosis) will not be permitted to use the public spittoons, but must provide themselves with individual sputum receivers, preferably of easily destructible material, and carry these with them on arrival and departure. They will be held strictly responsible for the disposal and destruction of their own sputum, so that no other person's health may be endangered therefrom.
3. Such persons must provide their own drinking-glasses, soap and towels, and shall not use those provided for the general use.

TUBERCULOSIS AMONG IMMIGRANTS

Among the millions of immigrants who come to our shores, naturally there are many afflicted with tuberculosis. If allowed to enter the country and mingle with others in tenements and congested districts of our cities, these individuals would be a source of danger and would add many new foci for the spread of the disease. For this reason, all aliens suffering with the communicable forms of tuberculosis are refused permission to land. This applies to those having pulmonary, gastrointestinal or genitourinary tuberculosis. To guarantee against doing an injustice to any one, these cases must be diagnosed microscopically; that is, tubercle bacilli must be found in stained specimens made from the sputa or excretions of the alien. In cases presenting marked clinical signs, but in which the tubercle bacilli can not be found, the alien may still be debarred on the ground that he is suffering from a condition which may interfere with his earning a living and cause him to become a public charge. The medical examination of all immigrants is performed by officers of the Public Health and Marine-Hospital Service.

TUBERCULOSIS AMONG SEAMEN

With regard to seamen of the merchant marine, it is well known that the accommodations furnished sailors on merchant vessels are necessarily cramped and crowded, and in most instances poorly ventilated. When a member of a crew contracts pulmonary tuberculosis, he becomes a serious menace to others who occupy the same fore-castle, unless unusual precautions are taken. Sailors are prone to ship on one vessel after another, remaining but a short time on any one. A consumptive sailor in this way may infect many fore-castles and endanger the health of the sailors who occupy them.

To remedy this condition as much as possible, the medical officers of the Public Health and Marine-Hospital Service were instructed some years ago that whenever a consumptive sailor applied for treatment at a

marine hospital or dispensary the master or agent of the vessel in which the seaman last sailed should be notified, and whenever possible the fore-castle or other apartment previously occupied by the seaman should be disinfected. This was done for the protection of other members of the crew.

Deep-water sailors, because of the nature of their lives, are prone not to form family ties. When these men contract a serious chronic disease, like pulmonary tuberculosis, they are apt to suffer in many cases for want of a home, and, in addition, are a greater danger to the community because of not having a fixed domicile. The government has obviated all this by taking on itself the medical care of its sailors and by establishing at Fort Stanton, New Mexico, a large sanatorium for consumptive seamen. At the present time there are nearly 300 consumptive sailors at this institution.

The sanatorium is located on a reservation covering thirty-eight square miles on a plateau in central New Mexico, at an altitude of 6,150 feet. Here many patients recover, and, of course, some die, as no distinction is made, in admission, as to the stage of the disease. The majority of the patients, however, improve to such an extent that the disease is arrested, and the seamen are able to take up some kind of work and become self-supporting, after, however, having been educated in the way they must live to remain well, and not to be a source of danger to others.

NEED OF INSTRUCTION OF THE TUBERCULOUS

A few years ago, desiring a brief rest without going too far from Washington, I went to the Great Falls of the Potomac—about twenty miles from Washington—and registered at the modest hotel on the Maryland side. Everything seemed to minister to my recreation—some fishing, but more particularly the scenery and interesting surroundings; the intake of the water supply of Washington; the rushing falls and huge boulders in the stream; the neighboring woods and the old canal with its locks and dams; the country store and the old-fashioned hostelry with its clean rooms and beds; the rough canal men and the country people—gave interest to my visit, which seemed to have no drawback to its pleasure, until, on the second day, I interviewed a man whom I had seen lounging around the premises, with the air of an invalid and a cough. I talked with him and found he had consumption, that he had come to this spot for recuperation, but that his home was not far away in one of the adjoining counties.

His country doctor had informed him of the nature of his disease, but on inquiring I found that no word of warning had been given him regarding the danger he might be to others; no advice or instructions relating to the disposition of his sputum, which, therefore—without thought or knowledge of the harm it might do—he had been disposing of recklessly everywhere. Here he was, poor man, unconsciously submitting others, myself included, to the danger of infection with the same disease.

Now, that man should have been instructed; some one should have told him, and should have told him promptly, not in a harsh way that would make him feel that he was necessarily a danger to his own people and to others, but in a sympathetic manner, at the same time explaining how easily the peril of spreading the disease could be avoided.

To this end, provision should be made for placing in the hands of every such person a small leaflet or even a

card, explaining what the patient himself should do to prevent his conveying the disease to others—a disaster which he, himself, as well as those with whom he comes in contact, would naturally wish to avoid. Every doctor should have in his possession cards or leaflets of this character, whether they are provided by the state or municipal health authorities, by voluntary health organizations, or by the physician himself.

It is important that individual responsibility regarding this disease be emphasized. Every one should spread the knowledge of it, and persist until a public sentiment is established which will require of every one to contribute to the movement to wipe the disease out of existence. The simple but important rules should become a part of the common knowledge of the community, and their observance as much a habit as any other recognized rule or order of society.

The same feeling of respect and the same observance should prevail with regard to hygienic rules affecting this and other infectious diseases as now prevail regarding the well-known civic ordinances established for the protection of the community.

The same interest, the same patriotism, should be manifested as is shown by citizens in exercising the right of suffrage. The exercise of this right is simply an expression of a desire to take part in promoting the well-being of the community. How highly it is regarded is demonstrated, in both municipal and national elections, by the jealous care with which all our citizens, both of high and low degree, guard this, their sacred personal right. It is the essence of self-government, which in itself is the pride and glory of the present age and is illustrated nowhere and in no degree so vividly as by the great republic of the United States of America. This popular sentiment, this strenuous determination, to have an individual hand in the political welfare of the country, may well be extended, and naturally can be made to extend itself to the preservation of public health. Each individual must feel that it is his right to be protected from this aggressive disease—tuberculosis—and should be persistent in claiming this right.

SPHERE OF NATIONAL, STATE AND LOCAL PUBLIC HEALTH WORK

In the foregoing pages I have endeavored to show that the physician engaged in private practice must meet and know the principles and practice of sanitation and hygiene, the science of public health, and I now desire to show that his interest must be extended still further in this direction, and that he must of necessity acquire some knowledge of the laws and organizations in accordance with which the public health system is administered.

There are three divisions in the public health system of the United States, national, state and municipal, each having its own sphere, yet intimately related with the others. The states leave certain functions to the cities, exercising certain advisory and mandatory surveillance over them, and the nation bears an attitude similar in many respects toward the states.

In the matter of public health the question often arises how much shall be left to the states, how much shall be imposed on the general government? And here arises the old question as to police powers of the states and the restrictions imposed on the national government by the Constitution. There is evidently a growing sentiment that the national government should do far more than it is now doing toward the protec-

tion of the public health, and there is likewise a strong feeling that too much is expected of the national government, and that there is a tendency on the part of the state governments to allow, or to call on, the federal government for service which properly is imposed on the states themselves; and a willingness to surrender even states' rights for the sake of financial assistance. There is danger of an extreme view in each case, and it appears to me that as regards public health the limitations of the Constitution are the very limitations that the best policy would dictate. I do not admit that the limitations of the Constitution are as narrow as is claimed by some strict constructionists. Much may be done under the Constitution that at first blush seems impossible, but which under intelligent interpretation is possible.

On the other hand, measures evidently beyond the powers granted by the Constitution to the federal government would be unwise measures, weakening, as they would, the independence and self-reliance of states and municipalities, and cultivating a weak leaning on the national government, which would lead to a weakening of our national character.

As expressing one view of a proper division of public health work between the national and state governments, I quote from an editorial writer:

The sanitary condition of cities and towns and the control of the influences which affect the health of the people are matters that come very distinctly within the police powers of the states. Regulations and restrictions for the protection of the public health can be best established and administered by state and local authorities, and the nearer their administration comes to the people affected the better. The subject may be neglected in some states, or they may be slow in appreciating its importance and providing for the sanitary well-being of their people, but that fact does not impair their authority or transfer it elsewhere. They may be dilatory or negligent in many things that the national government can not look after for them.

When it comes to dealing with contagious diseases brought from other countries the matter takes a different aspect. The enforcement of measures for preventing their introduction at our seaports, or over our borders, necessarily involves interference with foreign commerce. Vessels have to be detained, inspected and disinfected and passengers and merchandise have to be subject to regulations that concern the people and the interests of the country regardless of state lines. National jurisdiction has here an appropriate field, and is alone adequate to its requirements. Quarantine regulations affecting communication with foreign countries should be national and national only. The same principles may apply in some degree to protection against the transmission of infectious diseases from one state to another through the agencies employed in interstate traffic, as interference with those agencies pertains to the regulation of commerce between the several states.

In addition to the functions of the national government as outlined in the foregoing quotation, the government is engaging in many important operations quite within its proper sphere. Among these may be mentioned the enforcement of the law and regulations regarding the manufacture of vaccine, toxins and anti-toxins; the law relating to pure food; it is engaged in scientific investigations of the cause of disease and other matters relating to public health; it publishes vital statistics, and disseminates information regarding health conditions in this and other countries; it publishes scientific bulletins on health matters, and its Public Health Service is by law brought into cooperation with the health boards of the several states.

The state boards of health are yearly increasing in power and efficiency, and no scheme of sanitary organization in the United States could be successful which should not include the state health organizations.

GROWTH OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE

The Public Health Service of the United States, under the Treasury Department, was established by act of Congress, by enlargement and change of name of the Marine-Hospital Service in 1902. It may be of interest to sketch briefly the origin and growth of this service. Beginning with 1789, Congress established marine hospitals at various ports of the country to encourage the merchant marine, and physicians were appointed by the respective collectors of customs, in charge of these hospitals. In 1873 the service was reorganized, the physicians made into a corps appointed by the Secretary of the Treasury after examination, with a supervising surgeon-general in Washington, appointed by the President. In 1889 the corps was placed on a still better basis, requiring appointment by the President and confirmation by the Senate. The care of sick and disabled sailors in hospital led to supervision of their sanitary welfare aboard ship, and as sailors and their ships are the usual carriers of infection from foreign ports to our shores, when the first national quarantine law in 1878 was passed, the responsibility for its enforcement was naturally placed, in the same law, on the Marine-Hospital Service. Assisting the states in the exclusion of epidemic disease under the first quarantine law, the service was naturally called on to aid in the suppression of epidemic disease which escaped the barriers, and in the performance of this duty the marine-hospital officers became experienced in enforcing sanitary measures and in the principles of sanitation. In the meantime, a laboratory was established for the scientific investigation of the diseases treated in the hospitals, which was extended subsequently to all contagious and infectious diseases and matters relating to the public health, and from this first laboratory has been developed by succeeding laws the present Hygienic Laboratory of the Public Health and Marine-Hospital Service.

For years the Marine-Hospital Service was engaged, under various acts of Congress, in the performance of public health duties quite apart from its original function, until finally these duties became so great and numerous and the care of sailors in hospitals relatively so small a matter, that Congress in 1902 changed the name to the Public Health and Marine-Hospital Service, and enlarged its scope in public health work. Today it has a corps of nearly 450 medical officers, 50 pharmacists and a total personnel of about 1,740. It treats annually about 58,000 sick and disabled seamen in its 22 marine hospitals and 120 other relief stations. It conducts the maritime quarantine of the Philippine Islands, Hawaii, Porto Rico and the United States. It has its officers in the ports of China, Japan, India, Europe, Central and South America, and the West Indies, to sign the bills of health of vessels, examine immigrants, and give general sanitary information. It inspects all arriving aliens, to enforce the immigration health laws, maintains a sanatorium for consumptives in New Mexico, a well-established institution for the investigation of leprosy in Hawaii; maintains the Hygienic Laboratory at Washington, with a personnel of sixty workers, for the investigation of disease and matters relating to the public health; and a Public Health

Bureau at Washington, with six divisions, through which the operations of the service, properly classified, are conducted by trained medical officers under the direction of the Surgeon-General.

RESPONSIBILITY OF THE PRIVATE PHYSICIAN

In the public health system of the United States, combining the national, state and local forces, the physician in private practice is an important factor. Indeed, he is the first unit, in that on him devolves a duty of reporting the facts that naturally first come under his observation. He has a direct responsibility to the state, in giving the notifications and making the reports required. He is the first to see and know the conditions and diseases which, at first local, may become afterward state or national in their importance. He should loyally support his state and local board of health.

In conclusion, I would say to the members of the graduating class: Do not be dismayed by the obligations, additional to those of your practice, which have just been indicated. At the beginning of a professional career, I know that the field of study, investigation and labor, opened up to the practitioner through the usual curriculum of a medical college, seems so large, so difficult to cover, that one is apt to be apprehensive as to acquiring all the information necessary in the several branches of medicine, and keeping apace with developments, and state medicine may seem an additional responsibility. But you have the advantage of youth and strength. Many years are before you. Your capacity and knowledge will grow with the increasing years. You surely will be able to master these principles of hygiene and sanitation, to become familiar with the public health laws and regulations, and to aid in their enforcement, thus adding to the dignity of your profession and the value of your lives to the common wealth; and will worthily fill the important place allotted to you in the resistless march of human progress.

Original Articles

CHRONIC CHOLECYSTITIS AS A CAUSE OF MYOCARDIAL INCOMPETENCE

REPORT OF THIRTEEN CASES

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It is said that one out of every ten adults has disease of the gall bladder and that one out of every thirteen has gallstones. If these figures are only approximately correct, there is certainly a remarkable discrepancy between the frequency of the occurrence and of the clinical recognition of chronic cholecystitis. This discrepancy is due partly to the ignorance of general practitioners concerning its frequency and partly to the obscurity of its symptoms. Yet when one's attention has been once directed to the subject, one is able to recognize certain symptoms which are very suggestive if not actually convincing.

Prominent among these is indigestion or stomach trouble, with or without more or less epigastric distress, distention or uneasiness coming on several hours after a meal and accompanied or relieved by eructations of gas. Not uncommonly these symptoms of indigestion occur at night, often waking the individual from

sleep toward morning, and they are sometimes associated with palpitation or irregular action of the heart. It is not uncommon for this discomfort in the stomach to be relieved by the taking of soda, food or even a drink of plain water. As belching of gas is apt to follow the ingestion of these substances, the relief experienced is generally attributed to the removal of gas from the stomach. The gas is tasteless and odorless as a rule.

Pain is not an essential symptom even when gallstones exist; and when the chronic cholecystitis is unattended with calculi there may be no history of pain whatever and even no tenderness except during and directly after an acute exacerbation of the gall-bladder infection. In some instances slight colicky pains are felt, and in two of my cases complaint was made of dull, intermittent pain below the heart. Attacks of "congestion of the liver" may be admitted, and at such times there is likely to be vague pain or tenderness in the region of the liver. In some cases also there is pain in the right shoulder, considered rheumatic, or in the back near the inferior angle of the right scapula, and Ewald's area of cutaneous hyperesthesia in the right back low down is generally discoverable.

There is, however, another point of interest in this matter of the symptomatology of gall-bladder disease; namely, the occurrence of disorders in the action of the heart, from arrhythmia and precordial oppression without dyspnea to demonstrable dilatation and incompetence dating usually from some attack of biliary colic or acute cholecystitis and thenceforth maintained by recurrences of the acute disturbance. This is shown by the case reports here narrated, the individuals having sought medical aid because of heart trouble, and, with but two exceptions, having no suspicion of anything being wrong with the gall bladder. Excepting in two cases in which outspoken attacks of hepatic colic were experienced, the symptoms referable to the heart overshadowed those pertaining to the gall bladder, and this viscus became an object of suspicion either on account of the complaint of "indigestion" or of facts in the anamnesis which directed attention to the gall bladder.

Without exception also in each of the cases reported, palpation detected a swelling in the proper location of the gall bladder which in most instances was shown by operation to be a Riedel's lobe. In nearly all cases, repeated and careful palpation was required before the swelling could be detected with certainty, and this was possible only after a more than usually pronounced attack of pain or indigestion. It was possible also at such times to perceive slight rigidity of the right rectus. The patient's color also was generally muddy or subicteric. There was not always a history of typhoid fever, while two patients gave a history of illness supposed to have been malaria, and some declared they never had been ill.

The cases to be reported number thirteen and have been divided into four groups in accordance with their clinical, not their pathologic, features. 1. In this group are five cases of pronounced cardiac incompetence showing considerable dilatation with arrhythmia and feebleness of heart's action with murmurs; in short, subjective and objective symptoms of serious heart disease. 2. This group comprises two cases in which there were attacks of pain that had been called angina pectoris or were of an anginoid character, and which attacks were followed by evidences of myocardial inadequacy. In

this group is included also one other case in which there was dull infracardiac pain, together with arrhythmia of the pulse and a moderate degree of dyspnea on exertion, both dependent on recognizable though not great dilatation of the heart. 3. In this group are embraced three cases of intermittence of the pulse of long standing and very intractable, but without dyspnea or other marked subjective symptoms of myocardial inadequacy. Two patients were much benefited by operation and thereafter enjoyed greater freedom from intermittence than by any previous lines of treatment. 4. This group includes two cases of valvular disease in which cardiac competence was destroyed either by outspoken attacks of hepatic colic or distressing symptoms thought referable to the stomach at first, but subsequently attributed to the gall bladder because of the recognition of a Riedel's lobe. A number of other cases could be reported, but are omitted because either not subjected to operation or not so plainly showing the signs of gall-bladder disease as to make its diagnosis certain.

CASE REPORTS

GROUP 1.

CASE 1.—*Patient*.—G. R., life insurance agent, aged 44, examined Nov. 12, 1903, on account of heart trouble, had suffered from a biliary colic two years before and been jaundiced for ten days. In March, 1903, he had experienced a second attack of colic and been jaundiced for three weeks but had not been operated on because of the state of his heart. All other illnesses were denied and habits had been good. The chief symptoms were dyspnea of effort and distress in the region of the liver.

Examination.—The only points of the physical examination worthy of note were the following: Icterus absent, temperature normal and urinalysis negative; accessible arteries not thickened, pulse intermittent and so arrhythmic that its rate was not recorded; the feeble apex beat in fifth interspace below left nipple and deep-seated dullness increased transversely from one inch to right of sternum to four and a fourth inches to left of the midsternal line; no murmurs, but all sounds very feeble and the second succeeding the first by too short an interval; below the right costal margin a tender, palpable swelling that extended downward the width of two fingers, while elsewhere the liver could not be felt. The diagnosis was made of cardiac hypertrophy and dilatation with inadequacy, due to the cholecystitis and hepatic colic, not to chronic myocarditis. Accordingly an operation was advised in the belief that it would not prove especially dangerous, if properly performed, and would remove the source of irritation which was preventing the restoration of cardiac competence.

Later History.—The subsequent history is interesting. After a period of much suffering from both heart and gall bladder the man at length went to Rochester, Minn., in the hope of an operation, but this being denied on account of the state of the heart I saw him again at St. Luke's Hospital in a very serious state of myocardial inadequacy, somewhat icteric and his gall bladder swelling, very tender and large. An operation was again urged but declined because of the apprehension occasioned by the unfavorable opinion previously received. In February, 1905, a letter received from him stated that, although his heart still troubled him, he was able to attend to business; and quite recently this man, now 50, was married for a second time and was reported actively pursuing his vocation, although still troubled at times by both heart and gall stones. Consequently it is believed that had his gall bladder been opened and drained when this was first advised he would have endured the operation, his heart been reinstated and years of suffering prevented.

CASE 2.—*Patient*.—T. C. H., policeman, aged 43, examined in June, 1904, on account of heart disease, gave the history of illness of ten months duration. Syphilis was denied and whiskey used to excess only during present illness. Two years previously patient suffered from chills and fever which, occur-

ring again ten months previous to examination, was called malaria. The perspiration was of bad odor and there was heaviness in the pit of the stomach. Ten days later palpitation and dyspnea set in and six months before the patient was seen his feet began to swell; he went to Mudlavia, where he took but fourteen baths. He was then obliged to return home and take to bed; he changed from doctor to doctor without relief. In April the abdomen was tapped and fluid withdrawn.

Examination.—Present symptoms were dyspnea on slight exertion, cough, and scanty muddy-looking sputum, anorexia and vomiting, poor sleep on account of shortness of breath. The skin was slightly jaundiced and pitted on pressure over lower extremities to knees, pulse 84, irregular and of low tension, radial arteries slightly thickened, tongue moist and red, temperature 99.9 F., leucocytes 12,600, urine slightly albuminous, lungs negative, but heart dilated, as shown by absence of impulse and increase transversely of both absolute and relative dullness, which latter reached from 1¼ inch to right of sternum to 1 inch outside of left nipple, all heart sounds very feeble and the first at apex impure. The liver was palpable and in the right parasternal line below the costal margin could be felt a swelling of the size of a small fist tender to palpation and the right rectus muscle was tense.

Diagnosis.—The history indicated that the symptoms of heart disease first appeared about ten days after the onset of an illness supposed to be malaria, but as malaria, in my opinion, does not cause disease of the heart and on account of the findings, namely, an enlarged and tender gall bladder, icterus, slight febrile temperature and moderate leucocytosis, the opinion was expressed that the dilatation and inadequacy of the heart had been initiated by an acute cholecystitis and was maintained by what was probably an empyema of the gall bladder. The heart muscle was thought to have suffered irreparable damage and yet without removal of the disturbing element by opening and drainage of the gall bladder, a restoration of even a part of its old-time power was impossible, although even after an operation a recovery of compensation was questionable. Accordingly operative interference was advised.

Operation.—The recommendation was accepted and his physician at home performed the operation. From him it was learned that the gall bladder was found enlarged, thickened, white and distended with mucus and dark bile but without stones. Local anesthesia was used.

Postoperative History.—The man stood the shock of the operation well and for seven days was progressing finely, when suddenly the flow of bile ceased, his temperature rose, the heart grew still more feeble and death occurred on the eighth day after the operation. No autopsy was permitted, but I believe that the findings at the time of the operation substantiated the diagnosis in so far as the relation between the heart and gall bladder was concerned, although an empyema did not exist.

CASE 3.—*Patient*.—C. S. H., real estate agent, aged 53, was first examined in November, 1904, because of heart trouble and shortness of breath for the past two weeks. Habits were excellent and venereal diseases denied; he had had malaria twenty-five years previously and in June, 1903, pneumonia, following which severe attacks of abdominal pain, coming on three to four hours after meals and compelling the patient to lie on his right side with knees drawn up, yet without nausea or vomiting. The last attack of pain had been in June, 1904, and had been diagnosed as acute appendicitis by his physician, who had kept him in bed and on a strict diet which had been maintained up to the present time and been responsible for his loss of weight. His complaint was dyspnea of effort and indigestion characterized by formation of great quantities of gas.

Examination.—Marked emaciation and pallor but no icterus; pulse irregular and intermittent, varying from 88 to 104 per minute; arteries soft and veins not turgid; systolic blood pressure (Gaertner), 95 mm.; no edema. Urine showed a trace of albumin and a few granular casts but no sugar or bile. Temperature 98 F. but leucocytes 12,200. Right lung showed reflex retraction at base behind but no râles. Heart dilated, the total transverse diameter being six inches, impulse very feeble and first sound at apex weak with a faint soft murmur, while

at base all tones were feeble, the second pulmonie being somewhat louder than the corresponding aortic. Examination of the liver revealed a swelling that extended from the costal margin in right parasternal line to the level of the umbilicus and was sensitive both to palpation and percussion. The stomach was somewhat dilated.

Diagnosis.—This disorder was plainly serious myocardial inadequacy with dilatation of both ventricles and muscular mitral insufficiency, but the question of moment concerned the state of the heart muscle and the possibility of its restoration to a fair degree of function power. The history of pneumonia eighteen months before and the man's age rendered likely the existence of a chronic myocarditis. But inasmuch as the gall bladder complication appeared responsible for the break-down of cardiac competence and seemed militating against recovery an operation was recommended in the hope that subsequent rest and treatment might restore some degree of compensation.

Operation.—Accordingly the gall bladder was opened a few days later and was found to contain stones besides exhibiting the usual changes of chronic infection. The heart stood the slight shock of the operation and ten days subsequently was reported by the attending physician to be showing a little improvement.

Postoperative History.—Unfortunately this improvement did not last and when the man was examined three months later the dilatation and myocardial inadequacy were still very serious. Nevertheless he persisted in his attempt to do business, with the result that he overstrained his weak heart, was removed to a hospital for treatment, but to no purpose, and death took place in March, 1906.

CASE 4.—Patient.—H. C. S., manufacturer, aged 61, was seen in April, 1907, because of heart disease. Ten years previously he had had symptoms of glycosuria but not of diabetes and at length sugar had disappeared; seven years before the present illness an operation for perirectal abscess was followed by a perineal abscess that broke into the bladder; several years prior to the glycosuria some sort of trauma with internal injury. In November, 1906, he had a fall, succeeded two weeks later by numerous attacks of epigastric pain that eventually became constant, was accompanied by fever and kept patient in bed. In December, while sitting up in bed to take a drink, he was seized with a sudden sensation of something having burst in the abdomen and fell back in a state of shock from which he was aroused with difficulty. From this obscure illness convalescence was slow and never complete, so that when Mr. S. went south in February he had slight ankle edema and symptoms of cardiac incompetence; by end of March ascites, and a physician ordered rest in bed, cathartics and heart tonics; as soon as able to travel the patient returned home and I examined him.

Examination.—Symptoms were dyspnea on exertion, slight cyanosis, pulse regular and 96 to 105 at rest, systolic blood pressure 154 (Janeway), diastolic 80, radials moderately stiff, no fever, and appetite, digestion and bowel movements good, urine increased at night but without albumin. Physical examination, briefly stated, yielded the following: Heart dilated as shown by feeble apex tap $4\frac{1}{2}$ inches to left and transverse increase of both superficial and deep cardiac dullness, the tones feeble and first at apex obscured by systolic murmur of maximum intensity over right ventricle; the second sound at apex doubled and aortic second tone intensified. Lungs were negative. The really interesting feature in this case was connected with the liver, which on superficial examination appeared enlarged from stasis. It was soon discovered, however, that the enlargement was strictly circumscribed and presented the shape of a swelling with convex upper surface and slightly uneven inner border that projected from the costal arch almost to the level of the umbilicus. This swelling was tender to palpation and by means of the tuning-fork could be differentiated from the body of the liver, which percussion showed of normal size and shape. Lastly, there was a right inguinal hernia.

Diagnosis.—Dilatation and incompetence of the heart, probably also some degree of chronic myocarditis, complicated by an intra-abdominal condition, thought to be a cholecystitis. It was stated also that the illness in the preceding fall with in-

termittent and afterward constant epigastric pain had been an acute exacerbation of an old gall bladder infection—that the sensation of something having burst in the abdomen and the resulting shock might have been due to rupture of the distended gall bladder, and that unless this complication were removed surgically restoration of cardiac competence was impossible.

Operation.—Accordingly a surgeon was called in who agreed in the diagnosis of chronic cholecystitis and concurred in the advisability of operative intervention. The consideration of the heart symptoms having developed during or directly subsequent to the acute illness in the fall gave hope that after removal of the abdominal complication myocardial adequacy might be regained. A week later the operation of opening and draining the gall bladder was done under ether. On incision of the abdominal parietes a clear, sticky serum gushed forth which coagulated speedily and the swelling collapsed. The gall bladder was then found, stitched to the abdominal wall, opened and drained. It was large, white, thick and filled with viscid almost black bile and no calculi.

Postoperative History.—A week later the pulse was of normal rate, the murmur gone and dilatation no longer demonstrable. Before long the man was going to his office but with the drain still in his gall bladder, and he had no further cardiac symptoms except for a short time when the flow of bile became checked. The pulse then became rapid but again fell to its wonted rate on re-establishment of the discharge of bile. In August he suffered a fall from a height of eight feet, which accident was followed by a return of the tumor and pain in the abdomen but without disturbance of the heart's action. Consultation with another surgeon resulted in a diagnosis of pancreatic cyst and a decision to operate. This was never completed, however, as death occurred on the table.

Autopsy.—This disclosed no cyst of the pancreas but a remarkable condition of the omentum. This was attached to the hernial sac and so twisted on itself as to have formed a pouch at its upper part. Into this pouch serum had transuded in consequence, probably, of constriction of the mesenteric vessels, and it was this localized ascites that created the swelling in the vicinity of the gall bladder.

CASE 5.—Patient.—J. B., marine engineer, aged 47, was seen in May, 1907, because of dyspnea and other symptoms, due, as he had been told, to heart disease. The only points in the history worthy of note were typhoid fever in youth and, ten years before the present illness, a severe abdominal pain relieved by a purge.

Physical Examination.—The patient's height was 5 feet 7 inches, weight 177 but normal 202 pounds; conjunctivæ subicteric; no edema, or fever; urine negative; pulse 107 and regular, radials slightly thickened; systolic blood pressure 112 and diastolic 75 (Janeway). There was no perceptible cardiac impulse and deep-seated dullness was greatly increased to left, reaching six inches to left of the midsternal line; sounds were all weak but clear and no murmur was audible. The chest and abdomen were negative. Questioned particularly as to other symptoms than shortness of breath, the man mentioned occasional pains in the lower chest in front which, beginning on the right side, extended upward and across to the left. The diagnosis seemed clear of cardiac hypertrophy with dilatation in consequence of chronic myocarditis and the patient was ordered to bed in charge of a physician in proximity to the man's temporary abode.

Course of Disease.—Treatment for the next two weeks seemed to be improving the condition of the heart, when suddenly, in June, the patient experienced acute pain in the region of the gall bladder, temperature rose to 103 F. with great acceleration of the pulse, marked tenderness below the right costal arch and rigidity of the rectus. Acute cholecystitis was diagnosed and an operation performed, the surgeon finding an enlarged enormously thickened and white gall bladder distended with sticky, black bile and mucus. But the significant feature of this case is that after the opening and drainage of his gall bladder the area of cardiac dullness became appreciably reduced in size and the man lost all symptoms of myocardial

incompetence. When last heard from a few months ago the man was following his occupation as chief engineer on one of the boats on our Great Lakes.

GROUP 2

CASE 6.—Patient.—Mr. McA., contractor, aged 73, seen in consultation May 16, 1907, because of angina pectoris, heart and kidney disease, gave the following history: He had considered himself well until three weeks ago, when one morning while sitting at his office desk, he was seized with a severe pain in the epigastrium and lower part of the chest. The patient arose, went into his cashier's room adjoining and asked to have a physician summoned. This doctor considered the pain due to indigestion and prescribed accordingly, but the pain did not cease for four hours. Symptoms of cardiac incompetence developed the day following and the family physician quite naturally regarded the attack as having been one of angina pectoris, and finding the heart dilated ordered the patient to bed. The only other illness in the patient's recollection had been thirty years previously and consisted of abdominal distress with fever and diarrhea. The symptoms were shortness of breath, especially at night, troublesome eructations of gas, urine scanty, showing a few fine granular casts but no albumin, temperature normal.

Examination.—The patient was in bed, breathing somewhat hurriedly and superficially, looked pale and thin; no edema; pulse 76 to 80 and frequently intermittent; systolic blood pressure 140 (Janeway) and diastolic 78, radials slightly thickened, veins negative. The heart-apex beat was distinct but feeble in sixth space five inches to left of the midsternum and relative dullness increased to one inch outside nipple; the first sound at apex accompanied by blowing systolic murmur and at base both second tones accented. The lungs were negative. The abdomen was thin, and below the right costal margin could be felt what seemed to be the liver. Careful percussion, however, showed the liver to correspond with the inferior costal arch, while below this line was a smooth, rounded body which, slightly tender, glided easily beneath the fingers with each act of respiration and by means of the tuning-fork could be differentiated from the liver. May 19 the patient had another slighter attack of pain in the hepatic region, and at my visit on the 22d the conjunctivæ were subicteric, the temperature was about 100 F., pulse more frequent and more irregular, heart's dullness still more increased, the murmur more intense, the liver congested and the swelling at its lower edge more easily palpable and unmistakably tender.

Diagnosis.—This was now clear and the opinion unequivocally expressed that the underlying cause of the trouble was chronic cholecystitis which had led to an attack of hepatic colic and not angina pectoris and had precipitated the myocardial break down. Degenerative changes in heart, arteries and kidneys were present no doubt, and on this account the gall bladder complication was preventing and would prevent restoration of compensation unless the gall bladder were removed by operation. This being hazardous, surgical counsel was obtained from three men of wide experience. The first was noncommittal; the second dismissed the case as purely medical; while the third coincided in the diagnosis already given and the view that although attended with great risk an operation afforded the only chance of the heart being restored to even a fair degree of competence.

Operation.—The friends decided to incur the risk and on May 25 the gall bladder was opened under gas. This anesthetic was borne badly, but at the end of eighteen minutes was withdrawn, as the operation was almost finished. Such was the rigidity of the abdominal wall, however, that a little more gas was ordered, whereupon respiration ceased promptly and death took place in spite of vigorous efforts to revive the patient. As in the other case, the gall bladder was large, thick, white and filled with black, viscid bile. No calculi were obtained. The only consolation possible under the circumstances was the corroboration of the accuracy of the diagnosis regarding the part played by the cholecystitis in destroying the competence of a heart muscle already diseased and only requiring a biliary colic to overpower its potential integrity.

CASE 7.—Patient.—Mrs. H., housewife, aged 64, was seen in consultation May 22, 1907, because of great irregularity of the pulse and other symptoms of heart disease. She had had typhoid fever in childhood; twenty-five years before, when pregnant, she had been trampled on in a crowd, and this was followed by bloody vomiting but not abortion; seven years before the present illness a severe epigastric pain lasting two or three days and slighter pains at intervals ever since; during the past winter an almost steady distress in region of stomach and for past three weeks shortness of breath on exertion. The present illness began with severe epigastric pain, which, radiating into the chest, was thought to be angina pectoris, especially as the patient had signs of mitral stenosis.

Physical Examination.—The patient was in bed, with rapid, feeble but regular pulse, rectal temperature of 101 F., a moderately distended, tympanic abdomen with marked tenderness and appreciable rigidity directly below the right costal margin. The heart showed a tapping apex beat, increased dullness, both absolute and relative, a short presystolic thrill and murmur ending in a faint systolic whiff heard with the thumping first tone. The diagnosis was made of acute infection of the gall bladder with gallstones, the pain having been a hepatic colic, not angina, and this state of things having broken down the compensation of a mitral stenosis of moderate degree.

Operation.—As there was danger of acute peritonitis as well as of irreparable injury to the heart an immediate operation was advised. This was consented to with reluctance and hence delayed until the following morning. Beginning peritonitis was discovered and, in addition, a large, thick gall bladder which contained pus and a single black stone.

Death occurred thirty-six hours subsequently.

CASE 8.—Patient.—J. A., hotel keeper, aged 48, sought advice of me Dec. 1, 1908, because of dyspnea, irregularity of the pulse and a dull infracardiac pain present most of the time. The history, obtained with much difficulty, was in brief as follows: Typhoid at 14 years of age; fifteen years ago congestion of the liver; six years ago, after a bicycle ride, severe pain in epigastrium with vomiting, lasting six hours and called gastritis; since that time frequent bilious attacks; in May, 1908, pain in the left thigh with nausea and a few hours later, while walking, pain in the left leg with limping, and later, while sitting still, a slight stroke which speedily disappeared, leaving no ill effects behind; a week subsequently pain in region of liver and jaundiced; previous to his experience in May the patient was in the habit of taking an early morning plunge from the wharf into the ice-cold river without any ill effect on his heart; since May had not been well.

Physical Examination.—Patient subicteric but well nourished; pulse 116 in dorsal decubitus and so arrhythmic that the rate could be determined only by auscultation of the heart; systolic blood pressure 155 (Erlanger), accessible arteries slightly thickened; temperature and urine negative. Heart dilated, apex beat in fifth and sixth interspaces five inches from the median line and deep dullness much increased transversely, from $1\frac{3}{4}$ inches to right of midsternum to $5\frac{3}{4}$ to left; many extrasystoles and over the body of the heart a feeble blowing systolic murmur, the pulmonic second tone accentuated. Abdomen corpulent, but below the ribs in the right parasternal line a body feeling like the liver extended downward in a convex shape for about two inches and from the right mammary to the median line, but not especially tender to palpation. The diagnosis was made of dilatation of the heart with incompetence, probably a chronic myocarditis, the incompetence having resulted from an attack of the hepatic colic in May, cholecystitis having caused also an intermittent elaudication.

Course of Disease.—This man subsequently returned to Chicago and received treatment by means of rest in bed, cardiac tonics and Nauheim baths. The heart became reduced in size and the murmur disappeared, while the tones grew stronger, but the dull infracardiac pain persisted, and from time to time, especially when this pain was most persistent, the Riedel's lobe could be made out with great ease. In February the gall bladder was opened under ether and drained. It was much thickened, enlarged, white and filled with mucus, dark-colored bile and sand. When the man went home ten days later his pain had disappeared entirely and his heart's action was slightly

less irregular. He felt perfectly well. A recent report states that when the drainage-tube was removed after six weeks and the wound closed, great abdominal distention and distress, weakness of heart and asthma occurred, necessitating reopening of the wound, on which mucus and bile escaped with great relief to symptoms. What the ultimate effect on his heart will be can not be predicted, but it is feared that the heart muscle has suffered irreparable damage.

In this case, as well as in one other of which I have notes, the pain felt below the heart was spoken of as in the heart. In this connection mention may be made of the circumstance that in a certain instance when a surgeon was exploring the gall ducts for stone the patient exclaimed, "Oh, that gives me a pain in my heart!" I also recall a case seen in consultation with Dr. McCaskey of Fort Wayne, in which besides myocardial inadequacy there were attacks of pain that bore a close resemblance to angina pectoris, yet may have been hepatic colic, since there was a history, together with local findings, that seemed to implicate the gall bladder. It is these considerations that have led to the classification of some of the cases reported in Group 2; namely, that in which there is pain simulating angina pectoris.

GROUP 3

CASE 9.—Mrs. B., aged 57, short and stout, consulted me in April, 1907, on account of a heart difficulty from which she had suffered for three years. She had a fever in the spring of 1904 on arriving in Italy from India, which illness was called malaria. Directly thereafter her heart began to trouble her and she was sent to Bad-Nauheim, where she took a course of baths under Dr. Schott. This course of treatments was repeated in the summer of 1905, and although improved thereby she still suffered from the same symptoms. No other facts of importance could be ascertained. Symptoms: persistent and annoying, irregularity of the heart, with a feeling of weakness and oppression in the region of the heart. This irregularity of the heart was especially bad when she was having indigestion, and at such times she had bad nights and was much exhausted. Naturally ambitious and energetic, she now could endure very little.

Examination.—The pulse was frequently intermittent, 80 standing and 70 in dorsal decubitus, systolic blood pressure 112 (Janeway). Percussion and palpation of the heart were impossible because of the mammary development, but the tones were feeble, especially the first, which in all areas was scarcely audible. The liver could not be palpated, but below the costal margin, right parasternal line, there was tenderness. The two points that attracted particular attention were the absence of dyspnea and the history of the cardiac symptoms having originated in or directly after an attack of supposed malaria. The want of dyspnea and the fall in pulse rate from the standing to the recumbent posture seemed to cast doubt on there being any serious degree of myocardial weakness, while the tenderness below the ribs and the belief that malaria does not cause heart disease directed attention to the possibility of the illness in 1904 having been an acute cholecystitis.

Course of Disease.—During the next six weeks Mrs. B. took a course of Nauheim baths and digitalis with slight improvement subjectively but no appreciable change in the pulse or heart sounds. At length in June she reported her heart as particularly bad because of an unusually bad night from indigestion. The pulse was more intermittent than had ever been noticed, but the point of special interest was connected with the gall bladder. Palpation of the liver had been made repeatedly but always with rather undecisive results. This day, on the contrary, it required but a moment to enable me to feel a smoothly rounded body projecting downward from the inferior costal margin about two inches, which was tender and glided easily down against the fingers with each act of quiet inspiration. The patient was now told that she had chronic cholecystitis, probably a sequel to an acute infection of the gall bladder three years before and that the irregularity of the heart was secondary to or greatly intensified by the chronic infection of the gall bladder. An operation was advised.

Operation.—On June 16 the viscus was opened and drained under ether. There was the usual finding of a large, thick, white gall bladder filled with tarry bile but, in addition, a quantity of sand and small stones.

Postoperative History.—Recovery was uninterrupted, but a little digitalis was ordered for a short time both during the days directly following and for a week or so in July. Not only did the patient improve in every other respect but the pulse soon became regular, and with occasional exceptions has remained so. During December, 1908, and until February, 1909, two months, the heart's action remained perfectly regular, but the patient then contracted an attack of grip, and at present writing, April 4, her pulse intermits but nothing like so frequently as it used to. Another noteworthy fact is that soon after the operation the heart tones became appreciably clearer and stronger and in particular the first sound previously almost inaudible became distinct. The patient herself is more than pleased with the result of the operation.

CASE 10.—*Patient.*—W. M. M., dealer in live stock, aged 58, was seen on July 8, 1908, on account of attacks of palpitation with eructations of gas which awoke him in the small hours of the night, and for which he had been treated without benefit for six months. He denied dyspnea and all other symptoms except flatulence and also declared he had never been ill before.

Physical Examination.—This showed a healthy-looking man of medium height and 158 pounds in weight. The pulse was of variable rate in consequence of frequent irregularity and intermissions, but when regular for a few seconds and running at the rate of 78. Systolic blood pressure was 148 and the brachial arteries felt rather stiff. Temperature and urine were negative. Heart: The indistinct apex beat was in fifth space below the nipple and relative dullness was increased to the left to $4\frac{3}{4}$ inches from the median line. The first tone at the apex was somewhat valvular and over the body of the heart was accompanied by a feeble systolic murmur heard with especial distinctness during each strong beat following a feeble systole. These extrasystoles were at times frequent. The abdomen was negative excepting that below the ribs on the right could be felt indistinctly a resisting body seeming very like Riedel's lobe. There was no tenderness.

Course of Disease.—Treatment by means of digitalis, strophanthus, etc., and various remedies to improve digestion, including correction of the diet, was absolutely without effect on the heart. At length in August, after an unusually troublesome time with his heart, palpation revealed the Riedel's lobe or gall bladder, whichever it was, so plainly that the opinion was expressed that a chronic cholecystitis was responsible for the indigestion and behavior of the heart, and an operation was advised. This was done under ether on August 28, and a thick, white, large gall bladder filled with molasses-like bile but no stones, was opened and drained. Convalescence was uninterrupted, but for a while strophanthus was administered as the state of the heart muscle was doubtful and it was desirable to reduce what slight dilatation was present. At length the heart, previously intractable to all treatment, became regular and for several months gave the man no trouble whatever. Recently, however, this patient has returned, complaining again of his annoying heart symptoms. This time flatulence was particularly pronounced and intestinal toxemia was thought to be the cause of the disturbed heart action. At the present writing treatment addressed to this condition is steadily improving the rhythm of the pulse.

GROUP 4

CASE 11.—*Patient.*—Mr. A., bank cashier, aged 39, consulted me in October, 1908, because of irregularity of the heart's action, slight dyspnea on stairs and fatigue out of proportion to its cause. He thought these symptoms had existed since a certain occasion when he overstrained himself in swimming two years ago. In the winter of 1907 he had been threatened with typhoid fever and since then had been much troubled with gas on the stomach. Other illnesses were unimportant and habits were good.

Physical Examination.—A healthy-looking man; pulse 96 and very arrhythmic, systolic blood pressure 131 and diastolic

80, vessels negative. Temperature, skin, tongue and urine were negative. Heart: Apex beat indistinct in fifth space five inches to left of midsternum; deep dulness reached $5\frac{3}{4}$ inches to left and also slightly increased to right. The sounds were short and valvular and the first at apex was accompanied by a faint whiff most audible with the systole immediately succeeding an intermission. The abdomen was negative.

Course of Disease.—As the heart was dilated and serious incompetence seemed imminent, Mr. A. was advised to take a course of Nauheim baths, which he did with much benefit, his heart's area becoming reduced in size and the murmur disappearing with appreciable improvement in the strength of the tones. His indigestion was troublesome, however, and on one occasion he was given four quarter-grain tablets of calomel with soda to take that evening at half hour intervals. The next day he returned with a still more intermittent pulse, saying that half an hour following the first tablet and directly after the second he had been seized with cramps, vomiting and diarrhea which lasted well into the night and that slight colicky pains were still present. In the belief that these symptoms were not due to the calomel but to a possible gall-bladder trouble, careful palpation of the liver was made with the discovery of a small, tender swelling in the exact location of the gall bladder and extending about two inches below the costal arch. Two days later this swelling was less tender and less easily felt. By the end of the week all sensitiveness had subsided and the mass could be detected with difficulty. The precise degree of influence exerted on the heart by the cholecystitis, and whether or not it was responsible for the maintenance of the arrhythmia was a question hard to decide in view of the history of possible strain while swimming two years before. Nevertheless, an operation was recommended but was not performed owing to an adverse opinion given the patient in Rochester, Minn. This patient has since reported himself as pretty well, having but slight annoyance with his heart and no return of the gall bladder trouble.

CASE 12.—This as well as the next one illustrates the disastrous effect of gall-bladder disease on a heart already damaged by a valvular lesion, but for the sake of brevity will be given only in outline.

Patient.—In 1905 I was required to treat a man of 40 who had an unmistakable insufficiency of the aortic valve, probably of vascular origin. The complaint was more or less dyspnea and palpitation, but the man was always dwelling on his distress in his stomach. As the liver appeared greatly enlarged and sensitive to palpation the epigastric discomfort was thought due to hepatic congestion secondary to the cardiac disease.

Course of Disease.—At length, however, the man's gastric distress and inability to eat and digest food became so pronounced that I was led to examine the liver with particular care. To my surprise I at length was able to determine that the generally enlarged organ showed a contour and tenderness suggestive of a Riedel's lobe. On minute inquiry into the previous history it was ascertained that the man had suffered from symptoms highly suggestive of gallstone colic. A diagnosis of chronic cholecystitis was made and an operation advised, notwithstanding the serious state of the heart. The advice was heeded and an enormously enlarged and thickened gall bladder was opened and drained. It contained the usual tarry bile but no stones. The gastric symptoms were removed and the patient became able to eat, although the liver remained engorged and the heart inadequate. This latter condition better for a time, gradually grew worse and sudden death occurred some three months subsequent to the surgical procedure.

CASE 13.—*Patient.*—Mrs. F., Jewess, was in my care for about a year and a half suffering from dyspnea of effort due to mitral stenosis and occasional attacks of gallstone colic which latter she said she had for a number of years. During the fall of 1908 she was twice in a hospital.

Course of Disease.—During the first of these times the inadequacy for which she had been admitted was yielding satisfactorily to rest and the usual remedies when she was seized with one of her hepatic colics. Not only did the liver become greatly enlarged in the characteristic form of Riedel's lobe, but the heart dilated and became very rapid and arrhythmic,

while the patient herself grew so hysterical and despondent as to be controlled with difficulty. As the gall bladder condition improved the associated cardiac and nervous symptoms gradually disappeared and the patient at length went to her home improved but still far from well. A few weeks subsequently she was again sent to a hospital where she went through a repetition of her former experience, but in an aggravated degree. The liver became much enlarged and underneath its lower margin could be felt a soft, exquisitely sensitive body believed to be the distended gall bladder. Her heart weakness became alarming. Tricuspid insufficiency developed, the legs became edematous, the woman was unable to take food, vomiting was frequent and her nervousness was almost uncontrollable.

A digitalis preparation was administered intravenously; morphin and codein and cathartics were prescribed freely without appreciable benefit. The condition became so grave that both the patient and her husband were told that without an operation, which under existing circumstances would be attended with considerable risk, a restoration of compensation was impossible. Thereupon the patient decided to go home and place herself under the care of a competent neighboring physician. This she did and I was informed subsequently by the attending physician that at length, with subsidence of the gall-bladder symptoms, the heart regained a fair degree of competence, so that the woman was able again to get about. His treatment had consisted essentially of that employed in the hospital, digitalis intravenously administered, etc. It is believed that the history in this case justifies the opinion that with permanent removal of the gall-bladder complication, the heart would have regained and retained its compensation, but without an operation will go to pieces again so soon as another gallstone colic is experienced.

The contemplation of the foregoing cases raises the queries as to what the explanation is of the effect of gall-bladder disease on the heart and why not all persons with chronic cholecystitis develop cardiac symptoms. I acknowledge frankly my inability to answer these questions, but with regard to the second I suggest that a previous state of the myocardium may be a determining factor. A healthy heart muscle may endure such a disturbing influence or may recover quickly from its derangement of function. A myocardium already the seat of structural disease, on the contrary, is seriously affected by conditions of strain or by illness which otherwise would prove harmless. Therefore, since chronic infection of the gall bladder manifests itself chiefly in persons at or past middle age, when presumably the heart muscle is no longer so able to resist attacks, there are furnished the conditions capable of producing the symptom-complex reported in these cases.

The explanation of the baneful effects on the heart of some cases of gall-bladder disease and not of others is hypothetical, and accordingly several theories may be advanced: (1) the circulation in the blood of bacteria or their toxins; (2) the depressing influence of bile constituents on the myocardium; (3) disturbance of the splanchnic circulation and secondarily of the systemic circulation and heart; (4) a reflex inhibition through irritation of the vagus. It is quite possible that a different explanation is applicable to different cases and, moreover, that there must be a predisposing cause residing in the heart muscle, that is, chronic myocarditis, in consequence of which the heart is unfavorably affected by influences which a healthy myocardium would be able to resist.

1. As regards the first explanation: The disastrous—even fatal—effects on the heart of acute cholecystitis, of which every practitioner of experience must have seen instances, is a direct result of the acute infection which is capable of setting up a parenchymatous myocarditis.

In the same manner, but, of course, very slowly, a chronic gall-bladder infection may induce a chronic myocarditis. This view seems borne out by the necropsy findings in a case which I have briefly mentioned elsewhere. A woman of 33, who had suffered for nine years with cholelithiasis, died as a result of an operation on her gall bladder. The autopsy disclosed pronounced coronary sclerosis and an extreme degree of brown atrophy of the heart. Careful search failed to reveal signs of syphilis or any source of infection than that for which the woman had been subjected to surgical interference.

2. The depressing effect of cholemia on the heart has long been known clinically and demonstrated experimentally. Its most common manifestation is in a bradycardia, but the investigations of Stewart and King, of which a summary has been graciously furnished me, prove a toxic action on the myocardium of the pigment biliverdin and a blood-raising power of the bile salts. Furthermore, the combination of biliverdin with an alkaline metal, sodium or calcium in gallstones, prevents its entrance into the circulation and, therefore, its toxic action on the heart. These facts explain the pernicious effects of chronic cholecystitis whenever there is mild but prolonged cholemia shown by slight icterus. Not only may there be chronic, though slight, toxic effect on the heart, but the increase of blood pressure caused by the bile salts may be a factor in gradually overcoming the functional integrity of an already degenerated heart muscle. Given on top of this an acute exacerbation of the chronic cholecystitis and we have all the factors necessary to acute myocardial incompetence.

3. The third hypothesis of irritation of the splanchnic is one which should not be ignored, but in the present state of our knowledge can only be hinted at vaguely. Nevertheless, since the splanchnics are the regulators of the circulation, it may be that disturbance of the intra-abdominal circulation may prove an added factor by unfavorably affecting an already weakened heart and to lead to its dilatation and incompetence.

4. Lastly, the disastrous effect on the heart of biliary colic is probably a reflex result of stimulation of the filaments of the pneumogastric distributed to the wall of the gall bladder. This is more likely, since the formation of gallstones tends to protect the heart from the toxic effect of biliverdin by preventing its absorption into the blood. It is likely also that reflex derangement of the heart is occasioned when soreness is present and not intense pain. It does not seem applicable, however, to cases in which the gall-bladder symptoms are indigestion and not colic, although it must be acknowledged that in many of these cases palpation of the liver reveals marked tenderness. In chronic cholecystitis, therefore, without colic or subjective distress, the harmful effect on the heart must be ascribed to the circulation in the blood of biliverdin and possibly of bacterial toxins, to which may be added the prolonged blood-raising influence of the bile salts. Then if to these be conjoined the disturbing effects of chronic indigestion, we have a variety of factors capable of setting up the cardiac disorders observed. That more or less structural damage to the myocardium ensues seems likely from the readiness with which arrhythmia returns on slight disturbing conditions as in Cases 9 and 10.

The question of operative interference in cases of the kind here reported is one that must be met and answered by the physician according to the exigencies of

each case. That the cholecystitis should be recognized and drainage of the gall bladder instituted before cardiac symptoms arise is self-evident, and the cases are here reported in the hope that general practitioners may be impressed with the frequency of inconspicuous gall-bladder disease and probably may derive some aid in its recognition. Experience has convinced me that the opening and drainage of the gall bladder is attended with less danger, when properly performed, even though myocardial incompetence be present, than is non-interference. Did time permit, cases could be cited which would prove the peril to the patient and the culpability of the physician in leaving a chronically diseased gall bladder unoperated on when timely surgical intervention would have preserved the heart from irreparable damage and even spared life.

LITERATURE

A search of the literature, so far as that has been possible, with a view to discovering cases of the kind here reported, has not been very fruitful of results. Scattered references to the effects on the heart of acute and chronic cholecystitis and to the behavior of the heart during an attack of biliary colic exist in works devoted to the practice of medicine, but, with exception of a paper by Riesman and of certain cases therein cited, no report of the kind here made has been found. For example, Osler,¹ in describing the symptoms of biliary colic, says: "Palpitation and distress about the heart may be present, and occasionally a mitral murmur develops during the paroxysm, but the cardiac conditions described by some writers as coming on acutely in biliary colic are possibly pre-existent in these patients." Krehl,² also in an article on myocardial diseases, says what may be translated as follows:

Disorders of the liver, especially gallstones, and also diseases of the genital organs, occasion at times motor or sensory disturbances on the part of the heart; palpitation, slowing or acceleration of its rate, precordial pressure, pain or anxiety, at times indeed stenocardiac attacks. Often these symptoms are united with heavy and difficult breathing.

And Sticker,³ in his chapter on asthma, narrates a case of a woman whom he was called to treat for an asthmatic seizure that came on during an attack of gallstone colic and in whom the right heart was much dilated, both the asthma and dilatation disappearing after cessation of the pain. Doubtless similar passages might be found in other works.

In 1907 David Riesman⁴ published a report of two cases seen by him which displayed a systolic murmur at the apex and increased cardiac dulness during or directly following a gallstone colic. He also cites the following cases gathered from the literature: Gangolphe,⁵ 9 cases, 4 of cholelithiasis, 2 of emotional jaundice, 2 of hepatic cancer and 1 of cholangitis, in which cardiac murmurs occurred; Fabre,⁶ 8 cases of jaundice, the heart affected in 5; Rendu,⁷ in 1883, a case of hepatic colic in which systolic murmur developed, another case of colic and icterus in which there was marked arrhyth-

1. Practice of Medicine, Ed. 4, 1901, p. 564.

2. Von Marings: Lehrbuch der Inneren Medicin. Ed. 5, 1908, p. 371.

3. Nothnagel's Specielle Pathologie und Therapie, xiv, part 2, sub-division 2, p. 17.

4. The Development of Cardiac Murmurs During Attacks of Biliary Colic, THE JOURNAL A. M. A., May 11, 1907, xlviii, p. 1589.

5. Du bruit de souffle mitral dans l'ictère, Thèse de Paris, 1875.

6. Gaz. d. Hôp, 1877, p. 916.

7. De l'influence des maladies du cœur sur les maladies du foie et réciproquement, Paris, 1883.

mia, and another of catarrhal jaundice with gallop rhythm but no arrhythmia. Rendu also cites a case of Potain, which showed all the signs of tricuspid insufficiency without the recognized causes of that condition. According to Riesman, Tessier⁸ classifies the cardiac disturbances due to gastrohepatic diseases as (1) intensification of the second sound, (2) doubling of the second sound, (3) a tricuspid murmur, and (4) complete tricuspid incompetence with venous pulse. Other writers who have dealt with the development of cardiac murmurs in cases of jaundice are Revillout¹⁰ and Guéneau de Mussy, who, according to Revillout, was the first author to mention their occurrence. Quincke,¹¹ likewise mentioned by Riesman, recognizes a systolic murmur and intensification of the pulmonic second tone in icterus, but thinks them no more frequent than in other states attended with anemia.

In addition to the foregoing, I have discovered reports of cases of inflammatory lesions of the heart due to gall-bladder disease. Thus, Leva,¹² from Eichhorst's clinic at Zürich, reported two cases of ulcerative endocarditis resulting from disease of the gall bladder. The first was that of a 50-year-old multipara, who, after having suffered from icterus and gallstones, suddenly developed signs of endocarditis, from which she died in a short time. The autopsy showed gallstones in the common duct, expansion of the biliary passages and fresh thrombotic endocarditis of the tricuspid valve. The second case, in 1889, was that of a 44-year-old woman who was brought moribund to the hospital and died three days later. At the necropsy were discovered a fresh endocarditis developed on an old mitral disease, gallstones with dilation of the bile passages, abscess of the pancreas and meningitis. Leva cannot prove a definite connection between the disease of the gall bladder and the endocarditis, but any other etiologic factor for the valvulitis is wanting, and hence he concludes that in the first case the organism must have wandered from the gall bladder into the blood without leaving any changes behind, while in the second the pancreatic abscess and meningitis were undoubtedly secondary to the gall-bladder disease.

Leva failed to find similar cases in the German literature, but in the French found the following: Martineau¹³ in 1866, Netter and Martha¹⁴ in 1886—a case of multiple abscesses with gall gravel scattered along the intrahepatic bile ducts of the right lobe of the liver and an ulcerative endocarditis of the mitral valve. They believed that the two conditions were of common origin, since they identified the same organism in both situations and in the duodenum. These authors also cite reports by M. Luys (1864), Murchinson (1868), Jacoud (1872), Rondot (1883) and Malibran (1884), but think the etiologic connection was not proven.

In 1893 C. Oddo¹⁵ of Marseilles reported a case of a 40-year-old man who, having had gallstone colic for several years, suddenly developed a typical attack of biliary colic and jaundice; two days later a feeble arrhythmic pulse with signs of pericarditis from which he died a few days later. Oddo did not find similar cases in literature.

L. Bard¹⁶ reported two cases of catarrhal icterus with bradycardia. In the first the pulse rate varied in the recumbent position between 48 and 52, but in the upright posture 84 to 88. In the recumbent position two jugular pulsations were seen to each cardiac systole and there was a doubling of the second sound, the third element being feeble and distant. In the second patient, the pulse in the dorsal decubitus was from 48 to 52, but in the erect posture 96. The heart sounds were the same as in the former case, but in the jugulars four pulsations were observed to each systole of the ventricles. The condition of the heart continued for several days after disappearance of the icterus.

Finally, the literature contains numerous references to the effect on the heart of the injection of bile into circulation, but, as these experiments are foreign to the class of cases here reported, they are omitted.

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MANAGEMENT OF HEMORRHAGE FROM THE PARTURIENT CANAL *

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The successful management of hemorrhages of the parturient canal requires an intimate knowledge of their causes, unerring judgment, and immediate action for their prevention or control. It is important, therefore, to have in mind a well-developed plan of aggressive action in these emergencies; for on promptness and directness depend the safety of the mother and child.

These hemorrhages may occur before, during, or after labor. Those occurring before and during labor are either accidental or unavoidable. The accidental are due to the partial separation of the placenta from its normal situation in the upper segment of the uterus on account of some pathologic state of the uteroplacental union or traumatism. The hemorrhage may be concealed, visible, or both. The concealed may be dependent on bleeding between the uterine wall and the placenta, the margin of the latter remaining attached; to extravasation of the blood between the membranes and the wall of the uterus; to rupture into the amniotic sac; to stenosis of the cervix or its occlusion by the presenting part.

The unavoidable variety is due to the separation of a vicious implantation of the placenta in the lower segment of the uterus. It is designated lateral, marginal, or central prævia, according to its relative position to the cervix.

Hemorrhage occurring after the delivery of the fetus may originate in any part of the parturient canal; but postpartum hemorrhage proper is only from the placental site. It is primary when it occurs within twenty-four hours after birth of the child; it is secondary when it takes place at any time during the puerperium subsequent to the first twenty-four hours. While the true form is from the placental site, yet there are other cases in which the bleeding may originate from the cervix, vagina, or pelvic floor. Finally, one or more of these types may be combined.

FREQUENCY

Premature separation of the normally implanted placenta is not of common occurrence, and, in fact, its

8. *Gaz. d. Hôp.* 1878, p. 667.

10. *Gaz. d. Hôp.* 1878, p. 666.

11. *Diseases of Liver*, Nothnagel's Practice, English transl., p. 438.

12. *Deutsch. med. Wchnschr.* 1892, xvii, 228.

13. *Arch. gen. de méd.* 1866.

14. *Arch. de physiol. norm. et ath.* 1886, xiii, 7.

15. *Péricardite complication de colique hépatique*, *Rev. de méd.*, 1893, xlii, 829.

16. *Semaine méd.*, 1902, xxiii, 15.

*Read before the Medical and Surgical Society of the District of Columbia, March 11, 1909.

very existence, though affirmed by some of the earlier obstetricians, was denied by others. Altogether, not over 400 cases of this type have been reported in the literature of the subject. These figures, however, do not give an approximate idea of its frequency, as, no doubt, many cases are not recognized, and others are credited to the *prævia* variety. According to Holmes, it occurs about half as frequently as *placenta prævia*, or once in 500 labors.

Placenta prævia occurs, according to different writers, from once in 300 to once in 1,000 pregnancies. In 5,000 births at Columbia Hospital, there were sixteen cases of *prævia*, or one in 312.5 births.

Postpartum hemorrhage occurs in about 5 per cent. of all cases, and terminates fatally about once in 5,000 cases.

ETIOLOGY

The etiology of accidental and unavoidable hemorrhage is not definitely understood. The causes to which these abnormalities have been attributed are so numerous as to justify the inference that the real cause is unknown. As more than 70 per cent. of the cases occur in women who have borne children and the liability increases with each succeeding birth, multiparity and endometritis may be regarded as predisposing factors. The frequent association of nephritis with accidental hemorrhage is also of some significance. A short cord and traumatism may be direct factors in the production of hemorrhage from a normal placental site, while uterine myomata, malformation of the uterus and low implantation of the Fallopian tubes will help to explain some of the cases of *prævia*. Hofmeier explains the origin of the latter as the result of the fusion of the inferior pole of the reflexa with the decidua vera, while Strassman attributes it to defective vascularization of the decidua due to atrophic or inflammatory changes, making it necessary for the placenta to spread over a greater area in order to obtain its requisite supply of nutriment. The unusual size of the placenta in these cases, when we consider the development of the normal placenta as described by Peters, lends support to the latter theory.

While the pathologic factors of postpartum hemorrhage are not clearly understood, we know that anything that lowers the vitality of the system predisposes to atony of the uterus, and this would undoubtedly retard the contraction and retraction of its muscular fibers and thus favor hemorrhage.

Therefore, hemorrhagic diathesis, anemia, leucocythemia, nephritis and endometritis are regarded as predisposing causes. Cardiac, pulmonary or hepatic disease, producing obstruction or sluggishness of the maternal circulation, increases the liability to hemorrhage. Multiparity, precipitate labor, hydramnios and twin pregnancy, also favor postpartum hemorrhage. By far the most frequent cause of hemorrhage after birth is improper management of the expulsive and placental stages of labor. Hasty delivery, either by forceps, breech extraction, or version, may leave the organ unprepared for normal action. On the other hand, precipitate labor or protracted labor, by inducing inertia, may be attended by a similar result. The prolonged use of anesthetics, premature expulsion of the placenta, or a distended bladder, are likewise factors. Secondary hemorrhage is most frequently due to adherent placental tissue or the retention of blood clots.

TREATMENT

Unfortunately, owing to the paucity of our knowledge of the etiology of accidental and unavoidable hemorrhages, we are practically helpless to prevent them. Not so, however, with postpartum hemorrhage; for with proper management during pregnancy and labor, we can usually prevent it; and when it does occur, by the prompt use of measures at our command, we can, with almost absolute certainty, control it.

The management of hemorrhage from the normal placental site will depend on the amount of blood lost. When it is slight, rest in bed and the administration of sedatives, as in threatened abortion, may suffice. If the bleeding continues and the signs of collapse are pressing, the uterus should be emptied slowly or speedily, as the case demands. The cervix, according to the exigency, should be dilated either manually or with rubber bags, severed by multiple incisions, or vaginal Cesarean section performed, and the infant extracted with forceps or by version. After delivery, the uterus should be vigorously massaged to promote its contraction. If the placenta is not promptly expelled, it should be removed manually, the uterine cavity irrigated and packed with gauze to guard against postpartum hemorrhage. At the same time ergot should be given hypodermically further to insure uterine contraction. The vaginal tampon, which is so effectual in the treatment of *prævia*, has no place in the management of accidental hemorrhage, because of the danger of concealed hemorrhage. I have had two cases of accidental hemorrhage; both mothers recovered, but the infants perished before delivery.

In marginal and lateral *prævia*, rupture of the membranes permits the presenting part to descend and control the bleeding by compressing the placenta, and the labor, as a rule, terminates naturally. In this connection, however, the possibility of concealed hemorrhage must be borne in mind. Some years ago I had under my care a case of marginal *prævia* in a young multipara who had given birth to a number of children in rapid succession. The membranes ruptured spontaneously early in labor and there was a slight bleeding. Pains were tardy and feeble. Several hours after the onset of labor, signs of impending collapse were observed, and concealed hemorrhage was suspected. Examination showed the cervix dilated about two inches, but soft and yielding. Forceps were applied *in utero* and a living child delivered. Immediately following the extraction, more than a quart of dark clots were expressed from the uterus, which continued to relax, necessitating artificial expression of the placenta. Profuse hemorrhage followed, which was controlled by intrauterine irrigation and ergot hypodermically.

The tampon is a very valuable adjuvant in the treatment of *prævia*, in that it controls the hemorrhage, promotes softening and dilatation of the cervix, and at the same time enables the attendant to deliberately prepare, if need be, for immediate extraction.

Bipolar version, perforation, or separation of the placenta by the finger from its uterine attachment and afterward bringing down a foot, are the usual methods employed in central *prævia*. Bipolar version has reduced the maternal mortality of *prævia*, but as the child is used as a plug to control the hemorrhage its life is usually sacrificed. It was quite natural, then, that other measures would be evolved with the hope of reducing the high infant mortality while not decreasing the chances of the mother. Hence, abdominal Cesarean

section for placenta prævia has been advocated and performed from time to time for nearly twenty years. In my judgment, it has a limited but clearly defined field. It is particularly applicable in complete prævia in primiparæ with undilated cervix, and the results compare favorably with other methods of intervention. In 1905 I reviewed the literature of the subject and collected reports of 24 patients operated on by twenty-one operators. Seventeen of the cases were of the complete implantation, 2 lateral, and in 5 the variety was not mentioned. Fourteen patients were operated on according to the Säger method, 7 by the Porro, and in 3 cases the methods were not stated. The majority of the patients were in unfavorable condition from repeated hemorrhages and were operated on after other methods had failed. Of the mothers who died, 3 succumbed to shock within twenty-four hours, 1 on the fourth day after secondary operation for obstruction of the bowels, and the fifth of septic peritonitis fifty-six hours after operation. Nineteen mothers and 11 infants recovered, a mortality of 20.8 per cent. and 54.3 per cent., respectively. Eight of the infants were either removed before viability or were dead before extraction, and 5 died from various causes in from several hours to four days after delivery. It is reasonable to suppose that the 5 who died after birth would have experienced the same fate after delivery *per vias naturales*, or might have perished after delivery, though certainly their chances of life were increased by the operation. These statistics are yet too small to formulate any fixed rule for guidance regarding the absolute and relative indications of Cesarean section for placenta prævia; these can be determined only by future experience.

Miller¹ has treated 14 cases of the central variety by preliminary ligation of the uterine arteries. His technic is to ligate the uterine artery on each side through the vagina, and then, having controlled the hemorrhage, he proceeds slowly to deliver. Two of his patients were so profoundly anemic, when first seen, that they died a few hours later, but the other 12 made good recoveries. In only 4 of the 14 cases was there any evidence of fetal life; in 3 of these the children were born alive, but all died prematurely within forty-eight hours. Miller asserts that the operation is simple, performed in some cases without anesthesia, does not decrease the possibility of future child-bearing, controls hemorrhage, allows the operator to proceed slowly and carefully to dilate the cervix and empty the uterus. He also states that the ligation prevents postpartum hemorrhage. He states that, while the fetal mortality may be slightly increased, there should be no maternal mortality except from infection. The method is ingenious and is an effective one in the treatment of placenta prævia, but, as in the older methods, the rights of the child are ignored. I have treated 7 cases of placenta prævia, 2 occurring in the same patient. One of the mothers died. Three of these cases were of the central variety, in which all of the infants were dead before the cases came under observation.

Many of the predisposing causes of postpartum hemorrhage can be overcome, and others at least mitigated, if treated during pregnancy. Some, however, can not be removed, and these may give much concern during the second and third stages of labor. The anemias, toxemias and leucocythemia are particularly prone to cause obstinate postpartum hemorrhage.

Whether to delay a rapid labor or to facilitate delivery in a protracted case in order to avert subsequent hemorrhage, is often difficult to decide.

Unquestionably, the most frequent cause of postpartum hemorrhage is the improper management of the third stage of labor, through neglect, or want of knowledge of the principle of contraction and retraction of the uterine muscular fibers which act as Nature's ligatures in controlling the uterine vessels, favor the formation of thrombi in the uterine sinuses, separate and extrude the placenta. Disregard of this important function of the uterine musculature is liable to be attended by grave consequences.

Every student and nurse should be taught at the bedside the method of grasping the fundus of the uterus, as proposed by Credé, for placental expression. No attempt should be made to deliver the placenta until the fundus rises to the level of the umbilicus, indicating that it has become detached from the uterine wall. At least a half-hour should elapse before expressing the placenta, unless there is actual uterine relaxation or hemorrhage. This allows the uterus to rest and prepare itself for the completion of the third stage. When the placenta is adherent, or if there is retention of clots, the fundus should be grasped in the palm of the hand, with the fingers on the posterior and the thumb on the anterior, and at the height of a contraction pressure made in the axis of the pelvis. If this fails to expel the placenta or clots, it may be necessary to introduce the hand into the uterus to remove them. But care must be exercised not to puncture the wall. In an emergency, bimanual compression, with one hand in the vagina pressing the cervix upward and grasping the fundus and forcing it downward against the symphysis, will effectually check the hemorrhage and allow time for preparing the intrauterine douche and subsequent tamponade. The placenta is sometimes retained and inverted, particularly if traction has been made on the cord. If it can not be expelled by uterine compression, the index-finger should be passed above the inverted edge, hooked into the placenta, and then slight traction will be sufficient to remove it.

I have not infrequently had to deal with postpartum hemorrhage of greater or less severity, and several of the cases are worthy of mention. The first occurred in a multipara who was attended by a midwife. I was summoned about two hours after delivery and found the patient in collapse. Examination showed the fundus uteri to be at the level of the umbilicus, and the uterus contained about a quart of clots. The débris was removed manually and further hemorrhage prevented by intrauterine irrigation and ergot hypodermically. The second case, that of a multipara, was also under the care of a midwife. When I reached the bedside, the patient had been delivered and was having a severe hemorrhage. Examination revealed a partially adherent placenta which was quickly peeled off with the finger and removed, and the uterus douched and packed. The third occurred in a case of Cesarean section complicated with inertia. After the extraction of the child, the uterus collapsed like an empty bag, and there was a marked hemorrhage. For a time it was thought that the Porro operation would be necessary to control the loss of blood. But the liberal use of salt solution, together with compression and gauze packing, finally checked the bleeding. All these patients required stimulants and hypodermoclysis to counteract shock; but recovered after protracted convalescence.

1. Miller, Harold A.: Am. Jour. Obst., 1908, lviii, 1047.

In secondary postpartum hemorrhage, like the primary, preventive treatment is the most satisfactory. If the third stage and the puerperium are properly managed, this complication can usually be avoided. The direct treatment consists in completely removing placental débris or clots and securing complete uterine contraction.

One of the most alarming cases of secondary hemorrhage with which I have ever had to contend was in connection with a case of blighted ovum. When I reached the patient, she was blanched and almost pulseless. Free stimulation and hypodermoclysis were given and the uterus packed. The patient's critical condition made it necessary to defer the removal of the mole until the following day. The acute anemia yielded slowly to the treatment and the patient had to be sent to the seaside to promote recovery.

Injuries to the cervix, vagina and pelvic floor may be greatly minimized by careful attention to the mechanism of labor, retarding the passage of the child in rapid labors and avoiding undue haste in instrumental and operative deliveries. Hemorrhage from laceration of the cervix should be controlled, preferably by suture, and all tears of the vagina and pelvic floor, no matter how slight, should be closed immediately to guard against subsequent hemorrhage or infection.

After the control of the hemorrhage, anemia and shock will demand careful attention. Heat, stimulants, opiates, salt solution, administered intravenously, hypodermically or by rectum, should be employed according to the requirements of the particular case. Strychnin and ergot are of signal value in uterine hemorrhage; the former for its stimulating effect, and the latter on account of its specific action on the uterus, in reinforcing its contraction and thus insuring more complete occlusion of the uterine vessels.

In conclusion, owing to the want of knowledge of the cause of accidental and unavoidable hemorrhages, the mortality from such sources, even in the hands of the skilled and experienced obstetrician, is high. Postpartum hemorrhage and lacerations of the parturient canal, on the other hand, are among the most amenable of obstetrical complications, but require an intimate acquaintance with the proper procedure under such conditions. My reason, therefore, for bringing to attention a subject so familiar to all is not its frequency, but the emergency of the situation which demands early recognition, prompt decision and action, in that it involves the life of the mother and the child, and as regards the physician himself, his professional reputation.

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The Relation of Necrosis of Fatty Tissues and Arteriosclerosis to Diabetes Mellitus.—L. Bleibtren (*Arch. f. ges. Physiol.*, cxxiv, 52), in connection with his work on diabetes, observed a case of advanced diabetes mellitus in a man aged 39, associated with extensive fat necrosis in the region of the pancreas, in the mesentery, in the costal and diaphragmatic pleura and especially in the duodenal serosa. There were no necrotic changes in the tissues of the pancreas itself. In accord with Pflüger's observations, Bleibtren advocates as a tenable hypothesis that the extensive fat necrosis around the pancreas and duodenum had materially damaged or destroyed the nervous connections of these organs, producing as a consequence diabetes mellitus. Similarly in a case of diabetes with associated extensive arteriosclerosis in the pancreatic and abdominal arteries, Bleibtren sees extensive disturbance of the visceral nerves with resulting diabetes.

PAIN AND POTT'S DISEASE, WITH ESPECIAL REFERENCE TO BACKACHE *

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The term "backache" is one which is frequently employed, and often very loosely. By "backache" the laity mean any "misery" or discomfort, located anywhere between the foramen magnum and the gluteal folds. As most backaches are situated below the diaphragm, however, this part of the anatomy is usually meant when backache is spoken of outside the profession. While backache is at times a valuable symptom, the indefiniteness which is so often associated with it makes it misleading to both the public and the physician. The large number of kidney-cures (many of which contain as much as 40 per cent. alcohol), which are so conspicuously advertised, tells plainly to what mischief it may lead. Many a benighted individual, by mistaking the ache over the upper sacral region, very common in neurasthenia or fatigue, for an indication of Bright's, doubtless often induces an incipient nephritis in kidneys which were normal before the exhibition of the "cure" from which he has sought relief. I believe that the number of backaches dependent on lesions of the kidneys is considerably less than we have in the past been disposed to think. A case I will cite shows that the physician also may misinterpret the significance of backache, and illustrates the great need of caution in diagnosing the significance of pain symptoms generally.

First Attack.—On July 28, 1908, I found A. H., a tall, lean Afro-American, in his thirty-sixth year, suffering with excruciating pains in his left hypochondriac and left lumbar regions. The thighs were flexed on the abdomen and the patient was doubled up on his left side between hot bricks and hot-water bottles, wearing a facies indicative of acute pain and distress. The pulse was regular, full and tense, temperature normal. The attack had come on suddenly, with some nausea at the onset. The pain radiated to the left lumbar region and left groin. The abdomen muscles were rigid over the painful area and there was tenderness on pressure, particularly over the region of the kidney both in front and behind. There was no history of painful or blood-colored urine. The only previous history of any moment was that, following an attack of what had been called grip, the patient had for a year been below his previous standard good health. The patient gave an indefinite account of attacks of pain similar to the present, experienced during childhood.

Course of Disease and Subsequent History.—Two ¼ gr. doses of morphin given hypodermically brought relief and the attack subsided. An examination of the urine revealed a clear amber fluid of 1015 specific gravity, showing a small trace of albumin and a few white corpuscles. Blood examination showed no increase in the leucocytes. Tenderness over the left kidney continued after the attack and the organ felt enlarged to the palpating hand. The urine was freely voided after the attack of colicky pain. A provisional diagnosis of renal or ureteral calculus was made.

Two weeks later an attack came on precisely similar in character to the one just described, but there was no abatement of the pain, except under large doses of morphin, until six days later, when an exploratory operation was performed by Dr. Acheson Stewart at the Mercy Hospital. A thorough examination of the kidney, its pelvis and ureter, failed to discover stone or other pathologic condition than a moderately enlarged organ with a shallow-fissured surface. Radiography had previously shown no shadow of a foreign body, but we had assumed that, if present, its texture was of such nature that a shadow could not be observed. A very slight leucocytosis was present before the operation. There followed a speedy con-

* Read before the College of Physicians, Pittsburg, April 22, 1909.

valescence from the operation, with cessation of pain crises for two months. At the end of this time some weakness of the back was still complained of and the urine showed a few leucocytes and doubtful red cells. Ten weeks after the operation and again at twelve weeks attacks recurred like the one first described. A course of salicylates was now followed by relief from pain for two months but more or less invalidism persisted. Then there set in a continuous, very severe pain in the muscles of the back in the lumbar region and toward the right hip joint behind. This resisted all efforts at successful treatment—antirheumatic, antisiphilitic, antineuritic and anti-neurasthenic—when, after a month the pain centered entirely in the right hypochondriac and right lumbar regions. The patient was again placed in the hospital, where, on suspicion and a history of an ancient penial sore, large doses of potassium iodid were prescribed. Under three days of this medication the pain shifted to the right thigh, knee and right leg (the anterior border of the tibia)—these areas claiming first one and then another, the location of greatest severity from day to day. An important difference was now noticed for the first time in the temperature chart; a previously normal temperature began showing an evening rise of about one degree. We believed that a tuberculous focus had been stirred into activity by the potassium iodid and were about to attempt a verification of this by a von Pirquet test when, with a rather sudden focusing of the pain to the right of the lumbar vertebrae and the appearance of a bulging, tender mass at this point, our interesting and varied trail of diagnosis was brought to an abrupt close. The exploring needle established the already unmistakable diagnosis of a tuberculous abscess, the process having undoubtedly existed for a long time and given rise to the varied manifestations of pain already described.

Janeway has called attention to persistent lumbago as a symptom of importance in masked Pott's disease; this was truly conspicuous in my own case. The radiating pains and painful areas alluded to may have arisen from compression involvement, through inflammatory exudates on the roots of the spinal nerves, as they emerged from between the vertebrae. The pain locations and steady progression from above downward leads one to think this probable. A colleague has since related to me an experience almost identical with the above. In an adult farmer, after six months, a mass presented in the right lumbar region. In neither his case nor my own was any spinal deformity noticeable. Tenderness over some of the spinal vertebrae had been noticed by me, but its significance misinterpreted. Spinal pain following jarring movements or twisting of the spinal column (symptoms of Pott's disease) were disregarded until the diagnosis was already apparent.

I have given the above case in some detail because of its valuable suggestions in the study of pain symptoms, and because I am convinced that the above experience is not an uncommon one in such obscure cases of spinal caries. The symptom of pain was throughout the most conspicuous feature. While a valuable symptom when rightly interpreted, pain in this instance repeatedly diverted our attention from important signs which would have given an earlier diagnosis. The case was especially characterized by backache, this giving rise to three mistaken diagnoses: calculus, rheumatism and neurasthenia. Backache is an incident in so many affections that a few words regarding it seem appropriate at this time. Taken alone it is generally of little value. Indeed, it may prove a positive hindrance. In the lumbar region especially we must think of fatigue pain from over-exertion, anemia and neurasthenia. The backache of flatulence and loaded colon must be thought of, particularly in women. In kidney lesions the value of backache has been overstated in nephritis, as it is probably of significance only in the acute processes; in other

forms of kidney pathology—floating kidney, lithemic, perinephritic and tumor conditions, though present at times, it plays no positive part in diagnosis. Backaches which are symmetrically placed are, of course, of far less diagnostic significance than those which are unilateral. Schmidt, in his valuable treatise on pain, calls attention to this, as also to the tenderness on pressure found on the right side in appendicitis with retrocecal abscess, hepatalgia and cholelithiasis: on the left side in gastric ulcer, perisplenitis and pancreatic lesions. "The demonstration of the alimentary modification of backache is of importance, since it occurs in ulcerative processes of the stomach or large intestine. In these as well as in disorders of the colon, for example, carcinoma, the pain often occurs within even a few minutes after the ingestion of cold fluids or solid food." Chronic prostatitis is apt to be overlooked as a cause of backache. W. C. Bryant, in a recent paper,¹ emphasizes this fact, and offers an explanation, in the light of Henry Head's brilliant researches, in the intimate relationship existing between the pudic nerve, from which the prostate receives its spinal fibers, with the roots of the sacral and lumbar plexuses. This prostatically caused backache leads to diagnoses of sciatica and lumbago and at times simulates renal colic so closely that nephrotomy has been performed for stone.

While speaking of referred pains, it is well to remember that what is true of the prostate is true of the various internal organs. A well-known physiologist² tells us:

Under normal conditions *cutaneous* pains are projected with accuracy to the point stimulated. Pain arising in the internal organs, on the contrary, is located very inaccurately. . . . Head especially and others have shown that the different visceral organs have, in respect to reflected pain, a more or less definite relation to certain areas of the skin. Thus we have pains arising from stimuli acting on the intestines, located in the skin of the back, loins and abdomen, in the area supplied by the ninth, tenth and eleventh dorsal spinal nerves. . . . those from the heart in the scapular region, and so on. The explanation offered for this misreference is that the pain is referred to the skin region that is supplied from the spinal segment from which the organ in question receives its sensory fibers, the misreference being due to a diffusion in the nerve centers. As Head expresses it:

"When a painful stimulus is applied to a part of low sensibility in close central connection with a part of much greater sensibility the pain produced is felt in the part of higher sensibility rather than in the part of lower sensibility to which the stimulus was actually applied. Another notable fact in this connection is the occurrence of the condition known as *allochiria*. When from any cause one or other of the cutaneous senses is depressed in a given area, stimulation in this region may give sensations which are referred to the symmetrical area on the other side of the body, or, if this also is involved, it may be referred to the area next above or below in the spinal order."

It should be of great value to bear these physiologic facts in mind when we are dealing with obscure conditions of pain.

The valuable observations of Goldthwait have established the important fact that many of the severe and chronic backaches, especially of women, are due to sacroiliac disease. He has further shown that backache often dates from the time of some operation, generally on the pelvic organs, when, owing to a failure to support the back with cushions, during the operation, a

1. Bryant, William Cullen: The Symptomatology of Prostatitis, THE JOURNAL A. M. A., March 6, 1909, lii, 754.
2. Howell: Text-Book of Physiology, p. 267.

tremendous strain is thrown on the sacroiliac joints, often greatly increased by assistants on either side of the patient bearing most of their weight on the patient's thighs. The joints are left badly sprained and at times chronically inflamed. In the same way, improper methods of dress, by inducing abnormal bodily posture, with its consequent embarrassment to the viscera, doubtless is an etiologic factor of importance in many cases of obscure backache. This question of posture is of vastly more import than I am able at this time to suggest in its bearing on various pains and aches, to say nothing of its influence on the general economy of the body.

The acute fevers, appendicitis and other conditions, often accompanied or ushered in with backache, have other such definite pathognomonic symptoms that little importance attaches to this feature in such diseases.

The pain from uterine affections is most often referred to the upper sacrum—"a dragging sensation, generally referred to the brim of the pelvis posteriorly" (Kelly), being the complaint of that most common of all gynecologic ailments, retroflexion. Diseases of the ovaries, testicles and rectum, as also excessive venery and pelvic inflammations, may direct pain to the sacral region. Speaking of the pains of pelvic inflammations, Kelly makes the statement, which it seems to me good philosophy to follow generally, where pain is concerned, that:

Inflammatory pain has a definite habitat. . . . The pain of inflammation is a fixed point; it is never in one place to-day and then at some remote part of the body to-morrow, one day in the shoulder and the next in the foot or calf of the opposite leg. . . . It is a safe working hypothesis to conclude that a patient who complains of a definite pain and who from day to day and week to week is definite in her complaint as to the character and seat of the pain, has some gross lesion.

It has been my aim to deal with those pains occurring in the lower dorsal, the lumbar and sacral regions—the commonest seats of backache. And it has manifestly been impossible to dwell on more than a few of the more typical examples. Schmidt, in his discussion of lumbar pain, says:

After excluding lesions of the musculature or fascia, such as lumbago and diseases of the spine, like spondylitis, osteomalacia, etc., there is a wide range of possibilities in which nearly all the abdominal organs compete, including particularly the female generative system.

Some discredit has, I think, been attributed to Head's observations on the incidence and distribution of referred pain, by losing sight of the important fact that actual pain is not always experienced, but, "according to the intensity of the visceral stimulus, actual pain may be experienced, or there may result a state of hyperesthesia or hyperalgesia which manifests itself by an increased susceptibility to stimuli, so that contacts which would ordinarily evoke only sensations of touch now give rise to actual pain" (Schmidt). The observation that counterirritation applied over these cutaneous areas may result in relief of the pain and the underlying lesion throws a new light on the results, at times appearing to crown the arbitrary methods peculiar to osteopathy and other counterirritant curative agencies.

CONCLUSION

I believe that Pott's disease would be much more frequently and earlier diagnosed if its initial manifestations, of which pain in the form of backache is often conspicuous, were looked for and recognized.

Backache is of diagnostic value chiefly when unilateral and when guardedly controlled by some accompanying facts of diagnostic importance.

Familiarity with the work of Henry Head on the subject of pain, especially of referred pain, will often be found of the greatest help in reaching a correct and often a difficult diagnosis.

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THE CLINICAL INDEX OF THE THORAX ASSOCIATED WITH PULMONARY TUBERCULOSIS *

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Until very recently almost all text-books on medicine and physical diagnosis have described the thorax associated with pulmonary tuberculosis as flat, and even now some of them persist in this. For example, this statement appears in a recent edition, "The paralytic or phthisical chest is abnormally small, long and flat." This is a curious survival of a medical fallacy which apparently grew up simply because in the past no one had measured any considerable number of such chests. Most of them do appear to be flat, it is true, but taking measurements on a few will show that in most cases the flattening is not real and the appearance is an illusion. This is produced by the shoulders being displaced more forward and downward than normal, which makes the anterior surface of the chest appear to be displaced posteriorly—the type commonly called "round-shouldered" or "hollow-chested." There are two factors which tend to produce the displacement of the shoulders in this manner: (a) a more nearly round chest than the normal, and (b) relaxation or deficient development of the shoulder-girdle of muscles.

It remained for Hutchinson,¹ while engaged in a developmental study of the human thorax, to measure twenty tuberculous chests which he found to be more nearly round than the average normal chest. This he reported in 1897, and subsequent investigation convinced him that the average tuberculous chest is not abnormally flat, but is, on the contrary, abnormally round.

Measurements of the diameters of the chest are made on an imaginary horizontal plane passing through the junction of the fourth costal cartilages with the sternum. Dividing the anteroposterior diameter by the transverse diameter gives the ratio (usually expressed as a percentage) which the former bears to the latter, and is called the "clinical index" of the chest. Several thousand measurements taken at the Yale gymnasium and in the German army² place the average, normal, adult clinical index at 70 per cent., or 70 as it is usually expressed. There is evidently chance for a considerable degree of error in the procedure, as it is impossible to specify definite landmarks at which the measurements should be made, because of the varying degrees of tilting of the ribs found in different individuals. On the normal skeleton such a horizontal plane intersects the spine of the seventh dorsal vertebra, but this may occur

* Read before the Section on Medicine of The New York Academy of Medicine, April 20, 1909.

1. Hutchinson, Woods: Some Deformities of the Chest in the Light of Its Ancestry. THE JOURNAL A. M. A., 1897, xxix, 512.

2. Hutchinson, Woods: Is the Consumptive Chest Flat? THE JOURNAL A. M. A., 1903, xl, 1196.

at the sixth or the eighth in abnormal chests. At the midaxillary line the plane passes through the fifth interspace in normal chests, but it frequently intersects the fourth or sixth interspace in tuberculous chests. Errors also arise because of variability in the thickness of the integument in different individuals, and because of unequal amounts of pressure placed on the calipers in making the measurements.

Hutchinson's first series of 20 cases¹ of pulmonary tuberculosis representing all stages of the disease gave an average index of 78. He subsequently reported 350 cases collected by him from various observers which showed an average index of 79.7. Of these, 40 were of his own which averaged 79.5; 42 cases in the Brompton Hospital (England) averaged 79.6; 75 cases collected by Colbeck of London averaged 80.3; 42 of these were in the first stage and 14 were women which averaged 84.3; White of Boston had 35 cases, with an average of 77.9, of which 10 were women averaging 78.3; Evans and McHugh³ of Chicago had 107 cases averaging 80.8, and Abrams of San Francisco had 35 cases averaging 78. Bessesen⁴ has independently reported 21 men with incipient tuberculosis who gave an average of 74.2, and 6 women, also in the incipient stage, averaging 75.2.

This report is based on a study of 1,022 measurements made on tuberculous patients in the Bellevue Hospital Dispensary and the Cornell University Medical College Dispensary. About one-half of them were made by various physicians in the Bellevue Hospital Dispensary, and the remainder by myself. As the results obtained by the others almost exactly agree with my own, the element of personal error seems to be eliminated.

This series of cases occurred in several races and many nationalities, including both sexes and all ages from 8 to 84 years, in all stages of the disease. The average clinical index of all the cases (1,022) is 75.98. In order to remove all possibility of error from including normal infantile chests, I have excluded all under 20 years of age, leaving 929 patients aged 20 years or more, which gave an average index of 76. This is somewhat lower than the averages noted by other observers, except Bessesen, whose results closely correspond with mine. The difference is, in some instances, because the measurements were taken at the level of the nipples instead of at the junction of the fourth costal cartilages with the sternum, as done by Bessesen and in this series of cases. The highest index observed was 100. The patient was a woman, aged 44, who gave a history of cough for three months and was in the incipient stage. There were no signs of emphysema, except that her anteroposterior and transverse diameters were each 22 cm.

While the average clinical index of tuberculous chests is greater than normal, not every such thorax, by any means, gives a high index; 245 (24 per cent.) of my cases were below 70. This fact greatly limits the value of such measurements in the diagnosis of pulmonary tuberculosis. Finding a high index in an individual case may increase the suspicion of tubercle infection, yet the value of the evidence is so slight that it can have very little weight. The lowest index observed was on a

man, aged 39, who was in the second stage. His transverse diameter was 27.5 cm. and his anteroposterior 15 cm., giving an index of 54.4.

A considerable number of cases show indices which are exactly, or very close to, normal. Taking, for example, variations between 68 and 72, inclusive, I find that 219 (21 per cent.) come within these limits. There were, however, only 83 cases (8 per cent.) which were below 68, while 720 (70 per cent.) were above 72.

Sex is practically no factor in modifying the indices of tuberculous chests, as 808 males averaged 75.93 and 214 females averaged 76.16.

The question whether this increased index is the result of tuberculosis naturally arises. Hutchinson and Bessesen both concluded that it was not, and my findings tend to confirm this. If it develops because of changes in the lungs it is reasonable to conclude that the more extensive the pulmonary lesion the greater the resulting change in the thorax. Separating my cases into stages of the disease gives the following result:

Stage.	No. of Cases.	Average Index.
I	231	75.82
II	637	76.04
III	154	75.97

Though the average indices of the second and third-stage cases are slightly higher than that of the first-stage cases, the difference is so slight that it may be disregarded. The increase in index, then, is not in proportion to the extent of the pulmonary lesion and is, therefore, probably present before the lesion has developed in the lungs.

Classifying the cases by decades of life results as follows:

Decade.	No. of Cases.	Average Index.
1	2	84.50
2	91	74.40
3	311	74.62
4	354	74.43
5	190	80.50
6	63	77.82
7	10	77.40
8	1	79.00

The higher indices after the fourth decade are probably accounted for by the emphysema which normally develops with advancing years.

Some of the cases showed all of the signs of emphysema and consequently gave high indices. It was impossible, however, to exclude them, as one can not clinically decide how much is hypertrophic emphysema and how much is compensatory, having developed secondary to the tuberculous process. It is also unfair to exclude all indices above a certain point as being wholly due to emphysema, as some of the highest noted were on patients giving no signs of it; yet the fact remains that if it were possible to exclude all of those cases in which hypertrophic emphysema existed the average index of the series would be considerably lessened, certainly not above 74.5, which is the average index of the cases in the second, third and fourth decades, 756 in number.

What, then, is the cause of the abnormal relations of the diameters of the chest which exist in three-fourths of the individuals who later develop pulmonary tuberculosis? Hutchinson,¹ by a study of comparative and developmental anatomy, concluded that it was due to an arrest of development, and his conclusion seems to be well founded. With only two exceptions (whales and bats), all mammals below the anthropomorpha have chests which are deeper than they are broad; for example, horses, dogs and cats. They assume the horizontal position and are quadrupedal. It is evident that the chest best suited to their necessities is one which gives a maximum of room for expansion of the lungs without

3. Med. Exam. and Prac., 1902, xii, No. 10.

4. Bessesen, W. A.: Variations in the Ratio of Diameters of the Normal Chest at Different Ages. The Form of the Phtisical Chest, THE JOURNAL A. M. A., 1905, xlv, 2003.

compression of the heart and great vessels, and at the same time allows free movement of the forward limbs in running. This the deep or high-indexed chest gives. When, however, the forward limbs are not used for locomotion, but for climbing, swinging, defense and other lateral movements, the deep chest restricts the freedom of such motions, and the animal is better served by one which is more nearly round.⁵ The anthropoid apes are examples of this class; they assume the semierect position and in them "the thorax is rather broad than laterally compressed."⁶ In man, as has been shown, the thorax is normally flattened anteroposteriorly. Thus we see that in general as the mammalia ascend in the scale of development their chests become more flattened. The apparent explanation for the nearly round chests of whales and bats is that, as their anterior limbs are no longer used in ground locomotion, forward and backward movements, but laterally in swimming and flying, respectively, such a chest is best suited to their needs.

An examination of the human chest from fetal to adult life is of interest in this connection. At the fourth month of fetal life the chest is considerably deeper than it is broad—the lower mammalian type. During the later months the anteroposterior diameter relatively decreases until at birth the chest is practically round⁷—the anthropomorphical type; and after birth it gradually flattens out until the normal index of 70 is reached at about the eighteenth year. The period of most rapid change is during the first six years of life; and at puberty the index is about 80. It is evident, then, that each human chest in its development has gone through the same stages with respect to its diameters as has the human type in its ancestral development.

Having in mind the above, and that the type of chest in which tubercle infection most frequently develops is the same as the normal human chest at puberty, it is a fair conclusion that the typical tuberculous chest is one which has been arrested in its development at or about puberty. Bessesen⁴ believes that the lack of development is principally in the transverse diameter, the anteroposterior becoming about normal. High-indexed chests have been shown to be common among paupers and the insane,³ and a study of the literature and photographs leads me to believe that such chests may also be found associated with idiocy, cretinism and chondrodystrophy. High-indexed chests, then, are frequently associated with various forms of so-called degeneracy, which are really conditions of maldevelopment.

It has been suggested that the degree of abnormality in the diameters may have some influence on the prognosis of pulmonary tuberculosis, and Hutchinson⁸ states that in 31 successive cases, of 16 patients who did badly the average index was 80.2, while 15 that did well averaged 74.6. My observations regarding this have not been sufficiently extensive to warrant a conclusion, though a few cases have shown results which lead me to believe that it may be true.

If high-indexed chests predispose to pulmonary tuberculosis, it is possible to lessen this predisposition by exercises which tend to produce an increase in the trans-

verse diameter; such as climbing, swinging by the arms and movements laterally from the body. It also creates the presumption that it may not be best to prescribe for patients with pulmonary tuberculosis exercises which tend to develop deep chests.⁹

CONCLUSIONS

1. The typical tuberculous chest is more nearly round than the normal chest.
2. The increased index precedes development of tubercle infection in the lungs. It is due to an arrest of development at or about puberty and predisposes to pulmonary tuberculosis.
3. Abnormally high-indexed chests in children should be corrected by proper exercises.

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CHLOROFORM—THE IDEAL HEMOSTATIC IN PULMONARY HEMORRHAGE

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In spite of the great advance made in medicine during the last half-century, the treatment of pulmonary hemorrhage remains practically the same as at the time of Galen, with the addition only of a number of the newer drugs which do not seem to materially improve the solution of this vexed question. The therapeutics of this frequent complication in pulmonary tuberculosis is still based entirely on clinical experience, which in the main is unsystematic and haphazard. Morphine, atropine, ergot, hydrastis, lead acetate, styptiein, adrenalin, calcium chloride, gelatin, nitrites, magnesium sulphate, and a host of other drugs used either singly, in combination, or in rotation, are doled out to the patient with more or less disappointment until Dame Nature, in spite of the drugs and the deranged digestion resulting from their employment, comes to the sufferer's rescue and by her *vis medicatrix* brings about the formation of a blood clot at the bleeding point.

The lot of a patient afflicted with pulmonary hemorrhage is, indeed, pitiful and his aspect at once evokes compassion. Compelled to lie flat on his back without even a pillow under his head, enjoined from changing his position, or at times even his clothes, no matter how irksome or oppressive, forbidden to turn his head or utter a word, subjected to the inevitable ice-bag, which occasionally leaks and chills him to the bone, stuffed with cracked ice in lieu of food, given frequent hypodermic injections, the patient must needs look very forlorn and think of naught but his impending doom. Nor is the position of the attending physician an enviable one, harassed as he is by anxious relatives and uncertain as he must be as to the results of his treatment.

In a previous paper¹ I made cursory mention of the successful use of chloroform in the treatment of pulmonary hemorrhage. Since that time I have continued my experiments with the drug and have given up one by one almost all the above-mentioned medical agents, limiting my treatment even in very severe hemorrhages to chloroform only. I am happy to report most excellent results from the use of chloroform in nineteen

5. Hutchinson: Studies in Human and Comparative Pathology, 1901, Chapter v.

6. Huxley: Anatomy of Vertebrate Animals, p. 402.

7. Holt: Diseases of Infancy and Childhood, 1908, p. 24.

8. Hutchinson, Woods: Discussion on Dr. Bessesen's paper, THE JOURNAL A. M. A., 1905, xlv, 2007.

9. Med. Rec., 1905, lxvii, 645.

1. Clinical Observations on Pulmonary Hemorrhage, THE JOURNAL A. M. A., March 13, 1903, 883.

eases of pulmonary hemorrhage, two of which ordinarily would have been regarded as probably fatal.

The routine treatment has always been uncertain and empirical because of the fact that the bleeding point is not accessible and therefore can not be reached directly by hemostatics. Our aim, therefore, must be to bring about a blood clot in an indirect manner. This may be achieved in one of the following ways: (1) by reducing the force and rate of the heart beat; (2) by reducing the blood pressure; (3) by reducing the respiratory movement.

Now the effect of chloroform on the circulation is chiefly to depress the vasomotor system, causing an extraordinary fall of blood pressure. Complete vascular relaxation ensues, facilitating the passage of the blood from the arteries into the capillary network and veins. The patient is, so to speak, bled into his own vessels. There is also some cardiac enfeeblement and dilatation, which likewise contributes to the fall of blood pressure. Chloroform has also a depressant effect on the respiration, because of the lessened supply of blood to the respiratory center.

As chloroform produces coagulation of the blood *in vitro*, it is possible that in some cases its action in the body is aided by direct contact of the vapor with the bleeding point.

In chloroform, therefore, we have all the requirements for an ideal hemostatic. It lessens the heart action, reduces the blood pressure and diminishes the respiratory movement. It acts promptly and efficiently and, what is more, it leaves the digestive tract intact.

The patient being placed in a semirecumbent position, from 2 to 4 c.c. of chloroform are dropped on the usual inhaler, or wad of cotton, and held near the nostrils of the patient. The hemorrhage will cease within five or ten minutes. During the following twenty-four or forty-eight hours the patient will be bringing up blood clots. The inhalation of 15 to 20 drops every hour is continued for a few days. Ammonium chlorid with small doses of codein is given internally every four hours. The ammonium salts favor expulsion of retained secretions, whereby we hope to avoid an aspiration pneumonia and the codein will prevent excessive coughing. It is also a good plan to administer a teaspoonful of magnesium sulphate three times daily to remove excrementitious matter which, when retained in the blood, will stimulate the vasomotor center and raise the blood pressure.

In the limited number of cases in which I had the opportunity of using chloroform the results have been all that could be desired. Being fully aware of the paucity of material on which this study is based, I hope that a more extensive trial by the profession at large will bring out more fully the value of chloroform in pulmonary hemorrhage.

Antituberculous Substance in Tuberculous Glands.—Dr. A. Fontes (*Brazil-med.*, 1908, xxii, No. 40) offers the following conclusions derived from his studies *in vitro* of the tuberculous glands of guinea-pigs: 1. There exists in the tuberculous glands of guinea-pigs a substance capable of reducing the number of tubercle bacilli in a given emulsion. 2. This substance does not exist in normal glands. 3. The maximum effect of this substance is exercised after 120 hours' contact; when it has reached this it ceases. 4. The addition of a larger amount of extract of tuberculous gland extract, after the appearance of the action, does not cause a new diminution of the number of bacilli. 5. This substance is not reactivated by the addition of fresh serum from a new guinea-pig. :

ISOHEMOLYSINS AND ISOAGGLUTININS OF HUMAN SERUMS, WITH SPECIAL REFERENCE TO CANCER

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AND

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In 1892 Maragliano¹ directed attention to the fact that the blood serums of patients afflicted with various diseases exerted a destructive influence on the blood corpuscles of healthy individuals, and also on the corpuscles of pathologic cases and set free hematin. He expressed the opinion that the reduction in sodium chlorid in the blood in different conditions of disease was a factor in the solution of red cells. This appears to be the first observation on isohemolysins of human serums.

Ehrlich and Morgenroth² demonstrated that the blood serums of goats that had been immunized by homologous blood corpuscles contained isohemolysins, the serums of the immunized goats being hemolytic for the corpuscles of other goats.

Von Dungern,³ on the other hand, found that the serums of guinea-pigs that had been immunized with the tracheal epithelia of cattle was not only destructive to the tracheal epithelia of the latter, but also exhibited an hemolytic influence on the blood corpuscles of cattle.

Landsteiner,⁴ in 1890, showed that human serums often agglutinated human corpuscles. He found this phenomenon of agglutination especially marked in the blood of diseased individuals.

The first extensive clinical application of the phenomena observed by Maragliano and Landsteiner was made by Ascoli,⁵ who examined seventeen normal persons and ninety-seven patients for isohemolysins and isoagglutinins. He employed in his technic a mixture of equal parts of serum and of blood corpuscle suspension. He used a 2½ per cent. suspension of blood corpuscles for the hemolytic reaction and one-half of this for the agglutination reaction, the serums for the latter being employed in different dilutions. His controls consisted of suspensions of the blood corpuscles in salt solution.

He found the agglutinating power of the serums of healthy individuals hardly observed in a higher than a 1 to 20 dilution of their serums, while in pathologic conditions it was often found in much higher dilution. In the examination of normal bloods, hemolysis was in most cases *nil*. In a very few he had observed a trace of solution and in rare cases a slight solution of red cells had occurred, as indicated by the rose color of the fluid after sinking of the cells.

In the examination of the serums of pathologic cases with relation to hemolysins, he found negative results with 5 cases of chlorosis, 2 of infection with *Anchylostoma duodenale*, 1 of abscess, 3 of acute rheumatism, 3 of exudative pleurisy, several of bronchitis, several of acute and chronic gastritis, 2 of lead-poisoning, 1 of acute and 2 of chronic nephritis.

On the other hand, he found strong isoagglutinating and isohemolytic properties in the serums of two patients with carcinoma of the stomach, a probable Addi-

1. Maragliano: *Verhandl. d. xi Cong. f. inn. Med.*, Leipzig, 1892; *Deutsch. med. Wchnschr.*, 1892, xviii, 411.

2. Ehrlich and Morgenroth: *Berl. klin. Wchnschr.*, 1900, p. 37.

3. Von Dungern: *München. med. Wchnschr.*, 1899, xvi, 1128.

4. Landsteiner: *Centralbl. f. Bakteriol.*, 1900, xxvii, 356.

5. Ascoli: *München. med. Wchnschr.*, 1901, xlviii, 1239.

son's disease, and a multiple pneumococcus infection. He examined chiefly cases of pneumonia, typhoid and tuberculosis.

In tuberculosis he had observed the serums able to dissolve erythrocytes and also to agglutinate them in a greater dilution than did normal serums. He also noticed marked isolytic properties of the blood serums of pneumonia patients. He states that isoagglutinins and isolysins are not to be found constant in the diseases mentioned, and that it was advisable to allow serum to act on the blood corpuscle suspension of different individuals as the isolysins are not active against the erythrocytes of every one.

From the experiments of Bordet, Ehrlich and Morgenroth, von Dungern, Ascoli, etc., it was evident that inoculation with the cells of an homologous or heterologous species, or, as might be expected with a tumor growth, would give rise to the formation of isolysins in the immunized individual or animal.

Weil⁶ observed this peculiarity of the serum of tumor dogs for erythrocytosis of normal dogs. He examined a number of patients suffering from cancer, etc., and observed the same phenomenon.

Crile,⁷ Blumgarten⁸ and Whittemore⁹ have also reported on this peculiar property of the serums of patients suffering from cancer, tuberculosis, etc., the technic employed by them being practically the same as that recommended by Landsteiner, Ascoli, etc. Blumgarten, as had been recommended by Landsteiner, used the washed corpuscles, without salt solution, as Maragliano had stated in his communication that among other factors the decrease of sodium chlorid in the serum of diseased patients had something to do with their dissolving red blood corpuscles.

In order to determine whether or not the hemolytic reaction had any specific value in the diagnosis of disease, we examined the bloods of a number of individuals. Some of these were healthy adults, others were suffering from cancer, typhoid, pneumonia, gastric ulcer, etc.

We found on completion of our work that our observations coincided in many points with those of Ascoli. We had not made any effort to estimate quantitatively the agglutinin content of serums: we did, however, observe a definite relation to exist between isolysins and isoagglutinins to which Landsteiner¹⁰ had referred conjecturally in his first communication on isoagglutinins.

Among the seventy cases examined, we tried nine normal persons against each other for isoagglutinins and isohemolysins.

Landsteiner¹¹ divides individuals into three main groups by means of isoagglutination, namely: (1) those whose corpuscles are not agglutinated by the serums of Groups 2 and 3, but whose serums agglutinate the corpuscles of these groups; (2) those whose corpuscles are agglutinated by the serums of Group 3 and whose serums agglutinate the corpuscles of Group 3; (3) those whose corpuscles are agglutinated by the serums of Group 3 and whose serums agglutinate the corpuscles of Group 2.

According to this classification for agglutination, 4 of the normal persons belonged to Group 1, 4 to Group 2, and 1 to Group 3. In 4 the supernatant fluid showed a faint pinkish tinge, one tube showing a considerable trace of solution. In these tubes agglutination of corpuscles had occurred. We did not notice isoagglutination of the strictly homologous corpuscles. In none of the tubes in which isoagglutination had not occurred was any trace of hemolysis present.

Among the pathologic cases examined by us were 22 of cancer, mostly of the stomach, uterus and breast. In 13 of these, or 59 per cent., we found isohemolytic serums, some hemolyzing the corpuscles of cancer patients. Of 8 cases of tuberculosis, 3 showed the hemolytic reaction, 1 hemolyzing the corpuscles of another tuberculous patient. We did not observe the reverse hemolysis in tuberculosis referred to by Crile.

Of 5 typhoid patients, 2 gave a strong hemolytic reaction, 1 of these hemolyzing the corpuscles of another typhoid patient as well as of a normal person.

Of 5 pneumonia patients, of whom 1 was convalescent, the serums of 2 showed a strong isolytic action. Ascoli found in 1 case of pneumonia a decrease in the hemolytic action of the serum from week to week until it disappeared.

In 2 cases of gastric ulcer, 1 of convalescent malaria, 1 of pernicious anemia, 1 of postdiphtheritic paralysis, 1 of salpingitis and 1 of pregnancy, the serums were found to be isohemolytic.

Two cases of pleurisy with effusion gave a negative result.

The degree of isolysis observed in the Maragliano reaction in diseased conditions is quite variable, some red cells showing apparently a greater degree of resistance than others, and some a complete resistance to the action of isolysins. According to Landsteiner, Ascoli, Hektoen,¹¹ etc., the isoagglutinins are considerably increased in some diseased conditions over that found in normal individuals.

Landsteiner, who first thought a relation existed between isoagglutination and isohemolysis, stated in a subsequent communication that an essential difference existed between the phenomena of isoagglutination and of isohemolysis, in that in the Maragliano reaction the serum acts on the corpuscles of the same individual.

In the pathologic serums examined by us we observed the hemolytic action of the serum on the corpuscles of the same individual in two cases of cancer and one of convalescent malaria.

On the other hand, we observed a close relation to exist between isohemolysis and isoagglutination in the examination of bloods of pathologic cases. This association was so frequently observed that we could apprehend with considerable certainty before examining the corpuscles that they had been agglutinated from the pinkish color of the supernatant fluid.

While this observation is not constant, it is sufficiently frequent to influence greatly the results obtained with the hemolytic reaction.

It would appear from our observations that the frequency of what is commonly termed a positive isohemolytic reaction will depend usually on two factors: (1) to what group with regard to isoagglutinins the suspected blood belongs, and (2) whether there are bloods among those against which it is tested whose corpuscles will be agglutinated by the serum of the suspected blood, and it is immaterial apparently whether the cor-

6. Weil: Observations on the Hemolytic Reactions of the Blood in Dogs Affected with Transmissible Lymphosarcoma (abstr.), THE JOURNAL A. M. A., Jan. 4, 1908, 1, 64.

7. Crile, George: Hemolytic Tests for Malignancy (abstr.) THE JOURNAL A. M. A., June 27, 1908, 1, 2150; also: Jour. Am. Surg. Assn., 1908, xxvi, 619.

8. Blumgarten: Med. Record, 1909, lxxv, 61.

9. Whittemore: Boston Med. and Surg. Jour., 1909, clx, 77.

10. Landsteiner: Wien. klin. Wchnschr., 1901, xiv, 1132.

11. Hektoen: Jour. Infect. Dis., 1907, iv, 297.

puscles are from another case of cancer, tuberculosis, etc., or a normal. We find confirmation of this latter observation in our work in the original statement of Maragliano, that the serums of pathologic cases are hemolytic for the corpuscles of diseased individuals as well as for the corpuscles of normals.

In regard to the nature of the isolytic substance, Ascoli was able to show that its activity was destroyed by heat, but that it could be reactivated by the addition of a fresh serum. This would seem to indicate that it was an amboceptor that depended on the presence of complement for exerting its hemolytic influence on blood corpuscles, and that it was not due to the action of any toxin produced by an infectious agent.

On the other hand, holding in mind the experiments of von Dungern, Ehrlich and Morgenroth, Ascoli, etc., it would seem that this hemolytic property of pathologic serums was associated in some way with cell destruction, and that, as Ascoli suggests, a reaction of the organism against the absorbed products of cell destruction results in the formation of antibodies which are hemolytic.

We examined, several weeks ago, among others, a student's blood which was taken as normal. At that time his serum, which agglutinated the corpuscles of Groups 2 and 3, did not show any hemolytic action on human corpuscles. We examined his blood a few days ago and found that his serum hemolyzed corpuscles which it agglutinated to about the same extent as had a cancer serum in the same series of examinations. On inquiring into the history of the student during the interim of examinations, we found that he had lost about seventeen pounds in weight. He denied any infection and said that he felt well, but tired. He attributed his loss of weight to increase of work and loss of sleep in preparing for state examinations.

The circumstances in this instance, in which a normal-acting serum was converted into a pathologic-acting serum, would seem to support the theory that the isohemolytic property of serum is dependent on absorption products or antibodies of absorption products of abnormal cell degeneration.

In reviewing the literature of this subject and in analyzing our own work, which we find to conform to the earliest observations on this subject, we can see no reason for bringing this isohemolytic action of serums into specific relation with any one disease or condition. On the other hand, we can confirm Maragliano's original observation, that the serums of many pathologic cases may exert an hemolytic influence on the blood corpuscles of normal and diseased individuals.

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Lessons from the Russian Cholera Epidemic.—The Russian medical societies are now reporting the experiences of members during the recent cholera epidemics at various points. The importance of bacilli carriers in the dissemination of the disease is generally emphasized—this being evidently responsible for the spread of the epidemic at Dorpat and possibly explaining also the flaring up of the disease after it has been apparently extinguished by the winter's cold—the germs being kept alive by repeated contact infection. In the preceding epidemic a number of cases broke out simultaneously, all traced to contamination of the water, but in the present epidemic the cases occurred at long intervals and in widely separated parts of the city, probably the result of contact infection, possibly by intermediation of sound bacilli carriers. All agree that personal hygiene is the most effectual means of prophylaxis against cholera so that in highly civilized communities there is comparatively little danger from the disease.

EPILEPSIA PARTIALIS CONTINUA OCCURRING IN CEREBRAL SYPHILIS

REPORT OF A CASE, WITH OPERATION *

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WITH THE COLLABORATION OF

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It seems almost incredible that any form of epilepsy should exist and yet not be well recognized. The literature of this disease is very extensive, and much of it contains little that is new. There is a type of epilepsy, however, which does not appear in the text-books, and even in the most recent writings receives scant recognition. Thus, Oppenheim¹ mentions it in a few lines by stating that cases occur in which during the interparoxysmal period muscular twitchings of short duration and without loss of consciousness are observed in one or another portion of the body. It has been described, especially by Russian writers, as "epilepsia continua" (Koshewnikow, Muratoff, Bechterew); Bruns also mentions it.

The cases differ from those of myoclonic epilepsy; the twitchings are limited to a small portion of the body, and are more intense than in myoclonia.

The name, "epilepsia partialis continua," seems to have been first employed by Koshewnikow,² who reported four cases in 1894. Characteristic epileptic attacks occurred in all four cases; sometimes they were abortive, sometimes they were with loss of consciousness. No period of cessation occurred between these attacks, as in certain portions of the body clonic movements persisted with variation in intensity, and when these movements became very severe they passed into an ordinary epileptic convulsion. The patients were unable to work, as they held the twitching limbs with those not implicated by the movements. In two of the cases the disorder began with local spasm, which passed into the ordinary epileptic convulsion; in the other two the persistent clonic movement followed the ordinary epileptic attack. No information as regards pathology was obtained either by operation or necropsy. This form of epilepsy has, since the report of these cases, been called, by some writers, Koshewnikow's epilepsy.

Orlowski³ reported a case of this type in which general epileptic attacks occurred after an infectious disease, and later the patient had attacks every ten or fifteen minutes without loss of consciousness. Twitching of fibrillary or tic-like character was seen in the right side of the face, implicating also the tongue and larynx and continuing during sleep. The right limbs were weak. The case was thought by some of those who heard the report to be functional and not organic. No pathologic cause was determined.

Choroschko has written a monograph on this form of epilepsy, but, as it is in the Russian language, I have been obliged to depend on abstracts.⁴ In the *Jahresbericht für Neurologie und Psychiatrie*, 1907, it is stated that Choroschko reports three cases of his own and refers to eleven in the Russian literature. Outside of

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1. Oppenheim: *Lehrbuch der Nervenkrankheiten*, ed. 5, p. 1389.

2. Koshewnikow: *Neurol. Centralbl.*, 1895, p. 47.

3. Orlowski: *Neurol. Centralbl.*, 1896, p. 526.

4. Choroschko: *Neurol. Centralbl.*, 1908, p. 279; *Jahresb. f. Neurol. u. Psychiat.*, 1907, p. 772.

Russia, Bruns alone has observed this rare type. Choroschko differs from Koshewnikow in that he believes the lesion is subcortical and suggests the name "polyclonia epileptoides continua." The twitchings are clonic and extend gradually from a limited area, and usually synergetic muscles are affected, especially on the right side. There seem to have been no lesions found either by operation or necropsy, so far as one may judge from the abstracts.

It may not be amiss, therefore, to report a typical case of this partial constant epilepsy, especially as it is one in which operation was performed. It shows that the lesion may be cortical.

History.—The patient, a colored man, aged 22, was admitted to my service at the Philadelphia General Hospital, Feb. 19, 1908. He gave a clear history of syphilitic infection. In July, 1908, he had his first convulsion. The fingers of the right hand twitched at first slightly but later more severely, and the convulsion confined to these members lasted about twenty minutes and left a paralysis of the hand persisting about fifteen minutes. He had another convulsive attack confined to the right hand in about three weeks. The whole right upper limb became implicated in the third attack, and this attack was followed by unconsciousness. There seems to have been involvement of the face and right lower limb also in the fourth attack. After these repeated attacks persistent weakness of the right upper limb ensued.

Examination.—The weakness of the right side of the face increased greatly after the man entered the hospital, and the palsy was of the cerebral type, i. e., slight in the upper part of the face and almost complete in the lower part. The weakness of the right upper limb also increased considerably, and the right biceps and triceps reflexes were much exaggerated, whereas the corresponding reflexes on the left side were normal. Stereognostic perception and sense of position were lost in the right hand. Tactile sensation also seemed to be diminished in this part, but was normal in the face. The motor power was about normal in the lower limbs, and the patellar reflex was only a little prompter on the right side. Babinski's sign was not distinct on either side. The ocular examination revealed little that was abnormal.

The case was clearly one of syphilis of the brain with convulsions of the Jacksonian type, only the right side of the body being involved, and the persistent paralysis being confined to the right side of the face and the right upper limb. Other attacks which the patient had made the case an unusual one and worthy of careful study.

Independently of the typical attacks he had twitching confined to the right side of the face lasting an indefinite period, an hour or more at a time and occurring very frequently. There were periods in which he had none of these spasmodic movements, but the movements were almost constantly present, and resembled a tic movement or fibrillary twitching. They were not excessive in their intensity, and implicated the muscles about the right side of the mouth, about the right eye, the right cheek, the right ear, and the right side of the neck. After persisting for some weeks in the face they ceased in this part, and were observed in the right upper limb. The whole right upper limb was displaced in these clonic movements, but the displacement was not excessive, and the spasm consisted of slight twitchings lasting indefinitely as did the previous twitchings of the right side of the face. There was no impairment of consciousness. The peculiarity was the almost constant duration of fibrillary or twitching movements in the face at first and later in the right upper limb, movements that were very unlike the severe spasmodic contractions usually seen in an epileptic attack, both in intensity and duration.

It is a question whether operation is advisable in cerebral syphilis. Two cases with operation have been observed by me in addition to the one described in this paper; in one the removal of a gumma of the dura was followed by much improvement during a period of seven or eight years, but the patient eventually died of his syphilis. In another case excision of a gumma of the brain was performed, but the result was far

from satisfactory, and in the case reported in this paper operation accomplished little. However, as there seemed to be a chance for the patient from operation, I referred him to Dr. Edward Martin, whose report is here given:

Because of the failure of mercury and iodid treatment, the steady progression of symptoms, the possibility of their leading to a fatal termination, operation was deemed advisable in this case. The Rolandic area was exposed by a periosteal flap which was raised by means of a Crile cutting tool driven by an electric engine. The dura was raised without difficulty, exhibiting only slight adhesion to gummata placed in the arm and face centers. A portion of this tissue was excised by circular excision, the obvious vessels leading to it being first encircled by fine gut carried by means of a fine pointed curved needle. The operation was attended by trifling shock.

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MEDICAL PSYCHOLOGY

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I make the following extract from an editorial in the London *Lancet*,¹ in 1885, based on an elaborate report by Buchanan, professor of surgery at Glasgow University, of the results that he saw during a visit to Lourdes:

There can be no question that faith-healing is a fact. The brain is not simply the organ of the mind; it is also the chief center or series of centers of the nervous system, by which the whole body is energized and its component parts, with their several functions, are governed and regulated.

There is no miracle in healing by faith, whereas it would be a miracle if the organism, being constituted as it is, and the laws of life such as they are, faith-healing did not under favorable conditions occur. . . .

Pathologists will limit the area of the process to the province of functional diseases, but we are not sure that we are justified by scientific facts in making this limitation. . . . It is a fact in pathology that if the functions of an organ be maintained or restored, much of the destructive metamorphoses . . . may be arrested and to some extent repaired. . . .

The "vis medicatrix Naturæ" is a very potent factor in the amelioration of disease, if only it be allowed fair play.

This extract is from an editorial written in 1885 in one of the most reliable and conservative of medical journals published in the English language; and now, in 1908, we still find ourselves shutting our eyes to this all-important department in the healing art, and relegating its practice to ignorant charlatans, enthusiastic religionists and fanatics and mystics of endless variety.

Is not the mind as essential to the well-being of the patient as is the body? And by what law of Nature is the treatment of disease by scientific means limited to mechanical and chemical agents?

If the mental activity of the patient has been an active agent in the production of disease—and no one disputes that this is in every case an important factor—how can it be unscientific or unprofessional, or undignified, to use this same mental activity of the patient to assist in the relief of his suffering?

The answer that many would make to this question is that mental activity is such an intangible, imponderable and un-understood force that we must ignore it, and thus leave its management to those sufficiently ignorant and unscientific to undertake its direction. Could a greater confession of incompetence to care for and direct those needing our aid be admitted than this?

If the mind is an important element in the protection

1. June 13, 1885, p. 1093.

from and the relief of disease, is it not as much our duty to study the mind and its functions as it is to study the body and its construction and functions? Or, briefly, is not psychology as essential a study for the physician as anatomy and physiology?

Have we not neglected an important part of our duty, and are we not, even if more scientific, quite as narrow and one-sided in our treatment of disease as those who attempt through the study and direction of the mind alone to restore the body to health?

Had we not been blinded by our narrow prejudices, the editorial just quoted and similar articles and discussions so long ago would have aroused our interest and led to our investigation, and we would have realized that we were neglecting an important element in the care of the sick and the prevention of disease.

The laity naturally look to us for direction in these matters, but in this we have failed them, and they are, in consequence, drifting away from us, and we are rapidly losing the position in their confidence which we should occupy. But, fortunately, while psychologic development has been progressing, conservative scientific men have been studying its meaning and its processes, and a great amount of knowledge has been accumulated, so that what was dark, uncertain and mysterious twenty-five years ago can now be scientifically discussed.

In order to recover the lost ground, we must assume the office of the investigator and analyzer of every element that enters into the cause, course and termination of disease. We must learn the sources and action of every force that plays a part in the preservation of health.

Do not imagine that I would by one jot or tittle detract from the importance of the work that our men have been doing in other departments. The advance of learning in anatomy and physiology in health and disease is marked, and, above all, the growth of the knowledge of the causation and prevention of disease has in the last few years been phenomenal. Nor would I in any way reflect on the ordinary medical and surgical treatment of disease. This is all good, but more is required of us. We must not only know the machine and its disorders, but we must also understand, as far as possible, the power and energy that propels the machine, and to do this we must go thoroughly into physiologic psychology and psychologic physiology, as well as into pure psychology, which last I believe to be a true science.

So much for the importance of our subject.

Science and discovery have worked revolutions in knowledge during the past fifty years, and we must not fear again to venture on new ground in our investigations.

No one of the many theories devised to explain the action of the mind in controlling bodily conditions has received general acceptance. In taking a working hypothesis, we do so, therefore, fully realizing that it is subject to amendment, as knowledge increases.

The radical change that is taking place in scientific thought was well illustrated at the meeting of the British Society at Dublin during the past summer. Dr. J. S. Haldane of Oxford University, president of the section on physiology, read a paper on "The Relation of Physiology to Physics and Chemistry."² In it he states his opinion that the mechanical theory of life has not only failed, but retarded the progress of science, and

that the study of the phenomena of life belongs to the department of biology and philosophy. Francis Darwin (son of Charles Darwin), in the Presidential Address,³ goes deeply into the discussion of the habits, memory and other qualities in plants, which we ordinarily classify as characteristic of intelligence. When vegetable cells manifest these qualities and powers, it is not difficult for us to surmise that the individual cells in our own make-up possess, to a certain extent, at least, the same characteristics; each cell exercising its particular function and duty with a degree of independence within its sphere of action, but still in all that it does, being under the direction and control of cells higher up in the functional scale. Thus, step by step, we go upward, until an ultimate central and always active control is reached.

Is it not logical to suppose that as our bodies develop from the original parent cell, each of the offspring of this cell inherits some of its individuality, and that as differentiation takes place this individuality is not lost, though function and structure be modified that each may fill its special place in the great community of cells which go to make up the whole? But, in order to bring about the necessary cooperation and coordination, the closest communication must be, from the first, preserved between the individuals, so each must be kept under the direct controlling influence of a higher delegated direction.

And so the body develops in all its parts—we must not stop here for details, but we may imagine the intelligent action displayed by each cell, the wonderful cooperation and coordination. There must be zone beyond zone of directing intelligence, each in its sphere guiding all below it, until, step by step, the whole is brought into perfect unison. There must be a controlling relationship between every separate cell in every distinct area of the whole body as development is corresponding elsewhere. To take a simple illustration, we find the cells of the toe-nail systematically arranging themselves; they must have a local directing intelligence. Again a higher intelligence directs the symmetry of the two corresponding nails, and probably a higher intelligence still compels the relative proportion of the toe-nail to, let us say, the eyelid; for we do not have a giant's eyelid and a pigmy's toe-nail in the same community.

These superimposed centers are developed, not to give power and function to the original cells, but to enable those cells to perform their duties adequately, with necessary system and cooperation. In other words, the function and power of the higher centers is delegated to them from what we may term the primary cells.

Have we not here a suggestion of Fechner's theory of the universe being but a succession of enveloping spheres of intelligence?

Or can we criticize that great apostle of pure materialism, Haeckel, for introducing and using the term "cell soul," with all that that term conveys?

Can one consider these things and doubt that an intelligent directed energy is in constant action in every cell in the whole body? I wish we had another term than "intelligence" to describe this energizing function. Intelligence is so apt to be confused with consciousness, on the one hand, and with instinct, on the other. Consciousness seems to be an entirely distinct quality or function of the mind while instinct is a term applied to

2. Brit. Med. Jour., Sept. 12, 1908, p. 693.

3. Brit. Med. Jour., Sept. 12, 1908, p. 751.

qualities which mark the lower phenomena of intelligence, but which, as I understand them, so gradually merge into definite intelligence that no line of demarcation exists, and so I use the word "intelligence" for all those qualities which show perception, discrimination and determination.⁴

And so we go up from one directing and energizing zone to another, until we reach the higher centers in the brain, but so gradual is the advance that we do not lose the sense of individual power and intelligence in the cell from which we started.

And if this individuality is a necessary element in the growth and development of the body, it is just as much so for the maintenance of the body through its whole existence. We must then realize that, while every cell in the body is to a degree an individual, still every cell is under the controlling influence, step by step, of higher cells, until the highest physiologic centers of the brain are reached, and that here a constant controlling energy is exercised which reaches to every individual cell.

We are all too familiar with physiology to necessitate my giving illustrations of these phenomena. The example of intelligent directed action in ordinary adult life that comes at once to one's mind is, of course, the action of the white blood corpuscles in inflammation. Here we have action so elaborate and so complex that it seems to approach a high order of intelligence.

We are apt to confuse our minds by falling back on the term "reflex." Reflex acts are in all cases manifestations of a degree of intelligence. The efferent impulse is entirely different in its nature, force and function from the afferent impulse, and these qualities of the efferent impulse are modified in each case by many conditions of environment.

And now having reached the high controlling centers which are in constant action, we are very close to consciousness.

One of the first facts we have to learn in psychology is that mind, consciousness, and intelligence are not synonymous terms. Our mind is in constant action; part of it, at least, is manifested in the constant intelligent energy of control of which I have just spoken. In this way the mind reaches every cell of the whole body and directly dominates it.

The organs of sense are the means by which impressions from without reach the higher controlling centers, and under the influences of these impressions we can see the controlling intelligent influence of the mind on our cells in a thousand ways. This is sometimes accompanied by consciousness, but this is not the rule.

I must not stop to give illustrations, for they are familiar to every student in physiology and medicine.

The ordinary reflexes, so-called, do not depend on consciousness. Acts which we can control by our consciousness we call volitional, but most acts that can be consciously controlled may also be performed without consciousness. Acts that the mind habitually performs, outside the influence of consciousness, we term involuntary.

Thus the control of nearly all the cells of the body by the higher centers is being constantly exercised, but

this exercise is habitually involuntary. Hence, nearly all physiologic functions, such as the affairs of circulation, nutrition, secretion, excretion, digestion, etc., etc., are classed as involuntary acts.

And now we come to the all-important question, Can acts, habitually involuntary, in any way be controlled through the conscious mind? In other words, can these physiologic offices of the body be in any way influenced by conscious volition, that is, by the will?

This question may simply involve habit—we may from disuse have forgotten how to use this power—or it may be evolutionary. Is a new power approaching in the developing consciousness of higher intelligence?

As the disturbance of physiologic function is the important element in the causation of disease, and the restoration of function may often restore health; indeed, as resistance to infection, immunity, etc., are produced by the functional secretions of certain cells, we realize at once the importance of this question of the control of cell functions by the will. Indeed, on this question "hang all the law and the prophets" of psychologic medicine.

And now we will turn and approach this question from another standpoint.

From Professor William James, of all thinkers and writers on these subjects, I myself have derived the most guidance. He stands to me as an intellectual giant, above prejudice and preconceived notion, weighing each new fact as it presents, and giving it its proper significance in the storehouse of our little knowledge. He is, as I suppose you all know, a graduate in medicine from Harvard, and so we can claim him as of ourselves, but his great knowledge of philosophy and psychology have given him a higher and broader point of view than most of us can obtain, and he can easily see over the stumbling-blocks that seemed insurmountable to me. To me it is now incomprehensible to conceive why I was ever allowed to practice medicine without some knowledge of philosophy, as well as psychology. I supposed them a mystifying labyrinth of confusing and unprovable theories, while if philosophy is anything it is the science of the conformation of knowledge, and places each science in its proper place in relation to each other specialty. It is the balance-wheel of acquired knowledge, the educator of scientific judgment.

But to return to Professor James: In his presidential address⁵ to the American Philosophical Association at Columbia College, Dec. 28, 1906, on the "Energies of Men," he comes nearer giving a direct affirmative answer to our question than I find in any short article that has come under my notice.

In this article he calls attention to the fact that in every one there are latent powers which, when aroused under extraordinary stimuli, enable one to do and to suffer what would have been thought beyond all possibility.

After many illustrations in the ordinary affairs of life, he comes to our important question. He says:

There seems no doubt that we are each and all of us to some extent victims of habit-neurosis. We have to admit the wider potential range and the habitually narrow actual use. We live subject to inhibition by degrees of fatigue which we have come only by habit to obey. Most of us may learn to push the barrier further off and to live in perfect comfort on much higher levels of power.

4. Since this was written, Alfred Russell Wallace has published in the *Fortnightly Review*, March, 1909, page 434, this statement: "Now even the extreme monists, such as Haeckel, are driven to the supposition that every ultimate cell is a conscious, intelligent individual that knows where to go and goes there." See also the (New York) *Independent*, March 4, 1909, page 457, and the *American Review of Reviews*, April, 1909, page 485.

5. *Phil. Rev.*, January, 1907, xvi, 1.

And again:

The normal opener of deeper and deeper levels of energy is the will. The difficulty is to use it, to make the effort which the word "volition" implies.

He then discusses the various processes by which the will may be developed in this power of control, and especially by methodical ascetic discipline, such as that of the Hindu Hatha Yogi system. And here he takes a case which is so pertinent to our question that I shall take the liberty of using it for our instruction:

A European friend of his, a man of the highest literary and scientific attainments, is greatly hampered in his work by a disordered nervous system manifesting itself in recurring attacks of great prostration. After exhausting the resources of ordinary medicine, he entered on the discipline of Hatha Yogi.

After persistent application, in spite of relapse, success came, and he found his mind and his body would obey his will, "like a wild horse tamed." A short four months of this training brought this man to an entirely new realization of life and its powers. Fourteen months after the beginning of the course, Dr. James says of him (p. 14):

There is in fact no doubt that profound modification has occurred in the running of his mental machinery. The gearing has changed and his will is available, otherwise than it was, available without any new ideas, beliefs or emotions so far as I can make out, having been implanted in him. He is simply more balanced where he was more unbalanced.

This condition continued, and in answer to Dr. James' question as to where the virtue lay in these exercises, he wrote:

The Yogi exercises are nothing else than a methodical way of increasing our will. . . .

I am sure that everybody who is able to concentrate thought and will and to eliminate superfluous emotion, sooner or later becomes a master of his body and can eliminate every kind of illness—this is the truth at the bottom of all mind cures—our thoughts have a plastic power over our body.

Now, this case is not unique, or even uncommon in its results; indeed, it is limited in its application, for in it we have no direct illustration of the modification of organic tissue. But I use it because here we have a highly developed mind capable of analyzing and explaining the steps by which these results are brought about.

We see the same results produced by an endless variety of agents. He who is awake and unprejudiced can see them about him all the time. Thus, we see instances, under the practice of the many scientific and unscientific, religious and emotional cults, under the many extraordinary 'pathies, and all sorts of philosophical and nonsensical theories. The results vary in different cases; sometimes this power of concentration and self-control is developed only after long systematic training; sometimes, to the receptive, it comes so suddenly that it seems to the uninitiated almost miraculous in its results.

If we study these results in conjunction with the cause apparently producing them, we soon find that the objective idea received and acted on by the subject is of secondary importance. The key to it all is the subjective condition of the mind acted on; or, expressed simply, it depends on the will of the subject.

Admit for a moment the hypothesis that the mind has the power of exercising direct volitional control over the physiologic activities of the body, and it is all simple.

All so-called "faith-healing" comes, then, to be simply a volitional act, and we soon come to see that faith is the sure expectant knowledge that conditions we look for will come about.

I doubt if any one who is capable of analyzing these cases will dispute that they are actual experiences and so must admit that the physiologic activities are, under certain conditions, frequently controlled by the will of the subject.

And now what are these conditions that enable one to be receptive of the idea of the power of the will? for if I understand the will aright the realization of its power will certainly bring about this control.

No two bodies are the same in energy and habit of action, and our mental attitude and habits vary in infinitely greater degree.

It is doubtful if any idea can find a foothold in an unwilling mind, and if this be so "the will to believe" is the first essential condition.

In the majority of minds, uncertainty and a lack of self-reliance are so constant a habit that in order to receive a new idea they must have a tangible material fact to which to attach the idea. Hence many will exercise their power quickly if they have the idea that a certain definite material or certain particular act will produce a certain definite result. Here we see, as instances, the result of acts of faith, of acts of discipline, the results obtained by many medical treatments, and by mechanical and chemical appliances.

A concentration of attention on an idea helps the will to act on it, and if we can develop that degree of concentration which enables us to shut off all other ideas, especially those conflicting with it, and to render the attention practically passive, we are approaching ideal conditions.

No man stands alone. We are constantly imparting knowledge to each other. We look to all about us for ideas and enlightenment, and if we are willing to give dissociated, passive attention to a communicated idea from one we trust, the reception and adoption of that idea is very simple and direct; indeed, we often find that our will has put the idea into action through the deeper zones of intelligence before our consciousness even realizes its import.

No idea contrary to the will of the subject will find acceptance. The will has its individual characteristics, can be cultivated, and often, in time, changed, but still it is the will and the will of the subject is, I believe, the sole agent of action.

When ideas are thus implanted on an expectant and receptive mind, we speak of it as direct suggestion. I use the term "indirect suggestion" of those cases in which the attention is placed on some objective idea or agent in order to arouse the will to action. Often by fixing the attention on an idea without objective aid, we can bring the will to exercise direct personal control to a phenomenal degree. This, of course, is called self-suggestion, or autosuggestion.

As the attention becomes dissociated and passive, the mind of the subject becomes more and more susceptible to suggestion, and we often find a degree of power and self-control developed that seems in the ordinary commerce of life incomprehensible.

Deeper and deeper states of dissociation can be discovered and exploited, but these are seldom developed in medical psychology, and we need not here even discuss them.

It thus seems that the will may be excited to this controlling activity by many different processes. As minds differ, so results may be produced by different methods. What succeeds with one may entirely fail with another, and the reverse.

While I am inclined to believe that there is no mind that can not be aroused by some process, there is a wonderful difference in the facility by which this may be done. Investigators have not yet been able to give a basis of classification or any guide by which susceptibility may be determined, except by individual experience. Everything being equal, however, the higher in the scale of intelligence the more easily can concentration and the action of the will be aroused. On the other hand, the opposing action is the will itself, especially in the egotist who knows it all, and knows that he knows it.

We are all constantly using suggestion in some form in every phase of every-day life. Indirect suggestion is the common rule, but when we understand what we are doing, and desire to use suggestion, it seems to me that it is in every way much more satisfactory to use the direct method. The power of self-control can, by direct suggestion, be developed and the mind built up to a condition of strength, power and self-reliance that is impossible by any other means.

To quote again from the same article of Professor James:

Suggestion, especially under hypnosis, is now universally recognized as a means, especially successful in certain persons, of concentrating consciousness, and in others of influencing their body states. It throws into gear energies of imagination, of will, and of mental influence over physiological processes that usually lie dormant. . . . It is, in short, dynamogenic.

That is, I take it, that one is capable under certain conditions of controlling, through some zone of intelligence, the activity of the primary tissue cells.

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Clinical Notes

DEATH FROM HEMORRHAGE INTO THE SUPRARENAL BODIES IN A BOY OF EIGHTEEN*

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CHICAGO

The interesting and instructive case of hemorrhage into the suprarenals here reported occurred under the care of Dr. Byron Meacher, Portage, Wisconsin, to whom I am indebted for the specimen shown; namely, the right suprarenal body and the right kidney.

History.—Dr. Meacher's history of the case follows: The patient, a boy, aged 18, came to the hospital Jan. 26, 1909, for operation for a left inguinal hernia. The examination before the operation indicated that the patient was in perfect general health. The urine was normal; there was no history of any previous illness of any importance whatsoever except that four years ago he suffered from an infection of the left leg, recovery from which was complete. No record of tuberculosis could be obtained. Operation, January 27, under ether anesthesia, was uneventful. On the first day after the operation the pulse ranged from 100 to 140; it was normal on the second day, but from the third day, January 30, until February 10 it ranged from 100 to 140; after February 10 it was normal in rate but irregular until death, February 15. The pulse was feeble all this time. The temperature was normal until the third day after the operation, when it gradually rose to 102 F., where it remained for two days, gradually going down to normal during the next five days. The day before

death the temperature was subnormal. The urine at no time showed anything abnormal. Immediately after the operation the patient complained of pain a little to the left of the median line under the costal margin and later of the same kind of a pain under the right costal margin. This pain persisted with some tenderness until death. On the fifth day the liver reached three fingers below the costal margin and was then quite tender, but on the ninth day it seemed to have returned to its normal size, the tenderness, however, persisted. Some food was taken every day and there were no disturbances of the bowels, but the patient vomited at different times after the fifth day, gradually losing weight. The wound healed by primary intention. On February 9 the mind seemed somewhat clouded and gradually became more so until death occurred, February 15.

Postmortem.—There was no abnormal discoloration of the skin. The wound in the left inguinal region was healed throughout. There was some emaciation. The heart, lungs, liver, intestines and urinary bladder were normal in appearance. The spleen seemed considerably enlarged. The kidneys also were normal. Both suprarenal bodies were much larger than normal, firmly adherent to the surrounding structures, and densely and uniformly infiltrated with blood so that their appearance was like that of a hemorrhagic infarct. The right suprarenal and the right kidney were submitted to me for further examination. The kidney is quite normal in size and appearance, the capsule free; the right suprarenal body is situated in the usual place at the upper pole of the kidney. It is much enlarged, being 5 cm. in width, 5.5 cm. in height and about 2 cm. in thickness, and so uniformly infiltrated with firmly clotted blood that only a very thin shell of the cortex is recognizable here and there. In places there is some infiltration of blood into the tissues about the suprarenal, but the main hemorrhage is wholly within this organ. On the cut surface it is quite smooth and red. The hemorrhagic infiltration is most intense in the medullary part and appears to be of about the same age everywhere, and microscopically the tissue is uniformly necrotic, no nuclei being demonstrable in the adrenal cells; some of the vessels in the central part are plugged with clots and the mouth of the suprarenal vein is closed by a firm, adherent and yellow thrombus which projects into the vena cava as a small smooth oblong body about 1 cm. in the longest dimension. A short and incomplete segment only of the vena cava accompanies the specimen so that nothing can be said of the condition in other vessels.

In the newborn and in infants and children, hemorrhage into the suprarenal bodies is relatively not uncommon. Recently it has been dealt with quite exhaustively by Arnaud,¹ Hamill² Dudgean,³ and Litzenberg and White.⁴ The literature also contains reports of instances of more or less extensive hemorrhage into the suprarenal bodies in adults, and in some the clinical and anatomical details are not much different from those in the present case. This is especially true of cases described by Mattei,⁵ Arnaud, Pritchard,⁶ Laignel-Lavastine,⁷ Simmonds,⁸ Munson,⁶ Lissauer,¹⁰ and Lavenson.¹¹ Lavenson gives an excellent and exhaustive

1. Les hemorrhagies des capsules Surrénales. Arch de méd., 1900, new series, iv, 5.

2. Hemorrhages into the suprarenal capsule in still-born children and infants. Report of case showing rupture of the sac and escape of blood into the perirenal tissues and the peritoneal cavity. Arch. Pediat., N. Y., 1901, xviii, 81; also Tr. Am. Pediat. Soc., N. Y., 1900, xii, 176.

3. The etiology, pathology and diagnosis of adrenal hemorrhages. Am. Jour. Med. Sc., 1904, cxxvii, 134.

4. Hemorrhage of the adrenals in infants with report of two cases due to infection. THE JOURNAL A. M. A., 1908, li, 1964.

5. Recherche sull'anatomia normale e pathologica della capsula suprarrenale e considerazione sull'apoplezia di questi organi e sulla malattia dell'Addison. Sperimentale, 1863, xi, 3.

6. A case of hemorrhage into the suprarenal capsule of both sides. Lancet, 1890, i, 750.

7. Hemorrhagie des glandes surrénales. Bull et mém. Soc. anat. de Paris, 1901, lvi, 683.

8. Ueber Nebennierenblutungen. Virchow's Arch. f. Path. Anat., 1902, clxx, 242.

9. Suprarenal hemorrhage, an unusual cause of sudden death. THE JOURNAL A. M. A., 1907, xlix, 19.

10. Zur Kenntnis der Nebennierenblutungen. Virchow's Arch. f. Path. Anat., 1908, cxliii, 137.

11. Acute Insufficiency of the Suprarenals. Arch. Int. Med., 1908, li, 62.

* Read before the Chicago Pathological Society, March 8, 1909.

résumé. In some of the cases there is uncertainty as to whether the primary condition was hemorrhage or thrombosis of the principal veins, followed by hemorrhagic infarction. Lissauer believes that in cases studied by him the primary condition was thrombosis, and it seems to me not unlikely that such was the case in the present instance also. Suprarenal hemorrhage does not seem to have been diagnosed during life as yet, and, while there can be no doubt that bilateral suprarenal hemorrhage or hemorrhagic infarction, as in this case, may cause death after distinctive clinical disturbances, the observations so far recorded probably are not sufficient for the reconstruction of complete clinical picture or pictures, although Arnaud concludes his study of a large number of cases of all kinds of suprarenal hemorrhage by dividing them on the basis of symptomatology into three distinct clinical types, viz.: the asthenic type (suprarenal insufficiency), the peritoneal type (peritoneal irritation), and the nervous type. Lavenson adds two more groups; namely, cases of sudden death and cases, so far observed only in children, with purpuric eruptions or hemorrhages in the abdominal viscera.

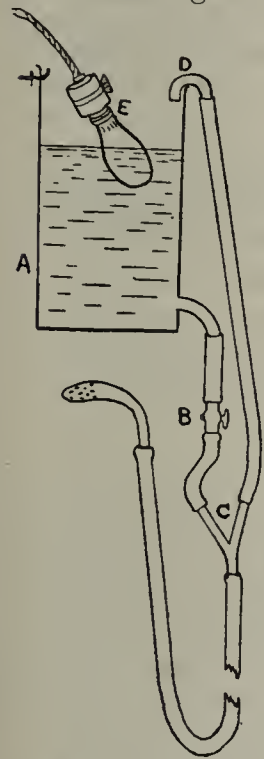
PROCTOCLYSIS

A SIMPLE METHOD OF ADMINISTERING THE MURPHY TREATMENT

M. IVERSEN, M.D.

STOUGHTON, WIS.

While there are many devices and arrangements for administering the "Murphy treatment"—proctoelysis—most of them are either costly, clumsy or both. The method I have adopted, and which the accompanying illustration makes self-explanatory, has proved satisfactory. It has the added virtue of being easily carried out with material at hand in any hospital.



The parts consist of a fountain syringe or irrigator (A), a stopcock (B), a Y-shaped glass tube (C). From the latter a long rubber tube, ending in a hard rubber or glass tip, extends downward and another piece of tubing extends upward, ending in a U-shaped glass tube (D), the open end of which projects into the irrigator. I have found an 8-candle-power incandescent electric drop light (E) all that is necessary to maintain the temperature of the saline solution.

The stopcock is set so as to permit a flow of from 50 to 80 drops a minute. The vent tube leading from C to D permits the back flow of liquid or the passage of gas when the patient strains. The container should be from 4 to 14 inches above the level of the buttocks.

Therapeutics

PREVENTION OF TUBERCULOSIS

Dr. Noble P. Barnes, Washington, D. C., presented a paper at the International Congress on Tuberculosis (*Interstate Medical Journal*, January, 1909), which states so well the every-day methods of preventing this disease that it is time well spent to review them.

As unhealthy mucous membranes are probably generally the point of entrance into the system of the tubercle bacillus, Barnes emphasizes the necessity for keeping mucous membranes clean and healthy and with free drainage. He emphasizes the necessity for the complete and prompt removal of adenoid vegetations and enlarged tonsils in young children, and believes that the frequently performed tonsillotomy, while removing obstruction, leaves partially concealed or submerged diseased tonsillar tissue that not only harbors various organisms, but offers an open door for the tubercle bacillus. If it is decided that a tonsil is diseased a complete tonsillectomy should be done. Also, partial removal of adenoids does not relieve the congested turbinates, and proper nasal breathing and nasal mucosa drainage can not be established until the nasopharynx is cleared.

The nose itself should be made as free of bony obstructions and mucous membrane hypertrophies as deemed necessary for the free passage of air. If the mucosa is thickened, the use of mild alkaline antiseptic solutions followed by mentholated pure petroleum oil will aid in causing it to become healthy. In simple catarrhal conditions of the larynx and upper bronchial tubes, the inhalation of some mild aromatic antiseptic oil solution is of value.

Barnes believes that the rising toilet of all individuals who possess sensitive mucous membranes, and of those who inhale city dust, should include the employment of a non-irritating nasal douche, and a cold water gargle. "A free change of air in the lungs is next in order, the method depending on the physical condition, and lastly inhalation for from five to ten minutes of mentholated aromatic oils."

From such a morning toilet of the nose and throat, mucus that may have collected during the night is washed off and expelled, the appetite for breakfast is improved, and the mucous membrane is prepared to counteract the ill effect of the dust and bacteria that must of necessity be inhaled during the day.

If the mucous membrane of the nose and throat is unhealthy, Barnes suggests, besides small doses of iron, small doses of iodid. This is certainly good treatment, provided the dose of iodid is very small, perhaps not more than 0.03 to 0.05 gram (or $\frac{1}{2}$ to 1 grain) three times a day.

If a tuberculous process is going on in the lung, Barnes advises against respiratory exercises as tending to prevent the normal healing of the part. This is certainly good advice, as either the exercise is often carelessly ordered by the physician, or the patient or the patient's family, through the reading of popular articles, begins deep breathing at a time when it is positively contraindicated. Later, when a lung has thoroughly healed, graduated respiratory exercises are advantageous. Barnes suggests the following precautions in lung gymnastics, viz.: never expand the chest beyond the degree of comfort for fear of tearing open old wounds or rupturing air cells. 2. The air should be expelled through the nose instead of through the mouth or puckered lips as taught by most teachers of physical culture, because the turbinates are cooled by inhalation, and warmed by exhalation, and the dust caught on the nasal hair and mucous membrane will be forced out instead of being drawn further in."

The mucous membrane of the digestive tract becomes second in importance as a route of tuberculous invasion

in infants and children, and besides the frequent swallowing of human tubercle bacilli in contaminated food, and from putting into the mouth unclean hands and toys, it seems to be a proved fact that bovine tubercle bacillus is pathogenic to children. Besides the necessity for pure, clean, and non-infected food for infants, a primary necessity in this prevention of digestive infection is to keep the things the child puts in its mouth clean, and Barnes believes "the abominable pacifier, which is first put into the nurse's mouth, then rolls around on the floor, and then finally into the baby's mouth, is pernicious and a germ carrier, to say nothing of the deformities of the face and mouth that may occur from such constant sucking." Such "sucking quieters" of the babe create a habit for putting everything into his mouth when he gets a little older, to say nothing of sucking his own dirty fingers, putting pennies and other dirt-carrying things into his mouth, and later as a school child "chewing gum, sucking pencils, nibbling his nails, etc." All such sucking and chewing habits are best prevented by not allowing the babe to acquire such habits.

If the stomach mucous membrane is believed to be imperfect, Barnes believes that a little dilute hydrochloric acid may be needed to cause the stomach to be a proper germ-killing organ. The hydrochloric acid of the stomach not only has its local efficient action, but also stimulates the proper flow of the bile and the proper flow of the intestinal secretions.

Too great care of the child's teeth can not be given. Decayed teeth must be filled or extracted, and Barnes thinks it is many times a fallacy to believe that diseased teeth in children should be left *in situ* for fear of interfering with the proper eruption of the second teeth.

Tuberculous lymph bodies which can be reached Barnes would immediately remove. "Simple enlargements of the lymphatics in children can be reduced by diet, hygiene, and the administration of sodium salicylate and iodid of iron," but if they are tuberculous such treatment will not cause them to become normal, and they must be removed.

As many more eye inflammations in children are tuberculous than was once supposed, more careful attention to cleansing the eyelids in the morning and evening with non-irritating antiseptic lotions seems advisable.

Examination of the ears of infants who are in any way ill should be routine, and the ears should be carefully watched when the child has any kind of a cold, or cries from pain that can not be localized.

Besides the above measures in preventing local inflammations and the catching of cold from local infection, colds may be prevented by proper bathing. Barnes believes the hot bath for the child should be discontinued, and that "the tepid and gradually cooling shower accompanied by friction should be adopted; the temperature depending on the individual ease and lowered only to the point of giving good reaction."

He sums up the measures for the prevention of colds and therefore the tendency to tuberculosis as, "proper hygiene of the skin and mucous surfaces; proper hygiene in diet, sleep, and living; avoiding fatigue, long hunger, mufflers, and chest protectors; avoiding dust and poorly ventilated places." No exercise in the open air can overcome the injuries to the child from sitting in foul-aired schoolrooms or sleeping in close apartments, nor can fresh air and good food overcome disease while such wrong living is continued.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1909," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(Continued from page 1835)

ORGANS OF ANIMALS

The discovery of the importance of internal secretions has led to extensive clinical trials with preparations of the so-called ductless glands, and other tissues which elaborate, or are supposed to elaborate such internal secretions. Two of these, the thyroid and suprarenal glands, have given decisive therapeutic results and have become official in the Pharmacopeia; preparations of the active principle of the suprarenal are described in this book under the heading of "Epinephrin." The other organ products are scarcely beyond the experimental stage, and may therefore be described together. Their active principles have not been isolated, and they are most commonly used in the form of the powdered dried gland. The gross fat and connective tissue should be removed as completely as possible, and the drying should be conducted at a relatively low temperature. The powder is frequently compressed into tablets. It is recommended that the strength of these should be stated in terms of the dried gland. Since there are no tests for the quality, or even identity, of these powdered products, the physician, unless he can himself supervise their preparation, is forced to rely on the general reputation of the manufacturer.

After the description of each gland a list of such preparations as have been submitted to the Council, and which are being marketed in an unobjectionable manner, is given. For the reasons stated, however, the Council disclaims any responsibility for their quality or identity.

PITUITARY GLAND

The removal of this body in animals is followed by symptoms of motor disturbances, depression, emaciation, and rapid death. The infundibular portion of the gland causes, when injected intravenously, a rise of blood pressure and slows but strengthens the action of the heart. It contains a substance soluble in water, and not destroyed by boiling, which is stated to cause dilation of the renal vessels and a marked increase in the secretion of urine. The gland has been found to be abnormal in many cases of acromegaly and so is believed to have an internal secretion acting on the growth of bones. The anterior lobe is claimed to have properties similar to those of thyroid extract.

The drug has a doubtful effect on the circulation when given by the mouth, but the infundibular portion may be useful in cardiac debility. An extract of this part of the gland has been recommended as a diuretic. The results of the use of the gland in acromegaly are uncertain, but the output of phosphates is increased. It may be given at the first symptom of debility or functional disturbances.

DESICCATED PITUITARY SUBSTANCE (ANTERIOR LOBE)—Armour.—The anterior lobe from the pituitary of the ox, separated, dried and powdered without the addition of preservative or diluent.

A light grayish yellow powder, having a slight peculiar odor. Partly soluble in water.

One part represents approximately 4.5 parts of the fresh substance. On incineration, it should yield not more than 6.5 per cent. ash.

Action and Uses.—See pituitary gland above.

Dosage.—0.05 to 0.20 Gm. (1 to 4 grains) in powder or tablet.

Manufactured by Armour & Co., Chicago.

DESICCATED PITUITARY SUBSTANCE (POSTERIOR LOBE)—Armour.—The posterior lobe from the pituitary of the ox, separated, dried and powdered without the addition of preservative or diluent.

A light grayish yellow powder having a slight peculiar odor. Partly soluble in water.

One part represents approximately 4.5 parts of the fresh substance. On incineration, it should yield not more than 6.2 per cent. of ash.

Action and Uses.—See pituitary gland.

Dosage.—0.05 to 0.20 Gm. (1 to 4 grains) in powder or tablet.

Manufactured by Armour & Co., Chicago.

THYMUS GLAND

Little is known as to the functions of the thymus, but it is believed to have an important relation to growth. There also seems to be some relation between the thymus and thyroid, for the former is frequently abnormal in diseases involving the latter (exophthalmic goiter).

The use of thymus is purely empirical. It has been recommended in the treatment of exophthalmic goiter, rickets, tuberculosis, hemophilia, and infantile marasmus and atrophy; its use in the latter conditions is said to be the most promising. It is claimed to exert a somewhat favorable effect in certain cases of cancer.

MAMMARY GLAND

The extracts of the mammary gland are said to have an effect upon the uterus. They have been used in the treatment of profuse and painful menstruation and of uterine and ovarian tumors, but the beneficial results reported can hardly be accepted until confirmed by further observations.

PAROTID GLAND

Indications and suggested uses are similar to those for the mammary and ovary; it has been recommended in artificial menopause, intermenstrual pain and other conditions in which the ovary or corpus luteum are used.

PARATHYROID GLAND

The parathyroid gland, even in small doses, has a pronounced action on the course of the tetany resulting from the removal of or injury to the parathyroid glands. Its use checks the convulsions and removes the feeling of fear, the nausea and diarrhea and has undoubtedly at times greatly prolonged life or saved it while the injured parathyroid glands regained their functions. The fresh gland seems to be more active than the dried commercial preparation.

The drug has been used most successfully in tetany following removal of the parathyroids; its use in idiopathic and other non-operative forms of tetany has been less successful.

DESICCATED PARATHYROID GLAND—Armour.—Desiccated Parathyroid Gland—Armour, consists of the exterior parathyroids of the ox freed from fat, cleaned, dried and powdered, without the addition of preservative or diluent.

A light yellow powder, having a peculiar odor. Partly soluble in water.

One part represents approximately six parts of the fresh tissue. On incineration it should yield not more than 7 per cent. ash. It contains very small amounts of organically combined iodine.

Action and Uses.—See parathyroid gland.

Dosage.—0.006 Gm. (1/10 grain) four times a day.

Manufactured by Armour & Co., Chicago.

TESTICLE

Subcutaneous injections of testicular extracts were claimed to increase muscular energy from 10 to 20 per cent. Oxidation is somewhat increased and extracts of the gland may be used in obesity, but the results are uncertain. It has also been recommended in prostatic hypertrophy and many other conditions.

SPLEEN

Spleen has been used empirically in anemia, chlorosis, myxedema and various other diseases.

OVARY

The ovaries produce internal secretions which are necessary for the proper functioning of the uterus and which also have obscure effects on metabolism and the nervous system. Diminution or cessation of the activity of the ovaries (as at menopause, natural or artificial) often leads to a variety of nervous symptoms; irregularities in their activities seems to be sometimes accompanied by dysmenorrhea. Ovarian substance has been administered, often with apparently good results, for the relief of symptoms following the natural or artificial menopause and in dysmenorrhea, intermenstrual pain, etc.

CORPUS LUTEUM

It is generally recognized that one or more of the most important of the internal secretions of the ovaries originate in the corpora lutea and the latter have been tried recently to a considerable extent in some of the classes of cases in which the entire gland is used. Thus, it is stated that in cases of artificial menopause, following operation, the use of the dried corpus luteum has been followed by great improvement. It may be given in the form of tablets, each of which is composed of a dried corpus luteum, obtained from a pregnant animal, usually a pig; or it may be given as "lutein" in twenty grain doses, three times a day, in some cases given continuously, in others periodically when the discomforts are greatest, and continued for about ten days at a time. The "lutein" is made by squeezing out the corpora lutea from the ovaries of the pig obtained at the slaughter house. The corpora are then rapidly dried, powdered, and compressed into tablets. These preparations are stated to frequently give good results when the ordinary ovarian extract made from the dried tissues of the ovary itself fails.

Corpus luteum has also been recommended in obesity associated with amenorrhea and in other conditions of "ovarian insufficiency" and in dysmenorrhea.

Drevet recommends that an extract of the corpora lutea, prepared as follows, be used: 1 kilo of finely divided corpora lutea are macerated in the cold for forty-eight hours with a mixture of 500 Cc. glycerine, 500 Cc. distilled water and 10 Cc. sulphuric acid. The liquid is filtered, neutralized with soda and the precipitate after being washed, is dissolved in acetic acid and again precipitated. The precipitate is then dried in vacuo. Dose of this extract, 0.04 Gm. to 0.08 Gm. ($\frac{2}{5}$ to $1\frac{1}{2}$ grain) gradually increased to 0.12 Gm. (2 grains).

RED BONE MARROW

Red bone marrow consists largely (more than 90 per cent.) of fat. In new born animals a third or more of this fat consists of lecithin. The marrow of the bones of new-born animals contain iron (up to 1 per cent. or more) in various forms of organic combination. Both lecithin and iron decrease rapidly in the first weeks after birth. The commercial preparations contain very variable amounts of these constituents.

Action and Uses.—Red bone marrow is supposed to stimulate the formation of red blood corpuscles; whatever action it may have in this direction is probably due largely to the iron and lecithin which it contains.

It is recommended in simple and pernicious anemias.

EXTRACT OF RED BONE MARROW.—Extract of red bone marrow is a glycerin extract of the red marrow of bones. It contains about 2 per cent. of proteids, about 0.1 per cent. of lecithin and about 85 per cent. of glycerin.

It is a brownish liquid of an agreeable aromatic taste.

Actions and Uses.—This preparation is claimed to stimulate the formation of the red blood corpuscles.

It is recommended in simple and pernicious anemia.

Dosage.—4 to 8 Cc. (1 to 2 fluidrams) in water, milk or wine, three times a day.

Prepared by Armour & Co., Chicago.

(To be continued.)

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[For other information see second page following reading matter]

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TUBERCULOSIS AND THE INDIAN

Mortality from tuberculosis is said to be far higher among the Indians than among the whites or even among the negroes.¹ It is generally believed, however, that there was no tuberculosis among the Indians previous to the coming of the white men. If it existed, it must have been exceedingly rare. Early histories of the aborigines describe such diseases as smallpox, cholera, filth diseases, insanity and rabies (from the bites of wolves and skunks), but say almost nothing of tuberculosis. As the whites came into contact with the Indians, this disease spread progressively from east to west.

The negative reason for the peculiar mortality from tuberculosis among the Indians is that this race, having come into contact with the disease very recently, has not had time to acquire immunity. For a similar reason, the negro race also has a high consumption mortality: it is very probable that there was no tuberculosis in Africa until the white man took it there. If the condition of the Indian and the negro, who have no racial immunity against tuberculosis, be compared with that of the Jew, who, through the forty centuries of his contact with tuberculosis, has established for himself a comparative immunity against the disease, it is seen that the Jewish race has not only a lower death rate from tuberculosis than the other two, but perhaps the lowest rate of any people.

The positive agencies for the dissemination of tuberculosis among the Indians are their personal and domestic habits. In the old days the nomadic Indians dwelt in more or less temporary abodes. These were well ventilated, since there were no means for making them air-tight. They were dirty enough; but by the time the stench from the filth around them became unbearable, it was time for the inhabitants to move on. They must sometimes have become infected; but the most permanent possessions of the Indians were of such perishable nature, compared to the belongings of civilized people, that diseases can not have been long perpetuated by them. Civilization, however, has provided the Indian with a durable and immovable house—generally a log cabin or rude hut—capable of being hermetically sealed against the air. Now he can shut out the fresh air, as he could not from his tepee. He is not

sufficiently advanced to understand and apply the principles of disinfection; and his belongings, sheltered by four walls and a roof, are much less subject to Nature's process of purification by destruction.

When the virgin soil of the Indian's constitution is prepared by such habits as these and by liberal indulgence in the white man's fire-water, it is natural enough that the seed of tuberculosis should strike deep root there and bring forth abundant harvest of death.

The national government has not been wholly remiss in its attitude toward this matter. The Honorable F. E. Leupp,² Commissioner of Indian Affairs, and Prof. Ales Hrdlicka,³ of the United States National Museum, have been active in the work of saving the Indian from extinction. The Lake Mohonk (N. Y.) Conferences also have been zealously agitating the matter. On the Cattaraugus Reservation, in New York State, an excellent dispensary, a well-equipped hospital, and the Thomas Indian School for Indian Children are maintained. What is being done for the Indian, however, is but a fraction of what should be done; and, if humane instincts will not prompt us to action, enlightened selfishness may furnish a motive. The Indian, in his intercourse with the whites to-day, is a constant disseminator of infection. Self-protection should, therefore, dictate such humane efforts as a dormant sense of justice may fail to inspire.

ANAPHYLAXIS

In a recent contribution to the study of anaphylaxis Biedl and Kraus¹ assert that, at least in dogs, the symptom-complex characteristic of the so-called anaphylactic shock is caused by a profound peripheral vasodilatation with a correspondingly grave fall in blood pressure. The other symptoms—vomiting, diarrhea, anuria, etc.—they regard as secondary to vasodilatation, which is regarded as the underlying primary process. They also found in the anaphylactic state a greatly decreased coagulability of the blood, as well as a marked fall in the number of polymorphonuclear leucocytes. They, furthermore, emphasize that results similar to those obtained by them in anaphylactic dogs follow the intravenous injection into normal dogs of commercial (Witte's) peptone; indeed, they assert that the results in the two cases are so much alike as to be practically identical. They even maintain that they have produced the so-called anti-anaphylaxis—the extinction of hypersensitiveness that follows survival of the acute symptoms produced by a second injection of the foreign serum in sensitized animals—quite as readily by the injection of peptone as by the injection of the foreign serum itself. Reversely, survival of the second injection of foreign serum is said to give a considerable measure of freedom from the poisonous effects of pep-

2. Leupp, F. E.: *Fighting Tuberculosis Among the Indians*, Southern Workman, November, 1908.

3. Hrdlicka, A.: *Contribution to the Knowledge of Tuberculosis in the Indian*, Southern Workman, November, 1908.

1. Wien, klin. Wchnschr., 1909, xxii, No. 11.

1. Eighth Ann. Rep., Bureau of the Census, Mortality Statistics, 1907.

tone. Biedl and Kraus believe that such striking similarity of results is explainable only on the assumption of the presence in the two cases of substances physiologically identical. On the basis of their results they offer as a hypothetical explanation of the acute phenomena of anaphylaxis the formation in the sensitized animal of a vasodilating substance which becomes fully active on the introduction of a second dose of the foreign protein. Richet,² pioneer investigator in this field, who first introduced the word "anaphylaxis," in discussing the work of Biedl and Kraus, points out that he himself has shown, so long ago as 1902, that in anaphylactic shock there is an extreme and rapid fall in arterial pressure. This fall, however, he regarded and still regards as a secondary phenomenon due to cellular changes especially in the central nervous system. Richet holds that vasodilatation does not explain the vomiting, the diarrhea, the intense itching, the convulsions, the coma, and other symptoms characteristic of anaphylactic shock, especially since such symptoms are not a necessary consequence of even extreme vascular dilatation produced by other means. As to the incoagulability of the blood, his experience indicates that it is not at all constant in anaphylaxis. The toxic effect of Witte's peptone, which, it is well to remember, is a complex substance, after all is in so many ways dissimilar from the anaphylactic shock that the comparison does not help to explain the latter. Consequently, while no doubt exists as to the occurrence of vasodilatation in acute anaphylaxis, we have good reason to believe that the dilatation is a secondary phenomenon and that the primary process must be sought elsewhere than in the peripheral vasomotor apparatus.

THE BIOLOGIC STANDARDIZATION OF DIGITALIS

We publish elsewhere¹ in this issue an abstract of Bulletin No. 48 of the Hygienic Laboratory, Washington, D. C., entitled "The Physiological Standardization of Digitalis." It contains a good deal of material which is of great interest to the physician, because, in addition to giving a complete historical review of the various steps which have led up to biologic standardization of drugs, and an investigation into the accuracy of these methods, it also gives the results of the writers' examination of some of the proprietary preparations of digitalis which are on the market. Three of these non-pharmacopeial preparations compared very favorably with the official fluidextracts as the results given in the table on page 1939 show. With two more preparations, however, the findings were not as favorable, and they furnish examples of the vast difference between theory and fact, or perhaps it might be said between manufacturers' claims and actual conditions. One of these is claimed to have about double the effect on the system that an ordinary fluidextract possesses. In real-

ity, when judged by its effect on animals, it appeared to be considerably weaker than the fluidextracts examined. It would seem also that the manufacturers themselves are not entirely convinced of the increased potency of their own preparation, for when it comes to doses they recommend from one-third to one minim *every hour*, an amount which is certainly not less than that of the official fluidextract, which is from one to two minims and usually given three or four times a day. More striking still were the results obtained with another preparation whose manufacturers claim that it is an aseptic permanent solution of the same strength as the tincture of the United States Pharmacopeia. Of three specimens examined, one seemed to be about half the strength of a tincture, while the other two bottles contained dark, muddy solutions not possessing the characteristic cardiac action of the digitalis series. One of these solutions when injected into the circulation lowered the blood pressure 23 per cent., giving a curve resembling that of the nitrites. The writers of the bulletin point out that this preparation is certainly not invariably a permanent solution, but may deteriorate and be positively harmful. When it is remembered that this preparation is especially recommended for hypodermic administration and that such a method is only employed where a rapid action is desired, the seriousness of the situation becomes more apparent. Such a preparation would be a menace to the "health of the sick."

An important need, emphasized by the appearance of this bulletin, is that of government supervision of the manufacture of preparations belonging to this series in the same way as the government now controls serum manufacture. Of the necessity of biologic standardization there can be no doubt, and while many pharmaceutical houses now maintain laboratories for this purpose there is no uniformity of method or of standard strength to which the preparations on the market under the same name must conform. Each maker has his own standard. The necessity of a uniform standard is great; the incorporation of such a standard in the next pharmacopeia would seem to offer no unsurmountable obstacles.

The appearance of a government bulletin of the scope of the present one and dealing with so valuable and much used a drug as digitalis is of considerable importance. It furnishes another indication of the widespread interest which is being taken in the production of pure drugs of a uniform strength.

SUBSTITUTES FOR THE WASSERMANN REACTION

Since the clinical value of Wassermann's complement-fixation test for syphilis has been pretty firmly established, numerous efforts¹ have been made to devise a substitute that is simple and more generally practicable. Most of these have depended on precipitate forma-

2. Presse méd., 1909, xvii, 249.

1. Pharmacology Department, 1938.

1. THE JOURNAL, April 3, 1909, p. 1113.

tion when syphilitic serums are treated with one of a variety of reagents. Thus Klausner, by diluting serum with distilled water, obtained with syphilitic serum a much more abundant precipitate than with other serums. Other observers have obtained similar results, using as a precipitant, dilute alcohol, solutions of lecithin, sodium taurocholate, or sodium glycocholate. But, unfortunately, none of these tests has proved constant enough to be of much value clinically.

A somewhat similar test has been reported by Noguchi,² who systematically examined the various constituents of spinal fluids and blood serums giving a positive Wassermann reaction, and found that the active substances (antibodies) were all precipitated with the euglobulin fraction of the proteins, on half saturation with ammonium sulphate. He further found that this fraction was constantly and materially increased in the syphilitic serums he examined, over that in normal and non-syphilitic serums, although there was not a quantitative relation between this increase and the intensity of the Wassermann reaction. Noguchi thinks that this increase in globulin is more constant than the Wassermann reaction, and that it bears a more definite relation to the activity of the disease. He also found an increase in the globulin in the spinal fluid in cases of tabes and general paresis.

His determinations were made by careful gravimetric methods, but he has devised a simple method for clinical use depending on the precipitation of the proteins in the spinal fluid by ten per cent. butyric acid solution. In positive cases a flocculent precipitate appears. In negative cases the fluid remains clear or becomes simply cloudy. He thinks the test is simpler and gives more definite results than Nonne's method of half saturating the fluid with ammonium sulphate. In a modified form he found the butyric acid test applicable to the blood serum.

The increase of globulin in the serum of syphilitics has been previously described. It is probably this which gives rise to the precipitate formed by dilution of the serums in Klausner's reaction. But an increase in globulin has been reported by other observers in the serum of some non-syphilitic conditions as well. Hence, until the test has been extensively tried, it can not be accepted as a reliable substitute for the Wassermann reaction. Better results might be expected from its application to spinal fluids.

WHISKEY AND THE PUBLIC HEALTH

The National Model License League, an organization which claims to be working for the purification of the existing liquor business, has been utilizing a statement made by a distinguished physician in an address to the commercial bodies of Kentucky in their recent convention. Speaking of health matters in that state, this

physician is quoted as saying that for every one death produced by whiskey 1,000 deaths have been caused by the drinking of impure milk; that for every single death produced by the drinking of whiskey there have been 5,000 deaths from the drinking of contaminated water. He prefaced this statement by a request that it should not be misunderstood or misinterpreted, but from the use to which it is being put it has certainly been misinterpreted and the attempt is made to make it still more generally misunderstood. The public is apt to accept generalities of this kind without allowing for the qualifications which may have been in the mind of the speaker. Furthermore, there are very few diseases which have not contributory factors to their mortality, and even moderate drinking habits affect the prognosis of disorders from which a total abstainer is comparatively safe. As a lay journal says, the apparently impressive and prodigious figures are not worth a straw as an argument. Certainly not in the way they are being used here. The case is another instance of the same kind that has heretofore been noticed in THE JOURNAL in which remarks are used in senses entirely different from those intended by the speaker or writer.

DESIDERATA IN BRITISH LIBRARIES

Professor Karl Pearson, the eminent authority on biometrics, writes to *Nature* of May 6, inquiring where a number of medical journals, or certain years of such, can be found in England, stating that they have been looked for at the likely places and it is possible that they exist and have not been found. It seems a curious thing that London, with its library of the British Museum and all its other medical and general libraries, should lack copies of such widely quoted periodicals as *Lo Spallanzani*, the *Archiv f. Psychiatrie u. Nervenkrankheiten* for the eighties, the *International Medical Magazine*, etc. There seems also to be no library in London containing a complete set of university dissertations and degree theses. This last probably would be found to be the case also in many, if not all, of our American libraries, though there are opportunities occasionally of acquiring them at comparatively small cost. Many of these theses contain valuable matter or worked up summaries of our knowledge on their special subjects, and, while they are not absolutely necessary, they may be badly wanted at times. If any one occupied in research wishes to verify his references he needs to have all the conveniences for that kind of work, and, though bibliography in scientific papers may be easily overdone, the facilities for it should not have too many limitations.

THE FRENCH BIRTH RATE

It is said that for the first time in many years the French birth rate is showing an upward tendency. Of late years it has been decreasing or stationary. The increase is small, only about 9,000 for the first six months of 1908, but it was accompanied with a corresponding decrease in the death rate of over 60,000. This would seem to indicate that the conditions that have been troubling the French sociologists for the past few years are improving.

2. Jour. Exper. Med., January, 1909.

THE ATLANTIC CITY SESSION

We learn as we go to press that the Session at present under way at Atlantic City bids fair to be one of the most successful in years and, though not characterized by any spectacular features, there is every evidence of good solid scientific work. The familiarity of so many members of the Association with Atlantic City and its methods, together with that city's perfected system of arranging for conventions, all tend to make matters move smoothly. The attendance so far is very good and may possibly exceed that of two years ago, though this is not probable. On the first day the registration was over 900, reaching 2,480 on Tuesday. A large number of physicians were in Atlantic City in advance of the convention, having come from other society meetings in the East and also to attend other meetings held at Atlantic City in connection with the Association's convention. Medical men were much in evidence last Sunday both in the hotels of the city and on the Boardwalk. Among other societies meeting at Atlantic City this week are the American Association of Medical Milk Commissions, the American Gastro-Enterological Association, the American Proctologic Society, the American Urological Association and the National Conference of State Medical Examining and Licensing Boards. The House of Delegates transacted its regular business with dispatch. It is impossible to print the minutes of the meeting in this issue of *THE JOURNAL*, but nearly all of the proceedings will appear in the June 19 issue. The general meeting, which was held according to schedule, was well attended, as were also the Section meetings which commenced Tuesday afternoon. The medical profession of Atlantic City is entertaining the visiting physicians in its usual generous style. A notable feature of the present session is the scientific exhibit; all the space available has been taken, there being nearly fifty participants. Many new features have been introduced and the tuberculosis exhibit is particularly fine. In all, there seems every reason to believe that the 1909 session will be one of the most satisfactory ever held.

Medical News

ALABAMA

Commencement Exercises.—On April 30, the annual commencement exercises of the Medical Department of the University of Alabama were held in Mobile, and a class of 29 was graduated. The address of the evening was given by Hon. John McDuffie, Monroeville, and John W. Abercrombie, president of the university, presented the diplomas.

Personal.—Dr. Samuel W. Welch, Talladega, has been elected a member of the State Board of Medical Examiners, vice Dr. Edward H. Sholl, Birmingham.—Dr. J. E. Shirley has been appointed resident physician of the Mobile City Hospital; Dr. S. S. Stubbs of the Southern Infirmary; Dr. S. C. Spencer of the Providence Infirmary; Dr. R. R. Ivey of the Alabama State Hospital, Tuscaloosa, and Dr. J. R. Oswalt of St. Margaret's Hospital, Montgomery.—Dr. Felix H. Craddock has been elected municipal health officer of Sylacauga, and Dr. Braxton B. Pugh of Ironaton.—Dr. Rufus L. Milligan has been elected city physician of Montgomery, vice Dr. Gaston J. Greil.

ARKANSAS

Personal.—Dr. William E. McLain has been elected city physician of Argenta.—Dr. Joseph J. Moncrieff, Beebe, has been appointed chief medical examiner of the National Consolidated Casualty Company, Little Rock.

City Hospital for Little Rock.—The City Hospital district, Little Rock, is about to issue bonds for \$50,000. The Medical Department of the University of Arkansas has given assurance that as soon as actual work on the hospital is begun it will erect a \$35,000 building beside it. It is believed that the former offers of \$10,000 from the university, and of two lots for a site will be renewed.

Society Meetings.—The Arkansas Medical Society, at its thirty-third annual meeting held in Pine Bluff May 18-21, elected the following officers: President, Dr. James H. Lenow, Little Rock; vice-presidents, Drs. Harvey D. Wood, Fayetteville; Elbert L. Watson, Newport, and Forrest A. Corn, Lonoke; secretary, Dr. Morgan Smith, Little Rock; treasurer, Dr. John S. Wood, Hot Springs; delegate to the American Medical Association, Dr. Eugene C. Hay, Hot Springs; alternates, Drs. Charles C. Price, Douglas, and Buchanan Hatchett, Fort Smith; councilors, first district—Dr. Horace R. McCarroll, Walnut Ridge; third district—Dr. Samuel A. Southall, Lonoke; fifth district—Dr. H. H. Nichuss, Wesson; seventh district—Dr. James C. Wallis, Arkadelphia; and ninth district—Dr. Creed T. Cannady, Cotter; State Board of Medical Examiners, third district—Drs. Frank B. Young, Springdale; Frank B. Kirby, Harrison, and James H. Beard, Gentry; second district—Drs. Fred T. Murphy, Brinkley; Lemuel E. Willis, Newport, and Gus A. Warren, Blackrock; sixth district—Drs. William S. Stewart, Pine Bluff; John L. Butler, Sheridan, and L. H. Barry, Hot Springs; seventh district—Drs. James C. Wallis, Arkadelphia; James T. Henry, Eagle Mills, and John A. Moore, Lisbon. Dr. C. P. Merriwether was selected as assistant editor of the journal of the society. The society decided to hold its 1910 meeting at Little Rock.—At the annual meeting of Carroll County Medical Society, held in Eureka Springs, May 12, the following officers were elected: President, Dr. John D. Jordan; vice-president, Dr. Russell G. Floyd; secretary, Dr. Henry Pace, and delegates to the state society, Dr. Floyd, all of Eureka Springs, and Dr. Charles A. George, Berryville.

COLORADO

State Board Members Appointed.—On May 17, the governor appointed the following members of the State Board of Medical Examiners: Drs. William W. Rowan, Ouray; Miller E. Preston, Denver, and David A. Strickler, Denver.

DELAWARE

Antituberculosis Society Elects Officers.—At the meeting of the directors of the Delaware Tuberculosis Society, held in Wilmington, May 4, the following officers were elected: Honorary president, Dr. John J. Black, Newcastle; vice-presidents, Drs. Harold L. Springer and Irvine M. Flinn, Wilmington; chairman of farm committee, Dr. Peter W. Tomlinson, Wilmington; admission and dismissal committee, Drs. Joseph P. Wales, Albert Robin, Irvine M. Flinn, and Harold L. Springer, and chairman of educational committee, Dr. Albert Robin, all of Wilmington.

Governor Appoints Commission.—The governor has appointed the following medical members of the State Tuberculosis Commission: Drs. Peter W. Tomlinson, B. L. Lewis and W. F. Haynes, whose duty it is to arrange dispensaries in each county and make sanatorium arrangements for tuberculosis patients. He also appointed Drs. Harold L. Springer and Irvine M. Flinn, both of Wilmington, members of the State Board of Examiners of Graduate Nurses. He has also issued commissions to Drs. John J. Black, Newcastle, and James J. White, Dover, reappointed trustees of the State Hospital, Farnhurst.

ILLINOIS

Change of Proprietorship.—The interest of Dr. Everett H. Butterfield, Ottawa, in the Ottawa Tent Colony, has been sold to H. B. Pettit, superintendent of the institution, son of Dr. James W. Pettitt, and the entire control of the institution is now in the hands of Dr. Pettit and his son.

Personal.—Dr. George H. Staey has resigned as pathologist to the Illinois Central Hospital for the Insane, Jacksonville, and will practice in that city.—Dr. Martha Hayward has been appointed superintendent of the Aurora City Hospital.—Dr. Arthur P. Leipold, Moline, has been elected supreme medical examiner for the state of the Home Fraternal League.—Dr. William H. Ludewig has been elected president of the Rock Island Board of Health.—Dr. Flint Bondurant has been appointed bacteriologist in the office of the State Board of Health, Springfield.

Smallpox in Illinois.—According to the report of the Public Health and Marine-Hospital Service on May 21, more than

one-eighth of all the smallpox in the United States between January 1 and June 1, was reported in Illinois. Of the total 9,960 cases in the country, 1,275 were reported from Illinois, but only 11 of these were found in Cook county.—Dr. Charles E. Crawford, Rockford, state health officer, is said to have found 72 cases of smallpox in Marengo in 41 families. The patients are all under quarantine, and the regulations are being well observed.

Chicago

Personal.—Dr. William A. Pusey has been elected president of the American Dermatological Association.—Dr. and Mrs. Bernard Fantus will sail for Europe June 15.

Commencements.—At the banquet which closed the commencement exercises of Rush Medical College, June 1, Dr. Henry B. Favill gave an address on "Medicine in the Scheme of Conservation." The president of the university announced that the college will start next year free from debt, which has been cleared away by the generosity of the members of the board of trustees. The degree of doctor of medicine was conferred on a class of 57. Fellowships in special subjects and prizes were conferred on 8 members of the class. The doctorate address was delivered by President Edward J. James of the University of Illinois.—The twenty-seventh annual commencement exercises of the College of Physicians and Surgeons, Chicago, the College of Medicine of the University of Illinois, were held June 5, when a class of 131 was graduated. The doctorate address was delivered by Dr. William E. Quine on "The Doctor and Religion."

INDIANA

April Sickness and Death.—During April, there were reported to the State Board of Health, 3,212 deaths, equivalent to an annual death rate of 14.3 per 1,000, or an 8 per cent. increase, as compared with April, 1908. There was also an increase in the morbidity of 10 per cent. Deaths under 1 year of age numbered 424, or 13.9 per cent. of the total deaths, and the deaths of individuals over 65 years of age were 1,044, or 33.3 per cent. of the total. Consumption caused 427 deaths, pneumonia 452, or 120 more than for the same month last year. There were 158 cases of typhoid fever reported in 24 counties, with 33 deaths, and 60 cases of diphtheria from 21 counties with 9 deaths. There were reported 176 deaths from violence, 8 of which were homicides and 31 suicides. The most prevalent disease of the month was tonsillitis.

Personal.—Dr. Jacob B. Casebeer, Auburn, went to Ann Arbor for operation May 25.—Dr. Edgar F. Kiser, superintendent of the City Dispensary, Indianapolis, has resigned.—Dr. Charles J. Overman has succeeded Dr. Edwin O. Harrold, resigned, as city health officer of Marion.—Drs. William F. Sharrer and William R. Quick have been appointed members of the board of health of Delphi.—Dr. Solomon G. Smelser, Shirley, has been appointed a member of the State Board of Medical Registration and Examination.—Drs. Charles P. Cook and Walter J. Leach, New Albany, have left for Europe.—Drs. J. H. William Meyer and Bo Carr Bowell have resigned as members of the LaPorte Board of Health.—Dr. Edward Linthicum, Evansville, was operated on in St. Luke's Hospital, Chicago, recently.—Dr. Harry N. Swezey has been made a member of the board of public works of Marion.—Dr. Jonas Stewart, Anderson, slipped and fell down a stairway May 15, sustaining severe injuries.—Dr. Calvin I. Fletcher, Indianapolis, has returned from Europe.

KENTUCKY

Railway Surgeons Meet.—The fifth annual meeting of the Kentucky State Railway Surgeons' Association was held in Newport May 26 and 27. The following officers were elected: President, Dr. John L. Phythian, Newport; vice-presidents, Drs. Charles G. Daugherty, Paris; Albert S. Brady, Greenup, and James B. Kinnaird, Lancaster, and treasurer, Dr. Clarence H. Vaught, Richmond. The association decided hereafter to publish its own journal, and to hold its next meeting at Ashland in May, 1910.

Personal.—Dr. Florence Meder, Louisville, has been promoted to second assistant physician at the Central Kentucky Hospital, Lakeland, vice Dr. John K. Wood, Bowling Green, resigned on account of ill health, and Dr. Samuel Young, Murray, has been named third assistant physician.—Dr. Frank P. Strickler, Elizabethtown, has been elected president, and Dr. Charles Z. Aud, Cecilian, secretary and health officer, of the Harden County Board of Health.—Dr. James W. Griffin, Lewisport, has been elected president and Dr. James W. Knox, Lewisport, re-elected health officer and secretary of the Board of Health of Hancock county.

LOUISIANA

Personal.—Dr. George Dock, New Orleans, sails this week for England and the continent. He will attend the International Medical Congress at Buda-Pest.—Dr. E. Dunbar Newell has moved from St. Joseph to Chattanooga, Tenn., where, with his brother, Dr. Edward T., he is in charge of the Newell & Newell Infirmary.—Dr. Irving Hardesty, professor and head of the department of anatomy in the University of California, has been appointed to a similar position in Tulane University, New Orleans.—Dr. Joseph A. Estopinal, New Orleans, secretary of the State Board of Health, has resigned to accept the position of special medical inspector in Havana. He has been succeeded by Dr. Edward S. Kelley.

MARYLAND

Presentation.—Dr. James S. Woodward, who for more than twenty years has been resident surgeon to the Maryland Steel Company, at Sparrows Point, near Baltimore, and who recently resigned, on May 27, was presented by his friends with a silver loving-cup, whose three handles bore the engraved words "Physician," "Neighbor," "Friend."

Charge Against Justice of the Peace.—Dr. Marshall L. Price, secretary of the State Board of Health, has filed with the governor charges against Justice of the Peace Hartle, Hagerstown, alleging that the justice dismissed the case of an undertaker of Williamsport who was accused of the violation of the law relating to burial permits, without hearing the witness for the state, and that he had conspired with a public school teacher, charged with permitting pupils not vaccinated to attend the school, thereby defeating the administration of justice. The governor has asked for a prompt explanation from the justice.

Baltimore

Commencement.—Maryland Medical College celebrated its eleventh annual commencement June 1, when degrees were conferred on a class of 31 by Dr. Harry Gross. The introductory address was made by Dr. Bernard P. Muse, and the address to the graduates was made by the secretary of state of Maryland, Hon. N. Winslow Williams.

Personal.—Dr. William F. Shellenberger of the resident staff of Johns Hopkins Hospital, was operated on for appendicitis May 25.—Dr. Henry H. Imhof was slightly injured in a street car collision, May 26.—Dr. Anna D. Schultz has been elected president of the Alumni Association of the Woman's Medical College.—Dr. J. Clagett Robertson was operated on at St. John's Hospital a few days ago.—Dr. Silas Baldwin was injured by a runaway horse, May 30.—Dr. D. C. Absher, who was operated on at University Hospital for appendicitis, May 18, has recovered.—Dr. J. T. Coughlin has been appointed chief resident physician of St. Joseph's Hospital, vice Dr. E. G. McFarland.—Drs. W. Preston Miller and William T. Watson sailed for Europe June 3.—Dr. Llewellys F. Barker has gone to Europe and Dr. Roland Whitridge to Spain for the summer.—Dr. William S. Thayer will visit Dr. William Osler in Oxford this summer.

MICHIGAN

Personal.—Dr. Oscar C. Breitenbach, Escanaba, has been removed from Wesley Hospital, Chicago, to Evanston, Ill., and his condition is much improved and speedy convalescence is anticipated.—Dr. John W. Bosman, Kalamazoo, has been appointed local surgeon for the Grand Trunk Railroad.—Dr. Clyde C. Slemons has been elected city bacteriologist of Grand Rapids.

April Mortality.—During April there were 3,394 deaths reported to the department of health, equivalent to an annual mortality of 15.5 per 1,000. Of these, 615 were of infants under 1 year of age; 217 of children from 1 to 5, inclusive, and 1,140 of individuals 65 years of age or over. Chief among death causes were pneumonia, 317; tuberculosis, 254; violence, 150; cancer, 139; influenza, 74; measles, 59; meningitis, 55; diarrhea and enteritis, 46; typhoid fever, 40; diphtheria, 38; whooping cough, 27, and scarlet fever, 16.

MISSOURI

Personal.—Dr. Thomas E. Graham has resigned as assistant physician at State Hospital No. 2, St. Joseph.—Dr. Frank B. Hiller, Kahoka, has been appointed a member of the State Board of Health, vice Dr. Robert H. Goodier, Hannibal, and Dr. Ernest F. Robinson, Kansas City, to succeed Dr. Walter S. Thompson, Armstrong.—Dr. John M. Bell has resigned as a member of the faculty of Ensworth Medical College, St.

Joseph.—Dr. Porter E. Williams, superintendent of State Hospital No. 1, Fulton, retired from that position June 8.

St. Louis

Memorial Meeting.—A memorial meeting was held by the St. Louis Medical Society, May 30, at which memorial addresses were delivered by Dr. Willard Bartlett on "Dr. Hugo A. Auler," by Dr. Albert H. Meisenbach on "Dr. Benno Bribach," and by Dr. Henry J. C. Sieving on "Dr. Hugo W. Bartscher," and by Dr. William M. Baker on "Dr. Michael P. Reynolds."

New Building for Medical School.—Dr. William H. Warren, dean of the Medical School of Washington University, announced May 26, at the annual banquet of the Alumni Association, that a \$250,000 building is to be erected on the university campus for the use of students during the first two years of their medical course. On May 27, the annual commencement exercises were held, when the degree of M.D. was conferred by Chancellor David Franklin Houston of the University, on a class of 48.

NEW YORK

Commencement.—The annual commencement exercises of Albany Medical College were held May 18. The essayist was Dr. William H. Davidson, the address to the graduating class was given by Dr. Abraham Jacobi, New York City, and Rev. Charles A. Richmond, acting chancellor of Union University, conferred degrees on a class of 40.

New York City

Fire in Hospital.—In a fire which occurred in the children's ward of the King's County Hospital, Brooklyn, May 22, sixty crippled children were removed by physicians and nurses uninjured.

Laboratory for Inoculation Experimentation.—Plans have been filed for a laboratory to cost about \$10,000, to be constructed on the roof of the College of Physicians and Surgeons for the purpose of inoculation experimentation.

Personal.—Dr. Louis L. Seaman returned from Africa, June 4.—Paul A. Lewis has been appointed associate in pathology, F. Peyton Rous, assistant in pathology, and Angelia M. Courtney, scholar in chemistry by the board of directors of the Rockefeller Institute for Medical Research.—A dinner was tendered by the sisters in charge of St. Mary's Hospital, Jamaica, May 27, to Drs. James J. Crawford, Albert L. Voltz, August G. Maron, and Hanford Pattengill, present and past internes of the hospital, and each of the guests of honor was presented with a physician's hand satchel.—Dr. and Mrs. John E. Weeks sailed for Europe May 28.

Buffalo

Commencement.—The annual commencement exercises of the University of Buffalo were held May 28. The principal address was delivered by Mr. Adelbert Moot.

Personal.—Drs. Lucien Howe and F. Park Lewis have returned from Naples.—Drs. James H. Carr and J. Walter Fitzgerald have started for Europe.—Dr. William G. Taylor has returned after a two months' vacation in Cuba and Mexico.

Hospital Dedicated.—The Harrington Hospital for Children of the Buffalo General Hospital was dedicated with appropriate ceremonies May 28. Charles W. Pardee, president of the General Hospital, presided and delivered the principal address. The building, which is a memorial to the late Dr. Devillo W. Harrington, is located on Goodrich street, directly back of the General Hospital. The building is constructed of buff brick and iron; is fire-proof, two stories in height, with a main building and two wings which enclose a court. The top floor of the building is to be devoted to the use of nursing infants, mothers, and young children. The main floor will be devoted entirely to medical and surgical wards, and rooms for older children, and the basement will be used for isolation cases and for observation of suspicious cases.

OREGON

New Hospital.—Multnomah county has secured possession of the site for the county hospital at Fourth and Hooker streets, Portland, and in a few weeks the building will be ready for occupancy. It will accommodate about 100 patients.

Elections.—At the annual meeting of the Portland City and County Medical Society, held in Portland, May 19, the fol-

lowing officers were elected: President, Dr. Alan W. Smith; vice-president, Dr. Alpha E. Rokey; secretary, Dr. George S. Whiteside; treasurer, Dr. Stuart H. Sheldon, and Board of councilors, Drs. Joseph A. Pettit, Ben Norden and Luther H. Hamilton. It was decided to continue the meetings through the summer months, and four additional vice-presidents were selected to preside when occasion required, namely, Drs. Noble W. Jones, Ferdinand H. Dammasch, Robert J. March, and Albert E. Mackey.—The annual meeting of the Southern Oregon Medical Association was held at Grass Pass May 11. Dr. Robert J. Conroy, Medford, was elected president; Dr. Beaver, Ashland, vice-president, and Dr. Alvane C. Seeley, Roseburg, secretary-treasurer.

PENNSYLVANIA

Philadelphia

Personal.—Drs. J. A. Bayard Kane and George W. Bailey sailed for Europe June 5.—Drs. Anna L. Bacon and Mary J. Rochelle were appointed probation officers of the Juvenile Court, June 4.—Dr. John W. Rhein, who was operated on in the Howard Hospital recently for appendicitis, is convalescing.—Dr. Henry W. Stelwagon entertained Dr. George Pernet of London, Eng., and the members of the American Dermatological Society at luncheon at his residence, June 3.—Dr. and Mrs. James A. Irwin sail from New York for Italy, June 12.—Dr. W. M. Late Coplin, director of the Jefferson College Hospital, was presented with a silver loving-cup by the members of the hospital staff, June 7.

Commencements.—The eighty-seventh annual commencement of Jefferson Medical College was held June 7. A class of 140 was graduated and the annual address was delivered by Col. William C. Gorgas, Medical Corps, U. S. Army, and president of the American Medical Association, who spoke on "Sanitation of the Isthmus of Panama." The degrees were conferred by the president, Hon. William Potter.—The twenty-ninth annual commencement of the Medico-Chirurgical College was held June 5, when a class of 80 received diplomas and the annual address was delivered by the Hon. Chauncey M. Depew of New York. The degrees were conferred by the Hon. Henry F. Walton, president of the Board of Trustees.

RHODE ISLAND

State Society Meeting.—The ninety-eighth annual meeting of the Rhode Island Medical Society was held in Providence, June 1. The following officers were elected: President, Dr. Eugene Kingman, Providence; vice-presidents, Dr. Augustine A. Mann, Central Falls, and Dr. Frederick T. Rogers, Providence; secretary, Dr. Stephen A. Welch, Providence; treasurer, Dr. George S. Mathews, Providence; auditor, Dr. William H. Buffum, Providence; curator, Dr. William J. McCaw, Providence, and delegate to the American Medical Association for two years, Dr. John Champlin, Westerly.

VIRGINIA

Faculty Elects Officers.—At the annual meeting of the faculty of the Medical College of Virginia, Richmond, held May 29, Dr. William H. Taylor was re-elected chairman; Dr. Christopher Tompkins, dean, and Dr. Frank M. Reade, secretary.

Elections.—Members of the Alumni Society of the University College of Medicine, Richmond, elected the following officers, May 19: President, Dr. H. B. Mahood, Emporia; vice-presidents, Drs. Joseph N. Barney, Fredericksburg; Joseph B. Bailey, Clayville, and Wyatt S. Beazley, Richmond; secretary, Dr. McCaw Tompkins, Richmond; assistant secretary, Dr. Daniel T. Bailey, and treasurer, Dr. Frank H. Beadles.—The Virginia Conference on Charities and Corrections, at its meeting in Lynchburg, May 18, elected J. T. Mastin, Richmond, president; Dr. Lawrence T. Royster, Norfolk, vice-president, and Drs. William F. Drewry, Petersburg; Roy K. Flannagan, Charlottesville, and Ennion G. Williams, Richmond, members of the executive committee. Surgeon Charles B. Wertenbaker, Norfolk, P. H. and M.-H. Service, prepared a paper on "Practical Methods for the Suppression of Tuberculosis in Virginia," which was read by Dr. Ennion G. Williams in the absence of the writer. He advocated the formation of a state antituberculosis league with representatives, and that there be organized simultaneously in every city, town and village in the state a branch of the league in order that the work of suppression of tuberculosis may be started at once.—A postgraduate school for physicians was organized by the Augusta County Medical Society at Staunton, May 12, with the following officers: Dean, Dr. Marshall J. Payne; vice-dean, Dr. John B. Catlett, and recorder, Dr. Kenneth Bradford.—At the annual meeting of the University College General

Alumni Association in Richmond, May 17, the following officers were elected: President, Dr. George A. McAllister, and vice-presidents, Dr. C. T. Womack, Martinsville, of the dental department, and Miss Maude Lambert, Roanoke, of the pharmacy department.

GENERAL NEWS AND COMMENT

A Well-Merited Honor.—The honorary degree of doctor of science was conferred on Surgeon Rupert Blue, U. S. P. H. and M.-H. Service, by the University of Maryland, at its recent convocation, on account of the services rendered by Dr. Blue during the recent epidemic of bubonic plague in San Francisco.

Psychologists Meet.—At the sixty-fifth meeting of the American Medico-Psychological Association held in Atlantic City, June 1-4, the following officers were elected: President, Dr. William F. Drewry, Petersburg, Va.; vice-president, Dr. Charles W. Pilgrim, Poughkeepsie, N. Y.; and secretary and treasurer, Dr. Charles G. Wagner, Binghamton, N. Y.

Dermatologists Elect Officers.—At the annual meeting of the American Dermatological Society, held in Philadelphia, June 3-4, the following officers were elected: President, Dr. William A. Pusey, of Chicago; vice-president, Dr. Grover W. Wende, of Buffalo, N. Y., and secretary and treasurer, Dr. James McF. Winfield, of Brooklyn, N. Y. Dr. Alfred Fournier, of Paris, France, was admitted to honorary membership. The next meeting of the association will be held in Washington in 1910.

Academy Election.—At the annual meeting of the American Academy of Medicine, held in Atlantic City, June 7, the following officers were elected: President, Dr. James H. McBride, Pasadena, Cal.; vice-presidents, Drs. Philip Zenner, Cincinnati; W. Blair Stewart, Atlantic City; Ruth Webster Lathrop, Philadelphia, and Hanau W. Loeb, St. Louis, and secretary-treasurer, Dr. Charles McIntire, Easton, Pa. (re-elected). Contract practice was discussed as a solution for the problem of securing medical care for wage-earners at a small cost.

Climatologic Meeting.—At the annual meeting of the American Climatological Association, held in Fortress Monroe, Va., June 4-5, the following officers were elected: Presidents, Dr. Edward R. Baldwin, Saranac Lake, N. Y.; vice-presidents, Drs. James M. Anders, Philadelphia, and H. Longstreet Taylor, St. Paul, Minn.; secretary-treasurer, Dr. Guy Hinsdale, Hot Springs, Va.; councilor, Dr. Charles E. Quimby, New York City; representative to the executive committee of the Congress of American Physicians and Surgeons, Dr. Roland G. Curtin, Philadelphia, and alternate, Dr. Thomas Darlington, New York City.

Surgeons' Annual Meeting.—The annual meeting of the American Surgical Association was held in Philadelphia June 3-5. The principal interest was centered in the symposium on "Thoracic Surgery," which was opened by a paper presented by Professor Friedrich, of Marburg, Germany. Professor Tuffier of Paris, France, who was to have read a paper in conjunction with Professor Friedrich, did not arrive. The following officers were elected: President, Dr. Rudolph Matas, New Orleans; vice-president, Drs. John M. T. Finney, Baltimore, and George H. Monks, Boston; secretary, Dr. Robert G. LeConte, Philadelphia; recorder, Dr. Richard H. Harte, Philadelphia, and treasurer, Dr. Charles A. Powers, Denver. The society will meet next year in Washington.

Conference of Charities and Corrections.—The National Conference of Charities and Corrections will be held in Buffalo, N. Y., June 14-16, inclusive. In connection with the conference, there will be exhibits by the Playground Association of America of model playgrounds; by the Committee on Children, who will illustrate the modern methods of work for dependent children; by the George Junior Republic, on what the boy can do; and by the Committee on Families and Neighborhoods on plans for removal of congestion in great cities. The following topics on the program are of special interest to the medical profession:

Industrial Insurance—Lee K. Frankel.
Statistics Relating to Children—Homer Folks.
Report of the Committee on Defectives.
Progress in the Care of the Insane—Frank B. Sanborn.
Care of the Criminal Insane—Dr. Thomas C. Fitzsimmons.
The Eastern New York Custodial Asylum—Franklin B. Kirkbride.
What Is Being Done in the Psychological Study of the Feeble Minded—Dr. Henry H. Goddard.
Effects of Industry of Women and Children in the Stock Yards District—Miss Mary E. McDowell.
Statistics of Public Outdoor Relief—Dr. Thomas J. Riley.
After Care of Institution Children—Brother Barnabas.

Public Recreation—Dr. L. H. Gulick.
Sending Consumptives from Home—Rev. W. S. Friedman.
Means of Safeguarding the Sale of Narcotics—William Jay Schiefelin.
The Medical Supervision of Schools—Dr. George H. Leslie.
Press and Publicity in Child-caring Work, Public Health Work, etc.
The Food Supplies of Charitable and Semi-Charitable Institutions—Dr. Harvey W. Wiley.
Diet for Tuberculous Patients—Dr. Herbert Maxon King.
The Responsibilities and Opportunities of a Health Officer—Roy Smith Wallace.
The Coordinate Responsibilities of Boards of Health, Boards of Education and Park Boards in Relation to the Welfare of Children—Dr. Luther H. Gulick.
Responsibilities of Civic Authorities in Relation to Immigrants—Dr. Peter H. Bryce.

The Carroll Fund.—The following subscriptions have been received since the last report:

Medical officers of the army.....	\$ 40.00
Illinois State Medical Society, Ottawa, Ill.....	500.00
North Dakota Medical Assn., Casselton, N. D.....	100.00
Adams County Medical Society, Natchez, Miss.....	20.00
New York and New England Assoc. Railway Surgeons, Oswego, N. Y.....	5.00
Dr. H. McM. Painter, New York City.....	10.00
Dr. H. A. L. Ryfkogel, San Francisco, Cal.....	5.00
Dr. Harold Seidelin, Merida, Yucatan, Mexico (U. S. Cur.)	4.99
Dr. W. S. Gardner, Bronx, New York City.....	1.00
Dr. Hermann Grad, New York City.....	5.00
Dr. Calvin Gates Page, Boston, Mass.....	2.00
Medical Society of the Borough of the Bronx, New York..	25.00
Dr. H. S. Steensland, Syracuse, N. Y.....	3.00
Louisiana State Medical Society.....	150.00
Calhoun County Medical Society, Battle Creek, Mich.....	15.00
Dr. W. F. Grinstead, Ottawa, Ill.....	50.00
Dr. Frank Billings, Ottawa, Ill.....	25.00
Dr. J. F. Percy, Ottawa, Ill.....	25.00
Dr. E. W. Weis, Ottawa, Ill.....	5.00
Dr. Joseph L. Abt, Ottawa, Ill.....	5.00
Dr. H. A. Pattison, Ottawa, Ill.....	5.00
Dr. C. D. Pence, Ottawa, Ill.....	5.00
Dr. G. W. Greene, Ottawa, Ill.....	5.00
Dr. V. A. McClanahan, Ottawa, Ill.....	1.00
Dr. J. P. Simpson, Ottawa, Ill.....	1.00

Previously reported \$1,012.99
4,155.65
\$5,168.64

The debt on the Carroll property to-day amounts to \$7.150. The interest on the \$5,000 mortgage (\$125) will fall due June 15. There is on hand in bank to-day to pay this indebtedness \$5,700.82, which leaves \$1,449.18 to be raised. The profession of this country will certainly give this amount to save the home of the widow of James Carroll.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 22, 1909.

Reform of the Indian Medical Service

The vast native population of India has for many years been dependent for medical treatment almost entirely on the medical officers of the Indian army. Naturally, the strain of even the hospital treatment of serious disease—which is all that could be attempted—has been very great on this service. The government has at last decided that no further increase of its civil work can be allowed, and that it would be a great advantage to India if physicians would establish themselves there in private practice as in other parts of the empire without entering the army service. As usual, the problem how they are to be paid does not seem to have troubled the government. The Indian population is abjectly very poor and very few could afford even the most modest fees.

A Memorial to Harold Barnard

A committee composed of members of the staff of the London Hospital, has been formed to publish a memorial volume of their late colleague, Mr. Harold Barnard, whose death was announced a short time ago in THE JOURNAL. It is proposed to publish a memorial volume containing all his contributions to abdominal surgery, illustrated by drawings by two of his pupils—Dr. F. Wood Jones and Mr. S. Beale—who had been engaged by Barnard to make them from his specimens.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, May 27, 1909.

Insurance of the Physician Against Civil Professional Liability

The physician is always exposed to action at law for errors, real or pretended, committed in the course of medical treat-

ment or of a surgical operation. Recently, a woman made a complaint to the Parquet of the Department of the Seine, concerning the death of her son under chloroform anesthesia administered in a Paris hospital for an operation. The woman asserts that the chloroform was administered by an interne without the surveillance of the operating surgeon, and contends that this fact constitutes a grave fault. In course of law the woman will be able to bring a civil action and claim heavy damages. Proceedings of this kind have suggested to certain insurance companies, which are always seeking to extend their field, to offer physicians insurance against this civil liability. By means of a moderate premium this insurance will make it possible for the physician to protect himself from payment of damages, often very heavy; and, further, it will relieve him from the vexations and worry of a lawsuit. Whether these advantages are real or problematical, there is a question which appears much more important, namely, whether such insurance is not incompatible with the professional dignity of the physician; and moreover—an indication of the times!—in one of our medical journals, we read under the heading, "Notice to the Medical Profession," the following advertisement: "In consequence of an agreement between this journal and La Foncière, one of the oldest and most important insurance companies in France, our subscribers are gratuitously insured against their civil professional liability. By the sole fact of paying their subscription they are covered during its course to the extent of 2,000 francs against pecuniary liabilities on account of bodily accidents involving their civil responsibility." The journal adds that by signing a supplementary personal contract and paying a premium, the subscriber may extend the gratuitous guarantee of 2,000 francs to a much greater figure.

Medical journals ought truly to show themselves more solicitous for the dignity of our profession and for the true interests of the body medical. It is satisfactory to know that this question of insurance against civil professional liability was recently discussed at the *Association de médecins* of Geneva, and that the essayist, Dr. Eugene Patry, showed himself in his conclusions, which were unanimously adopted by the association, distinctly opposed to such insurance. Regarding it first from a practical viewpoint, Patry thinks that the insurance company, seeking to make the greatest possible profits, will not always keep its engagements to the physician and will not cover all the cases. But alongside its more or less problematical advantages, medical insurance against civil liability presents also tangible inconveniences; for, if it should come into conflict with morals, it would risk diminishing the confidence of the public in physicians, which is the very foundation of our career. The Geneva association agrees with Dr. Patry, that it is more dignified for the physician courageously to bear alone the liability for his actions, than to cover himself by insurance. The only case in which medical insurance, according to Dr. Patry, can be justified, is when the physician has under his orders a medical or nursing *personnel* for whom he is civilly responsible. It is quite natural that in such case, a confrère, not wishing to be held responsible for the operative fault of an assistant or for an error in the administration of a remedy, should insure his *personnel*; but in such a case the insurance should clearly comprise only the errors of the *personnel* under the orders of the chief of service, and not those made by the chief himself.

Compulsory Notification of Contagious Diseases

The law of 1902 imposes on the physician in charge of the case the obligation of reporting a contagious disease. The medical profession has always protested against this regulation, and about six months ago the Academy of Medicine passed a resolution that the obligation should be binding jointly on the head of the family, or head of the establishment and the physician in charge (*THE JOURNAL*, Dec. 5, 1908, p. 1985). A draft of a law has been laid before the senate which places on the head of a family or of an establishment the obligation of making the notification after the physician has warned him of the nature of the malady. The physician is under obligation to present to his patient a notification bulletin, for which he is to demand a receipt. In case the physician does not receive within forty-eight hours an acknowledgement of the bulletin from the sanitary authority, he must make the notification himself. In case the interested person should refuse to give the prescribed receipt, the physician is required to make a notification. Refusal to comply with the law is to be punished by fines varying from 50 to 100 francs (\$10 to \$20).

A Physician Sentenced for Giving Fraudulent Certificates

A Paris physician has just been sentenced to three months in prison, a fine of 100 francs (\$20), and a year's suspension from the practice of his profession for issuing to a laborer a fraudulent medical certificate which permitted the latter, though completely recovered from an injury incurred in his work, to draw an invalid's half-pay from his employer while working for another employer.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, May 21, 1909.

Appendicitis—A Collective Investigation by the Berlin Medical Society

Three years ago the Berlin Medical Society determined to institute a collective investigation on appendicitis in the practice of Berlin physicians and hospitals, in order to clear up some unsettled points regarding this disease. A commission was chosen under whose direction the statistical investigation was made which included the entire year 1907. Prof. Albu and Rotter reported the results for the commission at the meeting of the society on May 12. The participation of practicing physicians in the investigation was, as usually happens, quite insignificant; altogether scarcely 8 per cent. reported their experience. On the other hand, the cases treated in the hospital were quite completely reported: 2,705 cases of acute typhlitis were reported, of these 2,365 were in hospital, 340 at home. The mortality in the hospital cases was 214 (9 per cent.), of those treated at home 6 (1.7 per cent.) there were 1,344 operations in hospitals with 197 deaths (14.6 per cent.), 105 were operated on on the first day with the mortality of 1 (0.9 per cent.), on the second day 318, mortality 23 (7 per cent.); the total mortality of cases operated on in the first two days was 5.6 per cent. On the third day and after (late operation) there were 921 operations with a mortality of 18.8 per cent. (third day 238 operations, mortality 23 or 10 per cent., later operations 683, mortality 150 or 23 per cent.); 1,021 were not operated on, either because it was not necessary or because they were hopeless cases; the mortality was 17 (1.6 per cent.). Different ages showed marked differences in the mortality (0-10 years, mortality 17.4 per cent.; 10-20, 5.3 per cent.; 20-30, 10 per cent.; 30-50, 21 per cent.; 50-70, 80 per cent.). Interval operations were carried on for chronic appendicitis in 97 cases, after an acute attack in 805 cases, total 902 cases with a mortality of 9 (0.9 per cent.). As the result of this investigation Prof. Rotter affirms the principle that the early operation, under all circumstances, promises the best results.

Mortality in the Larger Cities of Germany

According to a publication by the Imperial Health Office, the population of 327 German cities with at least 15,000 inhabitants increased in 1907 from 20,900,000 to about 21,500,000, the number of live births was reduced from 647,541 to 645,686, and the number of stillbirths increased from 20,165 to 20,282. The mortality figure has fallen a little. The mortality of infants per 100 born living sank from 18.6 to 17.1. As far as the causes of death are concerned, there was an increase in deaths from diseases of the respiratory organs, scarlet fever, diphtheria, puerperal fever, and accidents but a decrease in mortality from typhoid, measles, pertussis, gastrointestinal catarrh and suicide. The mortality of tuberculosis has proportionately decreased.

The Fight Against Lupus

The commission appointed to conduct the campaign against lupus proposes to favor the establishment of lupus sanatoria, to assist in the provision of apparatus for phototherapy, to favor the establishment of rooms for lupus patients in the neighborhood of the sanatoria, to provide for the gratuitous treatment and assistance in other ways of needy lupus patients, and to develop as much as possible the methods for the treatment and care of lupus. That increased efforts are necessary to combat lupus has been shown by a collective investigation according to which the number of known lupus patients under treatment in Germany is about 11,000 and the entire number of lupus patients in Germany is estimated at about 30,000.

Death of Professor von Ranke

A few days ago Professor von Ranke, formerly director of the Munich children's clinic, died at the age of 79. He was educated at the university under teachers like Johannes

Müller, Gorup-Besanez, Romberg, and Wunderlich, and was an assistant of Johannes Müller and Hugo Mohl. He went in 1854 to London as house physician of the German hospital, and served under the British government in 1855 and 1856 as civilian surgeon in Smyrna and the Crimea. In 1859 he entered the faculty at Munich. In 1866 he established the children's polyclinic in Munich, one of the first children's polyclinics in Germany. He has published numerous studies on metabolism, especially of children, as well as a large number of investigations in clinical pediatrics. He was one of the first to make a trial of O'Dwyer's intubation of the larynx and to publish his results. Three years ago he resigned his position as director of the children's clinic, and was succeeded by Professor Pfaundler, a pupil of Escherich.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, May 21, 1909.

Memorial to Auenbrugger

On May 18 a commemoration tablet was unveiled in memory of the centenary of the death of Leopold Auenbrugger, who was the first to use percussion of the chest in diagnosis. He was born in Graz in 1722. His studies of physical phenomena led him to apply the rules of acoustics to medicine and his work on examination of the thorax by a new and wonderful method contains much of what is known at present of percussion. Dr. Auenbrugger did not live to see the universal adoption of his discovery, for it was several years before the bulk of the profession had become convinced of the accuracy and truth of his observations. The method was rediscovered later on several times in different countries, but this does not detract from the priority and usefulness of Auenbrugger's discovery. The Vienna Medical Society (*Wiener medicinisches Doktorenkollegium*) celebrated the day impressively, and some of the descendants of the physician were present at the ceremony of unveiling the tablet.

The German Birth Rate in Austria

In an interesting compilation of statistical data, Dr. Hainisch recently pointed out that the vitality of the German race among the numerous nations composing the Austrian empire is increasing remarkably. In 1880-1885 the excess of births over deaths was in this country 5.17 per 1,000 Germans, against 10.09 amongst the northern Slavonic nation, 7.73 amongst the southern Slavs, and 8.34 amongst the Italo-Slavs, while in Tyrol the Germans had a rate of only 0.31 as against one of 5.92 of the purely Italian population. Regular and constant records kept by the statistical bureau of the ministry of the interior reveal a distinct and constantly increasing tendency in the German race to improve its vitality and lower its mortality. Thus the years 1901-1905 show that the excess of births over deaths in the purely German districts is now 9.58 per 1,000, among the northern Slavs 11.88, among the southern Slavs 10.63, while Tyrol showed 7.95 for the German part of the population, but 8.50 for the Italian component. The German increase of population was even smaller than that of the other nations, but it had increased by 85 per cent. during the last twenty years.

Social Legislation

The idea of promoting public welfare by legislation on hygiene and sanitation has obtained a firm hold in this country, and the government is bound to follow public opinion. As an outcome an "assistants' bill" and a "working hours" bill have been introduced into parliament, fixing certain hours for work. Thus all juniors, i. e., apprentices and shop assistants under 18 years of age may not be employed for a period exceeding nine hours out of the twenty-four. All shops and factories, except certain establishments where this is impossible, must be closed from 8 p. m. till 5 a. m. at least. In the food industries the time limit is 9 p. m. till 4 a. m., but still no employed person may have less than ten clear hours for sleep and rest during the night. A minimum dinner interval of ninety minutes is required by the bill, besides the ten hours of rest. It is suggested that in summer the shops be closed at 6 or 7, so that the persons employed will find time for walking in fresh air in daylight; it has been stated that the majority of these people spend no more than sixty minutes of the day on the street, walking from and to their homes. Anemia and general debility and a lowered tone of the organs of respiration and circulation have been attributed to these facts, and if the conclusions are correct, a great step forward will be made by the adoption of these bills.

Pharmacology

DIGITALIS AND ITS STANDARDIZATION

The Need of Biologic Methods of Determining the Activity of the Drug

The Hygienic Laboratory of the Public Health and Marine-Hospital Service has recently added another contribution to its already long list of publications. Bulletin No. 48, on "The Physiologic Standardization of Digitalis," is written by Dr. C. W. Edmunds of the University of Michigan at Ann Arbor, who was working on the subject at the Hygienic Laboratory last summer, and by Dr. Worth Hale, assistant pharmacologist in the Hygienic Laboratory. The bulletin deals with a variety of subjects which are intimately connected with digitalis standardization. After a short résumé of the chemistry of the plant, the writers show by references to the papers of Ziegenbein and others that the amount of digitoxin present in several specimens as determined by a chemical examination does not always run parallel with the activity of the specimens as determined by physiologic methods. This fact is of considerable importance, as some manufacturers are putting on the market preparations standardized by the digitoxin method, but as pointed out, even with uniform digitoxin content, there need not be uniform physiologic activity. It is this very fact which renders assay by biologic methods necessary.

That different digitalis preparations of the same name vary greatly in strength is familiar to all physicians who have used the drugs, and by physiologic methods these differences have been shown in both this country and in Europe to be from 100 to 400 per cent.

After discussing the causes of these differences in strength, the authors take up, from the historical standpoint, the subject of the physiologic testing of members of the digitalis series. They give a complete history of the development of this movement from the earliest writings on the subject down to the present time. In 1865 Fagge and Stevenson, in an address before the Royal Society, recommended the frog as a suitable animal on which the various digitalins might be tested in order to determine their relative activity. It is interesting to note that the method they used was essentially the same as is employed to-day by some manufacturers in the assay of their preparations. From the time of the appearance of Fagge and Stevenson's paper in 1866 until the late nineties, a period of thirty years, many papers were published dealing with the question of digitalis variation. A number of different experimental animals were employed, mainly frogs, dogs, and rabbits, and various standards were taken as indicating their relative activity. It seems strange that during this time no practical application was made of the work. It was not until 1898 that Jacquet, who had been examining some of the dialysates of digitalis, suggested that as the leaves show such a marked yearly variation in toxicity, preparations made from them should be tested on frogs, and if they do not show uniform activity, they should be evaporated or concentrated as might be necessary to bring them to the standard strength.

This paper of Jacquet's was, however, preceded by one by Houghton which appeared in America two months earlier. In this paper¹ Houghton recommended that strophanthus preparations should be standardized by determining the minimum fatal dose for frogs.

During the next few years several papers appeared recommending various methods of assay. These papers dealt, in general, with technical difficulties concerned with the methods and the various factors which influence the reaction of animals, and therefore the accuracy of the results. The most notable contributions on the subject which appeared during these years were from the pen of Focke of Düsseldorf. Employing a modification of the frog's heart method, Focke was able to confirm many of the commonly accepted views as to

1. THE JOURNAL A. M. A., Oct. 22, 1908, p. 959.

the causes of digitalis variation. The most important factor he considered to be slow drying of the leaves in which a very considerable amount of moisture is left, sufficient to permit certain enzymes present in the leaves to break up the glucosids to a greater or less extent. To avoid this, Focke recommends that the leaves be dried quickly in an oven so as to get rid of all the moisture.

Several other important papers which appeared during these few years are abstracted in the Bulletin, giving in this way a complete history of the different methods of assay which have been employed up to the present time.

The second part of the bulletin takes up the examination into the accuracy of the various methods which are in vogue to-day for the standardization of members of the series. All of these methods with their different modifications are grouped into three classes. Preparations may be compared (1) by ascertaining the minimum fatal dose on animals; (2) by a comparison of their relative activity on the frog's heart, and (3) by their relative effects on the blood pressure of the higher animals. In all, eight methods of assay were employed illustrating these different groups. The specimens of digitalis, twelve in all, which were assayed by these different methods, were obtained in the open market and were selected as furnishing types of preparations, some of which were made

at times, and the necessity of using several animals for one preparation on account of marked variations which appear. The writers conclude that of all the methods those in which frogs are used, are probably the best, as these animals can always be easily obtained, and in them the drug exhibits its true cardiac effect. They believe that either the method in which the minimum lethal dose is determined or that in which the heart is brought to systolic standstill in one hour should be chosen. They point out that physiologic standardization is not infallible, but that most of the discrepancies are due to the fact that actions on entirely different physiologic functions have been taken as standards instead of an action on the circulation.

The final section of the bulletin and that part which will perhaps interest the practicing physician most, is concerned with the report on the various preparations of digitalis which were examined. To permit a comparison, these were all figured to uniform tincture or 10 per cent. strength. The simplest way to indicate the relative activity of the different preparations is to reproduce a table from the bulletin. A table was therefore prepared by adding together the rankings of each preparation as determined by each method of assay, and then dividing the sum by the number of assays. The lowest numbers would therefore indicate the highest values.

PREPARATION	SUM OF RATING	NUMBER OF ASSAYS	FINAL STANDING
H. K. Mulford & Co., "Digitol".....	15	7	2.14
Burroughs, Welleome & Co., "Concentrated Tincture".....	16	7	2.28
Nelson, Baker & Co., "Fluid Extract".....	25	7	3.57
Hance Brothers & White, "Fluid Extract".....	29	7	4.14
Parke, Davis & Co., "Fluid Extract".....	31	7	4.43
Wm. S. Merrell Chem. Co., "Normal Tincture".....	40	7	5.71
Sharp & Dohme, "Fluid Extract".....	42	7	6.00
Lloyd Brothers, "Specific Medicine".....	58	7	8.28
Parke, Davis & Co., "Digitalone" Specimen 3.....	34	4	8.50
Parke, Davis & Co., "Digitalone" Specimen 1, 2.....			

according to the United States Pharmacopeial directions, while others might be classed together as non-pharmacopeial or as proprietary preparations. Before discussing the results of the examination of these specimens, it will be interesting to note the writers' conclusions as to the accuracy of the methods now in vogue.

In the first place, no two methods of assay gave the same results—preparations which by one method might appear to be of the same strength, by a second method were shown to differ 100 per cent. A superficial comparison of all the tables seemed to demonstrate the apparent worthlessness of physiologic assay, but on closer examination the outlook did not appear so hopeless. Two of the preparations, "Digitol" and a "Concentrated" tincture, stood at the head of the list in practically every table. Four U. S. P. fluid extracts were found to be of quite uniform strength by several of the methods, and finally two preparations, Lloyd's "Specific medicine" and "Digitalone" stood at the foot of the list in practically every table, so that there was in general an agreement between the different methods.

It was perhaps surprising that the agreement should be as close as it was. In the first place it would be very surprising if the lethal doses for guinea-pigs and frogs should show exactly the same relation because in the former animals the drug kills by paralyzing the respiration, while in the latter the cause of death is of cardiac origin. One preparation might act strongly on the nervous system and have feeble heart action, while a second might act strongly on the heart, but show little effect on the medulla. For this reason the authors say that the method of standardizing preparations of digitalis by ascertaining their toxicity on the higher animals is incorrect.

Considering the different methods in which the frog's heart is used, the authors recommend that in the choice of a method great care should be taken to allow sufficient time for complete absorption of the drug, because, unless this is done, a weak preparation of easily absorbable constituents would appear stronger than a strong preparation containing constituents that are absorbed with difficulty.

The blood-pressure method in which cats or dogs are used, offers practical difficulties in the way of obtaining these ani-

This table indicates probably very closely the relative strength of the different preparations examined and only a few of them are discussed individually.

Two preparations of Mulford's "Digitol" were examined, and although it is said to be "assayed, tested physiologically" and standardized to contain 0.025 gm. digitoxin in 100 c.c., the two preparations were not of the same strength as determined by the "one-hour frog" method, one being 30 per cent. weaker than the other.

Merrell's "Normal Tincture" was diluted to the same degree as the fluid extracts, but as normal tinctures are said to be made from fresh leaves, it is perhaps hardly fair to this preparation, but even so it compares with them fairly well. The maximum dose recommended is about the same as for fluid extracts (3 minims).

Lloyd's "Specific Medicine, Digitalis," gave very interesting results, especially when compared with the claims made by this firm. It was assayed by seven methods—in one table it appears at the bottom of the list; in four it stands last but one, and in the other two it is third from the bottom. Its comparative weakness is thus very clearly shown when it is compared with U. S. P. fluid extracts, and yet, according to Lloyd Brothers' advertising literature, "Specific Medicines" have about double the effect on the system that is possessed by ordinary (non-proprietary?) fluid extracts. The dose recommended is from $\frac{1}{3}$ to 1 minim every hour, which the writers point out is certainly not less than that of a pharmacopeial fluid extract.

Equally interesting were the results obtained with Parke, Davis & Co.'s "Digitalone," three bottles of which were examined. Two of the specimens were dark brown and contained a heavy precipitate and a somewhat sour odor. The other bottle contained a clear light yellow fluid in which was a flaky precipitate. This latter bottle showed a digitalis action, but this was very feeble as compared with any other digitalis preparation examined excepting Lloyd's preparation discussed above. In fact, it is interesting to note that in six of the seven tables the "Specific Medicine" and one or the other "Digitalone" preparations compete for the last place. It was perfectly evident from the appearance of the specimens of

Digitalone that two of them had deteriorated and by the frog's heart method they were shown to be practically devoid of digitalis action. By some of the lethal dose methods they caused death when given in very large doses, but it was a question whether death resulted from the digitalis itself or from digitalis decomposition products. Specimen No. 2 when injected into the circulation of cats raised the blood pressure in two animals 55 per cent., which result the writers suggest may have been due to decomposition products of digitalis acting on the medulla, since the true cardiac action of the drug had been shown to be absent by tests on frogs. Specimen No. 1 when similarly injected showed an action on the blood pressure comparable to the nitrite series, for instead of raising the pressure it lowered it 23 per cent.

While showing the worthlessness of these preparations, the authors point out that although "Digitalone" is claimed to be an aseptic, non-alcoholic *permanent* solution of digitalis of the same strength as the U. S. P. tincture, it certainly is not permanent under all conditions. One preparation which evidently had not decomposed, at least completely, was about half the strength of a U. S. P. tincture, while the other preparations not only possessed no digitalis action, but were positively harmful.

Correspondence

Necrosis of the Liver After Chloroform Anesthesia

To the Editor:—May I be permitted to comment on the conclusions reached by Drs. John R. Williams and W. D. Becker in their report of a case of "Necrosis of the Liver After Chloroform Anesthesia," THE JOURNAL for May 8, 1909, page 1488? Under title, "Postoperative History," a typical picture of the second stage of acute yellow atrophy of the liver is drawn. These second stage symptoms became rapidly deepened on the third day after operation and chloroform anesthesia, ending in death forty hours after the first indication of any mental disturbance.

The history of the case points very clearly to a severe bacterial infection before the operation. We are shown a patient "subject to attacks of 'indigestion' from childhood." Turbid, dark-brown urine, of acid reaction, and showing albumin blood cells and hyalin casts found postmortem can be assumed to have been present four days before death at the time when the "slight yellow tinge to the sclera" was observed, together with the increasing jaundice "rather noticeable" at the time of death. The acidity of this postmortem urine certainly indicates acid intoxication, and it is a pity that no record of any examination of the urine before the operation appears in the report.

F. W. White designates as one of the special poisonous substances, damaging the function of the liver and thereby producing acute yellow atrophy, "certain products of decomposition in the bowel." Such products of decomposition are very likely to have been present in the case reported even before the attack on April 16 of vomiting and diarrhea, pain, tenderness and no elevation of temperature. Adding to this an expectant treatment of four days, evidences in the urine of acid intoxication and destructive protein metabolism not excluded; at the time of the operation the presence of a slight yellow tinge to the sclera; the finding of an abscess thoroughly walled off containing about eight ounces of foul-smelling pus, up to which event the formation of gastrointestinal toxins could go on undisturbed; the temporary general improvement following evacuation and drainage of the abscess, but the steady increase of jaundice; add finally the third stage symptoms of forty hours' duration, death and the postmortem findings, and we do not have to adduce the toxic action of chloroform used as an anesthetic "in the absence of other explanation" to account for the acute yellow atrophy and its typical pathology.

At the time of the operation there was a slight yellow tinge to the sclera, the patient died in less than four days from yellow atrophy of the liver. In a majority of cases death ensues before the fourteenth day. Almost one-half of the

cases terminate fatally in from the fifth to the tenth day, says A. O. J. Kelly in "Modern Medicine," vol. v. Did or did not chloroform used as an anesthetic cause the death of the patient in question? I think it did not.

I am not as yet prepared to advocate chloroform as a safe anesthetic in cases in which gastrointestinal decomposition products are to be suspected and where functional disorders of the liver is evidenced by even slight jaundice in the absence of gross gall duct obstruction.

In order to prove that chloroform in measured doses given to physiologic effect produces acute yellow atrophy of the liver it will be necessary to collect cases in which the dosage has been accurate and the exclusion of pre-existing atrophy has been positive. Postulates such as those of Drs. Williams and Becker from premises so contradictory are not satisfactory evidence of the danger of chloroform as an anesthetic and should be promptly denied.

CARL R. KRONE, M.D., Oakland, Calif.

Dr. Krone's letter was submitted to Drs. Williams and Becker for comment, and they replied as follows:

To the Editor:—Dr. Krone's criticism of our report is of interest because it suggests the widely different conclusions which careful students may arrive at from a given set of data. He states:

In order to prove that chloroform in measured doses given to physiologic effect produces acute yellow atrophy of the liver, it will be necessary to collect cases in which the dosage has been accurate and the exclusion of pre-existing atrophy has been positive.

It may be inferred from this that Dr. Krone believes it is not proven that chloroform has ever produced liver necrosis, but it seems to us that it has been too generally conceded and too well established to make this a point in a controversy. Moreover, the amount of chloroform administered apparently has little to do with the necrosis which may follow, for a study of the many cases reported in the literature supports this view. In this case, the chloroform was accurately measured, and as was indicated in the report, approximately 4 drams were used. Dr. Krone believes that the liver condition was due to a pre-existing bacterial intestinal intoxication rather than to the toxic effects of the chloroform, and supports his contention mainly on the rather slender evidence presented in the urine examination.

A summary of the facts is as follows: The patient had an old inflammatory condition of the appendix, evidenced both by the history and the anatomic findings. During the attack for which he was operated on he suffered from pain in the abdomen, vomiting and diarrhea. A very slight jaundice was present. The postoperative history was uneventful until the third day, when the patient became irrational and later maniacal. Then followed convulsions, coma, and death.

The history of this case until the third day after operation is clearly one of appendiceal disorder. There was absolutely nothing about it up to this time to suggest either liver disease or intestinal intoxication. The urine examinations made at the time of operation and immediately following it were practically normal. The urine examination referred to by Dr. Krone was made by Dr. Williams from the excretion taken from the bladder at the postmortem. It was entirely different from those previously made, indicating the development of another pathologic state. It is invading the realm of the speculative to conclude from this single examination that the patient was suffering from bacterial poisoning and it is not in accord either with the history of the case or with the material evidence of the postmortem. Histologic examination of the liver sections also pointed strongly toward chloroform necrosis rather than "idiopathic" acute yellow atrophy. It must be conceded that cases of this sort are not capable of demonstration as is a mathematical proposition, nevertheless, we believe the history and findings warrant the conclusion as to cause of death. Intestinal toxemia does not adequately explain it. Furthermore, we are persuaded that chloroform as an anesthetic is more dangerous than is generally appreciated, for since the study of this case two others of similar type and followed by death, have come to our notice in this community.

JOHN R. WILLIAMS.

W. D. BECKER.

Rochester, N. Y.

Book Notices

TEXT-BOOK OF OPERATIVE SURGERY. By Warren Stone Bickham, M.D., Phar. M., Junior Surgeon, Touro Hospital, New Orleans. Cloth. Pp. 1206, with illustrations. Third edition. Price, \$6.50. Philadelphia: W. B. Saunders Co., 1908.

The text of this edition of Bickham's book has been enlarged by nearly a third, and the illustrations by over half. We are glad to note that some of the omissions and mistakes indicated in the previous review have been corrected.

Bickham still speaks of the advisability of flooding the field of operation to prevent air embolism after injury of the large veins at the base of the neck. He neglects to mention provisional ligation, a plan followed by Fenger with such success. Temporary ligation—merely closing the vein—would prevent the possibility. Flooding the field of operation in such cases is more theoretical than practical. The excision of a synovial sheath of an extensor tendon is still illustrated at a point in the hand where no sheath exists.

The most striking thing in the book is the detail with which the surgical anatomy and the steps of the different operations are given. There is considerable doubt as to the necessity of such detail. It is the application of didactic work to surgical procedures. Naturally, the outlines given can be followed but rarely.

The technic is well described, but the statement made in regard to the second edition that no rules are given to aid an inexperienced operator to make a selection of the procedure to be used holds true for the present edition.

The enormous task of collating and arranging the steps of the different procedures has been well and conscientiously done, and the book will be exceedingly useful for reference.

A TEXT-BOOK OF GENERAL PATHOLOGY. By J. Martin Beattie, M.A. (N. Z.), M.D. (Edin.), Professor of Pathology and Bacteriology, University of Sheffield, and W. E. Carnegie Dickson, M.D., B.Sc., F.R.C.P., Lecturer on Pathological Bacteriology, and Senior Assistant to the Professor of Pathology in the University of Edinburgh. Cloth. Pp. 475, with illustrations. Price, \$5. Philadelphia: P. Blakiston's Son & Co., 1908.

The pathologist will examine this book with particular interest because of the opening statement of the preface that "the present volume is based on the teaching of the Edinburgh school." Knowing the great influence that has been exercised by this school in British medical thought and practice, he will be interested in learning what it now represents in its teaching and ideals in so fundamental a branch as pathology, and what it may have to offer that is in advance of the ordinary standards. The Edinburgh standards, if the book at hand represents them fairly, call for clear presentation, in a concise way of the most essential facts, without any strong attempt to encourage and to lead students into extensive and independent reading or investigation. Accuracy, care, clearness and honesty of method and purpose are all marked characteristics of this book, but there is no intention of exhaustiveness exhibited, and one gets the impression that the writers have in mind a body of students who have no very strong preparation in the fundamental branches, and who are not to be expected to do anything more than to prepare themselves for the clinical courses. The Edinburgh teaching, therefore, would seem to fall short of the ideals of the very best of the American schools, while probably doing better than is the practice in many of them.

This volume is devoted to the subject of general pathology, a subsequent volume on special pathology being promised. It is reliable, in some places original, as in the discussions of infarct formation and the tissue changes of inflammation, and a good and useful small text-book of general pathology.

It falls short, however, of being an ideal book, according to the highest standards of medical education. The subjects are far too superficially treated to satisfy a thorough, interested student. There is too often the air of one who should say: "These are the main facts, and all you will need to know to pass your examinations; there are many fundamental principles and unsettled theories that you need not bother your head about." Also many subjects are treated in a very incomplete manner. For example, in discussing air embolism, no attempt is made to explain the conditions necessary in or-

der that air may enter the vessels; the mechanism of the effects produced by the intravascular air is not considered; and no mention is made of the possibility of air embolism from obstetric manipulations or from attempted intravenous injection of saline solutions—surely serious omissions in the education of the future practitioner. Similar omissions, not warranted on the ground of economy of space, are by no means infrequent; to mention only one, in the chapter of immunity, the highly important subject of anaphylaxis is not even spoken of.

We criticize this book to this extent because it is worth it. There are many commendable features, and any medical student will find help and profit in its pages—it comes so near being an excellent text that the shortcomings are all the more to be regretted.

One of the best features is the illustrating, which is splendid. There is perhaps no other English text with equally good illustrations from the standpoint of clearness, accuracy, and helpfulness for the student. For reproduction of photographs they are unusually good, being in the main as clear as diagrammatic drawings, with the added virtue of being true reproductions of actual conditions. In order to make these numerous reproductions the publishers have printed the entire book on highly glazed paper, which is exceedingly trying to the eyes and very easily torn. It is also to be presumed that the illustrations account for the price, being rather high for a book of this size.

Miscellany

The Diagnostic Value of the Porges Reaction in Paresis.—C. Tommasi (*Riv. di patol. nerv.*, February, 1909, xiv, No. 2) has tested the Porges glycocholate of soda reaction in 10 paretics, 1 case of suspected syphilis, 1 epileptic, 1 idiot and 6 senile demented, and tabulates and discusses the results. Two series of tests were made with an interval of from a week to a month between them in various cases. In the first series he obtained 3 positive and 7 negative reactions in the paretics and 3 positive and 6 negative in the others. In the second series there were only 10 paretics, 1 having died in the interval; the others gave 3 positive and 6 negative reactions. Of the 9 non-paretics there were also 3 giving positive reactions, but only 1 of these was positive in the first series (in the case of suspected syphilis), a dubious reaction appearing only after fifty hours. One paretic who showed a negative reaction in the first series was one of those who gave a positive reaction in the second series. From these findings, Tommasi concludes as follows: 1. The reaction of Porges with soda glycocholate is not constant in paresis. 2. A positive reaction may occur in individuals free from paresis or syphilitic taint in a proportion of cases nearly or quite equal to that in which it occurs in paretics. 3. The reaction is not always a constant result, either positive or negative in the same individual, paretic or non-paretic.

Medical Genealogy.—The Germans have inaugurated an effort to collect the medical histories of families and preserve them for purposes of research on heredity and similar questions. The *Centralstelle für deutsche Personen- und Familienforschung*, which has its headquarters at Leipzig, Neumarkt 29, has founded a department for collection of biologic and medical data bearing on the medical genealogy of different families. The necessity for such research and collections was emphasized anew by Professor Sommers in his postgraduate course at Giessen last August on "Families and Heredity," especially the necessity for study of the connection between the inherited *Anlage* and the fate of the family, and between the *Anlage* and the environment, as the most effectual means of throwing light on the evolution of the human race. It is the only means to determine the laws regulating the inheritance of chromosomes and the prominence or latency of various properties in the offspring. In an article in the *St. Petersburg. med. Wochenschrift*, May 15, Eichfuss urges systematic research in this line, especially in regard to hemophilia, tabes, tuberculosis, scrofula, carcinoma, syphilis and mental and nervous affections. He says that the field has been

worked a little by the psychiatrists and criminologists, but it will yield a most interesting and instructive harvest in all lines.

To Open the Thorax for Autopsy.—In the *Semana Medica*, April 15, 1909, D. Del Valle gives an illustration to show the advantages of obtaining access to the thorax, after the usual median incision from chin to symphysis, by cutting out the sternum and adjoining costal cartilages, down to and including the fifth. The inner end of the clavicle is first disarticulated. The flap of bone and cartilage thus outlined is separated from the parts beneath and removed, leaving a broad and long opening into the chest, wider below than at the top, while the retention of the sternum and cartilages below the fifth leaves the diaphragm in place intact. This prevents the escape of fluids, while allowing much more instructive oversight of conditions.

Treatment of Neurasthenia.—The Germans have a word, *Ausspannung*, which means to take off the harness and step out of the shafts for a brief interval. In a communication to the *Zeitschrift für Balneologie*, ii, No. 1, Boas advises such periods of relaxation—*Ausspannungen*—as a systematic therapy, he sends the patients away from home for five or ten days at intervals of six or eight weeks, and has been amazed at the resulting benefit in many instances. The neurasthenic conditions resulting from excessive mental work or emotional strain are the ones that benefit by these brief relaxation trips. It is not necessary to go to a health resort; a trip to some other city will answer the purpose in winter where there is opportunity for attending theaters, concerts, museums, etc. The main point is to have these little *Ausspannungen* repeated systematically every six or eight weeks.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, for the week ended June 5, 1909:

Coffin, J. M., capt., granted an extension of 18 days to his leave of absence.

Palmer, F. W., capt., relieved from duty at Fort Benjamin Harrison, Ind.; will proceed at the expiration of his present leave of absence to Fort William H. Seward, Alaska, for duty.

Hutton, P. C., capt., when relieved at Fort William H. Seward, Alaska, will proceed to Fort Snelling, Minn., for duty.

Murray, A., capt., relieved from duty at Fort DuPont, Del.; will proceed to Fort Egbert, Alaska, for duty.

Grissinger, J. W., capt., when relieved from duty at Fort Egbert, Alaska, will proceed to Fort Gibbon, Alaska, for duty.

Hall, J. F., capt., when relieved at Fort Gibbon, Alaska, will proceed to Fort Brady, Mich., for duty.

Whaley, A. M., capt., relieved from duty at Fort Sam Houston, Texas, and ordered to Fort St. Michael, Alaska, for duty.

Sweazey, V. E., capt., when relieved from duty at Fort St. Michael, Alaska, will proceed to Plattsburg Barracks, N. Y., for duty.

Miller, E. W., capt., granted an extension of one month to his leave of absence.

Truby, W. F., major, granted an extension of 15 days to his leave of absence.

George, W. R. S., O'Day, S. F., Phillips, H. F., Kearney, R. A., Miner, Donald, 1st lieutenants, M. R. C., ordered to proceed home from their present station.

Tenney, E. S., 1st lieutenant, M. R. C., granted leave of absence for 1 month, 20 days, about June 7.

Porter, E. H., 1st lieutenant, M. R. C., ordered from Fort Worden, Wash., to Fort Casey, Wash., for temporary duty.

Magee, J. C., 1st lieutenant, M. R. C., granted leave of absence for 5 days.

Doerr, C. E., 1st lieutenant, M. R. C., granted leave of absence for 10 days.

Harmon, D. W., 1st lieutenant, M. R. C., granted leave of absence for 20 days.

Dear, W. R., 1st lieutenant, M. R. C., granted leave of absence for 10 days.

Doerr, C. E., Bayly, R. C., Leary, T. J., 1st lieutenants, M. R. C., ordered to Fort D. A. Russell, Wyo., for duty with Company A, H. C.

Shields, W. S., Card, D. P., Kerr, R. W., 1st lieutenants, M. R. C., ordered to San Francisco, Cal., for duty with Company B, H. C.

Parce, A. D., Wilson, J. A., Goldthwaite, R. H., 1st lieutenants, M. R. C., ordered to Fort Niagara, N. Y., for duty with Company C, H. C.

Burket, J. A., 1st lieutenant, M. R. C., relieved from duty at Fort Snelling, Minn., and ordered to Fort Riley, Kans., for duty.

King, C. T., 1st lieutenant, M. R. C., relieved from duty at the Presidio of Monterey, Cal., and ordered to Fort Williams, Me., for duty.

McCornack, C. C., 1st lieutenant, M. R. C., relieved from duty at Vancouver Barracks, Wash., and ordered to Plattsburg Barracks, N. Y., for duty.

Fisk, O. C., 1st lieutenant, M. R. C., relieved from duty at Fort Leavenworth, Kans., and ordered to Fort Terry, N. Y., for duty.

Fox, J. S., 1st lieutenant, M. R. C., relieved from duty at Fort Sam Houston, Texas, and ordered to Fort McKinley, Me., for duty.

Kennedy, J. S., 1st lieutenant, M. R. C., relieved from duty at Fort Sam Houston, Texas, and ordered to Fort Bliss, Texas, for duty.

Demmer, C. C., 1st lieutenant, M. R. C., relieved from duty at Fort Ontario, N. Y.; will proceed to Fort Rodman, Mass., for duty.

Chase, C. L., 1st lieutenant, M. R. C., when relieved from duty at Fort Rodman, Mass., will proceed to Fort Gibbon, Alaska, for duty.

Harmon, D. W., 1st lieutenant, M. R. C., will proceed to Fort Davis, Alaska, for duty.

Trotter-Tyler, G., 1st lieutenant, M. R. C., ordered from Fort Adams, R. I., to Fort Strong, Mass., for temporary duty.

Mueller, A., 1st lieutenant, M. R. C., Magee, J. C., 1st lieutenant, M. R. C., Heath, G. D., Jr., 1st lieutenant, M. R. C., ordered to San Francisco, Cal., for duty at the Army General Hospital.

Coburn, H. C., 1st lieutenant, M. R. C., ordered to Fort Slocum, N. Y., for duty.

Tuttle, A. D., 1st lieutenant, M. R. C., ordered to San Francisco, Cal., to sail July 5 for the Philippine service.

Wright, F. S., 1st lieutenant, M. R. C., ordered to New York City on business of the Medical Department, and thence to the Presidio of Monterey, Cal., for duty.

Garcia, L. C., 1st lieutenant, M. R. C., ordered to Fort McDowell, Cal., for duty.

Snow, C. G., 1st lieutenant, M. R. C., ordered to Fort Leavenworth, Kans., for duty.

Dear, W. R., 1st lieutenant, M. R. C., ordered to Fort Sheridan, Ill., for duty.

Frank, C. E., 1st lieutenant, M. R. C., ordered to Fort Sam Houston, Texas, for duty.

McDiarmid, N. L., 1st lieutenant, M. R. C., ordered to Fort Sam Houston, Texas, for duty.

Smith, W. H., 1st lieutenant, M. R. C., ordered to Vancouver Barracks, Wash., for duty.

Stayer, M. C., 1st lieutenant, M. R. C., ordered to Fort McDowell, Cal., for duty.

Trenholtz, C. A., 1st lieutenant, M. R. C., ordered to Fort Baker, Cal., for duty.

Waring, J. B. II., 1st lieutenant, M. R. C., ordered to Fort Lawton, Wash., for duty.

Davis, A. D., 1st lieutenant, M. R. C., ordered to Fort Lawton, Wash., for duty.

McLellan, George H., 1st lieutenant, M. R. C., ordered to Fort Crook, Nebr., for duty.

Dunbar, L. R., 1st lieutenant, M. R. C., ordered to Fort Casey, Wash., for duty.

Trotter-Tyler, G., 1st lieutenant, M. R. C., relieved from duty at Fort Adams, R. I., will proceed to Vancouver Barracks, Wash., for duty.

Lowe, Thomas S., 1st lieutenant, M. R. C., relieved from further duty at Fort Walla Walla, Wash., and from temporary duty at Vancouver Barracks, Wash.; will proceed to Fort Lawton, Wash., and report for duty in the Army Transport Service.

George, W. R. S., 1st lieutenant, M. R. C., honorably discharged from the service of the United States, his services being no longer required.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended June 5, 1909:

Guest, M. S., surgeon, detached from the *Tennessee* and ordered to the Naval Academy, Annapolis, Md.

Bogert, E. S., Jr., surgeon, detached from the Naval Academy and ordered to the Navy Yard, New York, for temporary duty.

Hoen, W. S., P. A. surgeon, detached from duty at the Naval Hospital, Las Animas, Colo., and ordered to the *Philadelphia*.

Angwin, W. A., P. A. surgeon, detached from the *Philadelphia* and ordered to the *Tennessee*.

Ziegler, J. G., Kerr, W. M., Clark, G. F., Harlan, T., Riker, G. A., asst.-surgeons, commissioned asst.-surgeons, with rank of lieutenants (junior grade), from April 14, 1909.

Jenkins, H. E., Riddick, W. J., acting asst.-surgeons, commissioned acting asst.-surgeons, with rank of lieutenant (junior grade), from May 26, 1909.

Hart, S. D., acting asst.-surgeon, ordered to duty at the Naval Hospital, Navy Yard, New York.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended June 2, 1909:

Cofer, L. E., asst. surgeon general, directed to proceed to Fortress Monroe and Fisherman's Island, Va., on special temporary duty.

Young, G. B., surgeon, detailed to represent the service at the meeting of the American Medical Association, to be held in Atlantic City, N. J., June 7-11, 1909.

Grubbs, S. B., P. A. surgeon, directed to proceed to La Guaira, Venezuela, on special temporary duty.

Goldberger, Joseph, P. A. surgeon, directed to proceed to Woods Hole, Mass., on or about June 25, 1909, on special temporary duty.

Wilson, R. L., P. A. surgeon, granted 15 days' leave of absence from June 2, 1909.

Stiles, Charles W., chief, division of zoology, Hygienic Laboratory, detailed to attend the fifty-sixth annual meeting of the Medical Society of North Carolina in Asheville, N. C., June 15, 1909.

Adams, F. B., acting asst.-surgeon, granted 21 days' leave of absence from June 1, 1909.

MacCaffry, W. B., acting asst.-surgeon, granted 4 days' leave of absence in May, 1909, under paragraph 210, Service Regulations.

Stuart, A. P., acting asst.-surgeon, granted 30 days' leave of absence from June 30, 1909.

Wright, F. T., acting asst.-surgeon, granted 30 days' leave of absence, without pay, from May 23, 1909.

Hunt, Reid, chief, division of pharmacology, Hygienic Laboratory, detailed to attend the annual session of the American Medical Association (Section on Pharmacology and Therapeutics) to be held in Atlantic City, N. J., June 8-11, 1909.

BOARD CONVENED

Board of medical officers convened to meet at the Marine Hospital office, Seattle, Wash., May 29, 1909, for the purpose of examining alien Yutaka. Detail for the board: P. A. Surgeon M. W. Glover, chairman; Asst.-Surgeon C. W. Chapin, recorder.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended June 4, 1909:

SMALLPOX—UNITED STATES

Arizona: Winslow, April 24-May 1, 1 case, 1 death.
California: Los Angeles, May 8-15, 3 cases; San Francisco, 1 case.
District of Columbia: Washington, May 15-22, 1 case.
Georgia: Atlanta, Jan. 15-May 21, 62 cases; Macon, May 2-9, 3 cases.
Illinois: Danville, May 16-23, 2 cases; Springfield, May 14-21, 1 case.
Kentucky: Covington, May 15-22, 3 cases; Newport, 1 case.
Massachusetts: Somerville, May 15-22, 1 case.
Minnesota: Duluth, May 13-20, 2 cases.
Missouri: Kansas City, May 15-22, 2 cases.
Montana: Butte, May 6-20, 11 cases.
New Jersey: New Brunswick, May 1-22, 5 cases.
North Carolina: State of, April 1-30, 127 cases.
Ohio: Columbus, May 15-22, 1 case; Sandusky, May 8-15, 1 case.
Pennsylvania: Philadelphia, May 14-21, 1 case; Pittsburgh, May 15-22, 1 case.
Utah: State of, April 1-30, 37 cases.
Virginia: Portsmouth, May 18-25, 2 cases, 2 deaths.
Washington: Spokane, May 1-8, 5 cases.
Wisconsin: Milwaukee, May 15-22, 2 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, April 10-17, 9 cases, 2 deaths.

SMALLPOX—FOREIGN

Africa: East London, April 10-17, 1 case, 1 death.
Algeria: Algiers, April 1-30, 18 cases, imported.
Brazil: Rio de Janeiro, March 29-April 25, 44 cases, 26 deaths; Sao Paulo, April 5-11, 1 death.
Canada: Halifax, May 8-15, 2 cases; Toronto, April 24-May 15, 5 cases; Yarmouth, May 22-29, 2 cases.
Ceylon: Colombo, March 27-April 17, 5 cases, 4 deaths.
China: Amoy, April 20, present.
Egypt: Cairo, April 8-29, 22 cases, 19 deaths.
India: Bombay, April 20-27, 20 deaths; Calcutta, April 10-17, 171 deaths; Madras, April 17-23, 2 deaths; Rangoon, April 10-17, 9 deaths.
Indo-China: Saigon, April 3-10, 2 cases, 2 deaths.
Italy: Catania, May 1-8, 1 case; Naples, May 2-16, 17 cases, 7 deaths.
Java: Batavia, April 10-17, 3 cases.
Mexico: Matamoros, May 8-15, 1 case; Monterey, May 9-16, 10 deaths; Veracruz, 1 case.
Portugal: Lisbon, May 8-15, 4 cases.
Russia: Odessa, April 24-May 1, 1 case, 1 death; St. Petersburg, April 10-17, 13 cases, 5 deaths; Warsaw, March 6-20, 6 deaths.
Serbia: Belgrade, May 1-8, 10 cases, 2 deaths.
Spain: Barcelona, May 3-10, 5 cases; Madrid, April 1-30, 30 deaths; Vigo, May 1-8, 1 death.

YELLOW FEVER

Barbados: May 8-15, 1 case.
Brazil: Para, May 1-8, 4 cases, 2 deaths.
Mexico: Merida, May 14, 1 case, imported from Tekax.

CHOLERA—INSULAR

Philippine Islands: Provinces, April 10-17, 133 cases, 90 deaths.

CHOLERA

India: Bombay, April 20-27, 25 deaths; Calcutta, April 10-17, 108 cases; Rangoon, 5 deaths.
Russia: St. Petersburg, May 7-14, 15 cases, 7 deaths.

PLAGUE

Brazil: Rio de Janeiro, March 27-April 25, 3 cases.
Chile: Antofagasta, April 17, 9 cases; Iquique, April 18, 22 cases.
Egypt: General, April 16, 29 cases, 19 deaths.
German East Africa: Muanza, April 14, 60 deaths.
India: General, April 10-17, 5,309 cases, 4,594 deaths; Bombay, April 20-27, 508 deaths; Calcutta, April 10-17, 90 deaths; Rangoon, 30 deaths.
Indo-China: Saigon, April 3-10, 5 cases, 5 deaths.
Japan: Himeji, April 30, 1 case, 1 death; Kobe, April 17-24, 2 cases, 2 deaths; Yokohama, April 24-May 1, 1 case.
Peru: Lima, April 24-May 1, 10 cases, 6 deaths.
Straits Settlements: Singapore, April 3-10, 2 deaths.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

LENHARTZ DIET

To the Editor:—Will you kindly state what constitutes the so-called Lenhartz diet, which is used in ulcer of the stomach?

G. N. P., Yonkers, N. Y.

ANSWER.—The Lenhartz diet was described in THE JOURNAL, Jan. 26, 1907, and again May 30, 1908, p. 1813. It consists of a somewhat abundant diet, chiefly of proteids, given on the principle that the excess of acid is thereby neutralized and the healing of the ulcer facilitated. The patient is put to bed and absolute rest enjoined, so that the first two weeks following hematemesis the feces and urine are passed in a bedpan. Mental quietude is also enjoined,

especially freedom from any form of excitement. Confinement to bed is continued for at least four weeks. An ice-bag is laid over the region of the stomach to promote the contraction of that organ, lessen the exposed surface of the ulcer and relieve pain. On the first day, even after hematemesis, the patient receives in teaspoonful doses about a pint of iced milk and one, two or three fresh beaten eggs during the first twenty-four hours. The eggs are beaten up entire with a little sugar and the cup containing them placed in a dish filled with ice, so that they remain cold. In addition two or three times a day or oftener, bismuth subnitrate in, at most, 30-grain doses, is given, suspended in water, and these doses are repeated, as needed for the first ten days, two or three times a day. The amount of milk is increased daily by about 100 c.c. (3½ oz.) and daily one egg is added until at the end of the first week about 800 c.c. (26 oz.) of milk and from six to eight eggs are taken daily. After six days scraped beef can be given in quantities increased from the beginning dose of 31 gm. (1 oz.) to 70 gm. (2½ oz.) the second day, and so on, the beef being stirred into the egg. Gruel, softened zwiebach, etc., may be added to the diet after two weeks, and at the end of four weeks an abundant mixed diet, avoiding coarse vegetables and other irritating substances, can be given. The bowels are kept open by enemata.

The method is described by M. Wagner (*Muench. med. Wchnschr.*, Jan. 5, 1904) and also by J. V. Haberman (*Medical Record*, June 16, 1906). This method was tested by E. Wirsing (*Archiv. f. Verdauungskrankheiten*, xi, 3), in comparison with the method of Leube, and he reaches the conclusion that it is better than the older method for patients who have had recent hemorrhages or who are much debilitated, but that the method of Leube should be given the preference in ordinary cases. Wirsing's article was reviewed in THE JOURNAL, Oct. 7, 1905, page 1122.

This form of treatment has been tested by Lambert in eight cases of a severe type (*Amer. Jour. Med. Sci.*, January, 1908, abstracted in THE JOURNAL, Feb. 8, 1908, p. 480), and he comes to the conclusion that the claims of Lenhartz are correct; that the cure is equally efficient with the older method, is more rapid and more certain, vomiting stopping more quickly and relapse occurring less frequently than in the Leube method; that pain ceases more promptly, a sufficient food supply is afforded, anemia can be treated earlier, and a return to full diet allowed sooner than in the older method.

Lambert's modifications are more fully described in THE JOURNAL, Aug. 8, 1908, p. 497. If the patient prefers he allows a mixing of the eggs and milk and feeding the mixture, instead of the usual alternation as advised by Lenhartz. He also substitutes chopped chicken for the raw ham in the treatment of Lenhartz. After the tenth day Lambert allows a broiled chop, beefsteak or chicken as a substitute for the raw beef. Later ice cream is added and zwiebach is changed to toasted bread, and other cereals take the place of rice.

ETIOLOGY OF SCARLET FEVER

To the Editor:—Please give me references to the latest findings or research in regard to the etiology of scarlet fever.

E. B. FUNKHOUSER, M.D., Trenton, N. J.

ANSWER.—Among the more important recent articles embodying the results of investigations into the etiology of scarlet fever may be mentioned especially the following:

Hektoen, L.: Bacteriologic Examination of the Blood During Life in Scarlet Fever with Special Reference to Streptococci, THE JOURNAL A. M. A., 1903, xl, 685.

Weaver, George H.: Bacteriologic Studies of the Skin and Throat in Cases of Scarlatina, Tr. Chicago Path. Soc., 1903, v, 222; Agglutination of Streptococci, Especially those cultivated from Cases of Scarlatina by Human Sera, *Jour. Infect. Dis.*, 1904, i, 91; The Vitality of Bacteria from the Throats of Scarlet Fever Patients, with special reference to Streptococci, *Jour. Med. Research*, 1903, ix, 246.

Mallory, F. B.: Scarlet Fever: Protozoan-like Bodies Found in Four Cases, *Jour. Med. Research*, 1904, x, 483.

Jochmann, G.: Die Bakterienbefunde bei Scharlach und ihre Bedeutung für den Krankheitsprozess, *Ztschr. f. klin. Med.*, 1905, lvi, 316.

Duval: Die Protozoen des Scharlachfiebers, *Virchow's Arch. f. path. Anat.*, 1905, clxxiv, 485.

Field, C. W.: The Presence of Certain Bodies in the Skin and Blister Fluid from Scarlet Fever and Measles, *Jour. Exper. Med.*, 1905, vii, 343.

Ruediger, G. F.: The Streptococci from Scarlatina and Normal Throats, *Jour. Infect. Dis.*, 1906, lli, 755.

Gabritschewsky: Ueber Streptokokkenvaccine und deren Verwendung bei der Druse der Pferde und dem Scharlach des Menschen, *Centralbl. f. Bakteriologie*, part 1, Orig., 1906, xli, 719, 844.

Tunncliffe, R. M.: The Streptococco-opsonic Index in Scarlet Fever, *Jour. Infect. Dis.*, 1907, iv, 304.

Hektoen, L.: Is Scarlet Fever a Streptococcus Disease? THE JOURNAL A. M. A., 1907, xlviii, 1158.

Gabritschewsky: Ueber Streptokokkenerytheme und ihre Beziehungen zum Scharlach, *Berl. klin. Wchnschr.*, 1907, xlii, 556.

Gamaleia, N. T.: Scharlacherreger. *Berl. klin. Wchnschr.*, 1908, xiv, 1795.

Williams, A. W.: Recent Studies on Scarlet Fever, *Am. Jour. Obst.*, 1908, lviii, 152.

Schleissner, F.: Bakteriologische und serologische Untersuchungen bei Scharlach, *Wien. klin. Wchnschr.*, 1909, xxii, 553.

HAIR-PIN IN THE FEMALE BLADDER

To the Editor: The report of T. L. Hazard in THE JOURNAL, May 29, page 1759, on the case of a "Hat-Pin in the Male Urethra," prompts me to forward the following: The patient, who was referred to me by Dr. Shaw, of Junction City, Ohio, was a young, robust girl; she stated that while dressing, a hair-pin fell from her hair striking a nearby sofa, from which it rebounded into her bladder (unique explanation!). The hair-pin could be seen through the cystoscope, the loop of the pin pointing toward left wall of bladder. The accident (?) having occurred so recently, there was no incrustation and the pin was easily removed by hooking it out of the bladder with the little finger of my left hand, introduced after full dilatation of the urethra under general anesthesia.

STARLING S. WILCOX, M.D., Columbus, Ohio.

BILLROTH'S ANESTHESIA SOLUTION

To the Editor:—Your explanation of the A. C. E. mixture in THE JOURNAL, May 29, page 1775, was incorrect. The mixture was also called the 1, 2, 3 mixture:—1 part alcohol, 2 parts chloroform, 3 parts ether.

W. E. SHAW, Cincinnati.

ANSWER: The ordinary A. C. E. mixture, so called because it is a mixture of alcohol, chloroform and ether, contains 1 part of alcohol, 2 parts of chloroform, and 3 parts of ether, as our correspondent states. The query which was answered in THE JOURNAL, May 29, referred to Billroth's anesthetic mixture, which is also an A. C. E. mixture, composed of 1 part of alcohol, 3 parts of chloroform and 1 part of ether.

MARTIN STAIN FOR TUBERCLE BACILLI

To the Editor:—Please publish in detail mode of making stains for use in the Martin-Herman Mons method of staining tubercle bacilli.

A. R. SMITH, Los Angeles.

ANSWER: The Martin stain consists of two liquids; 1. A mordant solution consisting of a 1 per cent. solution of ammonium carbonate; 2. a stain made by dissolving 3 per cent. of crystal violet (methyl violet, 6 B.) in 95 per cent. ethyl alcohol. These solutions should be kept separately and mixed when wanted for use in the proportion of 3 parts of the mordant to one of the stain. After staining, the specimen is decolorized with 10 per cent. nitric acid in 5 per cent. ethyl alcohol. Crystal violet can be obtained by dealers in bacteriologic supplies.

DELAYED HEALING OF WOUNDS

To the Editor:—What is the reason that in some persons the healing process in cuts, abrasions, etc., is so slow? Take, for instance, the case of a man of 35, in apparent good health, who knocked off a piece of skin from the hand, one-quarter of an inch square. There was at first profuse bleeding and then an oozing of serum for from twenty-four to thirty-six hours. A crust then formed, but on motion the parts cracked, showing a seropurulent fluid beneath. After a week healing commenced and continued. The final stage was a hard corn-like scab which had to be cut like a corn and worn thin, having a smooth scar for a long time. The total time from inception to scar in the individual is from three to four weeks for even the smallest injury. Would vaccine therapy offer any hope of cure and what would be likely to help?

E. W. BURT, Westport, Mass.

ANSWER.—The explanation lies without doubt in two factors: a lack of resisting power on the part of the general system and some local condition in the skin unfavorable to healing. The latter condition may arise from a constitutional peculiarity of the individual's skin or from irritation in consequence of poisons circulating in the blood or, lastly, from repeated local infection. Theoretically, vaccine therapy ought to re-enforce the deficient immunizing action of the blood and favor healing. The vaccine would most appropriately be made from the secretions of the unhealed wound.

Association News

NEW MEMBERS

List of new members of the American Medical Association for the month of May, 1909:

ALABAMA

Downing, J. H., Bessemer.
Smith, J. G., Bankston.
Spotswood, D. J., Mobile.
Wilkinson, H. B., Montgomery.

ARKANSAS

Elton, A. M., Bruno.

McVay, L. C., Marion.
Owens, W. R., Paragould.
Scott, E. E., Magazine.

CALIFORNIA

Bryson, C. W., Los Angeles.
Canney, F. G., San Francisco.
Cross, Hugh, Dunsmuir.

Dameron, J. D., Stockton.
Doig, R. L., San Diego.
Foster, R. L., San Diego.
Pascoe, E. R., Los Angeles.
Ross, R. O., Fresno.
Stead, J. M., San Diego.
Sylvester, Florence M., Oakland.
Tower, A. M., Lodi.

COLORADO

Fantz, Theresa S., Denver.

CONNECTICUT

Barrett, W. J., New Haven.
Bohannon, C. G., South Norwalk.
Hawkes, W. W., New Haven.
O'Flaherty, E. P., Hartford.
Variell, A. D., Waterbury.

DISTRICT OF COLUMBIA

Carr, W. B., Washington.
Ruble, W. A., Washington.
Sowers, W. F. M., Washington.
Stewart, J. W., Washington.

GEORGIA

Bridges, D. R., Dawson.
Carter, W. N., Columbus.
Hall, T. H., Macon.
Kinard, J. O., Atlanta.
Wiggins, Lee W., Dexter.

IDAHO

Blitz, Adolph, Boise.
Soderquist, A. R., Idaho Falls.

ILLINOIS

Abelmann, H. W., Chicago.
Beesor, B. B., Chicago.
Berry, F. A., Chicago.
Bobzin, R. R., Shipman.
Christensen, A. H., Chicago.
Duncan, Adelaide, Chicago.
Ford, Charles, Wagoner.
Fuller, E. M., Chicago.
Gilmore, W. H., Mt. Vernon.
Graham, E. A., Chicago.
Halperin, George, Chicago.
Heely, O. J., St. Libory.
Klein, Sidney, Chicago.
Klopper, Zan D., Chicago.
Knap, W. H., Chicago.
Kaufmann, G. L., Chicago.
Lachaine, Edmond, Chicago.
Lambert, O. B., Chicago.
Lentz, Nathan, Chicago.
Lewin, Solomon, Chicago.
Lowell, A. D., Chicago.
McLaughlin, A. H., Aurora.
Murray, W. G., Springfield.
Oliver, N. E., Thornton.
Pollock, D. K., Little York.
Potter, H. E., Chicago.
Richards, R. G., St. Davids.
Scott, O. F., Summit.
Sheldon, A. R., Highland Park.
Summers, A. T., Mattoon.
Trauseau, Gertrude H., Charleston.

INDIANA

Baer, S. W., South Bend.
Engle, Walter C., Indianapolis.
Hirshfield, A. C., Indianapolis.
Hutcheson, W. R., Greencastle.
Michele, Mary H., Vincennes.
Reavis, W. J., Evansville.
Shanklin, V. A., West Terre Haute.
Stallings, F. L., Posey Co.
Stephenson, C. E., Indianapolis.
Sudranski, Charles, Greencastle.

IOWA

Bennett, G. J., Denver.
Best, E. E., Clarion.
Bos, C. N., Pella.
Brackney, H. J., Sheldon.
Bryant, A. J., Blairstown.
Chamberlain, B. H., Wyoming.
Coe, P. W., State Center.
Cross, G. B., Plainfield.
Dunshee, J. D., Woodburn.
Gillmor, B. F., Red Oak.
Grant, A. F., Taylor Co.
Keith, W. E., Lost Nation.
King, J. E., Anamosa.
Klinefelter, L. E., Rockford.
Lass, D. G., Ochevedan.
Leech, L. J., West Branch.
McLean, J. W., Fayette.
Miller, W. B., Centerville.
Moerke, A. C., Burlington.
Munich, J. A., Dows.
Pelletier, D. H., New Hartford.
Peppers, J. L., Goldfield.
St. Clair, F. E., Hampton.
Seabloom, J. L., Red Oak.
Smith, J. C., Woolstock.
Stevens, F. A., Belmont.
Tompkins, E. D., Clarion.

KANSAS

Carpenter, C. R., Leavenworth.
Carr, W. A., Junction City.
Dildine, A. R., Portland.
Hill, J. N., Osawatome.
Longacre, C. E., Westphalia.
Mayfield, Claud, Hutchinson.
Wickersham, E. C., Independence.
Wortman, J. G., Mound City.

KENTUCKY

Biggers, J. A., Louisville.
Coleman, W. H., Louisville.
Cook, C. J., Belmont.
Dunn, J. H., Lee City.
Ellis, J. W., Masonville.
Grant, W. E., Louisville.
Hayden, J. V., Salem.
Kieffer, Smithfield, Clintonville.
Kieffer, F. L., Covington.
Markwell, Chas., Versailles.
Onderdonk, W. A., Louisville.
Popham, A. E., Uniontown.
Ridley, J. U., Robards.
Rubel, H. M., Louisville.
White, J. G., Cerulean.
Whitis, Mack, Bengue.
Wilson, D. S., Louisville.

LOUISIANA

Chalaron, F. J., New Orleans.
Morey, J. C., Centerville.
Robert, J. J. Jr., Norwood.

MARYLAND

Beitler, F. V., Halethorp.
Benner, C. M., Taneytown.
Chambers, G. F., Lusby.
Conradi, F. A., Baltimore.
Diller, C. H., Detour.
Forster, A. M., Towson.
Galloway, G. F., Federalsburg.
Geroghty, J. T., Baltimore.
Haynes, H. H., Baltimore.
Hoag, J. Morley, Baltimore.
Hoff, D. E., Hagerstown.
Johnson, T. B., Frederick.
Johnston, E. H., Baltimore.
Maynard, S. S., Frederick.
Nice, J. A., Lisbon.
DeNoonley, T. F., Frostburg.
Sappington, C. T., Frederick.
Seiss, F. H., Taneytown.
Webster, J. B., Raspeburg.
White, W. W., Baltimore.
Zepp, H. E., Baltimore.

MASSACHUSETTS

Beaulien, E. J., Whitman.
Holden, W. D., Haverhill.
Hollings, Byam, Winthrop.
Jones, J. A., Lynn.
Hurly, E. D., South Boston.
Keegan, C. A., Arlington.
Kinnicutt, Roger, Worcester.
MacDonald, W. C., Malden.
McCaffrey, C. F., Somerville.
Murphy, Anna F., Worcester.
Smith, Myrtle, Worcester.
Smith, R. M., Boston.
Sobotky, Irving, Boston.
Stephens, F. N., Somerville.
Sullivan, J. T., Boston.
Winslow, B. S., New Bedford.

MICHIGAN

Bauch, G. F., Lansing.
Bliss, G. L., Three Rivers.
Braley, F. W., Saranac.
Crane, C. V., Tawas City.
Gustin, J. W., Bay City.
Hotvedt, I. M. J., Muskegon.
Kinsey, F. C., Three Rivers.
McComb, E. V., Menominee.
Munro, D. D., Kinde.
Rutledge, J. C., Detroit.
Sherman, A. T., Detroit.
Trumble, G. W., Bay City.
van Urk, Thomas, Kalamazoo.
Van Zwaluwenburg, J. G., Ann Arbor.

MINNESOTA

Benson, O. O., Sacred Heart.
Christiansen, Jas., Alden.
Dohm, A. J., St. Paul.
Durgin, F. L., Winnebago.
Jellison, E. R., Foley.
Kohler, G. A., Minneapolis.
McDermott, T. E., Minneapolis.
Miller, V. L., Westbrook.
Moen, J. K., Minneapolis.
Smith, M. W., Red Wing.
Stone, J. L., Minneapolis.
Voyer, E. O., Minneapolis.

MISSISSIPPI

Coleman, O. G., Coffeeville.
Cryer, W. H., Columbus.
Stephens, G. W., Meridian.
Weeks, W. H., Doddsville.

MISSOURI

Atkins, W. A., Rogersville.
Brewer, Lake, Ridgeway.
Carpenter, G. W., Utica.
Crank, A. C., Pittsville.
DeMenil, H. N., St. Louis.
Guhman, J. O., St. Louis.
Herbst, Frank, Kansas City.
Hooper, C. L., Ardmore.
Lipsitz, S. T., St. Louis.
Maltby, Burton, Liberty.
Morgner, Omar, St. Charles.
Ryan, F. M., Quitman.
Schwarz, Henry, St. Louis.
Shelton, W. J., St. Joseph.
Smith, M. A., Gallatin.
Tabacnie, Maxwell, St. Louis.
Wolf, A. S., St. Louis.

MONTANA

Arnold, M. H., Billings.
Brasier, O. V., Butte.

NEBRASKA

Coats, A. J., Lincoln.
Colburn, W. O., Stuart.
Dishong, G. W., University Place.
Kelley, Ernest, Norfolk.
Morris, D. F., Lewellen.
Rockwell, Orville, College View.

NEVADA

Toogood, J. E., Virginia City.

NEW HAMPSHIRE

Craig, Willie P., Walpole.

NEW JERSEY

Baceryeze, A. M., Newark.
Bennett, J. K., Gloucester.
Bullock, E. C., Columbus.
Calhoun, Charles, Rutherford.
Cladek, Walter E., Rahway.
Cohn, Hermann, Newark.
Converse, C. B., Jersey City.
Culver, G. M., Jersey City.
Dickinson, E. A. L., Trenton.
Dundan, A. H., Plainfield.
Dunkel, E. K., Jersey City.
English, S. B., Glen Gardner.
Granger, W. R. R., Newark.
Harden, A. S., Newark.
Hawke, E. S., Trenton.
Hicks, W. H., Newark.
Hood, Bruno, Newton.
Loper, J. C., Bridgeton.
Marcy, F. W., Camden.
Morrill, J. P., Paterson.
Osmun, M. M., Camden.
Prickett, E. D., Mt. Holly.
Pyle, W. L., Jersey City.
Saunders, O. W., Camden.
Smith, H. S., Newark.
Wagner, Otto, Elizabeth.
Walscheid, A. J., Weehawken.
Wilson, H. H., Bridgeton.

NEW MEXICO

Caulson, Richard, Tucumcari.
Herring, B. F., Tucumcari.

NEW YORK

Abrahams, Robert, New York City.
Albones, A. W., Frankfort.
Ambos, C. L., New York City.
Armstrong, A. S., New York City.
Auel, C. H. W., Buffalo.
Bailey, F. D., Brooklyn.
Barringer, T. B., Jr., New York City.
Beale, A. E., Schaghticoke.
Becker, J. I., Cairo.
Becker, LeRoy, Cobleskill.
Benedict, A. N., Yonkers.
Blaisdell, S. C., New York City.
Bleiman, Asher, New York City.
Boeker, Hermann, New York City.
Boyd, C. S., New York City.
Brennan, J. H., New Rochelle.
Caldwell, W. E., New York City.
Callender, G. R., New York City.
Carlisle, L. N., Mt. Vernon.
Carlucci, Francisco, New York City.
Chaffe, C. F., Rochester.
Coe, W. H., Auburn.
Demarest, Sylvester, Suffern.
Dietrich, A. E., Bay Shore, L. I.
Dattelbaum, M. J., Brooklyn.
Egan, C. J., New York City.
Erdmann, A. F., Brooklyn.
Evarts, H. C., New York City.
Frazier, L. A., Amsterdam.
Freutel, A. J., New York City.
Gillett, J. R., Kingston.

Glogau, Otto, New York City.
Goldberg, J. M., Brooklyn.
Golding, J. E., Brooklyn.
Grimm, J. F., Brooklyn.
Guile, E. B., Utica.
Hennington, C. W., Rochester.
Heydecker, H. R., New York City.
Hollister, F. C., New York City.
Hough, W. D., Niagara Falls.
Howard, Tasker, Brooklyn.
John, David, Yonkers.
Kane, J. J., Blughamton.
Lefkowics, Bartholomew, Manhattan.
Lewis, J. S., Buffalo.
Linder, John, Brooklyn.
Lord, M. S., Schenectady.
Macy, Mary S., New York City.
Medrick, R. F., Port Jervis.
Moak, C. H., New York City.
Morton, R. S., New York City.
Motham, L. D., Elmira Heights.
Neuwelt, Louis, New York City.
Palmer, W. E., Hornell.
Parry, Eleanor, New York City.
Perroue, Ettore, New York City.
Pierce, W. R., Amsterdam.
Price, J. Woods, Saranac Lake.
Raabe, Alfred, New York City.
Rasbach, F. B., Buffalo.
Redmond, F. J., Fillmore.
Reed, W. E., Washingtonville.
Riche, Paul, New York City.
Ringlaud, J. B., Oswego.
Rogers, W. H., Jr., Brooklyn.
Rooker, A. M., Niagara Falls.
Rose, M. C., New York City.
Rudisch, Julius, New York City.
Russell, S. A., Fulton.
Sachs, Ernest, New York City.
Seymour, Nan Gilbert, New York City.
Skinner, B. D., Greenport.
Smith, S. W., New York City.
Snyder, Frederick, Rosendale.
Somers, J. A., Brooklyn.
Squier, H. N., Utica.
Staebler, D. M., Brooklyn.
Steensland, H. S., Syracuse.
Stephens, C. B., Wallace.
Steurer, J. A., New York City.
Stevens, C. T., New Rochelle.
Stevens, J. W., Brooklyn.
Thomas, A. R., West Eaton.
Wallin, A. C., New York City.
Walsh, T. J., Buffalo.
Warner, H. S., Brooklyn.
Weiher, C. L., New York City.
Wheeler, J. M., New York City.
White, J. S., South Glens Falls.
Wilklow, G. F., Wurtsboro.
Williams, H. B., New York City.
Wolfert, B. E., Brooklyn.
Woolsey, L. E., Hancock.

NORTH DAKOTA

Douglas, F. A., Fessenden.
Harwood, C. B., Hope.
McMurtry, W. C., Wolford.
Rudell, G. L., Plaza.

OHIO

Biddle, D. H., Athens.
Bigelow, L. L., Columbus.
Blair, Thomas, Lyons.
Carson, A. I., Cincinnati.
Chambers, J. W., Bays.
Coburn, R. C., Upper Sandusky.
Davison, O. C., Bethel.
Haas, S. L., Cleveland.
Henning, E. R., Bellefontaine.
Hyde, A. G., Cleveland.
Ireton, E. C., Marathou.
Jewitt, R. A., Cleveland.
Jones, J. C., Dillonvale.
Levenberg, Bernard, Cleveland.
McCurdy, L. C., Coshocton.
Ruffin, C. A., Louisville.
Scarnecchia, Joseph, Youngstown.
Taylor, W. H., Youngstown.
Wassermann, S., Cleveland.

OKLAHOMA

Ames, H. B., Burlington.
Anderson, F. A., Claremore.
Butler, W. R., Maud.
Gorton, Mary L., Pawnee.
Gray, J. W., Oquinton.
Harrington, W. E., Lahoma.
McVicker, W. D., Garber.
Neely, J. M., Oklahoma City.
Rutherford, Lefe, Sapulpa.

OREGON

Baird, A. W., Portland.
Robinson, David, Mosier.
Schleef, H. C., Cottage Grove.
Sether, A. F., Roseburg.

PENNSYLVANIA

Aiken, T. G., Berwyn.
Aydelotte, J. T., Philadelphia.
Bachman, H. S., Philadelphia.
Bachman, M. H., McKeesport.
Bang, E. O., South Canaan.
Beale, J. E., Coal Dale.
Beyer, W. F., Punxsutawney.
Bishop, A. L., Philadelphia.
Borcer, O. P., Philadelphia.
Borzell, F. F., Cressman.
Bower, A. E., Ford City.
Bradley, C. D., Ford City.
Brundage, R. A., Pittsburg.
Brunner, H. P., Reading.
Buka, A. J., Pittsburg.
Butt, W. R., Philadelphia.
Cartin, H. J., Johnstown.
Cole, T. P., Greensburg.
Collins, James, Bristol.
Creighton, W. J., Philadelphia.
Crist, E. G. W., Lisburn.
Dalsimer, Leon, Philadelphia.
Davidson, C. H., New Salem.
Delaney, C. W., Altoona.
Dille, G. W., Cooperstown.
Dolley, G. C., Philadelphia.
Donaldson, J. S., Bellevue.
Dorrance, G. M., Philadelphia.
Dotterer, C. B., Boyertown.
Dunn, L. S., Chester.
Eastman, Henry, Pittsburg.
Field, G. B., Wood, Easton.
Frescoln, L. D., Philadelphia.
Getty, Mary, Philadelphia.
Glenn, T. O., Bradford.
Glenn, W. S., State College.
Grier, G. W., Pittsburg.
Grime, R. T., Philadelphia.
Gummy, F. B., Philadelphia.
Hamilton, S. S., Punxsutawney.
Harshberger, A. S., Lewistown.
Hofkin, A. F., Philadelphia.
Hope, P. T., Mercer.
Hostetter, J. E., Gap.
Howell, W. H., Altoona.
Hunter, J. W., Philadelphia.
Ingham, S. D., Philadelphia.
Judson, C. F., Philadelphia.
Keech, H. B., Philadelphia.
Keller, H. M., Hazleton.
Kirk, C. B., Fishertown.
Kramer, J. G., Pottsville.
Lane, D. W., Philadelphia.
Leaman, Rosh, Philadelphia.
Lehman, C. G., Newberry.
Lehman, J. R., Mountville.
Longshore, J. B., Philadelphia.
Lurting, C. W., Pittsburg.
Markel, J. C., Pittsburg.
McCord, W. C., Mars.
MacLachlan, A. A., Pittsburg.
McDowell, Katharine R., Philadelphia.
McEntire, O. W., Howard.
McLaughlin, C. M., Freeport.
McLaughlin, J. J., Philadelphia.
McNaul, W. J., Philadelphia.
Miller, E. B., Philadelphia.
Miller, H. E., Milroy.
Moore, E. W., Franklin.
Neff, J. S., Philadelphia.
Newton, R. D., Philadelphia.
O'Connell, J. A., Philadelphia.
Ohlman, I. L., Pittsburg.
Palmer, C. L., Mt. Lebanon.
Pancoast, J. W., Philadelphia.
Pease, T. N., Philadelphia.
Plank, E. R., Carlisle.
Podolski, L. A., Philadelphia.
Randall, W. F., Dushore.
Ray, W. B., Glenshaw.
Read, John, McKeesport.
Reese, G. W., Mahanoy City.
Reid, R. A., Zelenople.
Riethmiller, A. H., Millvale.
Ruffell, C. E., Philadelphia.
Sands, J. S., Bristol.
Scheehle, J. E., Philadelphia.
Schleifer, H. G., Pittsburg.
Schoening, J. J., Philadelphia.
Shearer, C. H., Reading.
Shoenthal, H. I., New Paris.
Smith, C. D., Philadelphia.
Smith, E. L., Schellburg.
Stein, N. H., Middleport.
Stewart, H. H., Friedensburg.
Taylor, W. H., Irwin.
Thomas, Anne H., Philadelphia.
Travis, G. S., E. Stroudsburg.
Tull, M. G., Philadelphia.
Turner, Anne L., Philadelphia.
Tuttle, Lucius, Philadelphia.
Umstad, G. B. R., Phoenixville.
Van Buskirk, W. L., Scranton.
Wallace, N. C., Dover.
Weakley, W. S., York.
Wetmore, S. S. P., Morrisville.
Wilson, L. F., Greensburg.
Wilson, R. L., Jeannette.
Woods, W. W., Rixford.

RHODE ISLAND

Heussey, J. P., Providence.
Palmer, H. G., Providence.
Risk, W. A., Providence.

SOUTH CAROLINA

Blakely, S. F., Spartanburg.
Doyle, T. C., Orangeburg.
Williams, H. B., Honea Path.

SOUTH DAKOTA

Miller, V. M., Mellette.
Whiteside, Jesse D., Aberdeen.

TENNESSEE

Anderson, C. F., Nashville.
Bryon, O. N., Nashville.
Chancellor, S. E., Elbridge.
Foster, J. I., Huntsville.
Hayward, O. M., Chattanooga.
Macon, R. B., Clarksville.
Malone, F. M., Capleville.
Oppenheimer, R. P., Knoxville.
Phillips, T. L., Newland.

TEXAS

Balrd, T. H., Otto.
Barrou, W. P., Carmona.
Bland, L. F., Port Arthur.
Bledsoe, M. F., Rockland.
Draper, R. H., Sparta.
Gibner, G. P., Knox City.
Hall, H. S., Newton.
Janes, A. M., Anson.
LeGrand, G. F., Hereford.
Markham, L. N., Longview.
Martin, J. E., Bruceville.
McMeans, A. A., Webb Co.
Miller, J. R., Port Bolivar.
Moore, T. F., Galveston.
Porch, C. L., Glazier.
Roberts, J. Thomas, San Marcos.
Smith, W. R., Lassater.
Spurgin, A. M., Dallas.
Warren, C. D., Houston.
Wilson, R. G., Odessa.
Wilson, W. T., Navasota.
Wright, J. B., Princeton.
Young, J. W., Roscoe.

UTAH

Allison, R. S., Clear Creek.
Moormeister, F., Salt Lake City.
Warner, W. E., Spanish Fork.

VERMONT

Clark, F. E., Burlington.
Eastwood, J. S., Brandon.
Norris, F. W., Swanton.
Smith, R. E., Rutland.
Shea, D. A., Burlington.

VIRGINIA

Caldwell, J. K., Galax.
Catts, S. R., National Soldiers Home.
Christian, W. G., Gordonsville.
Compton, R. F., Charlottesville.
Copeland, E. V., Round Hill.
Crenshaw, J. L., Charlottesville.
Culpepper, J. H., Norfolk.
Early, J. E., Charlottesville.
Eastham, Granville, Rapidan.
Garnett, R. W., Charlottesville.
Hinchman, J. D., Richmond.
Kern, R. L., Richmond.
Kerns, W. W., Bloxam.
Labenberg, C. A., Richmond.
Lile, Samuel, Lynchburg.
Marchant, C. D., Harmony Village.
Peyser, Mark W., Richmond.
Strother, W. J., Culpeper.
Taylor, Philip, Richmond.
Tucker, R. D., Powhatan.

WASHINGTON

Appleton, T. J., Seattle.
Belden, G. G., Spokane.
Brandt, A. L., Mt. Vernon.
Frost, W. S., Spokane.
Schlegel, H. E., Spokane.
Schwabland, W. W., White Bluffs.
Smith, Carroll, Spokane.

WEST VIRGINIA

Donahoo, R. S., Fairview.
Easley, E. M., Bluefield.
Fulton, W. S., Wheeling.
Hannah, U. H., Spruce.
Johnson, I. B., Laneville.
Kerr, W. W., Volga.
Lucas, J. B., Maybenry.
Martin, C. A., Harvey.
Miller, W. D., Weaver.
McLaughlin, J. M., Webster Springs.

Ogden, G. R., Flemington.	Fox P. A., Beloit.
Post, W. H., Masontown.	Higgins, E. G., Melrose.
Pratt, C. E., Wheeling.	Lambeck, F. J., Milwaukee.
Scott, B. F., Terra Alta.	Loge, E. S., Milwaukee.
Shirkey, D. W., Clendenin.	Lundmark, L. M., Ladysmith.
Spillman, J. W., New Cumberland.	Miller, W. S., Madison.
Stone, S. M., Tomsburg.	Nicholson, J. D., Balsam Lake.
Swimley, G. W., Bunker Hill.	Nowack, L. H., Watertown.
Trach, J. M., Farmington.	O'Connell, J. E., Menasha.
Werner, H. R., Thomas.	Patek, A. J., Milwaukee.
Woofter, J. V., Leopold.	Stephenson, W. L., Ladysmith.
	Stoddard, C. H., Milwaukee.
	Trankle, H. M., Bloomer.
WISCONSIN	
Baker, J. C., Hawkins.	
Beebe, C. M., Sparta.	
Bonesin, G. F., Detroit Harbor.	
Cahoon, Roger, Baraboo.	
WYOMING	
Hawk, J. W., Green River.	
Richards, J. R., Thermopolis.	
Shingle, J. D., Cheyenne.	

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phoenix, July 5-6. Sec., Dr. Ancil Martin.
ARKANSAS HOMEOPATHIC: Little Rock, July 13. Sec., Dr. P. C. Williams, Texarkana.
COLORADO: Denver, July 6. Sec., Dr. S. D. VanMeter, 1723 Tremont Place.
CONNECTICUT: Regular, New Haven, July 13-14. Sec., Dr. Charles A. Tuttle, 196 York St.; Homeopathic, New Haven, July 13. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, New Haven, July 13. Sec., Dr. T. S. Hodge, 17 Main St., Torrington.
DELAWARE: Dover and Wilmington, June 15-17. Sec., Dr. Henry W. Briggs, Wilmington.
DISTRICT OF COLUMBIA: Washington, July 13-16. Sec., Dr. George C. Ober, 210 B St., S. E.
ILLINOIS: Coliseum Annex, Chicago, June 16-18. Sec., Dr. J. A. Egan, Springfield.
INDIANA: 120 State House, Indianapolis, July 13-15. Sec., Dr. W. T. Gott.
IOWA: Des Moines, June 22-24. Sec., Dr. Louis A. Thomas, Des Moines.
MAINE: State House, Augusta, July 13-14. Sec., Dr. Frank W. Searle, 806 Congress St., Portland.
MARYLAND: Baltimore, June 15-18. Sec., Dr. J. M. Scott, Hagerstown. Homeopathic: Baltimore, June 15-17. Sec., Dr. Joseph S. Garrison, 848 W. North Ave.
MINNESOTA: Minneapolis, June 15. Sec., Dr. W. S. Fullerton, St. Paul.
NEW JERSEY: State House, Trenton, June 15-16. Sec., Dr. J. W. Bennett, Long Branch.
NEW HAMPSHIRE: Concord, July 2-3. Regent, Mr. H. C. Morrison.
NEW MEXICO: Santa Fe, July 12. Sec., Dr. J. A. Massie.
NEW YORK: Albany, June 22-25. Chief of Examinations Division, Dr. Charles F. Wheelock, Albany.
NORTH DAKOTA: Grand Forks, July 6-8. Sec., Dr. H. M. Wheeler.
OKLAHOMA: Guthrie, July 13. Sec., Dr. Frank P. Davis, Enid.
OREGON: Portland, July 6. Sec., Dr. R. C. Coffey.
PENNSYLVANIA: Philadelphia and Pittsburg, June 22-25. Sec., Mr. Nathan C. Schaeffer, Harrisburg.
RHODE ISLAND: Room 313, State House, Providence, July 1-2. Sec., Dr. Gardner T. Swarts, 315 State House.
SOUTH DAKOTA: Watertown, July 14-15. Sec., Dr. H. E. McNutt, Aberdeen.
TEXAS: Cleburne, June 22-24. Sec., Dr. M. E. Daniel, Honey Grove.
UTAH: Salt Lake City, July 5. Sec., Dr. G. F. Harding, 310 Templeton Bldg.
VERMONT: Burlington, July 13-15. Sec., Dr. W. Scott Nay, Underhill.
VIRGINIA: Richmond, June 22-25. Sec., Dr. R. S. Martin, Stuart.
WASHINGTON: Seattle, July 6-8. Sec., Dr. Kenneth B. Turner, Walker Bldg.
WEST VIRGINIA: Charleston, July 13-15. Sec., Dr. H. A. Barbee, Point Pleasant.
WISCONSIN: Madison, July 13-15. Sec., Dr. J. V. Stevens, Jefferson.
WYOMING: Laramie, June 23-25. Sec., Dr. S. B. Miller.

Kansas February Report

Dr. R. A. Light, secretary of the Kansas Board of Medical Registration and Examination, reports the written examination held at Topeka, Feb. 9, 1909. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 22, of whom 21 passed and 1 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Northwestern University Medical School.....	(1902)		85.
Hahnemann Medical College and Hospital, Chicago.....	(1908)		84.
Indiana University	(1908)		81.
Keokuk Medical College, Coll. of P. and S.....	(1908)	75, 79, 82	
Kansas Medical College.....	(1908)	80, 81, 83	
University of Kansas	(1906)	85; (1908)	89.
St. Louis College of Physicians and Surgeons.....	(1908)		80.
Ensworth Medical College.....	(1906)	80; (1908)	76, 81, 82.

University Medical College, Kansas City.....	(1907)	77.
Barnes Medical College.....	(1908)	84.
Kansas City Homeopathic Medical College.....	(1896)	76.
Creighton Medical College	(1906)	80.
University of Bukharest, Roumania	(1901)	82.
FAILED		
Louisville and Hospital Medical College.....	(1908)	72.5

Oklahoma January Report

Dr. Frank P. Davis, secretary of the State Board of Medical Examiners of Oklahoma, reports the written examination held at Chickasha, January 12, 1909. The number of subjects examined in was 15; total number of questions asked, 150; percentage required to pass, 70. The total number of candidates examined was 31, of whom 25 passed and 6 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Birmingham Medical College	(1906)		88.
University of Arkansas	(1908)		80.
Atlanta College of Physicians and Surgeons	(1902)		83.
Harvey Medical College	(1904)		83.
Hering Medical College	(1903)		87.
College of Phys. and Surg., Chicago, (1904) 92, (1907)			89.
Medical College of Indiana	(1899)		88.
University of Kansas	(1907)		90.
Hospital College of Medicine, Louisville	(1900)		78.
Kentucky School of Medicine	(1897)		82.
University of Louisville	(1904) 72., (1908)		74.
Boston University	(1908)		85.
Marion-Sims-Beaumont College of Medicine	(1903)		84.
St. Louis University	(1908)		83.
University Medical College, Kansas City	(1908)		84.
Barnes Medical College	(1904)		88.
Creighton Medical College	(1905)		88.
Cleveland Homeopathic Medical College	(1906)		82.
Knoxville Medical College	(1908)		77.
Meharry Medical College	(1908)		80.
Vanderbilt University	(1904)		81.
University of West Tennessee	(1908)		71.
University of Texas	(1908)		90.

FAILED

Chicago College of Medicine and Surgery	(1908)	86.*
Kansas Medical College	(1900)	73.*
Louisville and Hospital Medical College	(1908)	73.*
University of Louisville	(1907)	65.
Barnes Medical College.....	(1899)	56.
Tennessee Medical College	(1900)	63.

* Failed to receive 50 per cent. in one or more branches.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

McCormack in Missouri

Dr. McCormack has terminated a month of remarkably successful meetings in Missouri, having given his entire time during May to this work. The press notices received show unusual interest, while the attendance at practically all of the meetings was large and enthusiastic. Extracts from a few of the newspaper comments follow:

The Maryville *Tribune*, besides giving an extended account of the lecture, said editorially: "Monday was a great day for the physicians of Maryville and those who heard Dr. McCormack speak. Startling truths, clothed in ehaste words and phraseology, sent fathers and mothers home to think about these evils of society which are best judged from the physician's standpoint. The one great proof of the facts which he uttered was the spirit of unselfishness in which advice was given, in which he showed what the medical profession has, can and will do for the human race. . . . Dr. McCormack's visit to Maryville did good which can never be estimated. It set people to thinking, and in doing so accomplished that to which many men in carrying on a work fail to attain."

The Maryville *Republican* says: "One good result coming from the meeting was the referring of the matter of appointing a committee to investigate the public health conditions of Maryville to the mayor and city council. The council was requested to appoint a committee to investigate the probable sources of menace to the health of the city. . . . Probably not in years has such an address caused so much thinking on

the part of the people of Maryville. Startling statements proving the great and common disregard for health surprised the big audience."

The *Chillicothe Constitution* says editorially: "The business of the physician has reached a higher level than that of merely doctoring symptoms and alleviating pain. . . . The studious, honest physician has progressed beyond this stage. He is not only a healer, but an educator. He looks over and beyond the dollar and exercises the part of a humanitarian and takes to himself the burden of being to a certain extent his brother's keeper. It is much better that disease should be prevented than that it should be cured. It is much more beneficial to the people of America that they know how to observe the laws of health and sanitation and that they preserve their bodies from contagion and infection than that new methods of curing illness should be discovered. The Chillicothe physicians are to be congratulated on having secured the services of Dr. McCormack as a lecturer here, and on the broad spirit of progressiveness that leads them to take part in such a movement as Dr. McCormack represents." The *Constitution* also says editorially, in a later issue, under the title "Needed Health Reforms:" "The criticisms leveled against the country at large, the state of Missouri and the Missouri municipalities regarding their neglect of the public health, uttered by Dr. J. N. McCormack of the American Medical Association in Chillicothe recently, were not only timely, but were amply justified." The editorial then comments on the need of a vital statistics law in Missouri and urges the adoption of such a statute. It is gratifying to note that in the last few weeks a thoroughly satisfactory vital statistics law has been adopted in Missouri, due largely to the efforts of the organized medical profession of the state.

At Kirksville, Mo., the local press gave lengthy notices of the meetings, both before and after, and said: "Dr. McCormack is a forceful speaker and held his audience in the closest attention with his presentation of naked truths and facts that made the average man and woman think that perhaps this manner of physical life could be improved on." Editorially, the *Daily Express* says: "Dr. McCormack's recent lecture has stirred things up in this old town. The lectures served as an eye opener on some things."

The *Hannibal Morning Journal* says: "Dr. McCormack is delivering these timely health talks in cities all over the country and is doing a great deal of good. . . . Last night a magnificent audience, composed of representative citizens of this community, assembled at the high school auditorium to listen to a masterly address. Dr. McCormack is a splendid speaker, and held the undivided attention of the audience from the beginning to the close of his remarks."

The *Sedalia Democrat-Sentinel* says: "Dr. McCormack's talk was interesting because he spoke the truth, because he spoke entertainingly and convincingly, giving facts and figures to prove his arguments, because he struck out fearlessly, exposing sins of omission and commission, hitting a head wherever he saw it, then pouring the oil of kindness and humanity on the wound he was compelled to make. His object in making these exposures was not merely to criticize, but primarily to bring the facts before his audience so that they could think of and correct them. . . . He held the entire attention of his audience for over two hours."

The above are only a few extracts from a large number of newspaper reports received. The work being done in Missouri is of great value and will produce results of undoubted benefit to the public.

Unqualified Practitioners in England

The interest taken by the medical profession of Great Britain in the question of the practice of medicine by unqualified persons was commented on at length in a previous number of THE JOURNAL. That this interest is sustained and is taking the direction of practical investigation is shown by the circular recently issued to medical officers of health by the local government board, calling attention to the resolutions adopted by the General Medical Council of the British Medical Association, and stating that before taking any steps in the matter the lord-president of the local government board wishes to

obtain definite information regarding the extent to which medical practice is carried on by unqualified persons. Local health officers are therefore asked to report whether the practice of medicine and surgery by unqualified persons is increasing and whether the health of the public in the district is affected thereby. The collection of data along this line will undoubtedly furnish much interesting and valuable information.

Marriages

HENRY ANTHONY STRECKER, M.D., to Miss Nellie Marie Carroll, both of Philadelphia, Pa., June 2.

FRANK G. CROWELL, M.D., to Miss Nettie Cratty, both of Rochelle, Ill., May 19.

ROBERT L. BONE, M.D., Madisonville, Ky., to Miss Ade'e Lewis, at Baltimore, May 28.

ELIOT BISHOP, M.D., Brooklyn, N. Y., to Miss Pearl Rogers of Wilkes-Barre, Pa., June 1.

HARRY J. WILLEY, M.D., Lawrence, Kan., to Miss Mabel Green of Thayer, Kan., May 18.

EDWARD MEYER, M.D., New York City, to Miss Margaret E. McLaurine, at Baltimore, May 21.

EDGAR H. LITTLE, M.D., to Miss Gertrude Cline, both of East St. Louis, Ill., at Vandalia, Ill., May 24.

EDWARD MITCHELL VAUGHAN, M.D., to Miss Marie Hepburn Nowland, both of Middletown, Del., June 1.

G. MEMORY CHAPMAN, M.D., Logan's Store, N. C., to Miss Annie B. Ford of Hickory, N. C., May 19.

WILLIAM McCULLY JAMES, M.D., Ancon, Panama, to Miss Mary Gurley McCulloch, at Ancon, May 1.

SAMUEL J. SMART, M.D., Logansport, La., to Miss Cora Wallace of Centennial, Texas, at Shreveport, La., May 23.

PERRY C. BENTLE, M.D., Greensburg, Ind., to Miss Pearl Booth of Rush county, Ind., at Rushville, Ind., May 28.

Deaths

Henry Chrysostom Keenan, M.D. College of Physicians and Surgeons, New York City, 1895; a member of the Medical Society of the State of New York; president of the Brooklyn Gynecological Society; associate gynecologist to St. Mary's General Hospital, and gynecologist to St. Mary's Maternity Hospital; a police surgeon of Brooklyn for ten years; died in the Cumberland Street Hospital, Brooklyn, June 1, as the result of injuries received in a runaway accident received an hour before, aged 36.

Philo D. St. John, M.D. College of Physicians and Surgeons, New York City, 1883; formerly surgeon to the Rock Island System at Wichita, Kan.; a member of the Kansas State Board of Health in 1896 and 1897; from 1892 to 1896 city physician of Wichita; and a member of the staff of the Wichita and St. Francis hospitals; died at his home in Wichita, May 23, from accidental poisoning by carbolic acid, aged 57.

John T. Binkley, M.D. Pennsylvania Medical College, Philadelphia, 1852; of Evansville, Ind.; for many years a member of the American Medical Association; some-time professor of physiology in the Hospital College of Medicine, Evansville; was found dead in the Wellington Hotel, Chicago, June 2, aged 82, from the effects of a gunshot wound of the skull, believed to have been inflicted by a thief.

John Alexander Geisendorffen, M.D. Marion-Sims Medical College, St. Louis, 1891; Jefferson Medical College, Philadelphia, 1893; a member of the American Medical Association and Pacific Coast Association of Railway Surgeons; local surgeon to the Oregon Railway and Navigation Company at The Dalles, Ore.; died in St. Vincent's Hospital, Portland, Ore., May 26, from meningitis, aged 43.

Martin Henry Luken, M.D. Rush Medical College, Chicago, 1873; a member of the American Medical Association, Chicago Pathological Society and German Medical Society; for many years attending gynecologist to St. Elizabeth's Hospital and a member of the staff of the Norwegian Lutheran Tabitha Hospital, Chicago; died at the home of his brother in Chicago, June 5, aged 58.

Arthur M. Thome, M.D. Rush Medical College, Chicago, 1851; assistant surgeon in the Army during the Civil War, and later superintendent of the U. S. Marine Hospital, Keokuk, and professor of anatomy in Keokuk Academy; a minister in the Congregational church since 1866; died at his home in Chicago, May 28, aged 86.

Elizabeth D. Kane, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1883; a member of the American Medical Association; who confined her practice to the poor at her home in Kane, Pa.; prominent in educational, temperance and philanthropic affairs; died at her home in Kane, May 25, aged 73.

Floriman James Taylor, M.D. Rush Medical College, Chicago, 1881; of Pittsfield, Maine; a member of the Maine Medical Association, and secretary of the Board of U. S. Pension Examining Surgeons for Somerset county; died at the home of his mother in Drayden, Maine, May 24, from pneumonia, aged 54.

Charles Ellery Stedman, M.D. Harvard Medical School, Boston, 1865; a member of the Massachusetts Medical Society; from 1861 to 1865 assistant surgeon in the U. S. Navy; and visiting surgeon to the Boston City Hospital from 1872 to 1886; died at his home in Brookline, Mass., May 24, aged 78.

George R. Pattillo, M.D. Medical College of Georgia, Augusta, 1876; for many years a member of the state and national medical associations; and formerly local surgeon for the Georgia Railroad at Culverton, Ga.; died at his home in Camak, Ga., May 23, from pneumonia, aged 58.

George O. Johnson, M.D. University of Maryland, Baltimore, 1869; of Fort Cobb, Okla.; a member of the American Medical Association; a member of the senate in the first and second legislatures of Oklahoma; died in Guthrie, February 10, from asphyxiation by natural gas, aged 63.

William S. Huber, M.D. University of Pennsylvania, Philadelphia, 1888; president of the select council of Lebanon, and of the Union Fire Company; a member of the surgical staff of the Good Samaritan Hospital; died at his home in Lebanon, May 25, from cerebral hemorrhage, aged 43.

Thales Irving Stanton, M.D. University of Vermont, Burlington, 1877; New York University, New York City, 1878; for thirty years a practitioner of Baltic, Conn.; died suddenly at his home in Franklin, Conn., May 26, from heart disease, aged 60.

John J. Ward, M.D. Albany (N. Y.) Medical College, 1869; a member of the Medical Society of the State of New York; and for more than thirty years health officer of Ellenville, N. Y.; died at his home, May 22, from asthma, aged 75.

Henri Charles Gunkel, M.D. Eclectic Medical Institute, Cincinnati, 1859; for many years president of a bank of Newport, Ky.; died at his home in Newport, May 24, from cerebral hemorrhage, aged 83.

Alexander Leslie McCormack, M.D. New York University, New York City, 1882; for twenty-two years a practitioner of East Boston; died at the home of his brother in Roxbury, May 25, aged 53.

Lucius Josiah Thayer, M.D. Long Island College Hospital, Brooklyn, N. Y., 1895; physician of the Shawmut Company, Elton, Pa., for several years; died in Crenshaw, Pa., May 28, from cocaine poisoning.

Richard R. Thompson, M.D. Reform Medical College, Macon, Ga., 1854; a lieutenant in the Confederate service during the Civil War; died at his home in Cedartown, Ga., April 10, from influenza, aged 77.

Henry T. Cotton, M.D. Medical College of Indiana, Indianapolis, 1875; for fifty years a practitioner of Boone county, Ind.; died at his home in Zionsville, May 29, from cerebral hemorrhage, aged 75.

Thomas L. Browne, M.D. McGill University, Montreal, 1881; for many years a medical officer of the Quebec militia; died suddenly at his home in Richmond, Que., May 26, from heart disease, aged 57.

John D. Sherer, M.D. University of Pennsylvania, Philadelphia, 1880; a member of the Medical Society of the State of New York; died at his home in Waterford, May 25, aged 52.

George Aldomer Cox, M.D. Albany (N. Y.) Medical College, 1868; a veteran of the Civil War; died suddenly at his home in Albany, May 21, from angina pectoris, aged 63.

Thomas Johnson Fain, M.D. Hospital College of Medicine, Louisville, 1897; a member of the Montana State Medical Association; died at his home in Norris, May 29, from tuberculosis, aged 37.

Leonard C. Whitford, M.D. Bennett Medical College, Chicago, 1870; for nearly thirty years a practitioner of Seattle, Wash.; died at his home May 26, aged 72.

Whitfield Murphey Buie, M.D. University of Louisville (Ky.), 1811; died at his home in Mertens, Texas, May 28, from cirrhosis of the liver, aged 61.

Reuben Goucher, M.D. American Medical College, Eclectic, Cincinnati, 1854; formerly of Molalla, Ore.; died at his home in Mulino, Ore., April 19, aged 76.

John Frederick Foard, M.D. Jefferson Medical College, Philadelphia, 1847; died at his home in Statesville, N. C., May 13, from cholera morbus, aged 82.

Gabriel Henry Bane, M.D. Medical College of Ohio, Cincinnati, 1897; died recently at his home in Orangeburg, Ky., from tuberculosis, aged 39.

Thomas Perry Robosson, M.D. University of Maryland, Baltimore, 1859; died at his home in Flintstone, Md., May 28, from paralysis, aged 75.

James B. Womack, M.D. University of Tennessee, Nashville, 1891; died at his home in Baucom, Tenn., May 25, from tuberculosis, aged 45.

Edward H. Graves, M.D. Missouri Medical College, St. Louis, 1878; died at his home in Boody, Ill., May 14, from appendicitis, aged 59.

George C. Pitzer, M.D. Eclectic Medical Institute, Cincinnati, 1866; died at his home in Los Angeles, Cal., May 10, aged 74.

Isadore L. Meyer (license, Kan., 1903); of Hiawatha, Kan.; died suddenly in Oneida, Kan., May 8, from angina pectoris, aged 58.

Marvin W. Cobb (registration, Ohio, 1884); died at his home in Fredonia, N. Y., May 19, from pericarditis, aged 63.

Henry Nebeker, M.D. Jefferson Medical College, Philadelphia, 1876; died at his home in Clinton, Ind., May 25, aged 63.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

American Ophthalmological Assn., New London, Conn., July 14-15.
American Orthopedic Association, Hartford, Conn., June 14-16.
Idaho State Medical Association, Seattle, Wash., July 19.
Maine Medical Association, Portland, June 16-17.
Massachusetts Medical Society, Boston, June 15-16.
New Jersey Medical Society, Cape May, June 23-25.
Medical Society of the State of North Carolina, Asheville, June 15.
Washington State Medical Association, Seattle, July 20.
Wisconsin State Medical Society, Madison, June 30-July 2.

AMERICAN PEDIATRIC SOCIETY

Annual Meeting, held at Lenox, Mass., May 27-28, 1909

The President, DR. CHARLES P. PUTNAM, Boston, in the Chair

The officers elected for the ensuing year were named in THE JOURNAL last week in the department of General News and comment.

President's Address: State Care of Children

DR. CHARLES P. PUTNAM, Boston, urged the members of the society to take up a share of the work of the public institutions for children in their respective communities. These institutions, he said, were in fact great hospitals for chronic patients. The state's children he considered were juvenile offenders, truants, or dependent and neglected children, who should not be pictured as being on the whole healthy and normal. He described in detail the work done along these lines in Boston, and said he thought that the pediatricists were specially qualified by experience and training for this work, and he considered it incumbent on them to take up their share of the work of looking after these unfortunate children.

The Position and Work of the American Pediatric Society Toward Public Questions

DR. THOMAS MORGAN ROTCH, Boston, appealed to the members of the society to aid by their influence the safeguarding of early life. He stated that the chief point which we should aim at would be to persuade the enthusiasts who were doing such good work all over the country in connection with the different phases of early life to understand that they did not

know sufficiently all the different sides of the various questions connected with childhood, to allow them to control all the work themselves. He stated that the many workers who were trying to reform the laws in connection with child labor should understand that their great efforts were appreciated by the medical profession. He, however, had told them it was their province to drag crime out into the broad daylight, by crime meaning the unnecessary and cruel ill-treatment of children, by not legislating for them in a way that would protect them during the formative period of life. In the previous meeting at Chicago, he explained to them that when these children had been rescued from the mills, sweatshops and various kinds of labor, which they were made to perform, before they were ready for it, it was then the province of the pediatricists to decide what these children were able to do. After this had been decided it was the province of the legal profession to inform the legislators what laws should be made for the preservation of child life in the sense of the child's health. He said that this same reasoning applied to those who had charge of the grading of schools and kindergartens and also of the physical sports of both boys and girls during their different stages of development. He explained that the old methods of determining at what age a child should be in the various grades in school and when he should work, for instance, in the mills, had mostly depended on chronologic age, and, again, as to height and weight. Children differed much, even though they were of the same age, in both physical and mental development, and judging development by chronologic age, must be very misleading. For the last three or four years Dr. Rotch had been endeavoring to obtain some more exact index, not of chronologic age, but of development, with the intention of thus deciding when a child should work in the mill by determining whether he had the proper strength derived from a proper development for such work. He presented what he called an anatomic index. He said that the development of the epiphyses presented an important part of a child's development so far as strength was concerned, and so far as showing what stage of development he was in. The epiphyses could be studied in all the joints—shoulder, elbow, knee and ankle—and very fine changes occurred in these joints. The joint which was easiest to read and in that sense most practical for forming an anatomic index was the wrist. In the majority of cases a normally developed wrist represented a normal development of the other joints. This development could be studied in successive grades from birth to 14 years of age by making use of the appearance of the osseous centers of the carpal bones and of the epiphyses of the radius and ulna. A Roentgen-ray picture could be taken of the wrist; this picture would represent a certain stage of development. This classification could be used for all ages, and in this way we could determine whether a child was ready to enter a kindergarten; or in which grade of the school he could be placed; or to what strain in athletic contests he could be allowed to go, and in what form of laborious work he might be employed. The influence of the society should be brought to bear on educators as well as on the child labor committee to induce them to look at the work which they were engaged in from some other point besides that governed by their own especial ideas and the lines in which they were working.

A Report on the Medical Work in the Juvenile Court of Chicago

DR. F. S. CHURCHILL, Chicago, presented this report, which is based on the examination of 2,700 children, appearing before the Juvenile Court of Chicago during the last year; divided into the dependents and delinquents—dependent meaning one with no or ineffectual home care and delinquent meaning one who has transgressed the law. His analysis according to nationality showed 77 per cent. of foreign-born parentage; in proportion to the total population, the Polish lead. He examined as to the abnormalities of these children, paying especial attention to the height, weight and chest growth and the condition of the tonsils and adenoids, the condition of the eyes and ears, the condition of the teeth, heart and lungs, skin, and the frequency of venereal disease. The investigation

showed little organic disease among these children. The striking data were the high percentages of carious teeth, enlarged tonsils and cervical glands and defective eyesight, and the frequent occurrence of gonorrhea among the girls. Both boys and girls during the early years ran pretty closely to the normal, though a little below; among the delinquents they were very much below the normal, showing that the strain and stress of life that these children led began to tell on them at about the age of puberty. An exception to this general observation was the weight of the 16-year-old girls, who were shown to be 20 pounds heavier than normal girls and much better developed.

(To be continued)

ASSOCIATION OF AMERICAN PHYSICIANS

Twenty-fourth Annual Meeting, held at Washington, D. C., May 11-12, 1909

(Continued from page 1876)

SYMPOSIUM ON TUBERCULOSIS

The Cutaneous Tuberculin Test

DR. LAWRASON BROWN, Saranac Lake, N. Y.: Much work needs to be done with the cutaneous test; it should not be pronounced negative until at least 4, or better 7 days, have elapsed. The old tuberculin should be used, and a 25 per cent. solution is probably as efficient as stronger solutions, but if the test is negative with a 25 per cent. solution, the full strength should be used for the second inoculation. Failure to react to the cutaneous test does not absolutely exclude reaction to the subcutaneous, nor does reaction to the cutaneous test indicate that reaction to the subcutaneous test will always occur. It is difficult to judge of the prognosis from the cutaneous test. Some serums, especially those from patients treated with higher doses of tuberculin, or from animals with high agglutinative powers, when mixed with weak dilutions of tuberculin, tend to retard the cutaneous test.

Sensitization in Tuberculosis

DR. V. C. VAUGHAN, JR., Detroit: Sensitization is an important factor in tuberculosis. A positive reaction following the first instillation of tuberculin into the conjunctival sac is a strong confirmatory evidence of the existence of tuberculosis. A negative reaction following the first instillation of tuberculin into the conjunctival sac is of no value in determining the presence or absence of tuberculosis. A reaction of local sensitization obtained in an eye unaffected by previous instillation is strong evidence against the presence of tuberculosis. Failure to obtain a reaction of local sensitization in an eye unaffected by previous instillation is of no value in the diagnosis of tuberculosis. The treatment of pulmonary tuberculosis by cleavage products obtained from the bacillus itself has been followed by temporary improvement and arrest in certain cases.

The Influence of the Ingestion of Dead Tubercle Bacilli on Infection

DRS. M. J. ROSENAU and JOHN F. ANDERSON, Washington, D. C.: This is in the nature of a preliminary note. We have made some experiments to determine whether the ingestion of dead tubercle bacilli has any influence on subsequent infection. Our first series of experiments was done on guinea-pigs. At present we are carrying on experiments on two other species of animals. Of course, it is well-established that the injection of dead bacilli into animals is followed by local or general results, depending on the number injected, but whether the ingestion of dead tubercle bacilli has any influence is not so clearly established. In the first series we took 100 guinea-pigs and divided them into two lots. To 50 we fed dead bacilli for sixty days. At the end of that time the entire 100 were given large doses of live bacilli, and autopsies performed as soon after death as possible. It was found that on the average those that had been fed with dead bacilli died in 108 days; the controls in 113 days. This question is of practical importance, because in pasteurized milk we frequently ingest

large numbers of dead tubercle bacilli; and also in European countries tuberculous meat is sold, under official supervision, at a lower price. If the ingestion of such material would have any influence on subsequent infection, of course it is a matter of importance to determine the fact, and we hope we may be able to arrive at some definite conclusion on this subject when our experiments are completed.

An Index to Tuberculin Treatment in Tuberculosis by the Minimal Cutaneous Reaction Method

DRS. W. C. WHITE, D. A. L. GRAHAM and K. H. VAN NORMAN, Pittsburg: In a recent paper by White and Graham we described a volumetric quantitative method for applying the cutaneous test of v. Pirquet. In the application of this test we use various percentages of old tuberculin and a definite quantity of 0.01 c.c.m. The tuberculin is applied to one spot and protected by an ordinary vaccine shield to allow as complete absorption as possible. From a study of a number of cases we have been able to show that local and constitutional reactions are a part of the same phenomena, and that a definite ratio exists between the amount of tuberculin applied cutaneously and that given subcutaneously for the production of local and constitutional reactions. We have found that one-fifteenth of the amount of O. T. which when applied to the skin by our method will produce the minimal cutaneous reaction, will when given subcutaneously produce both local and constitutional reactions; that one-thirtieth of that same amount subcutaneously will produce local reaction without constitutional, and that one-fiftieth of the minimal cutaneous reaction dose will produce neither local nor constitutional reactions when given subcutaneously. It is possible by this method to determine, first, the borderland of reaction and no reaction to tuberculin, which will be the degree of tolerance of the patient to tuberculin; second, the dose of tuberculin necessary to give the grade of reaction desired. In beginning treatment, we first determine the minimal cutaneous reaction point of the patient as described. This is obtained in the majority of cases with 12.5 per cent. O. T., using 0.01 c.c.m. of the solution; i. e., the minimal reaction is obtained by the absorption from the skin of 1.25 mg. of O. T. From the ratios above mentioned 1/15 of the amount 1.25 mg., or 83/1000 mg. O. T., will produce both local and constitutional reactions; 1/30, or 4/1000 mg., local without constitutional; 1/50, or 25/1000 mg., no local or constitutional reaction. One-fiftieth, or 25/1000 mg., is therefore an amount of tuberculin which when given subcutaneously is just below the quantity necessary to produce local reaction at the site of injection in cases giving a minimal cutaneous reaction to 12.5 per cent. O. T. by the method described.

The Relative Importance of the Human and Bovine Types of Tubercle Bacilli in Human Tuberculosis at Different Periods of Life

DR. WILLIAM H. PARK, New York: Seventeen fatal cases of generalized tuberculosis in infants, in which the meninges were not involved, have been investigated. Twelve of these were due to the human type and five to the bovine type. Neither in age, in clinical symptoms, nor in pathologic findings, were any distinctive differences noticed which could be referred to the type of tubercle bacilli producing the infection. Ten cases of tuberculous meningitis were examined and all were due to the human type. Only two cases of abdominal tuberculosis were examined, and both were due to the bovine type. Twenty-nine cases of tuberculosis of the lymph glands of the neck were examined. Nine of these were of the bovine type, and the remainder of the human. There was no difference in the character of the cases, except that the majority of the bovine infections were in the younger children. In five cases of tuberculosis of the bones and joints all were due to the human type. There were examined four patients with pulmonary tuberculosis under 1 year of age, seven between 6 and 14 years, and 200 adults. In all the disease was due to the bacillus of human type. These results coincide so closely with the reports of other large series in different parts of the world that it looks as if there were little probability of further studies greatly

changing our present ideas of the relative properties of human and bovine infection. Bovine infection is certainly a considerable factor in the tuberculosis of children. In adults, on the other hand, it is almost negligible.

Discussion on Tuberculosis

DR. WILLIAM H. WELCH, Baltimore: Dr. Park's contribution is an extremely important one, especially the study of such a large number of cases of pulmonary tuberculosis without finding in a single instance the bovine bacillus, so far as that goes confirming Koch's contention at the last International Congress on Tuberculosis, at which he challenged any one to bring forward an authentic case of pulmonary phthisis due to the bovine tubercle.

DR. S. SOLIS COHEN, Philadelphia: It is important to be able to determine the minimal dose of tuberculin with which it is safe to begin treatment. My only experience has been in cases of laryngeal tuberculosis. For many years I was afraid to use it, but my brother obtained excellent results from the very first in the treatment of tuberculosis of the larynx, and recently I have been using it in those cases in which tuberculosis of the larynx coexisted with pulmonary tuberculosis, and always with good results, although not always with recovery.

DR. A. JACOBI, New York: Some time ago, Dr. v. Pirquet told me that of late he had been using the undiluted old tuberculin, and since then I have done the same. The method is very simple. I use only a small part of a drop. A single drop will suffice for twenty or twenty-five vaccinations. I scarify the skin, put the tuberculin on with a glass rod and leave it there a few minutes, having a control. I frequently use eosin simply to have something that may act as an irritant. A shield is put on, and I see the patient in three days, and almost invariably I have found the reaction positive in cases in which a general examination showed tuberculosis. I have never seen any untoward results.

(To be continued)

NEW HAMPSHIRE MEDICAL ASSOCIATION

Annual Meeting, held at Concord, May 12-14, 1909

The President, DR. JOHN M. GILE, Hanover, in the Chair

Reports of secretary, treasurer, councilors and chairmen of committees were read and placed on file to be printed in annual report.

The matter of expert medical testimony was exhaustively discussed, and it was voted that the chair appoint a committee of conference to meet with a like committee from the New Hampshire Bar Association to draft some bill on expert testimony which might be made a law at the next session of the legislature. The following were appointed. Dr. F. A. Stillings, Concord; Dr. E. O. Crossman, Lisbon; Dr. G. C. Wilkins, Manchester; Dr. J. J. Cobb, Berlin; Dr. John M. Gile, Hanover.

The next legislative committee was instructed to make strenuous effort to have the law governing the practice of medicine in New Hampshire modified at the next session of the legislature in some important particulars.

The secretary was directed to advise Senator Gallinger that the New Hampshire Medical Society was opposed to any restrictions on animal experiments, such as was contemplated in the District of Columbia.

The house approved vasectomy as reported from Indiana, and voted to oppose the licensing of so-called optometrists.

The officers elected for the ensuing year were named in THE JOURNAL, May 29, page 1768.

President's Address: Problems Confronting the Society

DR. JOHN M. GILE, Hanover: In an organization like this two general methods of procedure are open: One along the line of a loose association with little machinery and little paternalism in its methods; the other a radically different principle suggested by the whole trend of affairs toward industrial and social organization. The latter means carefully constituted committees and delegated authority, and most diligent and painstaking work on the part of those officers.

Expert medical testimony, in its present status, has been more discussed and more villified, derided and condemned than it would seem possible for any system to be and live, but it is still with us and without prospect of change. The bill introduced in the New York Assembly in March, 1909, probably will not pass. I suggest that a committee of conference be appointed to meet with a like committee from the New Hampshire Bar Association for friendly consideration of the subject. The American Urological Association is directing its attention to a propaganda for the sterilization by vasectomy of criminals, idiots and other defective classes, and is requesting the New Hampshire Medical Society to pass resolutions favorable to the legalization of such procedure. The frequency with which the defective reproduces his own or a still more degenerate type is appalling, and this fact is not appreciated even by the members of the medical profession unless special study is given to the subject. That famous family whose genealogy is recorded under the name of "The Jukes," showed among 700 descendants 55 per cent. of criminals and paupers, and in the course of a century cost the State of New York over a million and a quarter of dollars. Segregation has been the approved method of applying a check to this state of affairs, but it is expensive to the state and unsatisfactory to the subjects so controlled. Indiana legalized vasectomy two years ago for criminals and defectives and 800 individuals have thus been sterilized. Oregon has enacted a similar law.

The matter of suits against physicians for malpractice is always one of disturbing interest to the profession, and is one that has loomed especially large in New Hampshire in the past year. An organization, within the society, for medical defense appears to be giving highly satisfactory results in the states where it is in operation. This would tend to rule out those cases that are nothing more or less than blackmail and that are brought in the hope that the physician will pay a small sum rather than be put to the inconvenience and expense of trial. The law which regulates the granting of license to practice in New Hampshire has several features which make it cumbersome and not without friction in its working. The existence of three examining boards seems to be a needlessly awkward and cumbersome arrangement. One board with representatives from each of the so-called schools of medicine—eclectic, homeopathic and regular—should be simpler, better co-ordinated and more efficient in action. The present law apparently does not distinctly prohibit any one from practicing medicine so long as he does not attach the title of doctor or M.D. to his name. Complaints have come from the cities that unlicensed individuals are advertising and practicing medicine under the title of "Professor" and that the authorities refuse to prosecute under the existing law. In an effort to improve the law the legislative committee presented to the last legislature a bill dealing with those particulars in what seemed to be a more satisfactory manner, but opposition developed from various and somewhat unexpected quarters. The only purpose which the committee had was simply to make a more consistent law; hence when the opposition developed it was thought wise to let it die in the committee. New Hampshire, in common with nearly every other state in the Union, has in recent years been through a definite campaign for the advancement of medical education. The result is the remarkable change in the medical course of study of to-day as compared with that of 15 years ago. In connection with this the fact is to be noted of a marked decrease in the last five years of the number of students matriculated in the medical schools of the country. In 1904 there were 28,142 matriculants and 5,747 graduates and in 1908 there were 22,602 matriculants and 4,741 graduates, a decrease of 5,540 students and 1,007 graduates.

Surgery of the Stomach

Dr. John B. Deaver, Philadelphia, discussed in detail the symptomatology and diagnosis of diseases of the stomach and summed up the situation in gastric surgery as follows:

1. The treatment of ulcer surgically is highly satisfactory,

but not perfect in its results. 2. With less danger in operating because of our present improved technic excision or resection of gastric ulcer will probably become much more frequent. 3. Chronic dilatation of the stomach is curable by gastroenterostomy, whether the pylorus be patulous or not. 4. Gastropexy does not respond to surgical treatment. 5. Neuroses of the stomach are fit for surgical treatment only when their cause, being without the stomach, can be removed. Operations on the stomach for functional gastric conditions are always failures. 6. Carcinoma of the stomach in many instances would be curable if diagnosis would be made early; until our diagnosis is improved our results will continue to be poor. Unless we explore earlier and more often and not consider the responsibility of such procedure a grave one, we can not hope to progress in the surgery of malignant growths of the stomach.

DISCUSSION

DR. M. E. KEAN, Manchester: The problem would seem to be to evolve some plan of early diagnosis, so that the patient could be operated on while there was a good prospect of cure.

DR. F. B. LUND, Boston: Within the last two years the subject of gastroenterostomy has developed immensely. I have tried hard to get some help from laboratory men. Many patients have been sent to me by physicians as early cases of stomach disease, and I felt a careful laboratory examination ought to be made. Two young working men came to me supposedly with stomach disease. Both looked the least bit anemic and had gastric pain. One was found to have cancer, which could not be operated on by gastroenterostomy, as there was not room. The other had cancer also. The surgeon has to depend on the common sense of the doctor who has seen the patient and knows him. Acute ulcers in young men ought to have treatment. A great many will be cured without operation if the medical treatment is kept up, but it will not be and the case will eventually come to the surgeon. Medical treatment is difficult and has to be long continued. The majority of ulcers are cured by gastroenterostomy; it is a simpler proceeding than resection. I believe with Dr. Deaver that gastritis should not be operated on.

(To be continued)

ILLINOIS STATE MEDICAL SOCIETY

Fifty-Ninth Annual Meeting, Held at Quincy, May 18-20, 1909

(Continued from page 1882)

President's Address: The Relation of the Medical Profession to the Secular Press

DR. J. W. PETTIT, Ottawa: No agency is more potent for good or evil than the secular press. By secular press I mean more particularly the newspaper, which each day reaches fully 90 per cent. of the reading public. By far the larger part of the public, especially busy people, get about all their general information from the newspaper. It is the only printed source of information for fully one-half of the reading public. Any advertisement devoid of exaggeration, either expressed or implied, should be regarded as legitimate. It is not even this kind of advertising for whose recognition I plead, but that larger and more useful publicity which is mis-called advertising. Publicity may be defined as exploiting any medical fact which is of benefit to the public. Incidentally, more or less advantage will accrue to the publicity given to meritorious work done by the physician. This, however, is not advertising, but the legitimate reward for good work. The physician who furthers his own interest by doing good professional work is entitled to the reward which such service brings. This may be by scientific research, active society work, promotion of the public health, anything and everything that promotes legitimate medicine and the public welfare, and even though the motive may be fundamentally a selfish one, it should be encouraged. Many things are connected with our professional work of which the public has a right to know. There are also many to knowledge of which they have no right, and it would be a violation of professional confidence

to make public. The code is sufficiently clear on this point. I have observed that many medical men who advocate a narrow interpretation of the code are engaged in advertising by devious methods if we accept the doctrine that all publicity is advertising. The writing of useless books, the establishment of medical colleges for the primary purpose of securing the professorships, reading papers of doubtful value before medical societies as an excuse for the wholesale distribution of reprints, are some of the methods employed to evade the spirit of our code of ethics. This mad attempt to deceive and be deceived is responsible in a large measure for the establishment of so-called medical colleges, many of which are simply diploma mills, an evil which is not only a disgrace, but an absolute menace to our profession. One of the best means of mitigating these evils is to permit and encourage legitimate publicity along more rational and less harmful lines.

When Shall We Operate for Uterine Fibromata and Myomata?

DR. S. C. STREMMEL, Macomb: My assistant (Dr. Holmes) and I have operated in 61 cases, every one of which was complicated; four tumors had undergone carcinomatous degeneration, 1 sarcomatous, making 5 patients with malignant degeneration. The sarcomatous patient died 3 months after operation from recurrence, and one carcinomatous patient died in 6 months from recurrence. In the majority of our cases hemorrhage was a prominent symptom and was responsible for getting the patient's consent for operation. Ten tumors were large and produced pressure symptoms; 5 were complicated with ovarian tumors; 4 were multiple fibromata in which we were able to remove the growth without removing the uterus. One was a pedunculated fibromyoma weighing 19½ pounds; ascites and edema of the lower extremities and abdominal wall were extreme. A myomectomy was done; she recovered, and 2 years later gave birth to a child. We have never lost a patient from operation, but we have had some narrow escapes on account of undertaking cases away beyond the borderline of safety. I am convinced that we should advise operation for these tumors of the uterus as soon as the diagnosis is made, even before degenerative changes or complications occur. The only exceptions I make are those patients that any surgeon of average ability would refuse to operate on because of old age or a physical condition contraindicating operation.

DISCUSSION.

DR. WILLIAM CUTHBERTSON, Chicago: Many women present themselves for examination for other pelvic troubles and in the course of that examination we discover the presence of fibroid tumors. Unless these fibroids are sufficiently large to cause pain, displacement of the uterus, or profuse hemorrhages, I do not think we are called on to operate for their removal as soon as the diagnosis is made. Every practitioner of experience has seen cases of comparatively young women whose uteri have been studded with small fibroid tumors, yet they did not cause sufficient pain, displacement of the uterus, with accompanying constipation, disturbances of urination, to warrant operation; consequently I think we are safe in letting these young women go on and keep them under close observation.

DR. BERTHA VAN HOESSEN, Chicago: I have never been able to understand why a tumor of the uterus should be looked on any differently from a tumor of the breast. If a woman presents herself to me with a tumor of the breast, I would urge her to have it removed at once, and have a section of it examined microscopically, with a view of determining whether it is malignant or not. By this means we can get in the very early stages nearly all cases of carcinoma of the uterus. We know it does not do any harm to remove a small tumor from the breast; it is a simple operation; we know exactly what we are doing, and I believe the conditions in the pelvis are exactly the same.

SYMPOSIUM ON GASTRIC AND DUODENAL ULCER

Diagnosis of Gastric and Duodenal Ulcers

DR. CHRISTOPHER GRAHAM, Rochester, Minn.: In the majority of peptic ulcers the type of symptom is fairly suggestive, and a careful development of the history will lead

closely not only to a good diagnosis, but often to a degree of precision in ulcer location. The period of chronicity varies from 1 to 20 years, often running from 30 to 45. The average number of years in this series is between 12 and 13. The second characteristic feature is the periodicity of attacks. Are chronicity and periodicity peculiar to ulcer of the stomach? We find in gall-bladder disease, appendiceal colics and many general diseases this chronicity and this periodicity. Gallstone and appendiceal attacks come irregularly, increasing in severity as the attacks multiply. Pain is the most constant symptom of gastric ulcer. It is the time of pain or other symptoms; it is the regularity of pain and other symptoms; and it is the means by which the pain or other symptoms are relieved, that give the differential characteristics to gastric ulcer. Perforation is not infrequent and is acute or chronic. Chronic perforation causes adhesions to neighboring organs, reduces the motility of the stomach, which in turn decreases motor power and increases secretion. This increased secretion adds to the obstruction by causing pyloric spasm, while the spasm again heightens acid secretion, increases the pain, and threatens deeper ulceration. Hemorrhage which calls for radical interference is not so frequent as was formerly thought. As a complication, I would lay most stress on malignant degeneration, not because it calls for surgical relief oftener than does obstruction, malformation or perforation, but because it is the fruitful soil for cancer implantation. When cancer is once implanted, the cure has been proved most difficult, partly no doubt because the diagnosis is slow. In the differential diagnosis, three of the many conditions that call for attention are cancer, chronic appendicitis and gallstones. Until broader methods are evolved we must too often, in both gallstones and ulcer, rest satisfied with a surgical diagnosis.

Medical Treatment of Gastric and Duodenal Ulcer

DR. B. W. SIPPY, Chicago, discussed the medical treatment of gastric and duodenal ulcers, detailing a plan of treatment which, if rigidly carried out, will bring about good results.

Treatment of Non-Perforating Ulcers

DR. A. J. OCHSNER, Chicago: The surgical treatment of gastric and duodenal ulcer must depend on the accomplishment of three results in order to be practically successful: (1) It must remove all irritation from the ulcer in order to permit healing; (2) it must leave conditions so that the original cause of the ulcer is permanently eliminated; (3) it must leave a fairly satisfactory digestive apparatus after the patient has recovered from the operation. The irritation in persistent ulcer being due to the accumulation of severely acid gastric juice passing over the denuded surface, this irritation can be relieved by drainage at the lowest point of the stomach by gastroenterostomy, which at once prevents the accumulation of quantities of acid gastric fluid in the stomach and provides an outlet so that the fluid does not have to pass over this raw surface. Fortunately, the same procedure accomplishes the second and third conditions desired, provided the patient is carefully and persistently controlled in regard to taking non-irritating diet after the operation for the remainder of her life. In old suspicious-looking ulcers only will it be necessary to excise the pylorus, doing Rodman's operation, in order to prevent the implantation of carcinoma on the ulcer base. In ulcer accompanying hourglass stomach, excision and a plastic are frequently indicated. In perforative ulcer closure of the perforation should be done, and if obstruction follows subsequent gastroenterostomy is indicated.

Surgical Treatment of Perforating Gastric and Duodenal Ulcer

DR. J. E. ALLABEN, Roekford: I here report a case of perforating gastric ulcer which was operated on, with recovery of the patient, and draw the following conclusions: (1) Ulcers of the stomach and duodenum are much more common than is usually supposed; (2) the life of an individual with ulcer is perpetually jeopardized by the possibility of perforation; (3) the treatment of perforating gastric or duodenal ulcer is limited to surgical procedure; (4) the prevention of perforation means the early diagnosis of ulcer in the preperforative stage, and its treatment by excision or gastrojejunostomy.

Discussion on Ulcer

DR. JOHN B. DEEVER, Philadelphia: There is no class of affections that I approach with a greater degree of feeling of responsibility than stomach cases. I have felt for some time that too much was done on the stomach, and I have no reason to think otherwise. I am included among the number who have done too much. The more stomach surgery I do, the more I realize and appreciate the responsibility that we surgeons must have the courage to close the abdomen if we do not find a positive lesion, but in the past I have not done so. In the future I hope to do better. The avoidance of operation in acute hemorrhage is very important. Few patients die of acute hemorrhage of the stomach if treated medically; many die if treated surgically. That has been my experience.

DR. FRANK BILLINGS, Chicago: Many years ago surgeons were not so liberal in their expressions in the treatment of chronic gastric ulcers as they are to-day. I have expressed on previous occasions strong convictions that a certain class of cases should be treated surgically. I think we owe a great deal to Dr. Sippy, who read the paper on the medical treatment of gastric and duodenal ulcers, and who has worked out a systematic scheme for the treatment of these cases which is just as technical as the surgical treatment of ulcer, and which must be carried out in every detail in order to obtain satisfactory results. I believe that if medical men carry out in the future medical treatment with the same accuracy and technical skill as the surgeon does his work, there will not be this controversy we have had in the past, and it will grow less in the future regarding the cases which are medical and those which may become surgical. That is true, for in the past the majority of us have been remiss in the medical treatment of ulcer of the stomach.

DR. ARTHUR DEAN BEVAN, Chicago: These papers are the best examples of borderline work we have had for a long time. They show that it is absolutely essential, in order to achieve the best results, to have the diagnosis made and the medical treatment go hand in hand with the surgical handling of these cases. I feel I am fortunate in being associated with three or four medical men where we handle these cases by combining our efforts or by doing team work. This getting together of the internists and surgeons is the only way in which this subject can be satisfactorily worked out. I have gone through the same experience as most surgeons in the last five or eight years of having operated on a certain number of cases which were medical, and not surgical. On the other hand, I must say, in properly selected cases there is hardly any group of surgical cases so satisfactory as those which pertain to the stomach. Take a patient with obstruction of the pylorus; whose normal weight was 180 pounds, but he has declined in weight to 120 pounds; whose life is miserable; whose disposition is absolutely changed because of his continual suffering—that patient within six months after a simple gastroenterostomy regains his normal weight and returns to a condition in which he can enjoy life. The results from this operation on these cases are wonderfully satisfactory.

Gallstone Disease

DR. JOHN B. DEEVER, Philadelphia: The ideal treatment of any disease, or disease process, involves, first, temporary relief of the patient, and, second, the prevention of a recurrence by removal of the primary cause. That there are some cases of gallstone disease unsuitable for radical treatment none would be so rash as to deny. The very old, those who have other grave organic diseases, as of the heart, lungs, or kidneys, can not be considered favorable cases for any kind of operative interference. We can not differentiate a stone-forming biliary catarrh from any other mild biliary catarrh, and so it is necessary to wait until stones are actually formed before we have a basis for operation. The time of election for operative interference is when we have to deal with gallstones entirely within the gall bladder and when complications have not yet set in. When we find gallstones, they must be removed and their cause, if possible, done away with. The first requirement we can only fulfill by a most careful exploration of the viscus and its ducts in every instance. In the hand of so

competent an operator as Hans Kehr, calculi were overlooked in 2 per cent. of all cases. With surgeons less experienced in this line of work it is natural to suppose that this percentage is still larger and that the stones left behind account for many a case considered as one of recurrence after operation. With proper technique, however, there should be exceedingly few cases in which calculi are left behind. The removal of the cause involves an attempt to overcome the infection giving rise to the stone-forming catarrh. I hold that in every instance we should take for granted the persistence of such a catarrh, in spite of bacteriologic evidence to the contrary, and should drain in every case. It is not sufficient to provide for an open gall bladder only that drainage which it receives through the biliary tract. Who would think of allowing a possibly infected kidney to drain itself only through the ureter? Ideal cholecystotomy has fallen into well-merited oblivion. I believe that without thorough drainage we may have a temporarily curative operation for gallstones, but its effect as a prophylactic against their future formation is entirely lost. Perhaps the point of technique on which operators are still most divided is the removal of the gall bladder. I do not agree with those who hold that it should be removed whenever it is possible to do so. Not only is the mortality of cholecystectomy somewhat higher than that of cholecystostomy, but there are certain other disadvantages connected with the entire removal of the gall bladder. Adequate drainage of the bile tract is more difficult to secure and is less prolonged. If the stone-forming catarrh still exists, this may give rise to the formation at a later period of calculi within the duct, where they are apt to cause more difficulty; and, lastly, we are removing without a suitable substitute a bile reservoir which probably has some function which we do not as yet understand. The more complex details of the technique of gallstone surgery do not belong to a brief summary such as this. After all, the surgeon of to-day should be able to see that while technical detail is of great importance, correct diagnosis and understanding of underlying processes are still far more essential. In gallstone disease further progress will depend not on advances in operating only, but on earlier recognition and understanding of the disease process as a whole.

Poisoning from Bismuth-Subnitrate-Vaseline Paste

DR. V. C. DAVID and DR. J. R. KAUFFMAN, Chicago: After reporting five such cases, we draw the following conclusions: 1. Poisoning from bismuth-subnitrate-vaselin paste is more common than we had supposed. Since the report of these cases, in an examination of about 25 orthopedic cases in the Cook County Hospital in which bismuth-vaselin paste had been injected into tuberculous sinuses more than once, we found that in 6 patients there was more or less blue pigmentation of the gums. In one of the patients extreme blue pigmentation was present on the gums, the lips and the cheeks were without subjective symptoms. From this we have reason to believe that pigmentation of the gums is an early sign of bismuth intoxication, and should be taken as a signal to discontinue the injection of the paste for a time. 2. In the reported cases, 4 of the 5 patients received 6 ounces or less at the first injection, and 10 ounces or less *in toto*. 3. One fatal case occurred after the use of less than one ounce of paste. 4. Toxic symptoms developed after the first injection in from 10 days to 6 weeks, both extremes being the fatal cases. 5. The use of the x-ray apparently is not a factor which might influence poisoning because some of these patients were not skiagraphed after the paste was used. 6. There are acute and chronic cases of bismuth poisoning, the former being fatal, with general symptoms, and the latter tending to slow recovery with practically only local manifestations, but the onset of both is very much the same. 7. So far, no case of pure nitrate poisoning following the use of the bismuth-subnitrate paste is on record, and though there is but one case in which the nitrate played a part in the poisoning, it seems as though that danger should be avoided by the use of bismuth carbonate. 8. Impurities in the bismuth-subnitrate are not factors in the poisoning, because, metallic bismuth has been found in the local pigmented areas, and in two well-defined cases the analysis of the bismuth showed no considerable amount of impurities.

(To be continued)

Medicolegal

Liability for Preventable Fits

The Supreme Judicial Court of Massachusetts says, in the personal injury case of *Dooley vs. Boston Elevated Railway Co.*, that while it might be conceded that the evidence of the experts as to the power of the plaintiff by a general course of life to lessen the spells she had, or to control them in any degree, was, taken as a whole, not very illuminating, yet it would have warranted a finding that by a proper and reasonable use of such will power as the plaintiff had she could lessen these spells by improving her general tone, and, further, that if she resisted the impulse and did not "let go of her feelings" she could control them to a certain extent.

In this state of the evidence it was asked that the jury be instructed that if they found there was such physical injury as to permit the recovery of damages for mental suffering or disease also, then in determining the damages to be awarded for mental suffering or disease the jury must eliminate from consideration such of the plaintiff's symptoms or demonstrations, if any, as could have been prevented by the exercise of such self-control as the plaintiff was capable of at the time of such symptoms or demonstrations. Also that if the jury believed that the plaintiff had had fits, spasms, or spells, since the accident, and believed that the coming on of such fits, spasms, or spells was always or sometimes under the plaintiff's control in the sense that she could, by the exercise of the will power or self-control of which she was capable, have always or sometimes prevented them from happening, had she wished to do so, then so far as that was the case she could not recover for fits, spasms, or spells so preventable, or for their consequences. These instructions were applicable to a possible view of the evidence that the jury might take, and their general accuracy could not be successfully questioned.

But, instead of such instruction being given, the jury were told that the question might be whether the fits, spells or spasms, as they had been called, were voluntary or involuntary, and that if the jury said that they were entirely under the plaintiff's own control, and that she need not have one unless she saw fit to, and she had it because she wished to, then these should not be taken into account so far as she could avoid them, whether they caused suffering or not. This, under the circumstances, was error.

The requested instructions had reference not so much to the spells which the plaintiff had "because she wished to," but to such "as could have been prevented by the exercise of self-control," and there is a material difference between the two classes. The first more aptly describes a fit to which the active will of the victim contributes, the second a fit where there is no active exercise of the will to prevent it. The first implies an active exercise of the will, the second simply a sluggish inaction, a negligent quiescence of the will. The instruction given fairly covered the law as to the first class, but it utterly ignored the law as to the second class.

It was further to be observed that this omission was material on what might be regarded as a tender spot in the case: a spot where the jury would be likely to sympathize keenly with the plaintiff. On all the evidence the plaintiff was in a condition likely to appeal to a jury. A young woman, healthy both in body and in mind, and cheerful in temperament, had become an invalid and morose, and she was seeking to hold the defendant responsible for this change. Under these circumstances it was the right of the defendant to have defined with precision the legal limits of its responsibility.

Insanity and Testamentary Capacity

The Supreme Court Commissioners of Nebraska say, in the *Ayers' will case*, that it might be admitted that the testator, pathologically considered, was insane for many years; but the real question was: Was his mind so diseased that his mental freedom was perverted and his understanding destroyed so that he was incapable of knowing and comprehending in a general way the natural objects of his bounty, the nature and extent of his estate, and the distribution he wished to make of it?

The medical definition of insanity as given by Dr. Hammond in his work on *Diseases of the Nervous System* (page 332), is a manifestation of disease of the brain characterized by a general or partial derangement of one or more of the faculties of the mind, in which, while consciousness is not abolished, mental freedom is perverted, weakened or destroyed.

The older view regarded the human mind as a single indivisible potency not comprising distinct functions, and consequently that any impairment thereof must be absolute, and not partial. But modern medical science recognizes, as shown by the definition above quoted, that there may be a partial derangement of one or more of the faculties of the mind, leaving others practically unimpaired, and hence arises what is called partial insanity.

This court has laid down the rule that where the insanity is not general, the question to be determined is whether the subject was the victim of such delusions as controlled his actions and rendered him insensible to the ties of blood and kindred. *McClary vs. Stull*, 44 Neb. 175. A very full discussion of the degree of soundness of mind required for the making of a valid will and a full citation of authorities will be found in the case of *Perkins vs. Perkins*, 116 Iowa, 253.

The law makes no distinction between mental incapacity whether congenital or caused by age, sickness or disease, and it therefore follows that partial insanity does not necessarily disqualify a testator from making a valid will. Some courts have gone so far as to say that, when there is nothing unreasonable on the face of the will by one habitually insane, it will be presumed to have been made in a lucid interval. *Kingsbury vs. Whittaker*, 32 La. Ann. 1055.

Wherefore, the Supreme Court of Nebraska holds that where it appears that a testator had been on various occasions temporarily confined in a hospital for the insane, but in the intervals was competent to transact with judgment and discretion his ordinary business, and had sufficient strength of mind and memory to know and comprehend and retain in his mind those who were or naturally should have been the objects of his bounty, the nature and extent of his estate and the distribution he wished to make of it, and that during such an interval he executed in due form his last will and testament making a reasonable distribution of his estate, a judgment probating said will should be sustained.

"Defect of Reason" and Criminal Liability

The Court of Appeals of New York says, in the case of *People vs. Carlin*, that under the statute of that state, which embodies the English rule laid down in the celebrated *McNaghten Case*, 1 C. & K. 134, a person is not excused from criminal liability as an insane person except on proof that at the time of committing the alleged criminal act he was laboring under a defect of reason, which, furthermore, must have been such as to render him either (1) ignorant of the nature and quality of the act he was doing, or (2) ignorant that the act was wrong. This is the only test of responsibility known to the law of the state of New York. The phrase "defect of reason" in the statute means disease of the mind, and a person who has committed an act otherwise unquestionably criminal may not be relieved from the consequences of that act where insanity is relied on as the sole defense, unless at the time of the commission of the act he was suffering from some disease of the mind. Material neglect has never yet been recognized as an excuse for *matrieide*, and no matter how firmly the defendant may have been convinced that it was not wrong for him to kill his mother, his convictions to that effect could avail nothing as a defense unless they were the outcome of mental derangement.

Admissibility in Evidence of Disclosures to Physicians in Homicide Cases

The Court of Appeals of New York says that in the homicide case of *People vs. Hill* the defendant was examined by an expert for the people, who, before making the examination, told him that he had been requested by the district attorney to

make an examination of him and to ask him questions regarding himself and the accident. He then asked him to be free and frank with him, stating that he would use him right, and that he need not tell him anything that would incriminate himself so far as the deed was concerned. At the trial the defendant's counsel objected to the witness testifying as to any statement made by the defendant on the ground that the witness had promised the prisoner that he would treat him all right. It was claimed that this was an offer by which the defendant was induced to make statements to him on the understanding that he would not testify against him. The court's conclusion with reference thereto, however, is that such was not the fair or reasonable interpretation of the statement. There was no disclosure of the details of the homicide called out by the physician nor given by the defendant which was at all in controversy. The physician's examination of him, so far as questions were concerned, pertained to his memory, history, his family relations, diseases, and the extent to which he had indulged in drinking intoxicants. He then subjected him to a physical examination for the purpose of determining, as far as possible, the presence of any disease. The court finds nothing in this on which error could be predicated. But the court holds that the declarations of the defendant made to another physician as to his recollections of transactions after the alleged homicide, but long before the time of the interview with the physician, were not competent evidence.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

May 29

- 1 *The Etiology of Pain. E. G. Janeway, New York.
- 2 Hay Fever and Other Rhinologic Causes of Asthma. W. W. Carter, New York.
- 3 Myelogenous Leukemia. C. W. Cutler, New York.
- 4 The Future of the Alcohol Problem. T. D. Crothers, Hartford, Conn.
- 5 *Administration of Anesthetics. H. J. Boldt, New York.

1. **Etiology of Pain.**—Janeway discusses pains of various kinds and says that we should be cautious in labeling a severe pain as hysterical. He cites cases in which pain supposedly hysterical proved to be due to some serious condition. Pain due to toxic influences may baffle us unless we make diligent inquiry of the patient and his friends. Sciatica should be carefully scrutinized, since a condition that seems simple may be caused by pressure of a malignant growth. Pain in the abdomen may come from the kidney instead of the appendix, and it requires careful search to know whether pain comes from the kidney, gall bladder, or appendix. Pain or taxia may simulate some of these conditions. Pain in angina pectoris is severe and characteristic, and when combined with increased blood pressure and ashy lips it should not be mistaken.

5. Abstracted in THE JOURNAL, May 15, 1909, p. 1614.

Boston Medical and Surgical Journal

May 27

- 6 Early Career of Sydenham, with Remarks on the Men and Medicine of His Time. C. G. Cumston, Boston.
- 7 *Cancer of the Cervix Complicating Pregnancy. J. T. Williams, Boston.
- 8 *Classification of the Malarial Plasmodia. C. F. Craig, U. S. Army.

7. **Cancer of the Cervix.**—As the result of an examination of the records of the Boston Lying-in Hospital, Williams draws the following conclusions:

1. Cancer of the cervix does not prevent conception, and in a large percentage of cases antedates the pregnancy.
2. Cancer of the cervix, as a rule, grows with great rapidity during pregnancy and the puerperium.
3. While the prognosis of cancer of the cervix is more grave during pregnancy, it is not hopeless.
4. When an operable cancer of the cervix is discovered during pregnancy, no matter at what period, immediate operation is indicated.

5. Up to the present time statistics favor the Wertheim operation, preceded by Cesarean section if the child is viable.

6. In inoperable cancer with a living child at term, conservative Cesarean section is the method of choice. If the child is dead, or premature, a subpubic delivery will give the best result.

8. **Classification of Malarial Plasmodia.**—Craig discusses this subject and proposes the following classification:

Division.	Protozoa.
Class.	Sporozoa.
Order.	Hemosporidia.
Genus.	Plasmodium.
Species:	

1. *Plasmodium malariae*, Marchia and Celli. Quartan malarial plasmodium.
2. *Plasmodium vivax*, Grassi and Feletti. Tertian malarial plasmodium.
3. *Plasmodium falciparum*, Blanchard. Estivoautumnal plasmodium, tertian type.
- Sub-species:
4. *Plasmodium falciparum quotidianum*, Craig, 1909. The quotidian estivoautumnal plasmodium.

New York Medical Journal

May 29

- 9 Idiopathic Dilatation of the Esophagus. M. Einhorn, New York.
- 10 *Theories and Problems of Heredity. J. Wright, New York.
- 11 Indications for Operations on the Stomach. J. J. Gilbridge, Philadelphia.
- 12 Dacryocystitis. A. J. Herzig, New York.
- 13 *Digital Enucleation of the Fauical Tonsil. A. M. MacWhinnie, Seattle, Wash.
- 14 Otitic Significance of Tonsillectomy with Reference to Digital Enucleation. H. B. Blackwell, New York.
- 15 Deficient Oxidation and its Relation to the Etiology, Pathology, and Treatment of Nephritis (continued). N. E. Dittman and W. H. Welker, New York.

10. **Theories and Problems of Heredity.**—In this article Wright discusses cancer as a problem of heredity in its bearing on the problems of histology. He pays special attention to mouse cancer. He says that if cancer research in animals has thrown an expected light on cancer in man, it has thrown considerable light, it seems to him, on the problems of heredity, and certainly an unexpected light on histology and on embryology, that recapitulation of heredity. Hitherto the view has prevailed that the stroma of an epithelial cancer is derived from the connective tissue surrounding it. Wright thinks that in the future this can hardly be maintained in its entirety, in view of the rising flood of testimony to some of which he had referred. All his experience goes to support the view that the type of tumor in the human individual remains practically the same, so far as structure is concerned, throughout the life of the host, and while he can not but believe that epithelial cells may furnish stroma and connective tissue cells, a benign tumor does not change to a malignant one, nor does the latter change its type except very rarely. That it does so occasionally in the one human host perhaps can not be denied, but he has never seen any proof of it in practice, nor has he ever seen any adduced literature satisfactorily establishing the fact. Malignancy is not an expression which belongs to objective diagnosis. It refers to the host, not to the cancer guest. Final as the testimony of the microscope is so frequently thought to be, it is by no means a court of last resort. It can never be sufficiently urged that the biologic activities evidenced in the clinical history and the biologic condition noted in the structure must be correlated in forming an opinion as to the fate of the patient. Clinical experience combined with histologic observations has not demonstrated the fact that "the virulence of a tumor is the measure of its histologic structure" (Apolant and Ehrlich) with sufficient accuracy to make the opinion of the histologist as to the degree of malignancy in any given specimen of any great value.

13. **Enucleation of the Fauical Tonsil.**—MacWhinnie praises digital enucleation of the faucial tonsils on the following grounds: (1) Rapidity of the operation; (2) absolute non-recurrence if removed in its capsule; (3) minimum amount of hemorrhage and subsequent anemia; (4) the importance of starting on the outside of the capsule; (5) ease of performance, so amputation should never be thought of, even as a palliative measure. He describes the procedure as follows: The point of importance that should be remembered is to begin the procedure outside of the capsule, in the posterior inferior portion of the sinus, working up to the supratonsillar

fossa. The finger is then brought to the posterior inferior portion of the sinns, working up to the supratonsillar fossa. The finger is then brought to the original starting point and the same procedure is carried out, posterior to the anterior pillar, into the supratonsillar fossa to meet the first dissection; the finger is then carried to the original starting point, and by working forward, the thumb being on the anterior surface of the tonsil the enucleation is completed, the gland coming away in its capsule. At this point the operator should not try to pull the tonsil, for if he does some of the superior constrictor may come as well and hemorrhage result. When starting the procedure, the operator should begin on the outside of the capsule; there is almost no danger of getting inside of it, for if he did it is manifest that the work would be incomplete.

Medical Fortnightly, St. Louis

May 25

- 16 *Wandering Spleen in the Pelvis. F. Hinchey, St. Louis.
- 17 Immunity. L. H. Warner, Brooklyn, N. Y.
- 18 Chronic Appendicitis. C. A. Boice, Washington, Ia.
- 19 The Invalid's Vacation. G. H. Tarson, Mount Clemens, Mich.

16. **Wandering Spleen.**—Hinchey reports a case with the following features of special interest: During the years 1905 and 1906 when the patient was passing through the severe nervous manifestations that were ascribed to the menopause, she presented the clinical symptoms common to splachnoptosis. Prior to that time and since the menopause these symptoms were never observed. There is the same general ptosis now as then, with the lower border of the stomach below the navel, the right kidney readily palpable opposite the navel and freely movable, decensus of the liver and transverse colon, great laxity of the abdominal parietes, depression of the epigastrium and marked bulging of the hypogastrium; yet despite these conditions there are none of the usual symptoms commonly ascribed to splachnoptosis. Bearing this in mind, Hinchey believes that the removal of the diseased ovary *per vaginam*, with thorough repair of the pelvic floor, will relieve her of all her symptoms. The patient's marked ability to cope with the tubercle bacillus is also worthy of comment.

Virginia Medical Semi-Monthly, Richmond

May 21

- 20 Value of the von Pirquet Test for Tuberculosis. J. S. Davis, Charlottesville.
- 21 Etiology of Renal Sclerosis, Chronic Interstitial Nephritis. R. T. Styll, Newport News.
- 22 Sheet of Directions Given the Patient After a Tonsil Operation, including Treatment of Postoperative Hemorrhage. E. Pynchon, Chicago.
- 23 Alcohol. B. C. Keister, Roanoke.
- 24 Sacral Hematoma: Spina Bifida Converted into Hematoma During Breech Presentation; The Tumor Presenting. E. T. Brady, Abington.
- 25 Medical Organization and Its Benefits. V. V. Anderson, Lynchburg.

Journal Experimental Medicine, New York

May

- 26 *Atypical Forms of Tubercle Bacilli Isolated from the Human Tissues in Cases of Primary Cervical Adenitis. C. W. Duval, Montreal.
- 27 *Experimental Study of Influence of Kidney Extracts and of the Serum of Animals with Renal Lesions on the Blood Pressure. R. M. Pearce, New York.
- 28 *Pneumothorax and Posture. C. A. Elsberg, New York.
- 29 *Effects of Roentgen Irradiation on Changes in the Cell Content of Blood and Lymph Induced by Injections of Pilocarpin. R. L. Dixon, Ann Arbor, Mich.
- 30 *Influence of Addition of Adrenalin to Solutions of Sodium Chlorid and Calcium Chlorid on Production of Urine, Ascites, and Intestinal Fluid. M. S. Fleischer and L. Loeb, Philadelphia.
- 31 *Influence of Myocarditic Lesions on Production of Ascites, Intestinal Fluid and Urine in Animals Infused with Solutions of Sodium Chlorid and Calcium Chlorid. M. Fleischer and L. Loeb, Philadelphia.
- 32 *Intracranial Pressure. J. A. E. Eyser, M. T. Burrows and C. R. Essick, Baltimore.

26. **Atypical Tubercle Bacilli.**—Duval reports the study of four cultures of tubercle bacilli recovered from cases of a peculiar primary cervical adenitis in man, three of which died of acute general miliary tuberculosis. One of these cultures is of the human, another of the bovine type, while two are intermediate or atypical. One of the latter is of special interest. The case from which it was obtained ran a rapid

course; enormous numbers of bacilli were found in the tissues and they were highly virulent for rabbits and guinea-pigs, easily cultivated, and resistant to unfavorable conditions. Because of these characteristics and also because it produced lesions in chickens, it is regarded as an avian type of bacillus. Duval does not believe that the morphologic characters of the bacilli of different cultures afford much aid in differentiation, because these characteristics may vary, depending on the kind and reaction of the media.

27. **Kidney Extracts and Blood Pressure.**—Pearce finds that extracts of the kidneys of various animals may increase or diminish blood pressure, depending on the animal injected. Such substances have not the constant effect on all animals that extracts of the adrenal gland have. Extracts of kidneys the seat of different forms of nephritis have the same effect as extracts of normal kidneys.

28. **Pneumothorax and Posture.**—Elsberg finds that when a dog lies on its belly the heart falls toward the anterior chest wall, and supports the anterior septum between the two pleural cavities. This septum is weaker than the posterior septum, and is apt to rupture with the violent respiratory movements that take place when the pleura is opened if the dog is on its back. The danger of open pneumothorax is greatly lessened when the animal is in the prone position.

29. **Effect of X-Rays on Increase of Leucocytes.**—Injection of pilocarpin hydrochlorate into the muscles of a dog causes a definite increase of leucocytes in the circulation. So far as the mononuclear cells are concerned, this increase is interrupted by the action of x-rays, while the polymorphonuclears are relatively slightly reduced in number by this action. Dixon believes that the greater decrease of mononuclears by the use of x-rays perhaps is explainable by the fact that the parent cells of the polymorphonuclear leucocytes are not so accessible to the rays because of their situation in the interior of bone.

30 and 31. **Edema.**—Calcium chlorid, adrenalin and myocardial lesions each in a specific way effect elimination of fluid by the kidneys, by the mucosa of the small intestine, and by the lining of the peritoneal cavity. Hence Loeb and Fleischer conclude that the conditions influencing the elimination of fluids by these three surfaces must be different in each case and peculiar to the cells lining the surfaces.

32. **Intracranial Pressure.**—Increase of blood pressure resulting from increase of intracranial pressure over the blood pressure, takes place in the dog owing to constriction of the vessels of the intestines, kidney and limbs. In the brain the increase of intracranial pressure causes complete anemia. When the intracranial pressure is not so greatly increased, some of the larger connections at the base of the brain are more or less well injected. In the dog, the internal maxillary artery plays an important part in the cerebral circulation, and because of its position within the cranial cavity it is unaffected except by extreme degrees of intracranial pressure.

Providence Medical Journal

May

- 33 Medical Supervision of Schools and its Relation to the General Practitioner. A. J. Akers, Providence.
- 34 *Early Maternity. R. H. Carver, Taunton, Mass.
- 35 Old Age and its Consequences. F. N. Brown, Providence.
- 36 Lumbar Punctures. A. H. Ruggles, Providence.

34. **Early Maternity.**—Carver brings forward documentary evidence in support of a case of maternity twenty-four days before the girl was 10 years old, the father being 15 years. The son born when last heard of was in jail, having previously served a term in the house of correction.

American Journal of Public Hygiene, Boston

February

- 37 *Simple Procedure for Disinfection of Passenger Coaches and to Kill Vermin in Them. J. A. Amyot, Toronto, Canada.
- 38 *Measures to Promote the Health of School Children. M. L. Price, Baltimore.
- 39 *Id. S. G. Dixon, Philadelphia.
- 40 Health Problems of Provinces. M. M. Seymour, Regina, Saskatchewan, Canada.
- 41 Health Problems in Alberta. D. G. Revell, Edmonton, Alberta, Canada.

- 42 *Sociology of the Middle and Far West. C. F. Fagan, Victoria, B. C.
- 43 Social and Public Health Development of the Northwestern States and of the Western Central Provinces of Canada. P. H. Bryce, Bracondale, Ontario, Canada.
- 44 The Rat as a Factor in Disease. N. K. Foster, Sacramento, Calif.
- 45 Yellow Fever in Mexico. E. Liceaga, Mexico City, Mex.
- 46 Relation of State or Provincial Boards to Municipal Boards and Local Health Officers. C. A. Hodgetts, Toronto, Canada.
- 47 *Diphtheria Observed in Guadalajara, Mexico, from Jan. 1, 1904, until June 30, 1908, from a Hygienic Standpoint. M. M. Lopez, Mexico City.
- 48 *Tuberculosis and Poverty. E. T. Lies, Minneapolis.
- 49 Result of the Preventive Treatment of Rabies and Its Present State. D. Lopez, Mexico City.
- 50 *Best Method of Vaccinating with Humanized Lymph. F. de P. Bernaldez, Mexico City.
- 51 Determination of the Typhoid Bacillus in Infected Water and Milk. D. D. Jackson and T. W. Melia, Brooklyn, N. Y.
- 52 Method for Determining the Number of Dust Particles in Air. C. E. A. Winslow, Boston.
- 53 Report of Committee on Technical Progress. B. R. Rickards, Columbus, O.
- 54 Standard Methods for Bacterial Diagnosis of Typhoid Fever. F. F. Westbrook, Minneapolis.
- 55 *Working Method for Use in Diagnosis of Rabies. A. W. Williams, New York.
- 56 Standard Methods for the Bacteriologic Diagnosis of Tuberculosis. M. P. Ravenel, Philadelphia.
- 57 Methods for the Bacterial Diagnosis of Glanders. W. L. Beebe, St. Cloud, Minn.
- 58 Standard Methods for the Bacterial Diagnosis of Diphtheria. B. R. Rickards, Columbus, O.
- 59 *The Mortality from Industrial Diseases. L. W. Hutchcroft, Madison, Wis.
- 60 Need of Greater Uniformity and Accuracy in Statistical Expression. F. S. Crum, Newark, N. J.
- 61 Notification and Morbidity Returns in Cuba, with Special Reference to Yellow Fever and other Major Infectious Diseases. C. J. Finley, Havana, Cuba.
- 62 Protection of Public Milk Supplies from Specimens Contaminated with Pus Organisms. J. O. Jordan, Boston.
- 63 *The Survival of *B. typhosus* in Milk when used in Ordinary Breakfast-Table Coffee and Tea. H. W. Hill.
- 64 Work of the State Inspectors of Health and its Relation to the Work of Local Boards of Health. E. Washburn, Taunton, Mass.
- 65 Practice of Exposing Food Stuffs to the Street Dust and Its Effect on the Public Health. F. H. Slack, Boston.
- 66 Personal Hygiene. P. G. Styles, Boston.
- 67 Veterinary Hygiene. W. L. Beebe, St. Cloud, Minn.

37. **Disinfection of Passenger Coaches.**—Amyot describes the construction of an inexpensive structure, which is practically a disinfecting house, wherein formaldehyd or potassium cyanid disinfection of one or more railroad or other cars can be carried on.

38, 39, 50, 55. Abstracted in THE JOURNAL, Sept. 12, 1908, pp. 939; 941, 942.

42. **Sociology of the West.**—Fagan contrasts social conditions in the west with those in the east and in Europe. He regrets the too great independence of restraint among children. While the spirit of independence is good, too great freedom of action at an age when neither discretion nor judgment is developed is not good. He deplores the uncontrolled shaping of their own educational courses by juveniles, their attending or leaving school at will and selection of a calling, often in direct opposition to the parental wish. The teaching in hygiene is poor, he asserts, the teachers largely unlearned in science, and the text-books used a farce.

47. **Diphtheria in Guadalajara.**—Lopez describes an epidemic of diphtheria in an elevated city, which led him to the conclusion that the contagion of diphtheria is very inferior to that of measles, smallpox or scarlet fever.

48. **Tuberculosis and Poverty.**—Lies discusses the mutual interaction of tuberculosis and poverty, and says that what we need in this country is an adaptation of the German system of industrial insurance, which would have the effect, as it has in Germany, of encouraging a man to undertake treatment for tuberculosis early, when he is still in a curable stage, instead of waiting because of the expense involved, until he goes over the incurable line.

59. **Industrial Diseases.**—Hutchcroft points out that the old mortality grouping by occupations is, nowadays, apt to be misleading. It is evident, from the division of labor which has come about in most of our industries, that the work done by one set of laborers in an industry might be very unhealthy and cause some special form of occupational disease, while the employes in the remainder of the industry might not be subject to any destructive agencies. It is the particular

branch of the industry which develops an occupational disease with which we are concerned, although for purposes of comparison it would seem desirable to study the industry as a whole.

63. **The Bacillus Typhosus in Tea and Coffee Milk.**—Hill's experiments indicate that the epidemiologist, in listing those exposed to infection from a given milk supply, should not eliminate those who drink milk only in coffee or tea; for he has demonstrated that *Bacillus typhosus* survived in a mixture of milk with hot coffee or tea, and could be recovered from it twenty-four hours after the mixture was first made, except when the initial temperature of the mixture was above 68 C. Coffee or tea can not be used as a drink by most people at a temperature above 50 C.

Interstate Medical Journal, St. Louis

May

- 68 *Rectal Anesthesia. N. B. Carson, St. Louis.
- 69 Diagnosis and Treatment of Ectopic Gestation. E. E. Montgomery, Philadelphia.
- 70 Points of Interest in Tuberculosis of the Larynx. C. Graef, New York.
- 71 *Circumscribed Serous Spinal Meningitis. M. A. Bliss, St. Louis.
- 72 Guillotin. F. J. Lutz, St. Louis.

68. **Rectal Anesthesia.**—Carson reviews the history of this procedure of which he thinks the alleged dangers more imaginary than real, basing his opinion on an examination of the recorded fatal cases. He reviews the physiology and has been surprised in his series of cases by the rapidity of the absorption. The advantage, besides the removal of the anesthetic from the field of operation, is lessened fatality, owing to the lung being free to eliminate ether as fast as it is absorbed, so that it can safely be used when there is involvement of the lungs. Carson believes this method to be especially applicable in goiter operations. He uses Sutton's simple apparatus. He describes the technic and reports 16 cases in 2 of which death occurred from surgical shock and in one from medullary pressure in a brain case. He is convinced that the application of this method in properly prepared cases—he insists strongly on the method of preparation—has many advantages over the inhalation method.

71. **Circumscribed Serous Spinal Meningitis.**—Bliss discusses the etiology of this condition, and says that his own case gives a very clear history of traumatic causation, but whatever may be ultimately determined as to the most frequent causative factors, it is well to remember that the symptoms may come on insidiously and slowly. A history of intercostal neuralgia, of mild or severe type, is not unusual if the seat of greatest compression is in the dorsal region; in the lumbar region, lumbago, anterior crural or other nerve group neuralgias, may occur primarily, to be followed later by a rather even anesthesia and analgesia, associated with cramping of muscles and increased deep reflexes, and by bladder and rectal signs. An upper limit of the lesion can usually be determined.

Journal of New Mexico Medical Society, Albuquerque

May

- 73 Diagnosis and Surgical Treatment of the More Common Gall-Bladder Diseases. R. L. Bradley, Roswell.
- 74 Scarlet Fever. W. G. Hope, Albuquerque.
- 75 Erysipelas. C. M. Yater, Roswell.
- 76 Ileus. J. H. Wroth, Albuquerque.
- 77 Anesthesia. C. F. Montgomery, Lake Arthur.

Iowa Medical Journal, Des Moines

May

- 78 Methods of Diagnosis in Surgical Diseases of the Kidney Accompanied by Pyuria. L. W. Bremerman, Chicago.
- 79 Indications for Operating in Acute Otitis Media. L. W. Dean, Iowa City.
- 80 Psychologic Therapeutics and Some of its Limits. C. E. Huband, Ottumwa.
- 81 History of Keokuk Medical College and Evolutions in Medical Education During That Time. G. F. Jenkins, Keokuk.

Laryngoscope, St. Louis

May

- 82 Résumé of Some Work on Infection Through the Tonsillar Crypts. J. Wright, New York.
- 83 *Tonsillectomy. S. Yankauer, New York.
- 84 Vincent's Angina. H. Arrowsmith, Brooklyn.
- 85 Removal of Laryngeal Tumors in Left Lateral Position. R. H. Johnston, Baltimore.

- 86 Ranula. J. C. Beck, Chicago.
- 87 Chronic Interstitial Otitis, or Chronic Middle-Ear Catarrh and Otosclerosis. W. S. Bryant, New York.
- 88 Edema of Larynx Following an Infection of the Lower Pharynx. M. D. Lederman, New York.
- 89 Teratoma of the Tonsil. R. D. Jewett, Winston-Salem, N. C.
- 90 Sinus Skiagrams in the Erect Position. S. Lange, Cincinnati.
- 91 Perichondritis of Auricle Treated Successfully by Injection of Fifty per cent. Alcohol. H. Gifford, Omaha, Nebr.

83. **Tonsillectomy.**—Yankauer gives anatomic reasons for a novel method of local anesthesia in tonsillectomy. He injects with cocaine the trunks of the middle and posterior palatine nerves as they leave the bony opening. The entire region involved in the operation of tonsillectomy can be thus anesthetized.

Medical Herald, St. Louis

May

- 92 Roentgen-Ray Diagnosis in Pulmonary Tuberculosis and Gastric Carcinoma and Ulcer. E. H. Skinner, Kansas City, Mo.
- 93 The DeForest Caustic Apparatus. H. J. Boldt, New York.
- 94 Influences in the Foundation of Modern Medicine. C. A. Potter, St. Joseph.

Journal Indiana State Medical Association, Fort Wayne.

May

- 95 "Rubbering in Europe." L. F. Schmauss, Alexandria.
- 96 *Pathology of Exophthalmic Goiter. J. A. McDonald, Indianapolis.
- 97 Outlines of the Evolution of Psychopathies. I. O. Allen, Centerville.
- 98 Race Suicide from the Physician's Viewpoint. W. W. Wadsworth, Muncie.
- 99 Modern Syphilis. F. H. Jett, Terre Haute.
- 100 Sketches of the Medical History of Indiana (continued). G. W. H. Kemper, Muncie.

96. **Exophthalmic Goiter.**—McDonald concludes, from a review of the subject, that the symptoms of exophthalmic goiter are due to the excessive activity of a thyroid gland, the seat of certain characteristic changes indistinguishable from hypertrophy. He asks: Why should the process of hypertrophic compensation, elsewhere a beneficent and reparative function, here so far overstep its authority as to produce a symptom-complex which is certainly pathologic? And: What is the ultimate cause of this overstimulation? The overcompensation he considers to be in response to the continued action of certain toxins or stimulation bodies. In regard to the second question, he refers to reported cases confirming the suggestion of McCallum, that the underlying cause is an infection of some type—influenza, septic infection, scarlatina, diphtheria, cerebrospinal meningitis, measles, smallpox, purulent peritonitis or tuberculosis. In a case that he has had under observation for some months, the patient has a preceding history of long and severe typhoid fever. Little accurate work in exophthalmic goiter therapy can be hoped for until we have more conclusive information regarding the physiology of the gland.

Journal of Medical Research, Boston

April

- 101 Quantitative Relations of Antigen, Amboceptor, and Complement in the Estimation of Hemolysis. S. S. Kneass and J. S. Evans, Philadelphia.
- 102 *Acute Pancreatitis without Necrosis or Bacterial Invasion. C. Frothingham, Boston.
- 103 Studies of the Physiologic Leucocyte Content of Cow's Milk. B. H. Stone and L. P. Sprague, Burlington, Vt.
- 104 *Staphylococcus Infection Treated with Leucocyte Extract. P. H. Hiss and H. Zinsser, New York.
- 105 *Localized Anaphylactic Intoxication in Children Following the Repeated Injection of Antitoxin. W. P. Lucas and F. P. Gay, Boston.
- 106 Malignant Tumors in Mice, with Report of a Spontaneous Adenocarcinoma in a House Mouse (*Mus Musculus*). E. F. McCampbell, Chicago.
- 107 *Pathologic Cytology of Surgical Shock. Alterations Occurring in the Purkinje Cells of the Dog's Cerebellum. D. H. Dolley, Chapel Hill, N. C., and G. W. Crile, Cleveland, O.
- 108 Rhabdomyosarcoma of the Uterus. A. R. Robertson, Boston.
- 109 Effect of Dilution on the Flocculation of Colloids. B. H. Buxton and A. H. Rabe, New York.
- 110 *Study of Specificity and Sensitization by the Cutaneous Test with Human and Bovine Tuberculin. F. T. Lord, Boston.
- 111 *Quantitative Modification of the von Pirquet Tuberculin Reaction and its Value in Diagnosis and Prognosis. W. C. White and D. A. L. Graham, Pittsburgh.
- 112 *An Agar-Gelatin Medium. C. E. North, New York.
- 113 *The Behavior of the Gonococcus in Carbohydrate Media. T. Watabiki, Tokyo, Japan.

102. **Acute Pancreatitis.**—Frothingham concludes that, under certain undetermined conditions, polymorphonuclear leucocytes immigrate into the pancreas in sufficient numbers to cause

considerable lesions; this occurs more frequently in acute infectious diseases than in chronic diseases; as yet the lesions have not been correlated with clinical symptoms.

104. **Leucocyte Extract in Staphylococcus Infection.**—Hiss and Zinsser have no hesitation in concluding that "marked improvement in, and cure of, localized staphylococcus infection may be obtained by careful and systematic treatment with leucocyte extract." The extracts were obtained from rabbit leucocytes, treated with distilled water, and administered by subcutaneous injection.

105. **Intoxication After Antitoxin Injection.**—Lucas and Gay describe an immediate local edema and infiltration with tenderness, followed in untreated cases by necrosis, in persons re-injected with diphtheria antitoxin. The percentage showing this reaction increased with the number of injections at short intervals after a primary injection. The reaction corresponds to Arthus' phenomenon in rabbits.

107. **Surgical Shock.**—Dolley describes definite alterations in the Purkinje cells of the cerebellum of dogs in which surgical shock was produced by manipulation of the abdominal contents. The changes followed a definite course and occurred in animals in which the possible influence of anemia was eliminated by transfusion of blood from normal dogs.

110. **Specificity and Sensitization.**—Lord finds that the cutaneous tuberculin test in man fails to give evidence of a specific and differential quality in human and bovine tuberculin. This result in man corresponds to the results obtained with differential tuberculin tests in animals, and emphasizes the very intimate relationship, so far as susceptibility to reaction is concerned, between the human and bovine types of tubercle bacilli.

111. **Modification of von Pirquet Tuberculin Reaction.**—White and Graham express their conviction that cases of tuberculosis, except advanced ones, not reacting to the cutaneous tuberculin test, using 0.02 cm. of 100 per cent. Koch's old tuberculin, must be considered as free from tuberculosis or as having very inactive lesions.

112. **Agar-Gelatin Medium.**—Agar-gelatin medium described by North is made as follows (1 liter): Extract of one pound of lean beef or veal, extracted with 500 c.c. of water for eighteen hours; 10 grams of agar; 20 grams of gold label gelatin; 20 grams of dried peptone (Witte's); 5 grams of sodium chlorid; water to make one liter. The reaction is adjusted to the neutral point in the usual way, using phenolphthalein as indicator. The medium is favorable for the growth of pneumococcus, meningococcus, gonococcus and other bacteria ordinarily kept on hand. It can be used at 37 C., as well as at lower temperatures, and is recommended as a convenient routine medium.

113. **The Gonococcus.**—Watabiki finds that on carbohydrate media gonococcus ferments only mannite, dextrose, dextrin and levulose, indicating an absence of the varieties usually found among other bacteria. He also failed to obtain indications of the existence of varieties by means of certain serum reactions.

Old Dominion Journal of Medicine and Surgery, Richmond

May

- 114 Claudius Galen. B. M. Randolph, Washington, D. C.
- 115 Dysentery Due to Protozoa. W. Allan, Charlotte, N. C.
- 116 Mental Responsibility in Acute and Chronic Intoxication with Alcohol and Other Drugs. A. Gordon, Philadelphia.
- 117 Arteriosclerosis and Ocular Lesions. W. H. Wilmer, Washington, D. C.
- 118 Rectus Incision for Reduction of Strangulated Hernia, with Report of Case of Strangulated Hernia in the Sac of an Undescended Testicle. C. R. Robins, Richmond.
- 119 Example of Eventration. J. L. Hankins, Century, W. Va.
- 120 Example of Acephaly. A. J. Osborne, Lawrenceville, Va.
- 121 Rather Rare Complication in Gunshot Wound. S. R. Jordan, Republican Grove, Va.

Long Island Medical Journal, Brooklyn

May

- 122 Rational Treatment of Typhoid. E. E. Cornwall, Brooklyn.
- 123 Climate in Treatment of Pulmonary Tuberculosis. H. Greeley, Brooklyn.
- 124 Finer Points of Ether Therapy as Applied in Anesthetics. W. C. Woolsey, Brooklyn.
- 125 Secondary Anemias. R. A. Bate, Louisville, Ky.
- 126 Surgical Treatment of Internal Hydrocephalus. R. S. Fowler, Brooklyn.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

May 15

- 1 Acute Rheumatism, Its Allies and Its Counterparts. F. de H. Hall.
- 2 Diagnosis and Treatment of Morbid Conditions of the Pleura. T. R. Bradshaw.
- 3 **Bacillus Pyocyaneus* Pyemia Successfully Treated by Vaccine. E. H. Groves.
- 4 Tuberculous Meningitis without Tubercles. F. W. Higgs.
- 5 Outbreak of Meat Poisoning at Limerick. E. J. McWeeney.
- 6 Condition of the Blood in Experimental Rickets. L. Findlay.
- 7 *Treatment of Sleeping Sickness. A. Balfour.
- 8 Injury to the Vessels in Dislocation of the Shoulder. W. H. Battle.
- 9 Surgical Considerations Connected with the Anatomy of the Maxillary Sinus. A. S. Underwood.

3. *Bacillus Pyocyaneus* Pyemia.—Groves reports the case of a boy, of 10, who was operated on in August, 1908, for lameness due to fixation of the left hip. In November, 1907, he had had two abscesses, one in the right groin, the other on the inner side of the left thigh, the latter healing very slowly. The operation in August, 1908, was followed immediately by what proved to be a severe pyemia, from which a culture of the *Bacillus pyocyaneus* was isolated. A vaccine was prepared, and first 40, then 60 millions, increased later to 100 millions, of bacilli were injected, at intervals grading from a week to a fortnight. From the date of the second injection the boy's condition has rapidly improved. A peculiar feature in this case was that the patient exhibited three different varieties of pathologic dislocation of his joints: 1. Dislocation by destruction of bony surfaces; illustrated by the tuberculous left hip. 2. Dislocation by destruction of ligaments and the traction of muscles; illustrated by the right thumb. 3. Dislocation by distention of the capsule; illustrated by the right hip. Groves summarizes as follows the lessons of this case:

1. The danger of trusting to an "aseptic" system of surgery when dealing with the region of the groin. He now always uses 1 in 2,000 biniodid of mercury as lotion in these cases when asepsis is doubtful.
2. The absolute importance of an exact bacteriologic diagnosis in every case of suppuration.
3. The great gravity of *Bacillus pyocyaneus* infection.
4. The potency of vaccinal treatment of this infection.

7. Sleeping Sickness.—Balfour is led by a perusal of McKenzie and Martin's treatment in cerebrospinal meningitis—that of introducing locally, by spinal puncture a highly immune serum obtained from the blood of patients who have recently recovered, or, in acute cases, of injecting the patient's own serum—to suggest that a somewhat similar method of sero-therapy might be tried in cases of trypanosomiasis and sleeping sickness. He discusses the theory only as a suggestion, but thinks that anything likely to prove beneficial should be tried in cases of sleeping sickness.

Lancet, London

May 15

- 10 *Spread of Tuberculosis—Heredity or Infection? J. G. Emanuel.
- 11 *X-Ray Treatment of Ringworm of the Scalp. J. M. H. Macleod.
- 12 *Histology of Rheumatic Endocarditis. C. Coombs.
- 13 *Simplified Method of X-Ray Application for Cure of Ringworm of the Scalp; Kienböck's Method. H. G. Adamson.
- 14 Lithokelyphos. J. B. Hall.
- 15 Sporadic Outbreak of Trichinosis in Devonshire. J. D. Harris.
- 16 Calcium Lactate in Treatment of Epilepsy. A. R. Littlejohn.
- 17 Traumatic Separation of the Upper Mandible. W. Bligh.
- 18 Pulmonary Tuberculosis Terminating with Acute Streptococcal Meningitis. E. H. R. Harries.
- 19 Hepato-Omental Bands Constricting the Stomach. G. A. Hawkins-Ambler.
- 20 Plea for Use of Antidiphtheritic Serum in the Laryngitis of Measles. A. A. Warden.

10. Heredity or Infection in Tuberculosis.—The stress laid by insurance companies on a death from tuberculosis in the family of the applicant, tends to perpetuate in the public mind the belief in the heredity of tuberculosis. Emanuel does not deny that both heredity and infection may play their respective rôles in the spread of consumption, but tuberculosis is so prevalent that any hereditary tendency to it falls into

comparative insignificance. From the practical point of view, it is the various paths of infection that are of importance. He discusses the two doctrines and points out that, while the evidence in favor of infection is very strong, the scientific proof of heredity is well nigh impossible. It would require the records of many families in which several children of tuberculous parents had succumbed to tuberculosis in spite of early removal from their parents and early separation from one another, without possibility of exposure to other sources of infection. The results of experiments in guinea-pigs and of observations in orphan asylums where children are separated from an infected environment, give no support to the hereditary doctrine. He discusses infection through marriage, and through the dwelling, infection of fellow-laborers, through nursing, infection of health resorts, the influence of age and sex, bacillary transmission, latent tuberculosis, and hereditary predisposition, and concludes by stating that heredity can not explain (1) cases of phthisis occurring in the same family and obviously spreading from one member to another; (2) cases of phthisis conveyed from husband to wife and *vice versa*; (3) the prevalence of phthisis among the overcrowded poor; (4) the greater prevalence of phthisis among in-door as opposed to out-door employes; (5) cases of phthisis occurring among individuals brought into close contact by their daily avocations, in the home, office, workshop or factory; (6) the prevalence of phthisis among those engaged in tending consumptives; (7) the appearance of phthisis in places now used as health resorts, previously immune from the disease; (8) the mortality from tuberculosis gradually diminishing from infancy to 10 to 15 years and subsequently rising to a maximum at 45 to 55 years.

11. X-Ray in Ringworm.—Macleod's experience since 1905 has led him to the belief that:

1. The x-ray treatment of ringworm by the single dosage method, with the dosage regulated by the pastille, is practically safe and harmless.

2. It is a method of treatment of such delicacy that, even in the hands of an experienced operator, an accident such as an over-exposure might happen; but such accidents should be of such extreme rarity as not to discredit a mode of treatment possessing such obvious advantages.

3. Severe dermatitis followed by permanent baldness is the result of an over-exposure or is due to some accident, such as the exposing of an area the resistance of which has been lowered by the previous application of strong irritants before the inflammation has entirely subsided, or from overlapping.

4. Permanent baldness or delayed hair growth without marked dermatitis is the result of over-exposure, but it might, in rare instances, be due to some idiosyncrasy on the part of the patient, in the same way as the occurrence of alopecia areata after ringworm.

5. Macleod has been unable to obtain any definite evidence of injury to the brain by this method of treatment from his own cases, from the literature on the subject, or from anyone with experience of this treatment whom he has asked, and the experiments which he has done in this connection strongly negative the possibility.

12. Rheumatic Endocarditis.—Coombs states that the reaction to rheumatic invasion of the endocardium is characterized by the formation of large fibroblasts in groups and zones, which, so far as his experience goes, are constant in rheumatic, but absent from other, forms of endocarditis. The valvular inflammation of rheumatic endocarditis is set up, he asserts, by micro-organisms carried to the endocardium by the coronary arteries and their branches.

13. X-Ray in Ringworm of the Scalp.—Adamson describes the details of a simplified technic, the essential points in which are irradiation at right angles to the direction of the irradiation of adjacent areas, and to aim not at a point in the center of the vertex, of the lower occiput, or of the sides of the scalp, but toward the outer margin of these areas, so that half the dose goes on to the scalp and half on to the shield protecting the face and neck. If these precautions are taken there is no risk of over-exposure at the overlapping margins of the rayed areas. In practice the dosage works out so nicely, that every part receives an equal amount and depilation is total and complete, without anywhere a sign of over or under exposure. In theory, according to the well-known laws that the quantity of rays received at any point exposed varies (1) inversely with the square of the distance from the source; and (2) directly with the size of the angle of incidence, the dose received by any part of the scalp is found to be with mathematical accuracy, one pastille dose.

Medical Press and Circular, London

May 12

- 21 Alcoholic Insanity. J. O. Donelan.
- 22 Rupture of the Uterus During Labor. T. B. Grimsdale.
- 23 *Ought Tea, Coffee, and Chocolate to be Forbidden in Uricemia? A. Martinet.
- 24 Disinfection of Houses in India. S. C. Hormusjee.

23. Coffee, Tea, etc., in Uricemia.—Martinet concludes that:

1. Alkaloidal beverages, especially tea, coffee and chocolate, should be forbidden for uricemia subjects, especially those whose urine spontaneously precipitates uric acid.
2. Nevertheless, the action of coffee and chocolate appears to be less injurious to the organism than that of meat and the legumens, the latter appearing to predominate; for although uricemia manifestations are specially frequent in meat-eating races or tea drinkers (Anglo-Saxons), they seem to be rather rare in people who are vegetarians, even though they drink tea and coffee (Japanese, Hindus, Arabs, etc.).

In short, tea, coffee and chocolate may be allowed in moderation when the food is principally vegetarian and hypopurinic; but they should be strictly forbidden when the diet comprises much meat, which is the case in most instances of "excretors of uric acid."

Clinical Journal, London

May 12

- 25 Hemianesthesia of the Dissociated Form. W. P. Herringham.
- 26 Fistula and Diseases of the Rectum. L. Mummery.
- 27 *Pernicious Anemia (concluded). H. French.

27. **Pernicious Anemia.**—French concludes his article, begun in the last issue. The points he has sought to bring out are: 1. Slight evening pyrexia is seldom absent in pernicious anemia cases that are decidedly ill. 2. Pigmentation within the month, of precisely similar character to that seen in Addison's disease, may occur in pernicious anemia cases treated with arsenic. 3. The spleen is to be felt in about one-third of the cases, and is really enlarged. 4. The nerve symptoms are not at all uncommon in pernicious anemia. 5. The color index of the blood, though typically higher than when an advanced stage of the disease has been reached, is not always or continually high especially during a period of improvement in the patient's condition, when it may be actually low. Lastly, pernicious anemia, as we know it, is very possibly only a late and almost incurable stage of a disease that it is to be hoped will some day be recognizable early enough to be cured.

Intercolonial Medical Journal of Australasia, Melbourne

March

- 28 *Syphilis. H. B. Allen.
- 29 *Frequency and Intensity of Congenital Syphilitic Infection in Children. P. B. Bennie.
- 30 Syphilis and Nervous Disease. A. Davidson.
- 31 Treatment of Syphilis. W. McMurray.
- 32 The Larynx and Early Diagnosis of Phthisis. W. K. Hughes.
- 33 Idem. S. W. Ferguson.
- 34 Tuberculous Glands Treated by X-Rays. T. G. Beckett.
- 35 Radium Treatment. H. Lawrence.

28. **Syphilis.**—Allen says that the time-honored diagnostics of syphilis leave much to be desired. The great marks of syphilis are in the arterial wall, to which the spirochetes soon betake themselves in experimental syphilis. Allen sets forth the following conclusions concerning syphilis and the circulatory system: First, aortic aneurism, in the great majority of cases, is due to syphilis, and aneurism is very prevalent in Victoria, and very markedly prevalent among women, so that in 1906 there were 31 deaths recorded from aneurism in women, as against 57 deaths in men. Second, aortic regurgitation is mainly due to syphilis, either through chronic endocarditis or atheroma, or a combination of these conditions. Third, a large proportion of cases of mitral obstruction must be attributed to syphilis. Fourth, syphilis frequently induces thickening of the fibrous rings at the bases of the valves. Fifth, subject to unimportant exceptions progressive chronic myocarditis is a syphilitic affection. Sixth, syphilis is a potent cause of coronary atheroma, and thus contributes to the gravity of many cases of angina, or leads to myomalacia and rupture of the heart; while syphilitic arteritis at the mouths of the coronary arteries often causes cardiac ischemia, claudication and syncope. Apart from dust disease and chronic tubercle, syphilis is the great cause of interstitial pneumonia. The multiple fibroses of serous membranes often ascribed to tubercle are, in Allen's experience, more frequently due to syphilis. Surgeons have to bear in mind syphilitic arteritis and thrombosis, not only in senile gangrene, but in the neuro-

ses of young people, in Raynaud's disease, and superior mesenteric thrombosis. A chronic syphilitic inflammation is often the forerunner of a true malignant growth. The obstetrician needs to know the signs of syphilis in the umbilical cord and placenta. In the cord, the blood vessel walls are thickened and sclerosed, and in the fresh section white fibrillar tissue spreads from the thickened vessels into Wharton's jelly. The two arteries are constantly affected. In the placenta there may be opaque white patches in the surface membrane, with subjacent fibrosis. Gummata are sometimes found. The mother is always infected, though she may show no outward sign of the disease. The gynecologist must reckon with gummata in the cervix and upper vagina, and with slower forms of ulceration and fibrosis, chronic metritis, salpingitis and mastitis, in all of which syphilis may play a part. Allen is convinced that the main mortality in children from slight causes is due to inherited syphilis, in which precocious atheroma often plays a part. He suggests that the enormous prevalence of fibrosis of organs and sclerosis of arteries in later life, is to be attributed, at least partly, to the evolution of early fibrotic changes. A stringent marriage law for syphilitics, administered with adequate firmness, is urged.

29. **Congenital Syphilis in Children.**—Bennie discusses this question at some length and concludes that if either parent has ever had syphilis, no matter how well treated, there is a syphilitic taint in the child subsequently born. Fully 10 per cent. of the children are infected, and this small percentage affords material for more than half the pediatric work and includes nearly half of the fatal cases. Speaking generally, the chances of death before puberty are nearly seven times greater for the syphilitic than for the non-syphilitic. Infected children should, if possible, be treated in all illnesses for the syphilitic factor. A course of antisyphilitic treatment should precede operation on congenital syphilitics.

Annales de Médecine et Chirurgie Infantiles, Paris

April 15, XIII, No. 8, pp. 253-288

- 36 *Milk of One Cow versus Mixed Milk for Infant Feeding. (Lait individuel ou lait de mélange.) E. Gaujoux.
- 37 *Prophylaxis and Physiotherapy of Tuberculosis in Children. H. Keller.

36. **Milk of One Cow Versus Mixed Milk in Infant Feeding.**—Gaujoux thinks that there is no advantage in using the milk of one cow rather than the mixed milk unless that one cow is kept apart from the others under specially favorable conditions and constant supervision of its food, physical condition and physiologic functions, after eliminating tuberculosis with the tuberculin test.

37. **Prophylaxis of Tuberculosis in Children.**—Keller declares that country air and hygienic surroundings are required by the children of the poor in winter even more than in summer, as the children are housed more and the hours of sunlight are fewer. Well-located and well-conducted sanatoria for children, both of well-to-do and of poor families, would prove invaluable to promote hygiene, discipline and order and teach the children how to ward off disease. Such a sanatorium is the best school for both the tuberculous and the predisposed. He emphasizes the fact that prophylaxis of tuberculosis in the young will reduce its frequency in adults, and that measures to eradicate alcoholism will do away with its most prolific source.

Archives Générales de Médecine, Paris

April, CC, No. 4, pp. 193-256

- 38 Accidental Subcutaneous Emphysema in Two Cases of Valve Pneumothorax a Compensating Process. (Rôle compensateur de l'emphysème sous-cutané accidentel, dans deux cas de pneumothorax à soupape; obligation de ne pas compter sur cet effet favorable.) M. Perrin.
- 39 *Perforation of the Esophagus. M. Cléret.
- 40 *Electric Sterilization of the Air. A. Sartory.

39. **Perforation of the Esophagus.**—In the case described, a cancer in the esophagus was unsuspected until perforation occurred. The eccentric rather than the concentric development of the lesion prevented disturbances in the passage of the food into the stomach. The patient was a man of 45 with a history of early syphilis and excessive use of liquor, but robust

until recently, when symptoms of dyspepsia disturbed him for a time, recurring twice. After an interval of three months of freedom from symptoms, the pain in the right hypochondrium returned, with anorexia and rapid emaciation, and the perforation in the esophagus revealed the malignant nature of the trouble.

40. **Electric Sterilization of the Air.**—Sartory's apparatus draws in the cold air, heats and brings every molecule in contact with the electricity, passing the air on and out through a kind of chimney at the top of the apparatus. Air thus treated is rapidly sterilized, three hours being sufficient to sterilize completely the air in a room containing 150 cubic meters of air; from 50,000 the number of bacteria drops to 5,000 in one hour and frequently to zero by the end of the second hour. He relates experiences with this sterilizer in the crowded waiting room of a free public dispensary and in the smaller consultation rooms, the tests showing entire success. Sterilization is complete much sooner in comparison in the smaller rooms.

Presse Médicale, Paris

May 5, XVII, No. 36, pp. 313-320

41 *Chancroidal Processes at the Anus and Anal Canal. (L'anite chancroïdeuse.) P. Ravaut and B. Bord.

May 8, No. 37, pp. 321-336

42 *Buried Protheses in Treatment of Fractures. (Technique et indications de la prothèse perdue dans le traitement des fractures.) A. Lambotte.

43 Specific Antibodies in the Serum in Various Streptococcus Lesions. M. R. Castex.

44 Scoliosis from Malformation of the Vertebrae. P. Desfosses.

41. **Chancroidal Ulceration of the Anus.**—Ravaut and Bord insist that the anal region should be regarded as entirely distinct from the rectum in its response to infection, as well as from the anatomic and histologic standpoints. The gonococcus locates by preference on the rectal mucosa, sparing the anus, while chancroidal infection remains limited to the anal region, causing a special process, the characteristics of which they describe in detail, with four illustrations. Examination is so painful that they use spinal anesthesia for the purpose, injecting merely one drop and a half of a 50 per cent. solution of cocain hydrochlorate. This solution does not diffuse, but remains limited, inducing analgesia only in the genito-perineal-anal region. The chancroidal ulceration here requires the same treatment as at other points unless defecation is so painful that direct cauterization becomes necessary under spinal anesthesia. If there is a tendency to stenosis, progressive dilatation will soon correct it and may be indicated as a preventive measure.

42. **Buried Protheses for Fractures.**—Lambotte gives a number of illustrations of the small gilt or nickel-plated steel splints which he screws directly on the bone with half a dozen small screws, working through a long incision in the soft parts, as he explains in detail. The method has peculiar advantages for fractures of the forearm or thigh bones. With complete asepsis the prothesis is tolerated indefinitely by the bone tissue. He never touches the screws or plate with his hand, having devised special instruments for the purpose. The wider his experience, the greater his satisfaction with this method of treating certain fractures.

Revue de Médecine, Paris

April XXIX, No. 4, pp. 257-336

45 *Constitutional Toxic Dyscrasia Responsible for Conditions Known as Neurasthenia and Psychasthenia. Bernheim.

46 *Etiology, Pathogenesis and Treatment of Migraine. L. Jacquet and Jourdanet.

47 *Absence of Argyll-Robertson Sign in Certain Cases of Tabes. J. Heitz and Haranhipy.

48 Seventy-nine Cases of Paralysis of Recurrent Nerve. (Pathogénie et importance sémiologique de la paralysie récurrentielle.) E. Guder and R. Dufour.

49 Psychic Disturbances in Parathyroid Syndromes. Laignel-Lavastine.

50 Functional Disturbances and Dissociations with Abnormal Thyroid Functioning. (Discordances et dissociations fonctionnelles dans l'évolution morbide des états thyroïdiens.) G. Sardou.

45. **Toxic Dyscrasia Responsible for Neurasthenia and Psychasthenia.**—Bernheim has applied suggestion extensively during the last quarter century in the conditions known as neurasthenia, psychasthenia and psychoneurasthenia, and this

experience has shown that there are two well-defined forms of neurasthenia which differ little except in their response to suggestion. One form occurs after overwork and emotional and nervous strain, and such patients are easily cured by distractions and suggestion. The other form is the result of the action of some toxin or toxins circulating in the blood, with special affinity for certain tracts in the nervous system. This true neurasthenia is dependent on some organic or toxic disturbance, frequently revealed by the exaggeration of the tendon reflexes. Neurasthenia apparently purely functional may be the precursor of some permanent spinal affection, judging from experiences in his own practice. In three recent cases of intense neurasthenia the patients displayed a tendency to fall over backward when they stood up or tried to walk. This symptom indicates some organic or toxic localization in the cerebellum, confirming his assumption that psychoneurasthenia is not an imaginary affection nor autosuggestion nor a psychoneurosis, but has a toxi-infectious basis, generally some constitutional autotoxic dyscrasia grafted on an inherited diathesis, which may be roused to activity by some emotional or traumatic shock or physiologic strain or casual infection, especially influenza. Suggestion aids the functional elements in the syndrome, but is powerless against the underlying dyscrasia of the nervous system.

46. **Migraine.**—Jacquet and Jourdanet ascribe migraine to too rapid eating in the majority of cases, although in others the liver, the menses, mental strain or eye defects may be responsible. The main point in treatment is to make the patients eat in a more leisurely manner. It is difficult to enforce this, as old habits must be modified, but it is the only certain means of cure. Reading at table must be forbidden, and the patient must have a watch beside his plate. Migraine, they think, is a crisis of objective hyperesthesia of the brain substance, especially of the cortex, with variable nervous radiations, all under the dependence of stimuli emanating from various organs, chiefly from the stomach irritated by imperfectly masticated food swallowed in too short a time, inducing overfunctioning. He summarizes the details of a large number of cases which sustain this conception and which illustrate the prompt benefit derived from treatment based thereon.

47. **Pupil Reaction to Light Retained in Tabes.**—Heitz and Haranhipy state that 15 out of 48 tabetic patients showed some response to the action of light on the pupil. In some the response was practically normal. The Argyll-Robertson sign was also absent in nearly the same proportion in 29 cases in another hospital group and in 12 of 33 in general practice. The persistence of the pupil reaction was evidently due to some special localization of the lesions in the meninges.

Archiv für klinische Chirurgie, Berlin

LXXXIX, No. 1, pp. 1-279. Last indexed May 8, p. 1549

51 *Further Experiences with Operations on the Biliary Passages. (Operationen an den Gallenwegen.) W. Körte.

52 *Location of Appendix Vermiformis. (Lage des Wurmfortsatzes.) R. Liertz.

53 *Fifty-nine Notable Operations on the Biliary Apparatus. (Bemerkenswerthe Operationen am Gallensystem aus den Jahren 1907 u. 1908.) H. Kehr.

54 Proliferation of Fat Tissue and Villi in the Knee. (Ueber Fettgewebs- und Zottenwucherungen im Kniegelenk.) C. Rammstedt.

55 *Imperforate Anus. (Atresia ani.) G. Ziemendorff.

56 *Tubular and Cystoid Dermoids at End of Spine. (Die congenitalen Hauteinstülpungen am unteren Leibesende.) P. Klemm.

57 Negative Action of Fibrolysin on Scar Tissue. (Experimentelle Untersuchungen über die Wirkung des Fibrolysin auf das Narbengewebe.) W. Brandenburg.

51. **Operations on the Biliary Passages.**—Körte analyzes his experiences during the last five years, summarizing forty of the more interesting operations. He does not attempt to operate in case of carcinoma of the pancreas when sure of the diagnosis. One patient has been cured for nearly four years since removal of a carcinoma of the outer end of the common bile duct. The small tumor obstructed the passage of bile. It was removed at an early stage, before the obstructive jaundice had lasted long enough to debilitate the patient, a woman of 47.

52. **Location of the Appendix.**—Liertz gives illustrations of a number of interesting findings in regard to the appendix

observed in the course of 2,092 autopsies or at appendicectomies, including some from the literature. The position of the appendix in the fetus and in children, the origin and length, and the relations of the appendix with other organs are discussed in detail, with illustrations.

53. Unusual Gallstone Operations.—Kehr presents and discusses 59 of the more notable operations on the biliary system in the 200 he has performed in the last two years, although he admits that he did not learn anything essentially new from them.

55. Imperforate Anus.—Ziemendorff describes a case and reviews 114 which he has found in the literature. He comments on the strange fact that the prognosis has grown graver of late years, and also that rebellious constipation is a frequent sequel even when the trouble has been removed by effectual operation and stenosis or cicatricial obstruction has not developed later. The best results have been obtained with what he calls proctoplastic operations, but these require great perseverance, extensive mobilization of the intestine and careful suture to the skin. The results are good and permanent if other circumstances beyond control do not annul the results, which only too often happens. The 114 cases are tabulated under twenty-four headings. Proctoplastic operations for atresia of anus, rectum, urethra and vagina show a mortality of 26.9 per cent. for 78 cases and of 40 per cent. in 45 cases of atresia of the anus or rectum alone, while the mortality was 58.8 per cent. in the 17 cases with fistula. Colostomy has a record of 79.3 per cent. mortality in 29 cases, and simple puncture or incision of 28.6 per cent. in 7 cases. These statistics apply to the mortality during or soon after the operation. In 29 cases of atresia under observation for three months at least, 55.2 per cent. of the patients were free from disturbances, 17.2 per cent. still had some slight trouble, and 10.3 per cent. had died. The ultimate outcome is probably still more disappointing; the infant's peritoneum does not heal readily and the child's crying and restlessness interferes with the healing of the sutured wound or bursts it; such operations thus having a less favorable prognosis in infants than in adults.

56. Congenital Fistula or Channel in Sacral Region.—Klemm regards the congenital dimple or hole reaching inward toward the sacrum as a tubular dermoid, and reports five cases in which this congenital cavity became infected, with abscess formation, the constantly recurring disturbances finally necessitating excision of the parts involved. In one of these cases the trouble was an actual cystoid dermoid tumor with a system of fistulas, a multitubular dermoid. In another multitubular dermoid the cystoid growth sent out processes on each side, displaying active postembryonal growth. The excision should always extend down to the bone to ensure removal of all the dermoid tissue.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena
XII, No. 7, pp. 241-288. Last indexed May 15, p. 1628

58 *Internal Measures for Arresting Hemorrhage, especially in Hemophilia. (Die neueren innerlichen Blutstillungsmethoden, vorzüglich bei Hämophilie, mit besonderer Berücksichtigung der Verwendung von Serum.) K. Wirth. Commenced in No. 5.

58. Serum Treatment of Hemorrhage.—Wirth has found 45 articles on the subject of the internal methods of hemostasis. He reviews them all, with special regard to the use of serum in hemophilia. His analysis shows that the results of gelatin, calcium, strontium and ovarian and other organ therapy have been disappointing, although an occasional success has been realized. Far better results have been obtained with subcutaneous or intravenous injection of fresh animal serum, the method inaugurated by Weil; although Bienwald in 1897 reported the arrest of hemophilic hemorrhage by local application of normal human blood. He drew some blood from the child's grandmother and filled the traumatic wound in the left temple with the blood as a last resort. The foreign blood coagulated in the wound and the hemorrhage was arrested. Twenty cases have been published in which injection of serum arrested hemophilic hemorrhage more or less completely. To

date only two cases have been reported in which no benefit was derived (Bonzani and Maclair). The effect of the serum does not last over a month. The local action of the serum is also considerable, sometimes rendering repetition of the injections unnecessary. Wirth has had considerable experience with this treatment, which he reports in detail. One patient was a boy of 14, known to be hemophilic, with persisting hemorrhage from the nose, throat and gums, which stopped under application of diphtheria antitoxin locally and injections of from 15 to 20 c.c. No by-effects were observed, and the hemorrhagic tendency was kept under complete control by further injections, once a month, for six months. In another case a hemophilic girl of 15 with metrorrhagia and epistaxis was injected with horse serum and the uterus and vagina were tamponed with gauze dipped in normal serum, with prompt benefit. He has thus treated twenty-three patients with hemorrhage from various causes, and is convinced that the injections of serum are actually an efficient means for treatment of hemorrhage. This method of treatment is indicated above all in affections in which the coagulating power of the blood is reduced, although it may prove effectual in other forms of hemorrhage. As a rule, 20 c.c. of serum is enough, but 40 c.c. may be injected without harm. No disturbances were observed in his cases, not even when the injections were repeated. The subcutaneous route should be preferred unless the intravenous is urgently required. Horse serum seems preferable, and ordinary diphtheria antitoxin can be used, selecting the vials with the latest date, and applying the serum also locally to the bleeding spot. He calls attention especially to the subsidence of skin and mucous membrane hemorrhages in a case of cholemia with advanced cirrhosis of the liver. One new-born infant, bleeding freely from nose and mouth, was treated by local application of sponges dipped in horse serum, which rapidly controlled the hemorrhage. In some cases hemorrhages in the lower part of the bowel or from hemorrhoids were arrested by injection of 10 c.c. of beef or horse serum into the bowel.

Deutsches Archiv für klinische Medizin, Leipsic

XCVI, Nos. 1-2, pp. 1-215. Last indexed May 8, p. 1551

- 59 Cell Inclusions: Peculiar Bodies found Included in Leucocytes. (Leukocyten einschüsse.) R. May.
- 60 Two Cases of Myeloid Chloroma Leukemia, with Autopsy. H. C. Jacobaeus.
- 61 Relations between Leucocytosis and "Antiferment Reaction" of the Blood. Wiens and H. Schlecht.
- 62 "Antiferment Reaction" of Blood. (Ueber die "Antifermentreaktion" des menschlichen Blutes.) Wiens.
- 63 *Influence of Salt on Nephritic Edema. (Einfluss der Kochsalzzufuhr auf die nephritischen Oedeme.) J. W. Blocker.
- 64 Idiopathic Diffuse Miliary Vascular Disease. (Angiomatosis miliaris.) L. Steiner and H. Voerner.
- 65 *Pathologic Anatomic Differentiation of Mitral Stenosis and Mitral Incompetency. (Diagnose der Mitralklappenfehler auf Grund der Schliessprobe und Herzwägung.) A. Schabert.
- 66 The Amount of Blood Expelled by the Ventricles at each Contraction and Tests of Heart Functioning. (Ueber Schlagvolumen und Herzarbeit des Menschen.) A. Müller.
- 67 *Influence of Alcohol on Blood Pressure and Heart Functioning in Fever. (Einfluss des Alkohols auf den Blutdruck und die Herzarbeit in pathologischen Zuständen, namentlich beim Fieber.) A. Dennig, Hindelang and Grünbaum.
- 68 Laceration of Papillary Muscles of Mitral Valve. (Fall von Papillarmuskelzerreissung.) A. Dennig.
- 69 Opsonic Index and its Clinical Importance in Staphylococcus Disease. (Zur opsonischen Methodik nebst Untersuchungen über ihre klinische Verwertbarkeit bei Staphylokokkenkrankungen.) A. Böhme. Id. in Effusions. Id.

63. Influence of Ingestion of Salt on Nephritic Edema.—Blocker gives the metabolic findings in six cases of nephritis showing that the edema in such cases is only rarely the result of primary retention of salt. In one case copious intake of salt seemed to do harm, but in several cases restriction of salt did not show the least influence on the dropsy, while diarrhea and sweating gave great benefit. Only one patient showed a favorable effect from the salt-free diet, but this one success should encourage its adoption among other therapeutic measures. Other procedures are generally equally effectual; when these fail, the salt-free diet generally fails too. Besides this, the salt-free diet is generally repugnant to the patients. It should never be ordered until the conditions in regard to elimination of salt have been determined. He adds that the same purpose is accomplished with milk, weak tea, coffee and cocoa, rice and cereals, without inflicting too great privations

on the patients. Only when they weary of a milk diet and it is known that salt is harmful, should the strict Widal diet be instituted. Blooker treats patients with bed rest and exclusive milk diet in the parenchymatous form of nephritis, allowing the ordinary diet in the interstitial form, with diuretics and heart tonics as needed. If the dropsy does not subside, he gives 10 gm. of salt every day for a few days and watches the weight. If the weight increases, a salt-free diet should be ordered. If not, he pays no further attention to the salt in the food, but tries what diaphoresis or catharsis will accomplish. Different diuretics should be given a trial, as one may succeed when others fail. If the edema requires tapping, this should be done without hesitation. Copious ingestion of fluids caused no disturbance in most of his patients, but he advises not to go above two liters a day.

65. Pathologic Anatomy of Mitral Defects.—Schabert expatiates on the valuable retrospective information to be derived from combining the test of pouring water through the mitral valve with determination of the absolute and relative weight of the ventricle in relation to the other parts of the heart. In his autopsies in 11 cases of pure mitral stenosis, 6 of the subjects were over 50 years old. In 9 cases of mitral insufficiency, pure or combined, none of the subjects had reached the age of 50. The stenosis seems to be the terminal phase of the insufficiency. He was surprised at the number of cases of pure stenosis encountered and the long survival. With pure mitral insufficiency there is always hypertrophy of the left ventricle, determined most readily by weighing the different parts of the heart separately.

67. Influence of Alcohol on the Blood Pressure.—In the research reported, 956 measurements of the blood pressure in 62 patients were taken before and after ingestion of alcohol. The results are tabulated, the general conclusion being that alcohol should be given sparingly in pathologic conditions.

Deutsche medizinische Wochenschrift, Berlin.

May 6, XXXV, No. 18, pp. 785-824

- 70 Research on Puerperal Fever during the last Twenty-Five Years. (Wege und Umwege zur Erforschung der Genese des Kindbettfiebers im letzten Vierteljahrhundert.) F. Ahlfeld.
- 71 *Relations between Lymphatism and Scrofula. (Beziehungen des Lymphatismus zur Skrofulose.) E. Moro.
- 72 Myxofibroma of the Temporal Bone with Multiple Paralysis of Cranial Nerves. (Fall von Myxo-Fibrom des Felsenbeins mit multipler Hirnnervenlähmung.) D. Schwabach and M. Bielschowsky.
- 73 *Simple Non-Tuberculous Induration of the Apex from Mouth Breathing. (Zur Kenntnis der einfachen nichttuberkulösen Kollapsinduration der rechten Lungenspitze bei chronisch behinderter Nasenatmung.) G. Richter.
- 74 Marmorek's Serum in Dispensary Treatment of Tuberculosis. (Einjährige ambulante Behandlung mit Antituberkulose-serum Marmorek.) C. Thorspecken.
- 75 Traumatic Appendicitis. (Zur Frage der traumatischen Epityphlitis.) H. Wohlgemuth.
- 76 *Mercury Oxycyanid in Internal Treatment of Syphilis. (Hydrargyrum oxycyanatum als internes Antisyphiliticum.) Schulte.

71. Relations Between "Lymphatism" and Scrofula.—Moro was surprised to find that in a number of cases of pronounced lymphatism, resembling scrofula in every respect, the tuberculin reaction was negative. He has further investigated the previous history in fifty cases of scrofula giving a positive reaction. From the facts observed he is convinced that what we call "lymphatism" is a constitutional condition, and, if tuberculous infection is superposed, the result is scrofula. The latter does not develop without the "lymphatic" soil, and the tuberculin test is sometimes the only means to distinguish between lymphatism and scrofula. The distinguishing feature of the lymphatic constitution is the exceptional tendency to inflammatory reactions of an obstinate and recurring nature, in which the lymphatic tissue takes the most prominent part, primarily or secondarily. All this is found in scrofula, but it is not the result of the tuberculous infection. Such children are peculiarly sensitive to tuberculosis and after infection are exceptionally sensitive to the tuberculin test.

73. Non-Tuberculous Induration of the Apex with Impeded Breathing.—Richter warns that mouth breathers are liable to develop a simple, non-tuberculous "collapse induration" in the apex of the right lung which simulates a tuberculous process,

although it is merely the result of insufficient respiration. Normal conditions are liable to be restored when the adenoid growths or other obstructions are removed. It is especially important to differentiate this condition so that these patients will not be sent to sanatoria where they are liable to acquire a superposed tuberculous infection. Blümel declares that fully 5 per cent. of the 1,700 patients at the Görbersdorf sanatorium in the last few years were sent there by mistake as the apical lesions were not tuberculous.

76. Mercuric Oxycyanid Internally in Syphilis.—Schulte has used this drug exclusively for internal treatment of syphilis in the last twelve years. He orders 100 pills from 0.5 gm. (7.5 grains) of the oxycyanid in licorice powder, 2 pills 3 times a day, only after eating. He has never seen any disturbances from this drug, given at least in 1,000 cases, except that stomatitis is liable to develop if the mouth is not taken care of. He cites four typical cases to show the prompt and invariable benefit, and urges others to try the oxycyanid.

Jahrbuch für Kinderheilkunde, Berlin

April, LXIX, No. 4, pp. 375-504

- 77 *Prophylaxis of Diphtheria in Schools. (Bekämpfung der Diphtherie in den Schulen.) R. Schultze.
- 78 *Fatal Mushroom Poisoning. (Lorchelintoxikation.) E. Lövegren.
- 79 *Rare Type of Paralysis after Injury during Delivery. (Seltener Lähmungstypus nach Geburtstrauma: Hämatomyelie.) T. Gött.
- 80 *Clinical Importance of Elimination of Phosphorus in Urine of Breast-fed Infants. (Phosphorausscheidung im Harn beim Brustkind.) L. Moll. Commenced in No. 3.

77. Diphtheria in the Schools.—Schultze relates experiences and presents arguments to sustain his view that when a case of diphtheria develops among the children of a certain room in school, all the children in the room should be examined bacteriologically for diphtheria bacilli, or at least those who have been having sore throat. Positive findings should exclude the child from school but he should be allowed to return if two more bacteriologic examinations give negative findings. If the child keeps well for four weeks, or six weeks at longest, he should be allowed to return to school, notwithstanding positive bacteriologic findings, but should be given a seat apart from the other children. If anything develops suggesting that he is the source of new infection he should be excluded from the school again. By this supervision and control of the known and suspicious cases of diphtheria, it is possible to stamp out effectually all incipient epidemics.

78. Mushroom Poisoning.—Lövegren reports the postmortem findings in a case of poisoning from the mushroom, *Gyromitra s. Helvella esculenta*, which is not usually considered poisonous. Several members of the family were made ill by eating the mushrooms and a little girl died within twenty-four hours. The kidneys showed microscopic changes similar to those observed in nephritis after diphtheria.

79. Paralysis After Trauma During Delivery.—Gött reports three cases of paralysis in children who had been delivered by traction on the feet. The vertebræ seem to be able to stand traction without injury, but the spinal cord suffers as blood vessels are liable to be lacerated. Such hemorrhages generally soon prove fatal, but, if not, flaccid paralysis develops with complete atrophy of the muscles most involved and extensive sensory disturbances, absence of the reflexes, bladder disturbances and sometimes respiratory anomalies. The children generally succumb to colicystitis. The principal feature of this form of paralysis is the thickening of the meninges consequent on the hemorrhage, causing compression of the roots of the nerves passing to the lower half of the body.

80. Importance of Elimination of Phosphorus in the Urine of Infants.—Moll ascribes great importance to the phosphorus content of the urine, the large proportion eliminated in disease and its subsidence during convalescence. The tolerance for food can be determined from the urine phosphorus findings which are thus a reliable index for the diet. As the proportion of phosphates declines, the clinical picture improves. In acute gastroenteritis if the proportion of phosphates in the urine is not materially reduced by a day or two of fasting, the prognosis is bad. He is convinced that the presence of organic phosphorus in the urine of breast-fed

children must be regarded as a pathognomonic sign. In his six cases of acute gastroenteritis with fatal outcome, the proportion of phosphates showed no decline during from two to five days of fasting or merely weak tea diet. The proportion of phosphorus in the urine should be determined frequently, and at different hours in the day and night, estimating it in relation to the amount of urine, obtaining a total oversight by comparing the various findings. They will reveal sometimes a rise or fall in the proportion of phosphorus indicating that something is wrong before it is suggested by any other sign. The mechanism involved and the laws regulating the elimination of phosphorus in infants are discussed, especially the proportions between it and the nitrogen in the urine, giving a detailed description of twenty-four cases of gastroenteritis, etc., with the metabolic findings compared with the clinical course and the effects of diet.

Münchener medizinische Wochenschrift

May 4, LVI, No. 18, pp. 897-952

- 81 Bacteria Antiferments and Bacteriolysis. A. Kantorowicz.
- 82 Study of Action of Digitalis. (Zur Kenntnis der Wirkung des Digitalis.) L. Müller.
- 83 Comparison of Action of Carbohydrates and Albumin in Diet for Diabetics. (Vergleichende Untersuchungen über die Wirkung von Kohlehydrat und Eiweißnahrung beim Diabetes mellitus.) A. Gigon.
- 84 *Germs in Ice and Meat Poisoning. (Eiskonservierung und Fleischvergiftung.) H. Conradi.
- 85 Epidemic Cerebrospinal Meningitis. O. Mayer. Id. G. Liebermeister and A. Lebsanft.
- 86 Adams-Stokes Syndrome: Gumma in the Auricular Septum. (Gumma des Vorhofseptum.) C. Handwerck.
- 87 Thorium Oxid as Substitute for Bismuth in Roentgen-Ray Work. (Wismutverbindungen und ihre Ersatzpräparate in der Röntgenologie des menschlichen Magendarmanals.) C. Kaestle.

84. Ice and Meat Poisoning.—Conradi found paratyphoid bacilli in natural ice from various sources, and suggests that this may be the origin of paratyphoid infection in certain cases. He found that chopped ice is mixed with the meat in making sausages in certain districts.

Therapeutische Monatshefte, Berlin

May, XXIII, No. 5, pp. 241-296

- 88 Modern Instruction of Deaf Mutes on Basis of Bezold's Research on Deafmutism. (Der moderne Taubstummunterricht auf Grund Bezolds Taubstummforschung.) F. Wanner.
- 89 *Treatment of Furunculosis in Children and Acute Pemphigus in the New-Born by Packs to Induce Sweating and Baths Medicated with Mercuric Chlorid. A. Reiche.
- 90 Improved Technic for Total Spinal Anesthesia. (Totalanästhesie mittels Injektion in das Rückenmark.) T. Jonesco and A. Jiano.
- 91 *Diagnosis and Treatment of Glaucoma. Pick. Commenced in No. 4.
- 92 The French Pharmacopeia. (Codex medicamentarius Gallicus.) P. Fleissig.

89. Sweating and Mercurial Baths for Furunculosis and Pemphigus in Children.—Reiche has applied on a large scale Lewandowsky's method of dislodging the staphylococci from their nests in the horny layer of the skin where they start the abscesses. This is accomplished by vigorous sweating; the staphylococci thus drawn forth are then killed by immersing the child in a bath of 1 to 10,000 solution of mercuric chlorid. The child is first given a hot bath and then the pack, with warm drinks, and, possibly, from 0.2 to 0.3 gm. (3 to 5 grains) aspirin. The furuncles are opened and sponged out in the bath and the body lightly rubbed. The child is then rinsed off, wiped dry, and dusted with talcum powder. This procedure is repeated every day for two or three days, the loss of fluids being compensated by plenty of warm drinks. The children tolerate the sweating and baths well and in a number of cases in which all other measures had proved ineffectual, the furunculosis was cured by the end of one or two weeks, and the general health much improved under the cautious diet. This treatment has proved successful even with very frail infants suffering from general furunculosis. The same method has been applied with excellent results in the acute pemphigus of the new-born, supplemented by application of a mixture of 5 parts ichthyol and 5 parts glycerin in 100 parts water.

91. Glaucoma.—Pick discusses the diagnosis and treatment of glaucoma and warns that persons over 50 with a hyper-

metropic, small eye should avoid everything which might induce glaucoma or bring on an attack. Mydriatics should be very cautiously used on them. Atropin should be avoided and 1 per cent. homatropin given the preference, invariably followed by 2 per cent. pilocarpin or 0.5 per cent. eserine. The cases are not rare in which a single application of homatropin or even cocain has been followed by development of glaucoma; he has had such a case in his own experience: Six months after instillation of one drop of homatropin in one eye the patient returned with chronic inflammatory glaucoma in that eye. In case glaucoma is already present, the patient must avoid everything that might induce active or passive hyperemia in the head; emotional stress is particularly injurious in this respect. The bowels must be kept comparatively loose and severe physical exertion avoided, especially prolonged stooping over, and sexual excitement. He has encountered particularly severe and rebellious glaucoma in women at the climacteric age married to considerably younger husbands. There does not seem to be any direct connection between the general pressure in the vascular system and the tension in the eye. Patients living in a tranquil environment stand a better chance for recovery than others. Ten-minute, hot foot-baths may prove useful, with a little mustard or salt in the water. Warm full baths are also to be recommended, but hot full or sitz baths seem to have an injurious effect. A sheltered, inland, mild climate is preferable. Nervines and sedatives can seldom be dispensed with—valerian, bromids, quinin in doses of 0.15 or 0.2 gm. several times a day. The reassuring influence of the physician is an important factor in the cure.

Wiener klinische Wochenschrift, Vienna

May 6, XXII, No. 18, pp. 625-660

- 93 Micrococcus in the Blood in Puerperal Fever and in the Discharge in Purulent Endometritis. Benefit from Phototherapy. (Der Micrococcus endocarditidis rugatus Weichselbaum im Blute bei Kindbettfieber und im Ausfluss bei eitriger Endometritis; zugleich ein Beitrag zur Lichtbehandlung in der Gynäkologie.) T. H. van de Velde.
- 94 *Climatic Influences in the Light of Statistics. (Klimatische Einwirkungen im Lichte der Statistik.) K. Chodounsky.
- 95 Gonorrhea in Little Girls. (Gonorrhoe bei kleinen Mädchen.) O. Scheuer.
- 96 Auscultation Findings in the Stomach. (Zur Pathologie der Magengeräusche.) T. Frankl.
- 97 Klausner's Technic for Serodiagnosis of Syphilis. J. Kohn.

94. Climate and Respiratory Disturbances.—Chodounsky compares the statistics in Germany and in Austria during a three-year interval of all the patients admitted to hospitals on account of affections of the respiratory organs or acute articular rheumatism, as also the mortality from these affections in a number of climates in European countries. The findings show that the mild and sheltered regions show the largest proportion, while the bleaker regions are the freest from these affections. The difference is not very great, but it is always in favor of the colder and bleaker districts. The records of the mortality from respiratory affections per million inhabitants, show 4,787 for Italy, 3,167 for Scotland, 2,322 for Sweden, 1,759 for Norway, with 3,475 for Constance, the most southerly district in Germany, 3,877 in Alsace-Lorraine, and 1,855 for Posen. In Italy the proportion increases toward the south, from 3,326 in Venice to 6,226 in Apulia.

Zeitschrift für Geburtshilfe und Gynäkologie, Stuttgart

LXIV, No. 2, pp. 225-448. Last indexed April 17, p. 1302

- 98 *Placenta Prævia. O. Paukow.
- 99 Metastasis in Lung from Cystoma in Ovary. (Ueber lokale Destruktion und multiple Lungenmetastasen beim Pseudomucinkystom des Eierstockes.) G. W. Nicholson and L. Pick.
- 100 Primary Adenoma in the Lung. L. Pick.
- 101 Importance of Systematic Examination of Blood in Puerperal Fever. (Zur Methodik der Blutuntersuchung bei Puerperalfieber.) C. Lange.
- 102 Rare Form of Placental Cyst. (Zur Lehre von der Blasenmole.) M. Krüger.
- 103 Technic for Tubal Sterilization that can be Undone Later. (Kleine operationstechnische Mitteilungen.) H. Sellheim.
- 104 Unreliability of Lactic Acid for Obstetric Distinction. (Bedeutung der Milchsäure für die Geburtshilfe.) G. Becker.
- 105 *Treatment of Puerperal Pernicious Anemia by Transfusion of Blood. E. Sachs.

98. Placenta Prævia.—Pankow writes from Krönig's clinic at Freiburg to relate the details of eight cases of placenta prævia treated systematically by the classical Cesarean sec-

tion, with no morbidity. This method of treatment, he warns, is exclusively for institutional cases with the utmost favorable conditions for the intervention.

105. Treatment of Puerperal Pernicious Anemia with Transfusion of Blood.—Sachs gives the particulars of a case in which such a rapid transformation in the condition and in the blood picture followed the transfusion of blood, that he thinks that it is impossible to ascribe the phenomena observed to a mere coincidence. He reviews the similar experiences on record and commends his technic: injection of about 325 gm. of defibrinated blood into the median vein of the patient, about 250 c.c. actually entering the vein. There was no disturbance at the time, but a chill occurred in thirty minutes with transient rise in temperature. The improvement commenced the next day and the curves appended showed the transformation, the hemoglobin running up to 75 per cent. and the reds from 985,000 to 3,720,000 in one month. The differential blood count for this period is tabulated in detail. The principal danger from therapeutic transfusion of blood lies in the loss of vitality of the red corpuscles. They die if they are heated too much; consequently the blood to be injected must never be warmed over 45 C. They also die if they remain too long outside the body, although they may be kept on ice up to seventy-two hours. If blood is used from persons requiring therapeutic venesection on account of eclampsia, uremia or edema of the lungs, there is a possibility that such blood may prove injurious, and there is also a possibility of transmission of constitutional disease. As the fibrin ferment is released by the destruction of white corpuscles, blood unusually rich in leucocytes should never be used for transfusion. The results observed in his case suggest that the single powerful stimulus of the transfusion of blood acts on the bone marrow to such effect that it starts it on the road to normal functioning. The improvement in his case was more rapid, more pronounced and constantly progressive than in any other case he has found on record, which may possibly be attributed to the exceptionally large amount of blood injected.

Zeitschrift für klinische Medizin, Berlin

LXVIII, Nos. 1-2, pp. 1-176. Last indexed May 15, p. 1632

- 106 *Polycythemia. (Zur Kenntnis der Erythraemie.) J. M. Gordon.
107 Elimination of Creatin and Creatinin in Febrile Diseases. (Ausscheidung von Kreatin und Kreatinin in fieberhaften Krankheiten.) K. O. af Klercker.
108 *Clinical Experiences with Lesions of Central and Peripheral Nervous System. L. Jacobsohn.
109 Causes of Mistakes in Diagnosis of Stenosis of Left Venous Opening into the Heart. (Ursachen von Fehldiagnosen der Verengung des linken venösen Herzostiums: Stenosis ostii venosi sinistri.) J. Pawinski.
110 Should Seneca's Illness be Regarded as Asthma or Angina Pectoris? (Zur Geschichte der Medizin.) Id.
111 Treatment of Rachitis with Cod Liver Oil, Phosphorus and Lime. (Behandlung der Rachitis mit Lebertran, Phosphor und Kalk.) J. A. Schabad.
112 *Action of Amyl Nitrite on the Arterial System. (Wirkung des Amylum nitrosum auf das gesunde und sklerotische Arteriensystem.) C. v. Rzentkowski.
113 *Metabolic Processes in Leukemics after Roentgen-Ray Treatment. (Stoffwechselversuche an bestrahlten Leukämikern.) B. Vas.
114 *Functional Heart Disturbances in Fibrinous Pneumonia. (Beiträge zur funktionellen Diagnostik.) A. S. v. Solowzoff.
115 Ferments in Urine. (Fermente in menschlichen Harn.) F. Falk and S. Kolleb.

106. Polycythemia.—Gordon gives the details of three cases from von Noorden's clinic at Vienna, comparing them with others on record. The prognosis is generally grave aside from the few cases in which the course was unusually prolonged. The serious consequences of the severer forms of the plethora are felt most in the heart and brain and usually entail a fatal termination although none of his patients has succumbed. To date the affection has resisted all kinds of treatment: quinin, arsenic, oxygen, venesection, x-ray exposures, splenectomy and "iron-free" diet. Neisser has reported a case of polycythemia with somnolency, the syndrome persisting for seven years but then vanishing entirely under the influence of venesection and inhalation of oxygen.

108. Some Rare Nervous Affections.—Jacobsohn gives illustrated descriptions of a number of unusual affections of the central and peripheral nervous system observed in 360 patients with nervous troubles taking treatment at the university hydrotherapeutic institute.

112. Action of Amyl Nitrite on the Arteries.—Rzentkowski relates extensive research which shows that in health amyl nitrite relaxes the arteries with a very slight drop in the diastolic blood pressure. The blood pressure returns at once to normal on removal of the amyl nitrite, thanks to the elasticity of the arteries. In arteriosclerosis the diastolic blood pressure drops considerably although the heart action may be stronger. On removal of the amyl nitrite conditions return only very slowly to normal, the blood pressure not returning to its former height until after half an hour. The phenomena observed indicate that the higher tension in arteriosclerosis is the consequence of the permanent organic contraction and immovability of the intestinal arterial system. The true essence, therefore, of arteriosclerosis is the lack of elasticity in the walls of the intestinal arteries. He has the patients inhale ten drops of amyl nitrite at once, and has never witnessed any threatening symptoms from it in several hundred experiments on healthy subjects. He has also found it effectual in treatment of tuberculous hemoptysis.

113. Metabolic Findings in Leukemia Under Roentgen-Ray Treatment.—Vas summarizes his conclusions in the statement that Roentgen treatment has a similar action in both lymphatic and myelogenous leukemia. Under its influence the elimination of purin bodies is increased but not to parallel the numerical fluctuations in the leucocytes.

114. Functional Diagnosis in Pneumonia.—Solowzoff states that Katzenstein's method of examining the functioning of the heart proved valuable in the twelve cases of fibrinous pneumonia reported in detail. The test revealed prolonged weakening of the heart not demonstrable by any other objective sign. This weakness reached its height the second or third day after the crisis, even in vigorous patients and in those treated with digitalis. This also occurred in croupous pneumonia except that in these patients the blood pressure did not drop if they had been given digitalis. Caffein and strophanthin improved only while the drugs were being taken. The Katzenstein method has been described in these columns; it consists in compressing both femoral arteries just below Poupart's ligament. With a healthy heart the pulse rate grows slower or does not change while the blood pressure rises by 5 or 15 mm. mercury with Gärtner's tonometer. If the pulse increases and the blood pressure does not rise, this reveals cardiac insufficiency. The blood pressure drops with hypertrophy of the left ventricle. If the blood pressure does not increase while the pulse becomes accelerated, this shows still greater weakness on the part of the heart. This method is easily applied, requiring no cooperation on the part of the patient. The blood pressure and pulse were recorded at four minute intervals in his tests.

Policlinico, Rome

April 25, XVI, No. 17, pp. 517-548

- 116 Permanent Cultures of Bacteria. (Contributo alla preparazione di colture batteriche permanenti.) G. D'Agata and N. Pane.
117 *Iodin Treatment of Goiter. (Cura iodica del gozzo.) C. Urso.
118 *Exophthalmic Goiter following Iodin Treatment. (Morbo di Basedow conseguente all'uso di preparati iodici.) A. Cerioli.
May 2, No. 18, pp. 549-580
119 *Nervous Syndrome, etc., Complicating Ankylostomiasis. (Di taluni accidenti e sindromi nervose complicanti l'anchilostomiasi.) A. Signorelli.

117, 118. Iodin Treatment of Goiter.—Urso reports two cases of goiter in young women treated by daily injection of about 1 gm. of a 1 or 2 per cent. solution of iodine every day or second day, in Durante's iodo-iodid formula: 0.1 part iodine to 2 parts potassium iodid and water to 100 parts. Forty injections were made in one case and forty-five in the other, the fluid being injected so as to have it diffuse throughout the entire parenchyma during the course of the treatment. The goiter subsided completely in both cases with no signs of recurrence during the several months since. It was of the colloid form in both. Cerioli's article follows the above with a description of two cases of large goiter in women of 51 and 54, who were given a course of potassium iodid as the goiter seemed inclined to grow larger. The first patient took 15 gm. of potassium iodid in 300 gm. of water in the course of

fifteen days, as ordered, but by mistake she took at one dose in the morning the entire daily dose which should have been fractioned and taken after meals. She commenced to lose weight at once and the goiter also subsided, but symptoms of exophthalmic goiter developed with a recurrence of an old knee affection and crural adenitis and the goiter returned to its former size. In the course of several months these symptoms gradually subsided and the patient is now comparatively well. The second patient had arthritis, a cardiac defect and asthma, in addition to the goiter and considerable obesity. Potassium iodid was given tentatively but the patient rapidly lost weight and the heart symptoms grew more pronounced although the asthma vanished, and tremor was observed. No change was apparent in the goiter and the iodid treatment was soon suspended, but the symptoms and general malaise persisted for several months. He accepts a special susceptibility in these cases to the action of the iodid and calls attention to the onset of symptoms suggesting hyperfunctioning of the thyroid even while it was rapidly subsiding in size. This throws light on the cases of exophthalmic goiter without enlargement of the thyroid, and illustrates that the hyperfunctioning of an organ is not necessarily accompanied by unusual size.

119. **Nervous Symptoms with Ankylostomiasis.**—Signorelli reports three cases in which hookworm disease was accompanied by a meningeal, a neuralgiform or a convulsive, epileptiform syndrome. The patients were, respectively, 10, 17, and 23 years old.

Upsala Läkareförenings Förhandlingar

XIV, Nos. 3-4, pp. 205-348. Last indexed Feb. 20, p. 674

- 120 Deformities of the Skull, especially the Artificially Deformed. III. (Om kraniala deformationer, särskildt den artificiella bathry- och clinocefali.) G. Backman.
- 121 *Primary Actinomycosis of the Salivary Glands. (Om primär spottkörtelaktinomykos.) G. Söderlund.
- 122 Experiences with Operative Treatment of Malignant and Non-Malignant Gastric Lesions and Gallstone Operations. G. Ekehorn.
- 123 *Operative Treatment of Prolapse of the Rectum in Children. (En enkel men rationel operative behandlingsmetod af prolapsus recti hos barn.) Id.

121. **Primary Actinomycosis in Salivary Glands.**—In one of the two cases reported by Söderlund, a scrap of a head of barley was found sticking in the tissue of the sublingual gland, the outer end in one of its excretory ducts. The patients were a woman of 65 and a boy of 10, and in both the small hard tumor had developed in the course of a month or two. It was ascribed to a tuberculous origin in one case until after excision and microscopic examination.

123. **Method of Curing Rectal Prolapse in Children Without the Knife.**—Ekehorn passes a needle through the soft parts, at one side of the sacrum, until the tip emerges in the rectum where the operator's other hand threads the needle with a piece of stout silk suture material. This end of the silk is then drawn back and out, and the needle is introduced again in the same way on the other side of the sacrum, where it is threaded with the other end of the silk gut which is drawn out in the same way and the two ends are tied together over the sacrum. This brings the rectum up against the sacrum and as adhesions form the tendency to prolapse is permanently corrected without any cutting operation. In the four cases reported, the silk was removed after two weeks; the patients were between 2 and 5 years old, and there has been no sign of recurrence in any instance. It is not necessary to keep the patients in bed after this simple procedure.

Books Received

DIGEST OF COMMENTS ON THE PHARMACOPEIA OF THE UNITED STATES OF AMERICA. [Eighth Decennial Revision.] 1905. By Murray Galt Motter and Martin I. Wilbert. Hygienic Laboratory. Bulletin No. 49. March, 1909. Paper. Pp. 295. Washington: Government Printing Office, 1909.

DANIEL DRAKE AND HIS FOLLOWERS (1785-1909). Historical and Biographical Sketches. By Otto Juettner. A.M., M.D., Fellow of the American Academy of Medicine. Cloth. Pp. 496, with illustrations. Price, \$5. Cincinnati: Harvey Publishing Co.

COMMERCIAL LAW SIMPLIFIED. By Charles C. Simons, of the Detroit Bar. Leather. Pp. 510. Price, \$5. Detroit: The Business Man's Publishing Co.

HYDROTHERAPY. A Brief Summary of the Practical Value of Water in Disease. By William H. Dieffenbach, M.D., Professor of Hydrotherapy, New York Homeopathic Medical College and Flower Hospital. Cloth. Pp. 267, with illustrations. Price, \$3. New York: Rebman Co.

EXPERIMENTAL PHARMACOLOGY. A Laboratory Guide for the Study of the Physiologic Action of Drugs. By Charles Wilson Greene, Ph.D., Professor of Physiology and Pharmacology, University of Missouri. Edition 3, with 37 illustrations. Cloth. Pp. 76. Price, \$1. Philadelphia: P. Blakiston's Son & Co., 1909.

MEDICAL AND SURGICAL REPORT, CITY OF NEW YORK DEPARTMENT OF PUBLIC CHARITIES, City Hospital, Blackwell's Island. No. 1. 1909. Cloth. Pp. 237, with illustrations.

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Addresses

THE CONQUEST OF THE TROPICS FOR THE WHITE RACE

PRESIDENT'S ADDRESS AT THE SIXTIETH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION,
AT ATLANTIC CITY, JUNE 9, 1909

W. C. GORGAS, M.D.
ANCON, CANAL ZONE

It has been customary for the incoming President to urge on the Association some lines of action which he deems particularly useful and important. After careful thought, however, I have concluded that no special recommendations from me are needed at this time, and that a discussion of some phases of our sanitary work at Panama would be appropriate and perhaps generally useful and interesting.

This Association has recently endeavored to influence legislation in a direction favorable to sanitation; there is a broad field for usefulness in this line. With your permission, then, I will depart from the accepted custom, and will address you with regard to the sanitary work at Panama as it bears on malaria. I have thought that a brief description of this work might be of value to you in the future conduct of antimalarial work elsewhere.

Before entering on my subject, however, I wish to state that Dr. S. Weir Mitchell, of Philadelphia, has suggested that our Association should erect in the national capital some suitable monument in memory of the medical officers on both sides who lost their lives in the performance of their duties during the war between the states. Our Association now represents the medical profession of the whole United States. No period in the history of our profession can be selected in which greater devotion to duty was shown than was evidenced by the medical officers who served in this war, nor can any war be pointed out in which a greater number of medical officers gave up their lives in performance of their duties. I therefore recommend that the Association take steps looking to the erection in the national capital of a suitable monument in memory of the medical officers on both sides who gave up their lives in the performance of duty during the war between the states.

It has been proved that malaria is carried from person to person by the bite of the female of a particular species of mosquito, namely, the anopheles; and we hold that it is conveyed in practically no other way. Our sanitary measures are, therefore, directed toward the destruction of this species of mosquito. The female anopheles lays her eggs (about 100 at a time) on the surface of fresh water in which grass and algae are abundant. These eggs float around until hatched by the sun's heat, and the young larvæ flee to the grass and algae for protection

from small fish and other natural enemies. After larval and pupal stages in the water lasting about eight days, they develop into full-grown mosquitoes. The adult anopheles is weak in flight and does not habitually move about much; probably one hundred yards is practically its ordinary flight. The adult avoids the wind and seeks for its protection undergrowth, grass and plants near the ground.

Our measures for mosquito destruction are, then, based on the peculiarities just described. We destroy all the breeding-places within one hundred yards of the locality we desire to protect, so that the mosquito can find no water in which to lay her eggs, or in which her larvæ can develop. At the same time we clear off the brush within the same area, so that the adult can not secure protection against the wind.

The methods used for the destruction of breeding-places must vary with the locality. Wherever we can drain at reasonable cost, we do so, usually with superficial ditches, or with subsoil tiling. Subsoil tiling makes the ideal antimalarial drainage system; it does away entirely with mosquito-breeding, and, after it is once laid in, no further expenditure is necessary in keeping the ditch open. In the tropics the growth of vegetation is so rapid that a superficial ditch has to be cleaned out every two weeks to keep the channel free from breeding-places. This is a very heavy expense, and we, therefore, find it more economical to concrete all superficial ditches. A concrete ditch should be swept out frequently, else obstructions will form many small pools.

Drainage is, *par excellence*, the means for anopheles destruction, but in many cases, by reason of the expense, it can not be resorted to; as, for instance, where a town is situated near a large swamp or lake. In such cases the larvæ can live only around the edges of the water, where they are protected by grass and algae from small fish, or in holes made by the feet of animals in the soft soil along the margins of the water. We, therefore, keep the brush and grass cut there, and see that no animals have access. Where a town is situated near the banks of a small stream, we keep the banks and the stream itself free from grass and algae.

When it can be done with safety, sulphate of copper is used for killing algae. When this can not be used, we kill the larvæ with crude petroleum, or phinotas oil. Petroleum destroys the larvæ by spreading over the surface of the water and smothering them, while phinotas oil acts as a direct poison. These are the chief methods for destroying larvæ; and I look on their destruction, next to efficient drainage and the clearing away of vegetation, as the principal means for controlling malaria.

Brush-cutting we regard as second only to drainage in importance as an antimalarial measure. If brush and grass are thick about a dwelling, mosquitoes seek them

as shelter from the wind, and, if continuous stretches exist, the anopheles will wander by short flights a mile or more from a breeding-place. A cleared space of a hundred yards will, as a rule, stop her flight.

We keep the brush and grass cut within a hundred yards of the point to be protected. This is a large item of expense, as both grow very rapidly at Panama. It is a great economy to get the ground in such condition, preferably by subsoil tiling, that horse-mowers and scythes can be employed. They are now in use in most of the localities along the line of the canal where work has been going on for a year or more.

A specially good example of the results that can be attained by antimalarial work is afforded by our experience at Colon. This is a town of 15,000 inhabitants, and is built on an island just above sea-level. Where the ground has not been filled in, the houses have to be placed on piles from two to four feet in height, and are approached by wooden footways raised above the water. The heavy rains in the wet season convert this unfilled ground into a fresh-water swamp. Mosquitoes of every kind were very numerous in Colon when sanitary work was begun there.

The brush was first cut away for half a mile back of the town; this cleared area was intersected by small canals twenty feet wide and six feet deep, and the entire swamp was connected with these canals by surface ditches. This allowed the fresh water to run off, and the incoming tide caused all ditches to be filled daily with sea-water. We also looked carefully after all water-containers in the town, including cisterns and barrels.

The result has been that Colon is now almost free from mosquitoes of all kinds. This was unexpected. It was hoped by our sanitary measures to get rid of the disease-carrying mosquitoes, namely, the *stegomyia* and *anopheles*, which do not fly far; but it was not expected that the *culex* variety, which is strong on the wing, would be affected to any great extent.

In addition to measures directed toward the destruction of mosquitoes, the houses of all employes on the Isthmus are screened with wire gauze. Most of the houses are built with galleries, on which the doors and galleries open. These galleries are screened rather than the doors and windows themselves, thus leaving only one or two entrances into each house to be looked after with regard to being kept closed. The screening should always be supervised by some one experienced in mosquito work, as there are many points which will be overlooked by the average carpenter.

We also recommend the use of mosquito-bars, though most of us have become somewhat careless on this point, as mosquitoes are rare in houses which are carefully screened in the well-drained districts.

All employes are also urged to take three grains of quinin daily as a prophylactic measure. They are not required to do so, but the dispensers visit all the camps and barracks daily and offer quinin to such men as care to take it. On an average, our 45,000 employes consume daily about 20,000 doses of quinin.

To carry our sanitary measures into effect, the forty-five miles of country lying along the line of the canal are divided into seventeen districts. The sanitary work of each separate district is in charge of an inspector, and one chief inspector has charge over all. The chief inspector has on his staff a man familiar with the life-history of the mosquito; another who is an expert in tiling and ditching, and also a general inspector. These men keep in touch with the district inspectors and act

as their instructors. The district inspector is held responsible for the results in his district. He has twenty-five or thirty men for ditching and brush-cutting; a force of carpenters for keeping screens in repair, and one or two quinin dispensers.

The chief inspector keeps in such touch with the various districts that he can intelligently apportion to each the funds at his disposal, increasing or decreasing the monthly allowance as the necessity arises. Each district inspector is notified monthly of this allowance, and is required to keep his expenditures within the prescribed limit.

The medical officer in each district reports weekly the number and locality of the employes in his district suffering from malaria. These reports are consolidated every week in the central office, giving for each district the number of employes in that district, the number of cases of malaria which occurred during the week among these employes, and what percentage the number of cases of malaria bears to the whole number of employes. A copy of this consolidated report is sent weekly to each district inspector. The work of the district inspector is judged by this report. If the malarial rate rises in a district the special inspectors from the central office go out to the district and they, with the district inspector, are expected to find the cause of the rise and to correct it.

The results as to malaria have so far been very satisfactory at Panama. Table 1 shows the malarial rate among employes:

TABLE 1.—MALARIAL RATE AT PANAMA

Year.	Force.	Cases.	Rate per 1,000	Deaths.	Rate per 1,000
1905	16,511	8,496	514	92	5.57
1906	26,705	21,938	821	199	7.45
1907	39,344	16,709	424	138	3.51
1908	43,890	12,372	282	59	1.34

It will be seen from this table that there has been a steady decrease in the malarial rate and that at present it is less than one-fourth of what it was in 1905. I see no reason why the rate should not continue to decrease indefinitely, provided proper methods are kept up.

The general health of our force is excellent. Considering the whole population under our sanitary jurisdiction, including the cities of Panama and Colon, our results are shown in Table 2.

TABLE 2.—DEATH RATE IN THE POPULATION UNDER AMERICAN SANITARY JURISDICTION

Year.	Population.	Number of Deaths.	Rate per 1,000.
1905	42,699	2,793	65.41
1906	66,011	3,544	53.69
1907	102,133	3,435	33.63
1908	120,097	2,983	24.83

In the Canal Zone, which, for sanitary purposes, is under the supervision of the chief sanitary inspector, the rates for the last two years were as shown in Table 3.

TABLE 3.—DEATH RATE IN CANAL ZONE

Year.	Population.	Number of Deaths.	Rate per 1,000.
1907	54,306	1,708	31.60
1908	67,146	1,273	18.95

While this is not small as compared with most parts of the United States, it is small for tropical regions and small as compared with many parts of Europe.

Table 4 shows the death rate from all causes (including violence), considering the whole force of employes.

TABLE 4.—DEATH RATE AMONG GOVERNMENT EMPLOYEES

Year.	Force.	Number of Deaths.	Rate per 1,000
1905	16,511	427	25.86
1906	26,705	1,105	41.37
1907	39,343	1,132	28.77
1908	43,890	571	13.01

The rate for 1908 is probably not any higher than that of a similar body of men doing the same work in New York State.

The figures for Americans, taking into account all causes, including violence, are shown in Table 5.

TABLE 5.—DEATH RATE FOR AMERICANS IN PANAMA

Year.	No. of		Rate.	No. of		Rate.
	Men.	Deaths.		Women and Children.	Deaths.	
1905	3,029	35	7.00	800	..	....
1906	5,000	35	7.00	800	..	....
1907	4,300	42	9.76	1,337	9	6.73
1908	5,459	42	7.69	2,674	26	9.72

This is certainly a death rate no higher than for a similar population in the healthiest localities in the United States. It is much lower than that for most parts of the country.

I believe that the debility from which the white man has suffered in the past at Panama and in other tropical countries is due to malaria principally, and that if he protects himself from this infection he will remain as vigorous and strong as if he were living in a temperate climate. As a reason for this belief, I would cite the health conditions of the Americans at Panama.

We have about 8,000 white Americans there, living under the same conditions that exist at home among men doing the same character of work. They are exposed to the weather fully as much as they are at home, a large proportion of them being exposed for eight hours daily to the tropical sun and rains. Notwithstanding this, the figures quoted show that their general health remains fully as good as it was in the United States.

The only difference between ourselves and the whites formerly in Panama is that we have succeeded in protecting ourselves entirely from yellow fever and also, to a considerable extent, from malaria. Yellow fever has a great effect on the death rate of a non-immune population, but it is not a noticeable cause of debility. On the other hand, malaria is a disease which may affect the individual for years, and in a locality like Panama is responsible for a widespread condition of debility throughout the population.

It is neither difficult nor expensive for the white man going to the tropics to protect himself from malaria. It is only necessary that he should screen his house well, drain and clear off the brush within one hundred yards of his residence. These measures are much less expensive than those he must take in the temperate zones to protect himself from cold.

The advances in tropical sanitation in the last fifteen years have shown that the white man can live in the tropics and enjoy as good health as he would have if living in the temperate zone. This has been demonstrated both by our two military occupations of Cuba and by our present occupancy of Panama.

The returns for labor are many fold greater in the tropics than they are in the temperate zone. I think, therefore, that during the next few centuries the tendency will be for the white man to drift to the tropics. I dare to predict that after the lapse of a period, let us say, equal to that which now separates the year 1909 from the Norman conquest of England, localities in the tropics will be the centers of as powerful and as cultured a white civilization as any that will then exist in temperate zones.

I believe that our work in Cuba and Panama will then be looked on as the earliest demonstration that the white man could flourish in the tropics and as the starting-point of the effective settlement of these regions by the Caucasian.

THE TEACHING OF DERMATOLOGY—DERMATOLOGY AND THE PHARMACOPEIA

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON CUTANEOUS MEDICINE AND SURGERY AT THE SIXTIETH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, 1909

WILLIAM ALLEN PUSEY, A.M., M.D.

CHICAGO

There are two subjects which are now occupying a large place in the general policy of the American Medical Association. One of these is the effort at improvement of medical education. The other is the campaign in favor of the use of official remedies instead of proprietary or other remedies of uncertain or unknown composition. Both of these subjects are of direct importance to dermatology and I shall undertake, in the address which devolves on me as Chairman of this Section, to consider them in their bearings on our specialty.

THE TEACHING OF DERMATOLOGY

As you all know, the Council on Medical Education of the American Medical Association has been engaged for the last five years in an active campaign for improvement in medical education. The Council has lately undertaken the consideration of the subject of the medical curriculum and the standardizing of the medical course. With this end in view it appointed last summer a committee of One Hundred to prepare a Standard Medical Curriculum and this Committee was asked to draw up, through subcommittees, a curriculum for a four-year medical course; the plan of the Council being, not to establish a hard-and-fast curriculum to which all colleges should conform, but to furnish as nearly as possible an ideal curriculum which might serve as a standard by which schools might pattern. For the purpose of this study the Council divided the curriculum into ten sections:

1. Anatomy, including histology and embryology.
2. Physiology and physiologic chemistry.
3. Pathology and bacteriology.
4. Pharmacology, toxicology and therapeutics.
5. Medicine, including pediatrics and nervous and mental diseases.
6. Surgery; general and special.
7. Obstetrics and gynecology.
8. Diseases of the eye, ear, nose and throat.
9. Dermatology and syphilology.
10. Hygiene, medical jurisprudence and medical economies.

I was invited to act as chairman of the committee on dermatology and the following other members were appointed on the committee: Dr. Milton B. Hartzell, University of Pennsylvania; Dr. John A. Fordyce, University and Bellevue Hospital Medical College; Dr. T. C. Gilchrist, Johns Hopkins University; Dr. John T. Bowen, Harvard University; Dr. Grover W. Wende, University of Buffalo; Dr. Isadore Dyer, Tulane University; Dr. Douglass W. Montgomery, University of California; Dr. William T. Corlett, Western Reserve University; Dr. William A. Hardaway, Washington University.

Our committee was asked to make specific recommendations regarding the following points:

- (a) The place of dermatology in the curriculum.
- (b) Prerequisite courses, either preliminary or medical.
- (c) The necessary qualifications of instructors.
- (d) The best methods of teaching.
- (e) The necessary equipment.
- (f) The necessary clinical facilities.

- (g) The proportion of didactic and laboratory or clinical teaching.
- (h) The number of hours to be devoted to the subject.

Recommendations on these points were to be made with the following propositions in mind:

1. The medical course is to consist of four years of at least 900 hours each.
2. A preliminary college course shall be required including one year of physics, chemistry and biology.
3. The fundamental branches shall be taught in the first two years and the clinical branches in the last two years.

The Committee on Dermatology and Syphilis met in September last. The members of the committee found themselves in agreement on all essential matters and submitted a report which was unanimous, including the approval of the four members who were not present at the meeting. The scope of the committee as originally established had included dermatology and venereal diseases. The first point considered by the committee was this combination, and on this point it recommended that diseases of the skin and syphilis should constitute the group, and that gonorrhea and its sequelæ and accompaniments in the genitourinary tract should be included under genitourinary surgery. This recommendation, as well as all of the other recommendations of the committee were approved by the meeting of the chairmen of the ten sections held in New York Dec. 28, 1908. The further report of the committee, which was a slight elaboration of the report made to the meeting in New York, was the result of correspondence and represented an expression of opinion of nine of the ten members. This report was presented to a meeting of the chairmen of the ten subcommittees held in Chicago on April 5 last.

THE REPORT OF THE COMMITTEE

The essential part of the committee's report is as follows:

A. The course on dermatology and syphilis should preferably be placed in the senior year, but when necessary may be placed in the junior year. The feeling of the committee for placing the subject in the senior year is very strong and it believes that the course should be placed in the junior year only when the exigencies of the schedule make it practically impossible to place it in the senior year. A majority of the committee are of the opinion that to give the didactic instruction in the junior year and the practical in the senior would be better than placing the entire course in the junior year.

B. This department should have the student after he has finished the fundamental subjects and preferably after he has had a course in internal medicine.

C. At the head there should be a man who is an authority or a qualified expert. For his associates and assistants he should have men, preferably, who intend to make themselves experts in this department, or at least those who have had a reasonable amount of experience.

D. As the first condition of satisfactory teaching in this department there should be clinical instruction in small classes. In addition there should be a general clinic associated with the necessary didactic or systematic teaching. There is a very strong opinion in the committee in favor of small classes and the committee believes that most of the practical instruction should be given to the students in small groups. At the same time it is realized that dermatologic cases can be demonstrated more easily before a number of students than can most other cases and that the general clinic when properly conducted may be satisfactory.

E. The necessary equipment includes colored illustrations, projection apparatus, microscopes and the usual laboratory facilities.

F. There should be enough patients to illustrate repeatedly the commoner dermatoses.

G. Approximately two-thirds or three-fourths of the time assigned to this course should be given to practical instruction and the remaining one-third or one-fourth to didactic. The committee believes that one-fourth time for didactic instruction and three-fourths for clinical is a better ratio than one-third for didactic and two-thirds for clinical, but where the arrangement of schedules makes the division in one-fourth and three-fourths, respectively, impractical, it believes that the ratio or one-third for didactic and two-thirds for clinical teaching may be approved.

H. The number of hours assigned to this course should be ninety.

I. The scope covered by this group of subjects is definite and offers little opportunity for repetition by other departments. The following statement seems all that is necessary to avoid difficulty on this point:

The anatomy and physiology of the skin, excepting perhaps a brief review, should be left to their respective general departments.

The histopathology of diseases of the skin is so scantily considered in the other courses on pathology and is of so much importance that it should be given full consideration in this department.

In this department there should be given a systematic course on syphilis as a whole and a detailed consideration of its cutaneous manifestations. Detailed consideration of syphilis of the viscera and of other tissues than the skin does not belong to this department, but should be left to those departments where these subdivisions of the subject naturally fall.

Chancroids should be considered one of the infectious diseases of the skin and taken up by this department.

The cutaneous manifestations of the exanthemata should be covered by this department, but their general consideration should be left to medicine.

These recommendations were approved without modification by the meeting of April 5 last.

Of course these propositions cover in a very brief and dogmatic manner a broad subject on which there is room for much thought and perhaps some difference of opinion. As to the first and second propositions, I take it there would be no difference of opinion among us. Cutaneous diseases and syphilis should preferably be placed in the senior year and the student should take up dermatology after he has finished the fundamental subjects and, preferably, after he has had a course in internal medicine. In my judgment the last clause here "after he has had a course in internal medicine" expressed the important prerequisite qualifications for the study of dermatology. The student of dermatology should have an elementary knowledge of general medicine, and to take him in his junior year before he has completed such a course is an arrangement which can be justified only on the grounds of necessity; but anyone who has had to do with the arrangement of a medical curriculum knows only too well that a logical sequence in arrangement is a physical impossibility within the limitations which the length of human life places on the number of years to be devoted to the medical course.

As to the necessary qualifications of instructors, that is a proposition to which only a general answer can be given. I believe that the answer which is made by the committee is satisfactory. In my opinion, this condition for the adequate teaching of dermatology is one of the least difficult that we have to meet in the United States. With a rather extensive acquaintance among dermatologists in this country, I believe that there are few schools that can not obtain men qualified, as far as knowledge of dermatology goes, to teach all of the dermatology that can be included in an undergraduate's course. The dif-

ficulty is that most of the teachers will not, or are not so situated that they can, give the time necessary to the most satisfactory methods of teaching dermatology.

I believe teachers of dermatology, as other teachers of practical medicine, will have to come to understand that for satisfactory teaching of their subject they can not much longer confine themselves to one or two appearances a week before a class, but that they must give their time in large measure to the exacting duties that are involved in public hospital and dispensary attendance and in teaching small groups of students. This sort of work is most laborious, but it has its recompense in that it is as useful in increasing knowledge to the instructor as it is to the students.

As to the best methods of teaching dermatology, I believe that we have much food for thought. I think that our committee was unanimous in its opinion that clinical instructions in small classes is of the highest importance, and I have already intimated my belief that it is in this feature that dermatology, as now generally taught in this country, is weakest. If I can estimate the situation properly, the least valuable instructions which is given—and this applies to all departments of medicine—is that in which a teacher undertakes to instruct at one time a large body of students. In a subject like ours in which it is impossible, under the necessary limitations in time, to hope that students will be able to cover the subject thoroughly, I am inclined to believe that a short course of didactic lectures, sufficient to give an orientation of the subject, is useful and will be maintained; but I believe that it is impossible to avoid the conclusion that if we are going to give our students any practical knowledge of dermatology, no matter how elementary, it is necessary to bring them in sufficiently close contact with patients to allow them to observe accurately the clinical picture. In the time at their disposal it is impossible for them to obtain any wide knowledge of dermatology in this way, but from personal experience I can testify that it is surprising how much they learn from direct contact with a small number of patients. It follows as a corollary to this that we must have clinical material and, to obtain this, we must have facilities for taking care of it. Fortunately most of our cases are ambulatory, and a good dispensary will furnish all the material necessary. It is highly desirable, however, that this should be supplemented by a certain number of hospital beds. In this facility our department, as a rule, is weak, but not nearly so weak as it was a few years ago, and the increase in the last few years in the number of beds in our general hospitals allowed for cutaneous diseases makes me optimistic of what the future will do for us in this respect.

We asked that ninety hours as a minimum be assigned for instruction in this department and it was granted without debate. Of course, we would all like to have more. In my experience every teacher, not only in medicine but in all fields of instruction, is an Oliver Twist in this respect. We all know how depressing it is to undertake to give instructions in a large specialty like dermatology in the limited time that can be assigned to it in an undergraduate course, but the limitations of a student's time can not be disregarded, and, in my judgment, the ninety hours agreed on for dermatology and syphilis is sufficient to permit us to give an adequate course of elementary instruction.

I am sure that this subject is of great importance to dermatology in this country, and for that reason I have taken this opportunity of recalling it to your attention.

I am aware that, in presenting the matter in the way in which I have, I am making a sort of report of the committee's work to this Section, where, technically, the report does not come, but I am sure that the other members of the committee, like myself, feel that in acting in this matter we are assuming a responsibility that affects American dermatology as a whole, which is, in turn, most comprehensively represented by this body.

DERMATOLOGY AND THE PHARMACOPEIA

There is probably no other class of diseases which medical practitioners in general more frequently treat with proprietary remedies, of uncertain composition, than skin diseases. There is almost certainly no other class of diseases in which patients so frequently treat themselves with ready-made commercial remedies. There is perhaps no field of medicine which has been more exploited than dermatology by the makers of proprietary remedies. And I have had it said to me (but for the sake of my specialty I have vigorously denied it) that there is no class of practitioners who are more given than dermatologists to the use of proprietary remedies of all sorts.

I believe, therefore, that we may with profit to ourselves give some thought to the subject of the propaganda for the use of official or authenticated remedies which is being carried on by the Council of Pharmacy and Chemistry of the American Medical Association.

This body was established four years ago for the purpose of investigating and determining the value of remedies, not included in the Pharmacopeia and National Formulary, which were offered to or used by the medical profession. Up to the present time its work has consisted chiefly in examining proprietary medicines. In this work it has examined more than 700 articles; it has accumulated a vast amount of information about proprietary remedies, and has made the information readily available by publishing a book called "New and Nonofficial Remedies," which is to be published annually, bringing up to January of each year information covering all remedies examined that are regarded as worthy of acceptance. Incidentally, in addition to educating the profession concerning the value or lack of value of proprietary remedies, the work of the Council has exercised an enormous influence on the manufacturers of pharmaceuticals, because by publishing its findings in *THE JOURNAL* of the American Medical Association the Council has given standing to accepted articles and has given most disastrous publicity to fraudulent ones. I know no braver or more self-sacrificing public service than that which this Council has been carrying out, and no movement whose results for the medical profession are more important.

Aside from the many other abuses arising from the common use of proprietary remedies to which it has called attention, the Council on Pharmacy and Chemistry has shown that proprietary remedies coming from indiscriminate sources are wholly unreliable; that the practitioner who uses an unknown remedy, solely on the statements furnished by its proprietor, is in most cases acting on information which a careful man would not ordinarily accept as the basis for any important procedure. It has not shown that all manufacturers of proprietary articles are dishonest—far from that—or all proprietary pharmaceuticals unreliable, but it has shown that many are, and that the individual practitioner is not in most instances in possession of the information concerning the origin of proprietary remedies to enable him to distinguish between the reliable and

the unreliable. Particularly has it shown that the honest proprietor accepts investigation of his remedies in order that they may have the prestige of approval and that the proprietary remedy whose owner does not submit it to investigation is one which is likely to be unreliable.

In the four years that have passed, the Council has investigated almost all of the proprietaries; this work is practically finished, the Secretary of the Council tells me, except in so far as new agents present themselves—a small fraction of the work; and information concerning all remedies which have been accepted by the Council is available up to January, 1909, in the "New and Nonofficial Remedies." In order to keep this information closely up to date, it is intended to issue three supplements to this publication each year. Not only this, but the Council stands ready to examine and report within a short time on the character of any remedy submitted to it either by a proprietor or physician which, in the judgment of the Council, is worthy of examination.

This brings us face to face with a very concrete situation: In the Pharmacopeia, the National Formulary and the work of the Council, including its willingness to investigate new remedies, we have practically all of the remedies, or, at least, mixtures of drugs, whose composition and quality are guarded by official standards or authenticated by disinterested examination. In our use of drugs should we confine ourselves to these official and authoritative remedies or are we justified, in the face of the findings of the Council, in picking and choosing our remedies where we will, regardless of their authentication by these standards?

Many illustrations within the field of cutaneous therapeutics could be given from the findings of the Council to show that when we go outside of these standards we are likely to go blindly. The range of unreliability extends from the appropriation of common agents, like borie acid, under new names, through remedies of uncertain and highly problematical properties, to articles which entirely fail to contain the ingredients claimed for them. For example, I received, and I have no doubt the profession at large recently received literature calling attention to a new non-irritating 1 per cent. solution of mercuric iodid for hypodermic use in syphilis. The Council has on request recently examined this preparation and shown that it contains less than a hundredth part of the mercuric iodid claimed for it, if it contains any at all. How much blame should the practitioner place on himself, if, with no other knowledge than that furnished by the proprietor, he has used that preparation in a syphilitic emergency, like a cerebral endarteritis? Enough, I should say, to give him pause before again using a drug of unauthentic origin.

To take another illustration from the mercury preparations, there is in use for hypodermic medication a 1 per cent. solution of mercury soziodolate. Mercury soziodolate is insoluble in water, but is soluble in solutions of chlorids, iodids and bromids. And examination in the laboratory of the Council shows that the so-called solution of soziodolate of mercury is honest in so far as its mercury content is concerned. But when a mercuric compound is treated with an alkali iodid, like sodium iodid, an alkali mercuric iodid is formed. And, to quote the report, "from this it would seem that when mercury soziodolate is dissolved in sodium iodid, the compound is decomposed, and the solution contains sodium mercuric iodid. . . . If this is the case, the question at once arises, why should

not mercuric iodid be used in the place of the organic mercury compound, since the efficacy of mercuric iodid has been firmly established?" And the reporter suggests, as equivalent to the soziodolate solution in sodium iodid examined by him, the following very simple mixture:

R.	gm. or c.c.	
Mercuric iodid.....	0.8	gr. xiiss
Sodium iodid.....	3	gr. iiss
Water, q.s.a.....	100	fl. ʒiiss

I advise the reading of the publications of the Council on Pharmacy and Chemistry. You will not only find them interesting as contributions to our knowledge of human nature as it is exhibited in business, but, on the basis of my experience, I venture to believe that you will find them useful in refreshing your knowledge of chemistry, and, I am also almost ready to say, of materia medica and therapeutics.

Take again one of the recent aspirants for especial consideration as a local application—vasogen, for which so much has been claimed; this is, to quote the Council's report again, "essentially an ammonium soap and petrolatum—practically an ammonia liniment mixed with petrolatum." And iodovasogen, recommended as a substitute for iodine for external application, contains its iodine, not free, but chiefly in the form of ammonium iodid—quite a different sort of drug and one which certainly has not the same local action as iodine.

Vasogen serves well to illustrate another point about these proprietary remedies; and that is the danger of giving weight to testimonials to the value of these articles. As I write this I have before me one of the vasogen booklets with five pages of "bibliography," containing more than two scores of references to testimony on the value of this new ointment base. If I were an expert I would write a book on the psychology of the appeal of new remedies and of testimonials as to their efficacy.

In the light of the investigations of the Council I think that we are forced to the following conclusions: We should as nearly as possible confine our use of remedies to those authenticated by acceptance by official standards; particularly should we be careful on this point with proprietary articles. We can not without the greatest caution habitually use remedies whose composition and characters are not established, either by official recognition in the Pharmacopeia or National Formulary or in the "New and Nonofficial Remedies" of the Council—the only authoritative standards that we have. In the case of proprietary articles I believe that we would be on the scientific side if we confined ourselves absolutely to accepted articles. With drugs of definite and known composition, especially with pure chemicals and with other non-proprietary remedies of known composition or definite standards, we can safely allow ourselves much more discretion, provided we are informed as to their origin.

If we are going to use these standards as we should use them, it becomes highly important that the Pharmacopeia, the National Formulary and the "New and Nonofficial Remedies" should adequately represent the present state of our pharmaceutical knowledge, and if they do not we should take steps to correct the omissions. In the case of the "New and Nonofficial Remedies" and the work of the Council, there is, I believe, little for us to do, except to submit to them for investigation any new remedies that seem worthy of trial. It is doing its work well and is up to date. It serves to bridge the periods between the revisions of the Pharmacopeia, so that there may be no delay in furnishing

authentic pharmaceutical information. The only conditions which it requires for acceptance of articles are: that they shall not be fraudulent; shall be of known composition; shall not be advertised to the public and thus encourage self-medication, and shall not be useless or harmful. Certainly we could not require less exacting standards for the remedies we use, if we are to exercise ordinary intelligence in our prescribing. And if in connection with these very lenient requirements we remember that the Council stands ready to investigate without delay any remedy in its opinion worthy of examination, it seems clear that to conform to its standards in the use of remedies would not place any embarrassing or useless limitations on one's therapeutic resources.

In the case of the Pharmacopeia and the National Formulary there is a good deal that we may do. These official standards are revised decennially. New preparations are added and others are dropped. A critical comparison of the drugs and preparations, now officially recognized by these two standards, with our modern dermatologic materia medica, would, I believe, be of considerable value in improving for dermatologists the next editions of these works. It would show numerous preparations which might be omitted as useless and would call attention to some which should be officially recognized by these works.

The Pharmacopoeial Convention will welcome such suggestions. The Convention for the Revision of the United States Pharmacopeia meets in 1910, and the present, therefore, is an opportune time for effort in this direction. In view of this approaching convention I believe that it would be highly desirable for this Section to appoint a committee to consider this subject during the next year, with a view to offering suggestions concerning matters of dermatologic interest which might properly be considered by the Pharmaceutical Convention. This would be in line with the efforts of the Committee on Pharmacopeia which has been appointed by the House of Delegates of the American Medical Association.

In closing I wish to express the high appreciation I have of the honor conferred on me in selecting me to preside over the deliberations of this body. There are few things more grateful than evidences of esteem from one's colleagues.

Experimental Alcoholic Paralysis.—Aubertin and Lhermite (*Compt. rend. Soc. de Biol.*, 1909, lxvi, 38) performed experiments to determine the localized nervous effect, if any, of chronic alcoholism. It was found that animals which were given quantities of absinthe daily developed paralysis of the posterior limbs, and after an interval of about ten months died of cachexia. Postmortem, the spinal cord showed a reduction in the number of nerve cells in the anterior horn. This reduction was fairly well confined to special groups of cells. The degenerating cells showed the appearance of chromatolysis. In the area of the atrophied nerve cells there was a great proliferation of glia cells. These changes were practically absent from all parts of the brain. The peripheral nerves were intact and showed relatively no lesions. Only a few interannular segments showed some degeneration on the medullary sheath. Since the changes in the brain are not sufficient to account for the systemic changes seen in the animal, Aubertin and Lhermite conclude that the paralysis is to be considered a result of poliomyelitis. It is further asserted that chronic alcoholism may be accompanied by paralysis associated with an extensive degeneration of nerve cells in the ventral horns of the spinal cord, and without any visible changes in the nerve fibers.

Original Articles

TWELVE YEARS OF PULMONARY TUBERCULOSIS TREATMENT IN THE WEST *

E. S. BULLOCK, M.D.

IN COLLABORATION WITH

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The time has come when we should make a conscientious and scientific attempt to fix the value of climate, and especially high altitudes, in the treatment of pulmonary tuberculosis. I am not sure that it can be accomplished at this time, but that is no excuse for not trying, and one purpose of this paper is to assist, as far as possible, in the elucidation of this problem. I also desire to place before the profession, after twelve years of tuberculosis work, some practical observations along other than climatic lines, which I trust will be of service.

ALTITUDE IN TUBERCULOSIS

We must all admit that, until settled, the question of the place of climate in the treatment of pulmonary tuberculosis is one of great importance, for the physician certainly does not wish to send consumptives to distant resorts if as good results can be obtained nearer home. Twenty or twenty-five years ago there was an abiding faith in the efficiency of climate in tuberculosis, for the quite simple reason that nothing was done for consumptives at home, and all knew that some at least recovered when sent to distant climates. Then came the time when efforts were made in behalf of the too-long-neglected consumptive, and our beloved and respected Trudeau was among the first to show clearly that, in early stages especially, a certain proportion of these unfortunates could be returned to health and usefulness in their home climates. Then succeeded the period of almost childish enthusiasm for the results of treatment in home climates, and we are still passing through that stage, though there are portents of an early emergence.

It is curious and quite true that in many ways we are behind Europe, though as a nation not fond of admitting it; a little slow in backing a good thing (the sanatorium movement was twenty-five years late in reaching us) and still a little slow in discovering its limitations. In Germany, years ago, they found that the so-called cured patients were prone to relapse and die, and that the sanatorium must be supplemented by something else if the cured patients were to remain "cured." In this country we are just in the process of finding this out, especially those physicians who are not directly under the influence of the *esprit de corps* of the sanatorium movement. Such physicians, living in proximity to these institutions, have an excellent opportunity to observe the results, and often to care for the "cured" patients after relapse has occurred.

No man can spend years in contact with tuberculosis, and have left any great enthusiasm for the results of treatment, either climatic or otherwise, and most of us who have been long enough in the work rather lament the fate that made us specialists in the disease; for

* Owing to lack of space, this article is here abbreviated by the omission of a portion devoted to the consideration of therapeutic agents other than climate. A copy of the reprint containing the whole article will be sent by the author, or THE JOURNAL, on receipt of a stamped addressed envelope.

really it is fate and not choice that makes most of us tuberculosis specialists, nearly all having served time as consumptives before taking up the work. We are coming to recognize clearly that the root of the evil must be attacked by prevention, not cure, and that it would have been better for civilization if all the money expended in attempts at "cure" had been directed to the accomplishment of prevention instead. It is, however, our business to care for the sick as well as to prevent sickness, and after infection has occurred it becomes our plain duty to do all we can for the unfortunate person on whom the parasite has fastened.

A careful study and observation of tuberculosis will convince any one that, left to itself after the onset of tangible symptoms, it is the same old fatal disease it always has been, and that, even under the best of conditions, and with every modern weapon brought to bear, it is ultimately nearly always fatal in any stage beyond incipency. Until we have learned how to bring these people under treatment in the earliest stages, we have no right to wax enthusiastic over our efforts to cure tuberculosis. As Dr. Trudeau recently wrote, "The more attention you give to the tuberculosis problem the more it grows in size."

tion is not the more creditable from the fact that our opponents have adopted the same sort of argument, and hitherto have been satisfied with invective and unsupported opinion where the claims of climate are concerned. To put it colloquially, however, it is up to us to make good, rather than for the rest of the profession to prove that we are wrong, for we wish the general practitioner to make a certain disposition of his tuberculosis patients—one that is vastly more comfortable and less expensive not to make. To make good, as the saying goes, is our mission here.

People are not sent to Saranac Lake because of the climate, but, as we all know, on account of the excellent character of the work that has been done there from the beginning. Even if the argument goes against us it may not be too much for us to hope that we may be able to continue our chosen work in the sunny southwest, where it is vastly more comfortable, if not more scientific, to practice the outdoor life.

Now, let us throw the searchlight of facts on this perplexing question. We shall then be more than willing to leave the decision in the hands of the profession.

A mile above the sea, in a climate that for comfort can not be surpassed, whatever its scientific usefulness

TABLE 1.—FORT BAYARD, N. M.: RESULT OF TREATMENT IN COMPLETED CASES FROM 1899 TO 1907, INCLUSIVE*

Class.	No.	%	App. Cured.		Arrested.		Improved.		Unimproved.		Died.	
			No.	%	No.	%	No.	%	No.	%	No.	%
Incipient	124	4.9	42	41.9	42	33.8	15	12	15	12	0	0
Mod. advanced	1,089	43.4	72	6.6	326	29.9	384	35.2	292	26.8	15	1.3
Far advanced	1282	51.1	3	.23	122	9.5	305	23.7	447	34.8	405	31.5
Acute millary	9	.35	0	0	0	0	0	0	0	0	9	100
Total	2,504	....	127	5.07	490	19.5	704	28.1	754	30.1	429	17

TABLE 2.—FORT STANTON, N. M.: RESULT OF TREATMENT IN COMPLETED CASES FOR 1906, 1907 AND 1908*

Class.	No.	%	App. Cured.		Arrested.		Improved.		Unimproved.		Died.	
			No.	%	No.	%	No.	%	No.	%	No.	%
Incipient	17	5	7	45	6	29	1	11	2	8	1	5
Mod. advanced	99	26	16	15	36	34	25	23	6	9	17	18
Far advanced	227	66	12	4	30	17	41	17	36	14	119	44
Total	343	..	35	21	72	26	67	17	44	10	139	22

* Practically all patients presented bacilli in sputum on admission.

To return to climate, however: We know that there has been a vast expression of opinion on this subject, but so far, unfortunately, it has been mostly opinion. The scientific facts we require in order to reach a decision on the value of climate in tuberculosis have not been forthcoming to any great extent, especially in this country. Recently, Bonney of Denver published an otherwise creditable work on tuberculosis, but the chapter on climate, or rather the climate of Colorado, was the same old thing—opinion, opinion, and little else, of which we are all so weary, and with complete justification, too. As one reviewer quite aptly put it, "If climate is such a good thing in tuberculosis, why not prove it and then stop talking about it?"

Twelve years ago, fate sent me west with tuberculosis and I was fortunate enough to recover. I have devoted the best part of my life to the establishment of an institution for its treatment in the far west. If I am on the wrong track I wish to know it, and to retrace my steps before it becomes too late. I resent, however, having my motives questioned simply because I am and have been a climatic worker; because the facts in my possession seem to justify the continued advocacy of climate. I know that by our everlasting proclamation of unsupported personal opinion we climatic workers are to blame for the attitude of suspicious criticism that has commonly been adopted in discussing our work. That we are under a cloud I freely admit, and our posi-

tion may be, there exist two great government institutions for the treatment of tuberculosis—Fort Bayard and Fort Stanton. The former is for officers and soldiers of the United States Army, and the latter for officers and sailors of the merchant marine. About three thousand patients have been discharged from these institutions, and after nearly ten years' existence the results obtained should be worthy of careful comparative study. A foreword, however, is in order in regard to these institutions and their management. Both are under the direction of officers of their respective services, who have no personal interest in the exploitation of climate, and who come and go when their tours of duty are ended. This continued change in management, as well as in the personnel of the subordinate staff, is, of course, inimical to achievement in tuberculosis work. The members of the staff can not be expected to take the interest in it that characterizes those who have chosen it as a life vocation. Red tape and official detail consumes much of the time of those in charge, and, as these institutions are very large, that close supervision of patients, so essential to the accomplishment of the best results, is to a great extent impossible. Personal contact with patients, always in the services rather distant and much too dignified for friendly confidence, is entrusted largely to subordinates, who are even less interested than their chiefs. Careful individualization, as we all know, is most essential to the accomplishment of good results

in tuberclosis; for we never realize when an apparently trivial interference from us may mean the future welfare of our patients. When institutions go beyond a certain size, as in these government sanatoria, it is practically a lost factor. One thing we can say, however, about the men who direct these institutions; they are honest men, and their statistics are honestly and carefully compiled. Much more important than the character of the medical corps in its influence on results is the character of the patients handled at these government institutions. Without a doubt no other institutions, outside those of a penal character or insane asylums, can show quite so inferior a class of patients as these two have to accept. Their patients are mostly soldiers and sailors; equally improvident, thoughtless, dissipated, ungrateful, and to a great extent syphilized; it is almost impossible to hold them under treatment long enough to do them any permanent good; for, as you may not know, the length of time they remain under treatment is entirely in their own hands. Colonel Bushnell, in command at Fort Bayard, recently told me that the results among the officers, in whom he found a high

report 43 per cent. of cures and apparent cures; in the moderately advanced class they report 11 per cent. of cures and apparent cures, and in the far-advanced class 3.1 per cent. cures and apparent cures. In none of the approximately three thousand cases from which these figures were derived did tuberculin treatment enter as a factor. Further, nearly all patients presented tubercle bacilli in the sputum on admission; all were under treatment over thirty days, and no case was considered in which the patient was admitted arrested or cured. With one exception, to be presently discussed, these qualifications will be applied to all other cases and institutions considered in this paper. In many eastern institutions the plan has been adopted in classification of admitting patients with tubercle bacilli in the sputum credited to them if such had ever been present at any previous period, even though absent on admission. This is not the case with the western institutions discussed in this paper, where patients are credited with a sputum bacillary content at the time of admission only. I should explain, perhaps, that at Fort Bayard and Fort Stanton the results are substantially the same.

TABLE 3.—ADIRONDACK COTTAGE SANITARIUM 1907 REPORT: RESULT IN 157 PATIENTS DISCHARGED WHO REMAINED FROM 3 TO 26 MONTHS, OF WHOM 129 WERE TREATED WITH TUBERCULIN*

Condition of Patients When Admitted.			Non-tuberculous.		Apparently Cured.		Disease Arrested.		Improved.		Unimproved.		Died.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Incipient cases	61	39	..	..	23	38	27	44	9	15	2	3	0	0
Advanced cases	94	60	..	..	5	5	60	64	17	18	10	11	2	2
Far advanced cases...	1	1	..	..	0	0	0	0	1	100	0	0	0	0
Non-tuberculous	1	1	1	100	0	0	0	0	0	0	0	0	0	0
Total	157	..	1	1	28	18	87	55	27	17	12	8	2	1

* These results are practically the same as for all previous years, and many of these patients did not present bacilli on admission.

TABLE 4.—RHODE ISLAND STATE SANATORIUM FOR CONSUMPTIVES 1907 REPORT: RESULT IN 94 PATIENTS DISCHARGED WHO REMAINED FOR 3-13 MONTHS. NOT TUBERCULIN TREATED*

Condition of Patients When Admitted.			App. Cured.		Disease Arrested.		Improved.		Unimproved		Died.
	No.	%	No.	%	No.	%	No.	%	No.	%	
Incipient cases	20	21	11	55	8	40	0	0	1	5	0
Mod. advanced cases	61	64	6	9	36	59	11	18	8	13	0
Far advanced cases	13	13	0	0	5	38	4	30	4	30	0
Total	94	..	17	18	49	52	15	15	13	13	0

* These results are practically the same as for previous years and 16 of these patients did not present bacilli on admission—a class in which it is very easy to get cures anywhere.

grade of cooperation, were astonishingly good. Later on we shall show statistically the exact influence of character and temperament on results. Everyone who does this work recognizes the tremendous import of these factors on the part of patients in the final result, and for this and other reasons mentioned these institutions make much the worst showing of any of our western sanatoria. Therefore, no one can accuse us of unfairness in selecting the results of their work for comparison with that done at tuberculosis sanatoria located in unfavorable climates.

Now, just what has been accomplished in the cure of tuberculosis at Fort Bayard and Fort Stanton during the past ten years? For the sake of clearness I shall confine the question to "cure and apparent cure" which mark definite results, and about which there is little chance for difference of opinion in classification. For the moment I shall leave out of account the "arrests," the "improved," the "unimproved" and "dead." Those interested in these details will find them in Tables 1 and 2. Thus, readers will be able to carry mentally the essential facts and figures, and I shall avoid confusion in the final summing up. Also, for the same reason, I have combined and averaged the results at the two institutions under discussion. In the incipient class they

Dr. Sands and I have elected to compare the Fort Bayard and Fort Stanton results with those of four eastern institutions in the work of which climate can not be said to enter as a factor to any appreciable extent, and which, compared with each other, like the two institutions already considered, furnish about the same results, namely, the Adirondack Cottage Sanatorium, Sharon, in Massachusetts, the Massachusetts State Sanatorium, and the Rhode Island State Sanatorium. These institutions, as we know and admit, are about as well and scientifically conducted as any that exist. They are under the direction of tuberculosis workers from choice and not from orders, who are deeply interested in tuberculosis as a vocation, and at nearly all individualization is practiced to a great and influential extent. At these eastern institutions they have a much better type of individual to deal with, too.

Thus, it may be said, we have selected favorable eastern institutions to be compared with unfavorable western ones, and still we are able to show that Fort Bayard and Fort Stanton obtain better results. In considering these eastern results, we are still dealing with approximately three thousand cases, with the qualifications before mentioned. The combined results of the work at these institutions are given in Tables 3, 4, 5 and 6.

Cures and apparent cures in incipient cases, 42 per cent.; in moderately advanced cases, 6 per cent., and in far-advanced cases, 0 per cent. The difference is not great, but it is in favor of the two government institutions in New Mexico in each and every class, and when the differences before mentioned, in management and type of cases, as well as bacilli presented in all cases on admission, are considered, the difference becomes real and quite markedly in favor of high altitude treatment. In one of the institutions considered, namely, Sharon, Mass., the proportion of patients not presenting bacilli on admission was so very large that we compiled only such of their cases as presented bacilli on admission.

I am taking it for granted that, of course, all understand that proper management can not but be vastly more important than any climate. I desire to call attention to the fact derived from the above statistics that the differences become more markedly in favor of high altitude treatment the more advanced the cases. This is as it should be, for if there is anything at all in a favorable climate we should certainly expect to see its operation in the more advanced type of the disease. The

Further to elucidate this problem, Dr. Sands and I have elected to compare the results obtained at the New Mexico Cottage Sanatorium under our management with those of the Loomis Sanatorium at Liberty, N. Y., under the management of Dr. Herbert M. King. Both are private institutions in the sense that they do not receive government or state aid. We would not have chosen the results of our own work for comparison with that of the Loomis Sanatorium if another western institution of the same type had been available. This is a matter of taste and not of science, however; for we are as sure as can be that our statistics have been carefully and conscientiously compiled. It is hardly necessary to state here that, to be available for statistical comparison, all cases must have been classified according to the Turban scheme, as modified by the National Association for the Study and Prevention of Tuberculosis. This method has been employed in all the statistics used in this paper. As we all know, the personal equation is bound to enter into any scheme of classification so far devised, and it goes without saying that the best of classifications is necessarily imperfect. In order to free our sta-

TABLE 5.—SHARON SANATORIUM, 1907 REPORT: RESULT IN 18 PATIENTS DISCHARGED WHO HAD BACILLI ON ADMISSION AND IN A FEW OF WHOM TUBERCULIN WAS EMPLOYED*

Class.	No.	%	App. Cured. No. %	Arrested. No. %	Improved. No. %	Unimproved. No. %	Died. No. %
Incipient	8	44	3 37	4 50	1 16	0 0	0 0
Mod. advanced	8	44	0 0	2 25	6 75	0 0	0 0
Far advanced	2	11	0 0	0 0	1 50	1 50	0 0
Total	18	..	3 16	6 33	8 44	1 5	0 0

* Results practically the same as for previous years. As a large percentage of the patients did not present bacilli, such were omitted.

TABLE 6.—MASSACHUSETTS STATE SANATORIUM 1908 REPORT: RESULTS IN 619 PATIENTS DISCHARGED, IN MANY OF WHOM BACILLI WERE NOT FOUND ON ADMISSION AND IN WHOM TUBERCULIN WAS NOT USED TO ANY EXTENT*

Class.	No.	App. Cured. No. %	Arrested. No. %	Improved. No. %	Unimproved. No. %	Died. No. %
Incipient	230	76 33	107 46	40 17	7 3	Not mentioned.
Mod. advanced	312	25 8	117 37	137 43	33 10	Not mentioned.
Far advanced	77	0 0	12 15	37 48	28 36	Not mentioned.
Total	619	101 16	236 38	214 34	68 10	

* Results correspond to those of previous years.

more incipient the case the more easily is the cure obtained anywhere; and, *per contra*, the more advanced the case the more necessary it becomes to avail ourselves of every favorable influence, and climate is apparently the most potent after proper management. In this connection we must not forget to emphasize the fact that at the two government institutions 60 per cent. of all cases admitted are far advanced. This is especially true of Fort Bayard, where a large majority of the patients have been subjected to the almost fatal Philippine climate. Tuberculosis in our army is part of the price we have paid for our tropical possessions, and here let me ask, if there is nothing in climate, why is it that every medical officer who has served in the Philippines will testify to the fact that not only is tuberculosis horribly common and fatal among the natives of European descent, as well as among the aborigines, but also that when one of our soldiers becomes infected the only way to save him is to get him home and to Fort Bayard as soon as possible? That is not very soon, however; it is a long way home from the Philippines, and these cases often go from incipient to far advanced between the time of diagnosis and arrival at Fort Bayard. Let us not forget, in the face of the above easily confirmed facts, that the climate of the Philippine Islands in its relation to tuberculosis bears a somewhat similar relation to the climate of our eastern states that the latter do to the climate of New Mexico.

statistics from bias as far as possible, however, they were checked direct from the case records by both of us. The figures were checked as well by the Rev. Francis W. Carroll, the chaplain of our institution. I might also add that if there was any doubt about the proper classification of a case we placed it in as unfavorable a light as it would stand. We are also sure of the statistics of the Loomis Sanatorium; for every one recognizes the honesty and scientific attainments of the head of that institution. We have chosen these institutions for comparison, because, unlike those already studied, they present the most favorable results obtained under their respective climatic conditions. In both institutions tuberculin has not been employed sufficiently to make it important to take its use into consideration. In both we are dealing only with cases under treatment over thirty days, and all cases admitted arrested or cured have been eliminated.

At the Loomis, in the incipient class, they obtained 62 per cent. of apparent cures; in the moderately advanced class, 16 per cent., and in the far-advanced class, 3 per cent. At the New Mexico Cottage Sanatorium we report in the incipient class 83 per cent. of apparent cures, in the moderately advanced class 50 per cent., and in the far-advanced class 13 per cent. Thus, it can be seen, the results are again in favor of the institution with favorable or high altitude climate. This is not a slight difference as in the previous instances, but

"he who runs may read." Again, as in the case of Fort Bayard and Fort Stanton, the more advanced the case the greater the difference in favor of high altitude treatment.

It may be of interest to know how we explain the marked discrepancy between the results of our own work and those obtained at Fort Bayard and Fort Stanton. We think we have already made that point plain in the discussion of those institutions, the character of their management and of their patients. In regard to the difference in our favor in the study of results at the Loomis and New Mexico Cottage Sanatorium, we are sure that Dr. King has no advantage over us in institutional essentials, although probably our superior in the management of tuberculous invalids; and yet his results are not as good as ours. The reason must lie in the more favorable climatic environment, especially high altitude, and such we think it is. Time, of course, is a large factor in obtaining good results in tuberculosis, and the fact that at the New Mexico Cottage Sanatorium the average length of treatment is 9.3 months, which is somewhat longer than most institutions report, may have a bearing on our results.

pointment. I trust that it may also help others to solve the problem: "What shall I do with my consumptive patients?"

For the sake of perfect fairness, let us exclude from our thoughts the results of the comparison between the Loomis Sanatorium and the one under our management, and think only of those remaining east and west. We can grant, I believe, that we have properly estimated the work at the government institutions and that the result is even more in their favor than it seems to be. Still the difference in favor of high altitude treatment is not sufficiently great to justify shattering every established rule of the treatment of tuberculosis for the sake of sending a consumptive to the distant high altitude climate. I will try to make just what we mean plain to all, and in order to do this it will first be necessary to show that the influence of an unfavorable temperament or financial condition is most important in the final result, and should certainly be considered in sending a patient far from home. If it seems certain that a properly regulated life is impossible, such a patient should not be sent away, for the natural tendency to irregularity will be more pronounced in the idle life

TABLE 7.—NEW MEXICO COTTAGE SANATORIUM: RESULTS IN 241 PATIENTS DISCHARGED, WHO REMAINED OVER ONE MONTH, EXCEPT THOSE ADMITTED CURED OR ARRESTED*

Class.	No.	%	App. Cured.		Arrested.		Improved.		Unimproved.		Died.	
			No.	%	No.	%	No.	%	No.	%	No.	%
Incipient	47	19	39	83	8	17	0	0	0	0	0	0
Mod. advanced	48	19	24	50	16	33	4	8	3	6	1	2
Far advanced	146	60	19	13	45	30	37	25	39	26	6	4
Total	241	..	82	34	69	28	41	17	42	17	7	2.8

* Includes all cases discharged to Jan. 1, 1909. In 67 tuberculin was employed.

TABLE 8.—LOOMIS SANATORIUM AND ANNEX 1908 REPORT: RESULT IN 263 PATIENTS DISCHARGED WHO REMAINED OVER ONE MONTH, EXCEPT THOSE ADMITTED CURED OR ARRESTED*

Class.	No.	%	App. Cured.		Arrested.		Improved.		Unimproved.		Died.	
			No.	%	No.	%	No.	%	No.	%	No.	%
Incipient	42	17	27	62	6	15	7	17	2	4	0	0
Mod. advanced	115	43	19	16	40	35	36	34	18	15	2	2.5
Far advanced	106	40	4	3	14	15	43	39	36	33	9	7.5
Total	263	..	50	11	60	22	86	32	56	21	11	4

* Forty of these patients were treated with tuberculin.

Before leaving the subject of statistical comparison it may be well to combine the results of the western institutions we have been considering and compare them with the combined results obtained at the institutions located in the east. Fort Bayard, Fort Stanton and the New Mexico Cottage Sanatorium in the incipient class report 56 per cent. of apparent cures, in the moderately advanced class 24 per cent., and in the far-advanced class 6 per cent. The Adirondack Cottage Sanatorium, the Massachusetts State Sanatorium, the Rhode Island State Sanatorium, the Sharon and the Loomis Sanatorium report 47 per cent. of apparent cures in the incipient class, 7 per cent. in the moderately advanced class, and 0.6 per cent. in the far-advanced class. So, finally, there seems nothing to do but gracefully to admit that high altitude treatment furnishes better results than can be obtained in unfavorable or low altitude climates.

Medical questions are notably knotty and difficult of solution. We so often work in the dark as regards important factors that there comes a time when doubt of nearly everything assails us. Many times I have had moods of black pessimism in regard to the rôle of climate in tuberculosis, but this study of statistics, undertaken primarily to convince myself and Dr. Sands, has helped me to feel satisfied with my lot and to know certainly that my task is not useless. To return to my little oasis in the desert is a comfort and not a disap-

such a patient is often compelled to lead. And if such a one is sent to an institution it will simply make things uncomfortable for himself and every one else. A patient of this type is likely to become a peripatetic consumptive, roaming the west in search of the health that is never found. If the financial condition is not such as to permit a patient to go away in peace of mind for at least a year, and have during that period the best of care and treatment, then such should be kept at home. Fifty per cent. of our cases are classed as unfavorable as to temperament or financial condition, and this operates against them as follows: In the incipient class the percentage in favor of the properly equipped individual as to money and temperament is 17; in the moderately advanced class 18 per cent., and in the far-advanced class 15 per cent. These figures are much too conclusive to be overlooked when deciding on the disposition of a tuberculous invalid. Practically, does it seem reasonable that any one can do well when constantly worried about money and other important things? I am certain that our results would not be nearly as good if I had not by persistent begging been able to keep many patients under treatment who otherwise would have been forced to leave the institution. Thus, by sending away persons not properly equipped, an enormous burden is thrown on our institutions for tuberculosis in the west, a burden that detracts largely from the pleasure and comfort that otherwise might be derived from the work. This

applies to our western communities as well, and in Los Angeles the evil of indigent consumptives has grown to such proportions as to compel the citizens to take united action to insure their future protection.

I have admitted that climatic treatment offers no wonderful inducements for sending consumptives far from home. To be exact, the chances of the incipient are increased 9 per cent. by proper treatment in a high altitude climate, 17 per cent. in the moderately advanced class, and 6 per cent. in the far-advanced class. I have also defined two classes that positively should not be sent away. I have also pointed out that a good climatic environment does not justify breaking all the established rules of the treatment of tuberculosis. The sanatorium régime, with its hard and fast rules and constant medical supervision, is easily the most important factor in treatment. Therefore, it is much better to keep a patient in an unfavorable climate and in a good sanatorium than in the most perfect climate in the world outside a sanatorium, and, except for an occasionally and practically useless call on a physician, do just about as he pleases the rest of the time. In illustration of this point permit me to observe that at a meeting of our local county society, the physicians present, the majority of those practicing in Silver City, admitted that

conduct our institution for much less than you can properly care for patients in private rooms in your hospitals here. Without our partial endowment the rate we are forced to charge would, of necessity, be higher than it is. A properly conducted institution for the tuberculous implies a full corps of doctors, nurses and all the usual hospital employes, and has more than a hospital plant as well, for, to get the best results, we must provide separate cottages for patients. It seems necessary to mention this matter, as so many of our eastern friends have asked us why we can not charge less, seeming to forget that it is unreasonable to ask us to do in a country of high prices what they can not and would not do themselves in a country of much lower prices. From its organization, three and one-half years ago, the New Mexico Cottage Sanatorium has supplied 2,246 months of treatment at a total cost to the institution, without profit, of \$202,140. As the average length of stay is 9.3 months, the average cost per patient is \$838, and, of course, to this sum must be added the cost of transportation. Thus, the total cost for nine months' treatment is nearly \$1,000, and it may readily be seen how impossible it is, at present at least, to bring sanatorium treatment in the west, for private patients, within reach of more than comparatively few of the vast army of human beings

TABLE 9.—NEW MEXICO COTTAGE SANATORIUM: CASES WITH FAVORABLE TEMPERAMENT AND FINANCIAL CONDITIONS

Class.	App. Cured.		Arrested.		Improved.		Unimproved.		Died.	
	No.	%	No.	%	No.	%	No.	%	No.	%
Incipient	25	89	3	10	0	0	0	0	0	0
Mod. advanced	16	57	7	25	1	3	2	7	2	7
Far advanced	14	21	22	33	6	9	19	29	4	6

Total 121, or 50 per cent.

TABLE 10.—NEW MEXICO COTTAGE SANATORIUM: CASES IN WHICH EITHER TEMPERAMENT OR FINANCES WERE UNFAVORABLE

Class.	App. Cured.		Arrested.		Improved.		Unimproved.		Died.	
	No.	%	No.	%	No.	%	No.	%	No.	%
Incipient	13	72	5	27	0	0	0	0	0	0
Mod. advanced	9	39	9	39	3	13	2	8	0	0
Far advanced	5	6	23	29	31	39	19	24	1	1

Total 120, or 50 per cent.

outside the institutions located in Grant County there had been only seven or eight cures in the memory of the oldest medical inhabitant. It is only fair to add, however, that the climate does help many people in the far-advanced stages to keep on living.

I do not mean to maintain that every consumptive outside of an institution is necessarily mismanaged; for here and there will be found a doctor who knows the ropes, and a patient with sense enough to cling to them, but such doctors and such patients are quite exceptional, we are sure. To sum up in a few words, I most emphatically maintain that no consumptive should ever be sent away if it is not certain that he will have as good care and management in the distant climate as he could obtain near home. It was genuine pity for the homeless and often itinerant consumptive that originally actuated me in taking up the work out west.

It is, of course, important to remember that, as I have shown, the more advanced the case the more essential it becomes to prescribe climatic change.

A word may be useful regarding the cost of caring for patients properly in an institution in the west. I am referring, of course, to private patients who invariably insist on certain things which might be eliminated without damage to the scientific régime in a truly charitable institution. Our institution is in no sense commercial, but is organized to pay for maintenance, the plant itself being an endowment. We have found it impossible to

afflicted with tuberculosis. It seems to us very practical, indeed, to mention these financial details, for so many, about 50 per cent., of the people sent west are utterly unable to cope financially with the conditions found on their arrival. To live outside an institution and to have all the essentials of a proper environment, including medical attention, is even more expensive, and often disastrous, for to save money, patients, when left to themselves, will eliminate things of vital importance to their welfare.

I might mention that 60 per cent. of all our cases have been far advanced, a class which in the east is practically barred from institutional treatment. It is certainly a question if the time and money spent on these far-advanced cases is justified in the light of actual results obtained under the most favorable conditions, namely, 13 per cent. of apparent cures and 30 per cent. of arrests, leaving at least 30 per cent. to die within a comparatively short time, and probably most of the remainder within ten years. This is an academic and not a practical question, for when put to it few will submit to having a money value placed on their lives. It resolves itself into this: Cure in tuberculosis is probable inversely as the square of the lung tissue involved; the more advanced the case, the greater the necessity of high altitude treatment, the longer the time required to effect a result, and consequently the more money needed by the patient, for, where an incipient

may recover in from five to six months, a far-advanced patient will require a year or more to make even a relative recovery. It may be granted, I think, that we are not devoting so much attention to this matter as an inducement for the practitioner to keep tuberculous people at home until they have become far advanced, although we are free to admit that the greatest pleasure we have is to observe the slow return to health of some at least of these so-called hopeless patients. From our point of view they are quite the most desirable class of patients; for they see and know the necessities of the situation and are more than willing to devote the time to getting well. It is rarely necessary to do battle with them to keep them long enough under treatment to obtain a substantial result, as we often must with the incipients.

So far, in submitting proofs of the value of high altitude climates in tuberculosis, I have confined my argument to statistics. Of course, I can not but recognize, however, that the final decision will rest on statistical evidence carefully compiled and scientifically interpreted. Let us, however, for the moment, turn our attention to a collection of perfectly well-established facts, hardly less important to consider than those already studied. Time will not permit more than a glance at

the difference between the sun and shade temperature of 1 degree F. for every rise of 235 feet.

3. Asepticity of freedom from pathogenic germs, as proved by the researches of Pasteur and others. The effect of mountain air on the organs and functions of healthy and sick persons has been ascertained by repeated and careful observations to be as follows: The skin is tanned by the solar rays, and, according to Dr. Bowles, principally by the ultraviolet rays in the attenuated atmosphere. The circulation is at first quickened, the heart's impulse becomes more powerful, but the pulse rate at the end of six or eight weeks falls to normal, or even below normal. The respiration is at first quickened, but after a similar interval it gradually slows and is reduced to normal, or below normal. The breathing becomes deeper, the inspiration longer and the expiration more complete, and thus is explained the slowing of the respiration. At first there is reduction of the blood pressure, and in the amount of urea excreted by the kidneys, but more carbonic acid and water are eliminated by the lungs. When acclimatization is complete, the urea appears in full quantity in the urine, and the blood pressure again increases.

Accompanying and exactly coinciding with the reduction in the pulse and respiration the thorax expands in several directions, causing an increase in circumference at various levels of from one to three inches or more, also an augmentation of the spirometric record and increased mobility of the chest walls. The thoracic expansion is caused by the greater physiologic activity and development of the lungs due to rarefaction of the air.

TABLE 11.—RESULTS OF DIFFERENT CLIMATES COMPARED AFTER WILLIAMS

	Number of Patients.	Average Residence, Months.	First Stage.	Second and Third Stages.	Bilateral Affection.	Results.						
						General.			Local.			
						Improved.	Stationary.	Worse.	Arrest.	Improved, Including Arrest.	Stationary.	Worse.
High altitudes	247	12	65	35	37	83	12	14	42	55	10	9
Sea voyages	65		65	37	37	77	10	21	7	53	16	33
Riviera	210	9	59	41	36	65	10	24	5	36	17	45
British climates	292	9	58	42	42	63	8	28	2	23	20	41

the different factors of a good climate for tuberculosis, and the rôle each fills, and some, of necessity, we shall be compelled to overlook entirely. It is curious how a work of genuine merit is sometimes completely forgotten, and how a succeeding generation must rediscover it and learn it all over again. This is true of the epoch-making paper of Sir Herman Weber, read in London in 1869, which resulted in the use of the high altitudes of the Alps in the treatment of tuberculosis from that day to this. Sir Herman Weber had his predecessors, of course; among the most notable were Lowhard, Arehibald Smith and Jourdannet, who, some of them, many years before, had advocated high altitude in tuberculosis. Weber stated that altitude from 5,000 feet up was the one important factor in climatic treatment, and if that were provided we need not argue over other things, humidity, rainfall, etc., which "may modify but do not hinder the effects of altitude."

Williams of London, than whom there is no greater living English authority in the treatment of pulmonary tuberculosis and who has employed high altitude in his practice for the past forty years, states:

The characteristic effects of mountain climate are:

1. Diminished barometric pressure and consequent rarefaction of the atmosphere.
2. Diathermancy of the air, or the increased facility by which the sun's rays are transmitted. This, as the late Dr Denison of Denver was the first to show, causes an increase in

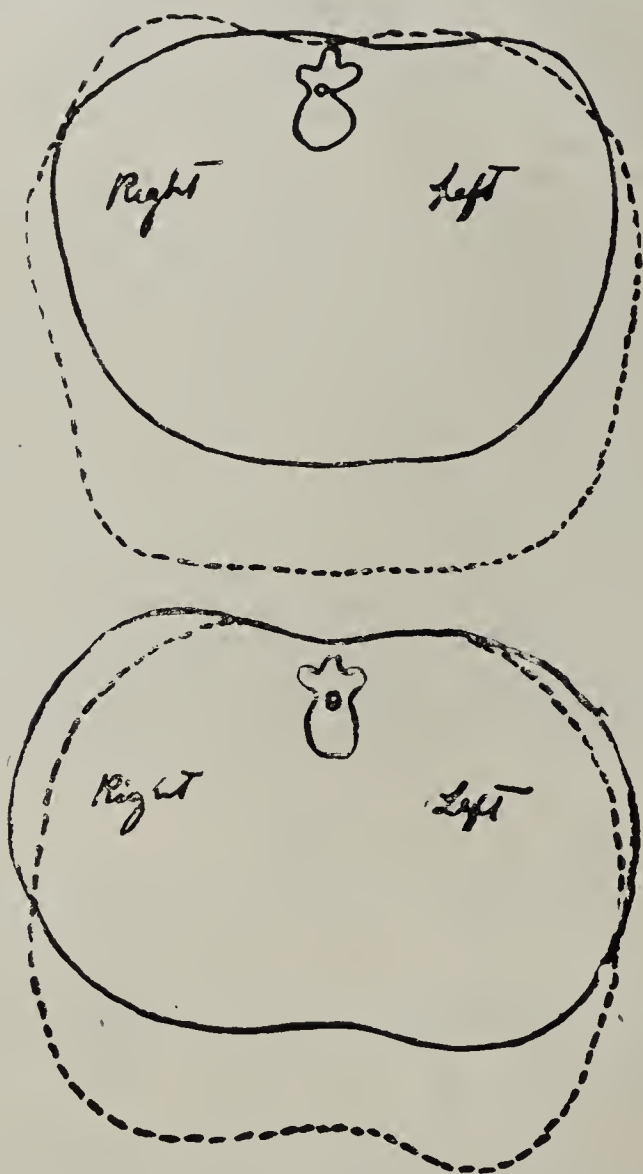
This is recognized by the measurements alluded to above and by the physical signs; for the respiratory sounds are heard over a larger area in the thorax than is usual, and thoracic expansion is further proved by the wearer's clothing becoming too tight around the chest. More oxygen is consumed by the blood and more carbonic acid gas is given off. These changes in the thorax and its contents in visitors to the mountains are exemplified more fully in the mountain races; for the Indian of the Andes, the hill tribes of the Himalayas, the guide and chamois hunter of the Alps have all enormous chests and are characterized by great respiratory power.

Dr. Williams states, as well, that of all his consumptive patients those treated in high altitudes yielded the most favorable results, and, what is more important, the fewest relapses. He gives the results in about 850 cases as follows: treated in high altitudes, 83 per cent. improved, as against 63 per cent. in England, which, as will be remembered, represents about the difference between the Loomis Sanatorium and our own work. Dr. Williams further states:

In no country can the high altitude treatment be more effectively carried out than in the United States, where the tract of high-lying land is of vast extent and where altitudes of from 5,000 to 10,000 feet are available and being situated in temperate latitude, present a great choice of climate.

All these facts in regard to the effect of high altitudes in consumption have been confirmed over and over again; there is hardly anything in medicine better sub-

stantiated. They have a right to take their places among the established contributions to our art and science. Let us not be deafened by the loud blasts of the trumpet of anticlimax, which has been so strenu-



Diagrams, after Theodore Williams, showing increased chest girth after sojourn in high altitudes. The solid lines show girth before, and dotted lines girth after stay in high altitude.

ously blown the past few years, and try not to forget what has been done by scholarly workers in Europe to prove the place of climate in tuberculosis. In imagination let us turn our eyes to the Alps, and there in the snow and ice and among the tall pines see the multitude of sanatoria for consumptives which dot the mountain sides and realize that Europe believes in altitude and climate in tuberculosis.

I should not leave this subject of altitude until something has been said of the results of our blood-pressure studies. I can not give all the details of this investigation, but can briefly indicate the results. It is positively known that coincident with improvement in tuberculosis there is a rise of blood pressure, and this phenomenon occurs, of course, in any altitude. Dr. Thayer of Baltimore recorded the blood pressure in a large number of consumptives and found it to average 100 mm. of mercury, showing conclusively the influence of tuberculosis in lowering blood pressure. Granting that Dr. Thayer's figures are correct, it becomes clear that continued residence in a high altitude tends to raise the blood pressure, after the primary fall has been recovered from. Among 350 of our patients, the average blood pressure in all classes is 130 mm. of mercury. Thus, we may have stumbled, for aught we know, on one at least of the specific reasons why high altitudes are beneficial in tuberculosis. Continued residence in a high

altitude causes complicated changes in the blood itself, as well also as an increase in hemoglobin, but further studies are required to elucidate them.

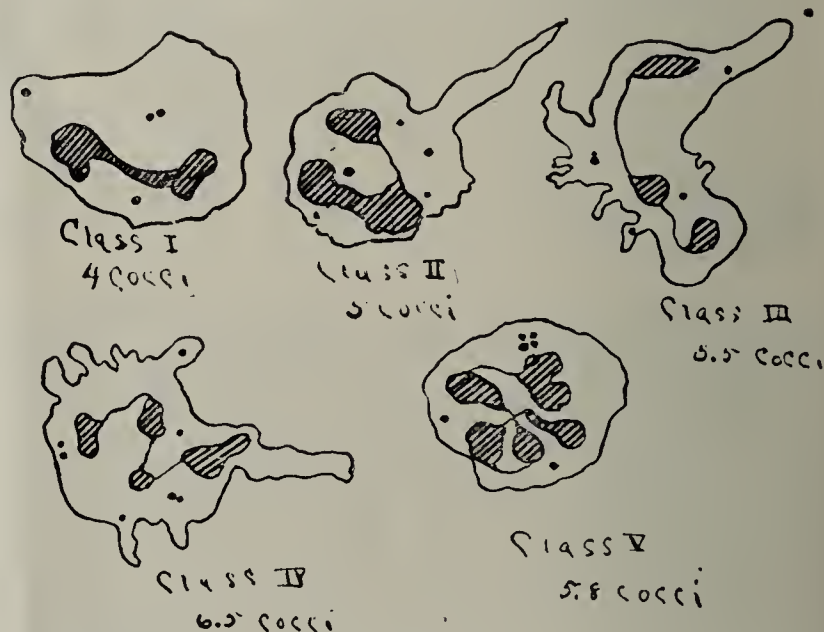
At this point I can not resist the temptation of pointing out the scientific advantages which would accrue from the establishment of a special laboratory at a selected spot in the Rocky Mountains for the study of effects of high altitudes on human beings, both sick and well.

PHAGOCYTOSIS IN RELATION TO ARNETH'S CLASSIFICATION OF NEUTROPHILES *

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If the experience of perhaps most workers who have written on the subject is to be accepted, the opsonic index as a means of diagnosis and especially as a therapeutic guide is far from satisfactory.

Disregarding the possibility that much of this adverse criticism is due to incomplete mastery of detail, there still seems good theoretical ground for not accepting some of Wright's earlier views on the question. In disregarding the leucocyte entirely he seems to have done wrong, since various observers have called attention to the variability of phagocytic activity by leucocytes obtained from various sources—in certain stages of infection and in artificially induced leucocytosis. But as far as I can determine no one has offered a satisfactory explanation for this varied activity.



Neutrophiles, drawn from the microscopic field. Figure below each neutrophile expresses the average number of staphylococci ingested by the corresponding cell in a series of 9 bloods, aggregating 1,200 neutrophiles.

Believing that Arneth's classification¹ of neutrophiles in conjunction with the phagocytic power of the neutrophile might throw light on this question, I made the following study:

Phagocytic tests were made with the blood of various patients presenting considerable variation in the number of cells belonging to the different classes of Arneth, and the average number of organisms ingested by the cells of each class was observed, in order to determine if constant relative phagocytic power existed for each class of cells.

* From the Laboratory of the Pottenger Sanatorium
1. Arneth: Die neutrophilen weissen Blutkörperchen bei Infektionskrankheiten, 1904; Die Lungen Schwindsucht, 1905.

The method of Dodds² was employed for simplicity, and the film preparations were stained with Hastings' modification of Nocht's stain. A serious obstacle was encountered, however, in that it was very difficult to assign all cells to their proper classes because of occasional overlapping of parts of the nuclei. While these doubtful cells were not many in number and did not materially alter the class percentage, yet taken in connection with their respective phagocytic powers, it became imperative to obtain a better technic.

The technic of Wiedenreich³ offers two great advantages over dry blood preparations. First, the cells are fixed while in ameboid motion; second, the parts of the nucleus are distanced from each other so that overlapping is a rare occurrence. This beautiful technic seems to be a most important advance for the accurate study of the morphology of the leucocyte. The advantage is shown in the fact that, while I found 12 per cent. of cells of doubtful classification in a total of 700 counted in the dry preparations, by employing Wiedenreich's technic the doubtful cells fell to 1.1 per cent. of 1,200 counted. Thus the error is negligible so far as the proper classification of cells is concerned.

The figures in the illustration drawn from the microscopic field will illustrate the beauty of the technic.

The individuals of this series of nine counts varied somewhat. In only one was phagocytosis greater in Class I than in Class II, and this was evidently the result of a clump of organisms which increased unduly the result. In four of the series there was a gradual rise in phagocytic power from Class I to Class IV, inclusive, and a decrease in Class V. In another four the same relation obtained with the exception that Class III was slightly lower than Class II.

I have made a similar differential phagocytic enumeration in the pus from a boil, counting 400 cells. In this the cells of Class I are only one-half as phagocytic as Classes II and III.

Now, in view of the fact that the blood picture from different individuals varies greatly, especially in disease, in the proportion of its several classes according to Arneth, it seems important that the true opsonic index, or, better, the phagocytic power of the blood, be obtained by the use of the patient's own corpuscles as well as serum.

To illustrate, I present two divergent types of blood from my records, all tuberculous patients:

TWO DIVERGENT TYPES OF BLOOD—ARNETH'S CLASSIFICATION

	Class I.	Class II.	Class III.	Class IV.	Class V.	W.B.C.
Mr. B.	33	40	20	5	2	13,300
Mr. G.	63	25	12			8,400
Mrs. J.	47	44	8	1		5,200
Normal	5	41	35	17	2	6,000

The first two are of the type anisohyperleucocytosis, while the third is of the anisonormolencocytosis type. Now, in the second case above, 63 per cent. of the cells are of weaker phagocytic power, and one would surely obtain quite different results if with the same serum should be put up opsonic mixtures with these cells and those from a normal person.

While I am aware that this work must be continued with great care before any definite rules may be established, yet I feel justified in offering the following conclusions:

1. There is more or less definite phagocytic value for each variety of neutrophile (Arneth's classification) acting on staphylococci.
2. This fact will surely throw light on the varying phagocytic values of neutrophiles obtained from various sources.
3. It may aid in the solution of the question of leucocytosis induced for therapeutic purposes.
4. It is evidence that Wright's early assumption, namely, that the leucocyte is a comparatively indifferent factor, is wrong.

A STUDY OF MALNUTRITION IN THE SCHOOL CHILD*

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This study was undertaken with a view to determine as far as possible the etiologic factors, which to a large extent are at the bottom of this very prevalent condition found in our city children, especially of the school age.

CAUSES OF MALNUTRITION

The subjects were all taken from the laboring and tenement-house classes and the parents were mostly foreigners. Each little patient, after having a careful physical examination, was weighed, a full history obtained from the mother through a trained nurse who spoke her language, and anything such as tuberculosis, syphilis or other diseases that would have a bearing on the condition of the child carefully noted. Then the following questions were asked the mother: "What does the child get for breakfast, for dinner, for supper? How many rooms have you? How many in the family, including boarders? Do you keep your windows open at night to allow the circulation of fresh air, and air the house in the day-time? When does the child go to bed? Does the child eat between meals—candy, etc.? How often does the child get a tub bath? Is the child in a grade with children of its own age at school?"

The answers to all these questions were tabulated opposite the name of each child with its history, weight and age. In 210 malnutrition cases in my own clinic on the lower East Side, it was found that meals were given as shown in Table 1.

TABLE 1.—DIET IN 210 MALNUTRITION CASES

Breakfast.	Dinner.	Supper.
Tea or coffee and bread .. 165	Tea or coffee and bread .. 28	Meat-soup 136
Cocoa or milk and bread .. 30	Meat-soup and potatoes 116	Coffee or tea and bread or cake 45
Milk or tea and egg 10	Coffee, egg and bread 29	Bread and Milk 15
Coffee and oatmeal 4	Bread and onion 2	Bread, milk and soup 4
Nothing 1	Fish or egg or bread 6	Bread, milk and fish 2
	Rice and milk 2	Milk and egg... 3
	Egg and milk. 5	Coffee and egg. 4
	Cocoa and bread 4	Nothing 1
	Cocoa-egg 1	
	Bread and milk 10	
	Egg and bread 6	
	Nothing 1	

The table shows that 175 drank tea or coffee at least once a day and many (25 per cent.) had tea or coffee two or three times a day. We find cereals given only six times. In other words, 83 per cent. of these children practically depended for their diet on tea or coffee and bread.

2. Dodds: Modification of Leishman's Method of Estimating the Opsonic Index, Brit. Med. Jour., Oct. 12, 1907.
3. Wiedenreich: Arch. f. mier. Anat. u. Entwicklungsgesch., May 30, 1908, p. 212.

* Read in the Section on Stomatology of the American Medical Association, at the Sixtieth Annual Session, at Atlantic City, June, 1909.

Of the 210 families examined, 3 had 1 room, 34 had 2 rooms, 114 had 3 rooms, 52 had 4 rooms, 3 had 5 rooms, 1 had 6 rooms. This makes the average number of rooms per family 3. The size of these three rooms averages 3,600 cubic feet. Seven families had 3 members each, 34 had 4 in the family, 49 had 5 in the family, 48 had 6 in the family, 22 had 7 in the family, 15 had 8 in the family, 12 had 9 in the family, 10 had 10 in the family, 4 had 11 in the family. The average size of the family was 6. This allows only 600 cubic feet of air space for each person.

Sixty-two per cent. kept their windows closed. Fifty per cent. of the children ate between meals—candy, etc.; 13 per cent. were in a grade at school with younger children. Of these children, 21 per cent. went to bed at 8 o'clock, 40 per cent. went to bed at 9, 24 per cent. went to bed at 10, and 12 per cent. went to bed at 11. These children were all under ten years of age and should have been in bed at 7 o'clock.

We found that 18.5 per cent. had a bath once a week; 22 per cent. had a bath once in two weeks; 11 per cent. had a bath once in three weeks, 18.5 per cent. had a bath once in four weeks, 22 per cent. had a bath once in three months, 4 per cent. had a bath once in two months, and 4 per cent. had a bath once a year.

We found that all these malnutrition patients were decidedly under weight for their age compared with the weight of normal children, the discrepancy varying from 4 to 16 pounds. Many children were found to be of the same weight as normal children who were from one to three years younger and in extreme cases there was even a difference of four years, and the cases were not picked but all malnutrition cases just as they came.

The ages of these children were from three to ten years but the great majority (175) were from six to ten years (or the school age). One thousand other children in the primary schools, in the Jewish quarter on the East Side were examined by me. Of these 40 per cent. were found to be poorly nourished, under weight and more or less anemic. These were, therefore, malnutrition cases. These children were from six to twelve years of age. Eighty-six per cent. had dental caries, 90 per cent. had adenoids, 40 per cent. had hypertrophied tonsils, 6.5 per cent. had defective hearing, 10 per cent. had defective vision, 4.5 per cent. had tuberculous lymph nodes of the neck, 1 per cent. had pulmonary disease, 0.4 per cent. had cardiac disease, 0.8 per cent. had chorea.

It will be seen that a very high percentage of these children had dental caries, and I believe we should put down this as one of the causative factors in malnutrition, since bad teeth mean improperly masticated food and disordered digestion, and painful teeth cause anorexia.

Whether the very high percentage (90 per cent.) of adenoids is due to the climate of New York City or the poor ventilation is a subject open to discussion and will require further investigation; but probably both causes are in a measure responsible.

Of the 210 patients examined in my own clinic 75 per cent. had enlarged cervical glands. One hundred and one of these children were tested for tuberculosis either with the Moro ointment test or the von Pirquet cutaneous test and some with both and 55 (55 per cent.) gave a positive reaction. Thirteen per cent. gave a family history of tuberculosis.

Practically all these children had defects and complications other than the malnutrition, the variety and per-

centage of which was very much the same as those found in the children examined in the schools. A detailed list of these defects would necessitate too long a paper.

It was observed that many of these children were in such a condition that they had no desire for good nourishing food and, indeed, could not retain it, because their stomachs had become so accustomed to the tea and bread or coffee and bread diet. The mother would say when told what food the child required, "But, doctor, she will not take it." Von Noorden accounts for this condition by stating that the activity of the digestive organs during starvation is lowered and the secretion of saliva, gastric juice, bile, and intestinal secretions diminish. In many of these cases the stomach had to be gradually educated to a stronger diet and the children were treated just as one would treat convalescents from disease.

It has been found that tea diminishes all the secretions of the alimentary tract and thus we see another reason for this inability on the part of the stomach to take food. Thus many causes play their part in bringing about malnutrition in the child, but two causes stand out prominently and common to all, namely, insufficient and improper nourishment, and bad housing. As Kerley has aptly put it, the child does not get what it has a right to demand.

Poverty, I am forced to admit, is an important factor in the causation of this chronic starvation or ill-nourished condition, but ignorance on the part of parents plays even a more important part—ignorance as to food-values, ignorance as to cooking, ignorance as to how to live, ignorance as to cleanliness, fresh air and sunlight. Although very few mothers had a proper idea of what foods were nourishing, or how to cook foods properly to make them nourishing, all were willing and glad to be instructed, and it seems to me that just here lies in a measure the partial solution of this problem. Since the mother who loves her child is by far the best instrument the state can employ to see that that child is properly nourished, fed and cared for, and in providing for its real education, the mothers are better than teachers, school managers, medical inspectors or attendance officers. It is economy to educate and improve the mothers and in that way guide the natural love to be an effective help in bringing up children to be healthy and useful citizens.

Visitation of the homes of underfed children and instruction of mothers would wonderfully reduce the number of these underfed children. The employment of the mother is responsible for many neglected children; given a father out of work or sick, and the mother must take in sewing or go out to work, with too often the result of underfeeding of not only the children, but herself as well.

A few statistics quoted from other writers may give a more adequate idea of the vast numbers of children involved and the importance of the subject.

Robert Hunter says: "Few of us sufficiently realize the powerful effect on life of adequate nutritious food. Few of us ever think of how much it is responsible for our physical and mental advancement or what a force it has been in forwarding our civilized life." Again, Hunter says that 60,000 to 70,000 children in New York City, "arrive at school hungry and unfitted to do well the work required of them. And at least 3,300,000 under fourteen years of age are underfed in the United States."

My own figures show an apparently greater number of underfed or more correctly speaking ill-nourished children in New York City, and fewer in the United States.

The latest available figures show that there are 241,947 school children in the elementary schools (primary and kindergarten) of Manhattan, and 555,525 elementary school children in Greater New York City. My statistics show that of this number there are approximately 96,778 in Manhattan and 222,210 in Greater New York City that are ill-nourished.

The census of 1900 shows that the urban population is increasing much more rapidly than the rural population of the United States. The increase in the total population in the United States from 1890 to 1900 was 20.8 per cent., while the increase in the urban population during that time was 36.8 per cent. This shows that we are becoming more and more a people dwelling in cities. We find the urban population in the United States in 1900 was 28,411,698.

Of the total population, 19.82 per cent. of pupils were enrolled, (or we might say now practically 20 per cent.). This would give us 3,682,239 school children in the cities in the United States. It is in the cities where we see the overcrowding and bad feeding mostly, and therefore most of the ill-nourished school children.

My statistics would show, then, that there are approximately 1,472,895 ill-nourished school children in the cities of the United States.

In the report of the Interdepartmental Committee on Physical Deterioration, Dr. Echholz, a British school inspector, states that on examining children in the Johanna Street Board school, in Lambeth, a type of school in a very bad district, 90 per cent. are found unable by reason of their physical condition, to attend to their work in a proper way, while 33 per cent. during six months of the year, require feeding. He estimates the number of underfed children in London as approximately 122,000.

Dr. Mackenzie considers more than one-third of the children in Edinburgh ill-nourished. These percentages from the cities in Great Britain correspond closely with my own in the cities of the United States.

John Spargo, in his excellent work, "The Bitter Cry of the Children" says that a crude investigation in the public schools of New York found out of 12,800 children, 2,950, or more than 23 per cent., wholly breakfastless or provided with miserably poor breakfasts.

A more careful and systematic investigation was made by Dr. H. M. Lechstrecker, of the New York State Board of Charities. He examined 10,707 children in industrial schools of New York. Of these, 998 had coffee or coffee and bread only for breakfast; 439 or 4.10 per cent. had no breakfast; 998 or 9.32 per cent. were anemic, owing to lack of nourishment. Only 1,855 or 17.32 per cent. started the day with an adequate meal. These astounding figures should indeed thrill every true American with the importance of the subject and the duty each of us owes to humanity for the relief of this curse which is sapping the life of our coming generation and threatens the health and strength of our nation. It is our duty to give this vital and far-reaching question our most careful thought and study, and to try to evolve means whereby this state of affairs among our poor can be properly, scientifically and adequately dealt with, as it involves the lives of our future American citizens.

Is it not absurd to force these little half-starved things to attend school as our compulsory school laws do force them? Is it fair to suppose that a hungry child, wasted and weakened, with the attendant conditions of lassitude, irritability, nervousness and anemia, the result of prolonged underfeeding and bad housing, can study in school for five hours with scarcely any intermission?

Although great advancement in the science of education has been made in the past twenty-five years, the physical condition and development of the child has been grossly neglected. When the child has a poorly developed and weakened body little can be expected from it in the way of mental development or advancement. The duty of the nation is, first of all, to care for the proper feeding and housing of its children and so to insure their proper growth, development and health.

A. F. Tredgold informs us in his book on "Mental Deficiency" that insufficiency and improper feeding, absence of fresh air or warmth, and the general neglect which unfortunately prevails during the early life of many of the children in our densely populated industrial centers, produces a retardation of the mental growth which is not permanent and is not therefore dementia. "Under more congenial surroundings the brain rapidly recovers and the child soon regains the normal standard."

Thus, no doubt the so-called stupidity or backwardness of many children in the public schools is simply the result of neglect and underfeeding.

Dr. Collie, Medical Inspector for the London School Boards, says that mental disability is not only preventable but in many cases curable. The brains of these underfed children are starved and fail to react to the ordinary methods of teaching.

Von Noorden, from experiments on man and animals has deduced the following law: "The expenditure of energy during starvation diminishes in the same proportions as the weight of the body, apart from extreme degrees of emaciation or adiposity and with moderate bodily exercise by day and normal hours of sleep by night." The operation of this law of Von Noorden, then, would account for the lassitude, nervousness and loss of energy seen in these children.

Atwater's experiments show that a larger amount of protein is required with physical labor than with mental labor and more energy utilized; therefore, the importance and necessity of a high proteid diet in the active child—and every healthy child is active. It has been shown by Atwater that a man on a vacation requires 79 grams of protein per day for a diet of maintenance which produces 3,125 calories of energy. It is known that three quarters of the amount of proteid necessary for an adult is necessary for a child. A growing child would therefore require about 59 grams per day, which would produce about 2,330 calories of energy. This proteid should be given largely in the form of a vegetable proteid. Children, by reason of their rapid digestion, and great respiratory activity should have about as much carbohydrate as adults.

Atwater also states that a child under two years requires 0.3 the amount of food of a man doing ordinary work; from six to nine years 0.5; from ten to thirteen years 0.6; a girl from fourteen to sixteen years 0.7; a boy from fourteen to sixteen years 0.8.

The growing child, requiring a highly nutritious diet, requires also a great deal of fresh air to oxygenate

the food properly. This requisite is impossible, as we shall presently see, with the housing conditions as they are. The conditions of overcrowding in New York, (and in fact in all our great American cities) has become a most menacing one.

The census of 1900 showed that more than 2,000,000 in Greater New York lived in tenement houses. These tenements then contained, according to Ernest Pool of the University Settlement, 361,000 interior living-rooms without light or ventilation. The number of these insanitary and disease-breeding rooms has since been reduced by 31,000 through the efforts of earnest men and women, leaving still the great total of 330,000 of these death-traps.

When actual figures show that six people on an average are crowded together in three small rooms, two of which are often inside rooms, the sum total of the air space in these rooms averaging about 3,600 cubic feet, (which is only half the air space that six people should have) is it any wonder that so many are in such a pitiful condition of health and that the contagious diseases and tuberculosis are so prevalent in this quarter?

Charles Edward Russell writes that in the most crowded regions on the East Side of New York the increase of population from 1900 to 1905 was about 33 per cent., while the increase in the whole borough was only 14 per cent.

There are 51 blocks in New York that shelter nearly 200,000 persons and the congested lower East Side contains about 600,000 people. Its area is only 0.5 per cent. of the total area of the city. What kind of children can we expect from people living under such conditions? And it is from this quarter that a large proportion of school children are drawn.

These same insanitary and overcrowded conditions have existed in London's East Side (Stepney) for the past thirty or more years and we only need to read some of the recent articles on the subject to realize the gravity and horror of it all, and the appalling results to the people. Shall we not take warning from these conditions?

If one compares the tenements of Berlin with those of New York, one is at once impressed with the foresight of the German people in providing these beautiful, light, sanitary and airy tenement-houses with wide balconies and courtyards and playgrounds for the children. Germany knows that the strength of the nation depends on the health of the working masses.

As it has been shown (at our last International Congress on Tuberculosis) that tuberculosis costs the nation each year millions of dollars and as this dread disease follows closely in the wake of bad housing and bad feeding, it does not take much calculating to see that to prevent these evils, even at a great cost, would really be money saved to the American people.

This then, is the state of our great American cities and in case of war, our soldiers must needs be drawn from among these poor anemic underfed weaklings. What is the use of battle-ships if we have no men to man them? Is it a wise thing for the American people to sit still and say nothing when laws should be passed compelling the building of sanitary habitations with plenty of room to breathe and plenty of sunlight? What does all this investigation show? To my mind it shows that the present way the poor are fed and housed in the large cities is responsible for much suffering, many lives lost, much sickness, degeneration, demoralization and the blighting of thousands of lives.

I believe that the present condition of affairs in the congested parts of our great cities could be entirely changed and controlled by laws. This can never be accomplished by private charity but must be dealt with and provided for by the state and national legislature; since laws governing these things are necessary for the public safety, health, and welfare.

There is no reason why New York and other great cities should not have just as good tenements as Berlin. We are too busy in the games of graft and grab. It is simply our short-sightedness, greed and haste to get rich that has allowed us to build and retain the present style of insanitary tenements. Let us reform before it is too late.

TREATMENT

In the treatment of this condition our first duty should be to instruct the mothers in the schools and clinics, either by word of mouth or printed directions, as to what foods are best for the growing child, which are the most nutritious and healthful for the money, the best way to cook different foods, what articles of diet to avoid, and the necessity of plenty of fresh air and sunlight, and cleanliness. Warm clothing is a necessity.

These children should be given a highly nutritious diet, that is, foods that contain a large amount of proteid material. Table 2, from Atwater, shows the percentage of proteid in a number of common articles of diet which contain a high percentage of proteid and consequently have a high nutritive value, but when it is a matter of dollars and cents, we must choose those foods which are nutritious and at the same time inexpensive. The most of the foods in this table are comparatively inexpensive for their food value.

TABLE 2.—FOODS THAT CONTAIN A LARGE AMOUNT OF PROTEID, ACCORDING TO TABLE OF ANALYSIS

	Proteids. %	Nutri- ents. %		Proteids. %	Nutri- ents. %
Beef	13.8 to 30	36.3	Cow's milk . .	3.4	12.6
Hen's eggs . .	11.6	23.2	Wheat flour .	13.5	
Chicken . . .	14.2 to 15.4	16.2	Graham flour	11.7	
Bluefish . . .	10.2	40.3	Oatmeal . . .	15.1	
Salmon . . .	24.1	40.6	Maize meal . .	9.1	
Mackerel . . .	15	40	Rice	7.4	
Smoked ham .	14.6	51.2	Beans	23.2	
Bacon	2.8	85.2	Peas	22.9	
Dried beef . .	27	38			

Having suggested the proper foods, I will state the dietary I have found most valuable in these cases.

I placed the children on a diet consisting of milk (a quart a day) cocoa, eggs, red meat (once a day) fowl, fish, bread and butter, and cereals, such as oatmeal (of which 94 per cent of the nitrogenous matter is proteid), farina, hominy, corn-meal, rice, pure olive-oil, and cream should also be given if possible, with vegetables, such as spinach, stewed tomatoes, stewed corn, cauliflower baked and creamed potatoes, purees of beans or peas, and baked beans, and fresh fruit, such as oranges, pears, apples, raw and baked and in the form of apple sauce, and stewed prunes. The children were ordered to stop school, be out in the open air as much as possible, open the windows at night and air the room thoroughly by day, go to bed at 7 or 8 o'clock and take a rest in bed for an hour or two after the midday meal. Bathing was encouraged for the purpose of cleanliness, and a salt-water bath followed by a vigorous rub for its stimulating and invigorating effect.

It was surprising how rapidly these children improved and gained weight with no other medication than a simple iron tonic. Some gained as much as a pound and a half a week.

A mixed diet, both in animals and in man, is usually taken better and the nutrients are more completely digested and assimilated than when only one food is used. Variety in foods of the same nutritive value stimulates the appetite and prevents the patient from tiring of any special food.

"For the same amount of money the most nutrients can be obtained in the form of milk, wheat flour, corn-meal, oatmeal, sugar, beans and cereals in bulk. Meats furnish proteid in large amounts but they fail to furnish carbohydrates as the vegetables do. It has been found that it takes six to eight pounds of cereals, besides forage crops, to make a pound of meat, consequently animal foods can never compete in cheapness of the nutrients with cereals and vegetables."¹

Vegetables should be given in abundance since the vegetable proteid carries with it a large amount of potassium salts which are the predominating salts in muscles, neutralize acid products and forestall rheumatism. Wheat flour and wheat bread have a high nutritive value, and more nutrients can be obtained in this form for a given sum of money than of any other food, except corn-meal.

Experiments at the agricultural stations show that bread is a very digestible food. Ninety-eight per cent. of the carbohydrate and 88 per cent. of the gluten or proteid are assimilated by the body. These experiments showed that graham and whole wheat flour were not as completely digested and absorbed by the body as white flour, although they contained a greater amount of proteid.

A child is a valuable national asset and its welfare and healthy development is of great importance to the state, which should be legally under obligation to look after it. Children who are starved, through negligence, ignorance, or poverty on the part of the parents should be fed as every child has a right to be fed: there ought to be no such thing as a starving child in our land, especially in the public schools, where children are under the daily observations of their teachers. It should be the public duty to see that such children are provided with nourishing food.

In England, Scotland and France nourishing meals are given in many of the schools at a slight cost, and are paid for by tickets previously purchased by the parents. Many meals are given free. This has been done in a few schools in this country with success. No distinction is made between those who pay for these meals and those who are unable to do so.

Let us remember that the future as well as the present is our concern in considering this great problem. Shall we civilized people allow our poor to be fed and housed worse than our domestic animals? If these horrible conditions are allowed to continue and rob the masses of their vitality, what can we expect the next generation to be? There can be but one answer, one outcome. Look to London's Stepney for the answer.

I want to add this report to the reports of others, who have perhaps had a greater experience than my own or who have looked into this matter further than I have been able to do. It is only by exposing these conditions that we can reach the remedies. If by such publicity beneficent legislation may be brought about our efforts will not have been in vain.

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[THE DISCUSSION ON THIS PAPER WILL APPEAR IN A LATER ISSUE OF THE JOURNAL.]

SCISSORS-MAGNET EXTRACTION OF IRON FROM EYEBALL*

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Particles of iron or steel may remain embedded deep in the eyeball for long periods without becoming so enclosed or so firmly adherent as to prevent magnet extraction by the ordinary methods. In the lens the development of a traumatic cataract may rather facilitate removal; and particles remain freely suspended in the vitreous for considerable periods, responding to the attraction of the magnet very much as they would immediately after the injury. De Schweinitz¹ has reported cases in which the tip of the Sweet magnet placed at the scleral incision, not introduced within the eye, promptly removed steel from the vitreous in one case in five weeks, and in the other two months after the injury, and in a third case of six months' duration, although the foreign body was not secured on the magnet, subsequent inability to demonstrate it within the eyeball where it had previously been localized by the *x*-ray, and the subsidence of the retino-chorioiditis it had caused, seemed to justify the assumption that it had been removed. Hirschberg,² speaking of the Schloesser-Edelmann magnet, says, "With it I once extracted a splinter of 27 milligrams which had been for five months embedded in the retina and had already induced siderosis of the globe. The result was permanent and good."

In the series of Knapp and Stoll³ a fragment was extracted through a scleral incision, after repeated trials with a giant magnet had failed to bring it forward, in one case at the end of six weeks, in another after 107 days. In the third case, after four months had elapsed, the foreign body was brought forward with a giant magnet and extracted through the cornea. At the Royal London Ophthalmic Hospital, as reported by McCallan,⁴ foreign bodies were extracted from the depth of the eye (some of them, however, from the lens) after five weeks, seven weeks, six months (three cases), two years and three years.

Operative failures, however, are not so generally reported as successes; and in the literature there is abundant evidence that after a foreign body has been embedded behind the iris and lens for more than one month successful magnet extraction is the exception rather than the rule. McCallan, among 39 cases, most of the patients being treated shortly after injury, gives 4 in which the giant magnet failed to extract the foreign body and indicates definite causes for this failure: "In the first two cases the foreign body was encapsuled and adherent to the ciliary body; in the third case the piece of steel was very large and was firmly lodged in a rent in the sclerotic."

In a case reported by de Schweinitz, although the fragment of steel was large, it could not be drawn from its position in the sclera by a magnet in contact with it. Sweet,⁵ among 57 cases of foreign body in the posterior portion of the eyeball, located by the Roentgen rays, records 6 in which the magnet failed to extract; 5 of the eyes were enucleated and a piece of magnetic iron or steel found embedded in fibroplastic cellular tissues. The periods in which this firm fixation of the fragment

* Read in the Section on Ophthalmology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

1. Tr. Am. Acad. Ophth. and Oto-Laryngol., 1904, p. 164.

2. Ophthalmoscope, February, 1905.

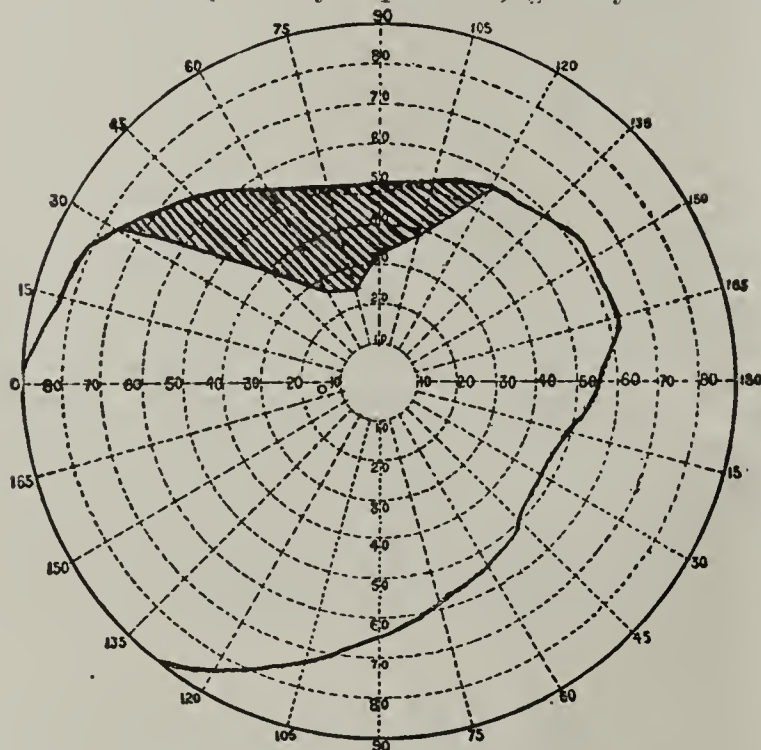
3. Arch. Ophth., July, 1907.

4. Royal London Ophth. Hosp. Rep., xv, 156.

5. Tr. Am. Ophth. Soc., 1901, p. 362.

had occurred were, respectively, eighteen years, three years, ten months, three months; five weeks, twelve days and four days. Millikin,⁶ who had to extract such a foreign body with forceps, says: "I do not believe that the magnet has yet been invented that will draw small foreign bodies through tough fibrous tissue."

In the series of Knapp and Stoll,⁷ among 9 cases in which the foreign body was recognized in the vitreous with the ophthalmoscope, the giant magnet failed to extract it in 4 of them; and in 5 other cases in which the foreign body was certainly present, though not visible, there was failure to extract with the magnet. Hirschberg, referring to a series of 64 of his later cases, says: "In 4 cases only of old splinter in the fundus (a small number in my opinion) was I unable to carry out extraction." Haab⁸ gives as the reasons for failure in magnet extraction: 1. "The foreign body was seated too firmly in the back wall of the globe or had pierced it completely. 2. The splinter was seated in the ciliary body at first or was drawn there by mistake. 3. The splinter had produced fibrinous-purulent exudation which, according to my experience, greatly hinders its



Field of vision ten months after operation in Case 1.

movability. 4. The splinter had been healed over in the course of months or years." Snell⁹ says the prospect of saving an eye will be inverse to the interval between the injury and the time when the electro-magnet is employed.

Enough has been said to develop the point that in a considerable proportion of cases the electromagnet, whatever its form and however used, fails to extract pieces of iron capable of magnetic attraction, because they are too firmly embedded in recent exudate or organized tissue. Such cases are sufficiently numerous to make it of interest and importance to consider a method by which some of these eyes may be saved; and such a method I believe we have in the use of scissors held in contact with the magnet while used to set free the foreign body. This is shown by the following cases:

CASE 1.—*Fragment of steel in eye over five months. Beginning siderosis. Failure of giant magnet; localization by x-ray. Failure with large hand magnet. Extraction with scissors. Almost full vision.*

History.—A. N. A., a man, aged 21, was struck in the left eye, Feb. 26, 1907, by a bit of steel flying from a hammer. His fellow workmen said that a stream of blood came from the wound, and that something must have gone into it. (The accident happened in southern Mexico.) The doctor the patient saw could find nothing in the eye. A cloud appeared in the upper part of the field of vision, but this passed away in about two weeks, and the eye was not badly inflamed. The patient could see perfectly after this. The vision became gradually impaired, however, and had grown more rapidly worse for the last month. He now consulted a competent ophthalmologist, who made repeated trials on each of five different days with a very powerful giant magnet. Each trial caused very severe pain in the lower part of the eye so that he felt very nervous the rest of the day; but it produced no bulging of the iris or other displacement of the foreign body.

Examination.—August 6, 1907, he consulted me. Vision: R. 4/4—; L. 2/100. There was a scar 1 mm. long in the nasal margin of the cornea. No opening was visible in the iris; but in the nasal part of the anterior vitreous was a triangular opacity, and the vitreous generally was hazy. Under atropin the opacity in the vitreous looked almost like detached retina, but was devoid of vessels. Radiograms made by Dr. G. H. Stover showed a very distinct shadow, indicating by the localization method of Sweet, a foreign body 9 mm. back of the center of the cornea, 6 mm. to the nasal side of the median plane, and 4.8 mm. below the horizontal plane.

Operation.—August 8, after the free use of cocain in crystal, an incision was made in the conjunctiva below the nasal border of the cornea. Then, pushing this aside so that it would give a valvular opening, a meridional incision was made in the sclera, beginning 7 mm. back from the corneal margin and extending 8 mm; the knife, entering 8 mm. in the direction of the foreign body, came into doubtful contact with it; an attempt being made with it to cut both above and below the particle of iron, with a rather free incision in front of it. The tip of the Johnson magnet was introduced twice, as nearly as possible in contact with the fragment. It was seen to drag the eyeball out of shape. When the particle was thus drawn on an attempt was made to seize it with the forceps, but this was unsuccessful. I then introduced scissors with blunt points as near to the foreign body as possible. Then the round end of the core of the magnet was placed in contact with the joint of the scissors, the current was turned on, and five or six distinct short snips were made with the scissors. They were then withdrawn, still in contact with the magnet, and the foreign body found adhering to the blades. It was the shape of an arrow-head 2.5 by 1.7 by 0.7 of a millimeter in size. The operation caused pain and faintness, especially during the first attempts to extract with the magnet; but the pain was not so bad as had been caused by the attempts to extract with the giant magnet. The eye was closed without any suture.

Postoperative History.—At the end of twenty-four hours there was moderate swelling in the parts, but the lines of incision could not be detected. General hyperemia of the globe was moderate; there was no pain. Vision had risen to 3/60, the patient noticing as soon as the eye was uncovered that "things looked much clearer." The general clouding of the vitreous was noticeably less, and in place of the dense opacity large floating shreds of white tissue were seen. The pupil was circular, 7.5 mm. in diameter. The eye was now left open and treated with atropin boric acid collyrium. The next day the hyperemia was less; a fair view of the fundus was obtained. Vision was 2/45. From this time improvement was steady and rapid. On the fifth day vision 4/20 partly, and on the 30th day 4/9 partly. At the end of three months it was 4/5 partly, at which it remains. The patient has finished a course in engineering with drawing and outside office work, without trouble with his eyes. The ophthalmoscope showed a very faint general haze in lower anterior vitreous, with a white scar having pigmented edges 1 disk diameter long and 1/3 disk diameter wide, at the extreme periphery of the fundus. The field of vision taken ten months after the operation is shown in the accompanying figure.

6. Tr. Am. Ophth. Soc., 1892, p. 572.

7. Arch. Ophth., January, 1906.

8. Haab, O.: Removal of Foreign Bodies from the Eye, THE JOURNAL A. M. A., 1902, xxxix, 463.

9. Ophthalmoscope, February, 1905.

CASE 2.—*Fragment of steel in the eye three years. Partial traumatic cataract; incipient siderosis. Failure of magnet alone. Scissors-magnet extraction. Preservation of useful vision.*

History.—W. A. H., a man, aged 34, came to me October 18, 1907, at the suggestion of Dr. L. G. Woodson, Birmingham, Ala. Three years previously his left eye had been struck by a small piece of steel. The resulting inflammation lasted about three weeks, but it had not been sore since. During the last two months the vision had been growing worse, although there had been some temporary improvement under treatment.

Examination.—The vision was R. 4/4; L. 4/15. The tension of eyeball was normal. The left iris was discolored, decidedly brownish, as compared with the right. The pupil was a little sluggish as compared with the right, slightly oval, long axis vertical. At the temporal periphery of the iris there was a small coloboma, although the scar in the limbus was not perceptible. The ophthalmoscope showed the right eye normal except that the smaller retinal vessels were slightly irregular in caliber and tortuous. In the left eye there was good fundus reflex in all directions through both the natural and the acquired pupil; but the details of the fundus were not well seen on account of the lens opacity. Under atropin this opacity was found to be net-like in appearance, situated in the deep layers of the posterior cortex, and about the posterior pole of the lens. Through it the larger retinal vessels appeared normal. In the extreme periphery of the fundus, downward and slightly inward, a black mass with a sharp edge projected into the field of view, probably the foreign body. Radiograms, made by Dr. G. H. Stover, gave by Sweet's method of localization, the shadow of a foreign body located 12 mm. back from the center of the cornea, down 9 mm. and to the nasal side of the median plane 4.5 mm., its size appearing to be 2.5 by 0.5 by 0.5 mm.

Operation.—November 20. Under local anesthesia with cocain crystals an incision was made by lifting the conjunctiva on the point of the knife, dragging it toward the vertical meridian, and making the scleral cut, starting 6 mm. back from the corneal margin, and 4 mm. to the nasal side of the vertical meridian, extending from this point 5 mm. back and slightly toward the nose. There was free bleeding from chorioidal vessels. The tip of the Johnson magnet was introduced twice, first between the lips of the wound, and later in contact with the foreign body. Slight pain was produced when the current was turned on, but there was no dislodgment of the foreign body. The tip of the scissors was then introduced as close as possible to the foreign body. The first time, the current was turned on before the magnet was in contact with the scissors, which were consequently jerked out of the wound. They were reintroduced, the magnet was brought in full contact with the joint of the scissors, and the turning on of the current produced no disturbance in the position of the scissors. About four snips were made with the scissors, which were then withdrawn, still in contact with the magnet, bringing the foreign body away on the tip of the blades. The foreign body was found to be a bit of steel 2.25 by 1.5 by 0.6 mm. in size, entirely covered with rust, except one edge. The bleeding ceased promptly; the pupil was widely dilated. There was some smarting in the eye during the day, but no aching.

Postoperative History.—November 22: There had been no pain. There was moderate ecchymosis. With the ophthalmoscope the black mass was gone from the lower periphery of fundus, and a white area was seen in its place. No hemorrhage was visible. Otherwise the ophthalmoscopic picture was unchanged.

November 27: Vision, L. 4/22, appearance of eye normal, except ecchymosis.

The eye remained entirely quiet after that time. At the end of two months, vision had risen to 4/12 + at which it still remains, without noticeable change in the lens opacity.

In both the above cases I had the counsel and assistance of my colleague, Dr. E. W. Stevens.

My first practical acquaintance with magnet extraction was as an assistant in the attempted removal of a minute fragment of steel, suspended in the vitreous a

little way back of the lens, where it was easily watched with the ophthalmoscope. The approach of the magnet, or the turning on of the current, caused the fragment to be noticeably attracted toward the magnet; and this attraction increased as the magnet was brought nearer, until the tip, being introduced into the vitreous, began to push the vitreous before it, and so caused the entangled splinter to retreat. The attempt to remove the splinter was repeated several times, and always with the same result. The fragment was each time pushed away before the magnet tip until the foreign body became obscured by hemorrhage, and the eye was finally lost by suppuration. The magnet used was a small one. Its attractive force was not sufficient to overcome the resistance of the tissue in which the foreign body was embedded.

In every case successful magnet extraction depends on the sufficiency of the attractive force to overcome the hold of the tissue on the foreign body. Since the attractive force exerted is proportioned to the size of the particle to be extracted, the smaller particles require the use of a more powerful magnet. The giant magnet has the advantage of exerting its maximum power from a greater distance. But for particles embedded in the coats of the eye, or in blood clots, exudate, or organized scar tissue, no magnet yet made, or likely to be placed at our disposal, is sufficient to overcome the resistance which holds the foreign body in its position. After the experience just mentioned it occurred to me that a knife might have been thrust in so far as to make a free passage for the suspended splinter through the vitreous, and that if the blade of the knife were rendered magnetic it could almost certainly be brought in contact with the foreign body. This plan I have tried, however, without success, in a case seen in consultation, in which the foreign body could not be seen, having been long embedded in the ciliary region.

In 1903 our fellow member, Dr. Connor¹⁰ reported the use of a strabismus hook, connected with the giant magnet and introduced through the corneal wound to disentangle a splinter of steel that had become caught in the iris. The same year Mr. Lang¹¹ reported a device consisting of a steel spatula, connected with Haab's magnet by a flexible iron wire cable, to complete the removal of a foreign body drawn into the anterior chamber by the giant magnet. This function is performed by the scissors after the foreign body has been dislodged. But this is obviously different from the use of the magnetic force to direct a cutting instrument to the foreign body, and thus to disentangle and furnish a free passage for a fragment of iron or steel which could not be started, by the magnetic force alone, from the position in which it was embedded.

In the two cases reported the scissors used were curved on the flat and had fine but slightly blunted points. It is important that the contact with the tip of the magnet should be made at the joint of the scissors, where the attraction of the magnet for the scissors will cause little or no interference with the necessary movements for snipping. The scissors should be introduced so that their tips are a very little short of the position of the foreign body; and the magnet tip should be brought in full contact with them and in the proper position before the current is turned on. Then the magnetic attraction will force the intervening tissue

10. Connor, Leartus: The Giant Magnet in Ophthalmic Surgery, THE JOURNAL A. M. A., 1903, xi, 772.

11. Roy, London Ophth. Hosp. Rep., xv, 296.

between the tips of the scissors and hold it there. The snipping first causes the opening of a passage to the foreign body. Later, as the foreign body tends to slip on the blades of the scissors, the repeated cuts divide bands of tissue that tend to retain it. It is conceivable that a fragment of iron or steel might be of such shape as to require to be thus freed on both sides before it could be withdrawn; but generally the movements of the scissors tips will so disturb its position that reintroduction in a somewhat different direction will not be necessary.

1434 Glenarm Street.

[THE DISCUSSION ON THIS PAPER WILL APPEAR IN A LATER ISSUE OF THE JOURNAL.]

THE FAUCIAL TONSILS AND THE TEETH *

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I have given my paper the above title, not because it is my purpose to say much about the teeth, but because I desire to emphasize the importance of the tonsils from the standpoint of the dentist. Tonsillar disease is so insidious in its origin that in most instances it goes unrecognized until the damage to the neighboring organs and even to the general health of the patient is almost irreparable. The tonsils and the teeth are alike at least in this one respect, and the time to cure either is before the disease begins. In other words, we do not see our patients early enough to give them the best kind of service. The tonsils and the teeth, on the other hand, are very unlike in respect to their physiologic importance to the human economy. No one questions, I suppose, the value of the teeth and the desirability of perfecting and preserving them in all their functional integrity but the tonsils have fallen into disrepute and they seem scarcely to have justified their right even to existence under any circumstances whatsoever, so that we find some who advocate their wholesale removal whether they are diseased or not. This, however, would seem to be an extremely radical measure for the correction of a great evil. It is too much like advocating the hanging of all men because some men are murderers.

The faucial tonsils differ but slightly, either histologically or functionally, from similar glands in other portions of the body, but their general and applied anatomy may be worthy of a brief description.

The faucial tonsils are situated on either side of the oropharynx between the pillars of the palate, and in their normal condition they are scarcely demonstrable without the aid of an instrument to draw them into view. The normal faucial tonsil varies in size but it is generally not larger than a small almond, which it somewhat resembles in shape. It rests on the fascia of the superior constrictor muscle, which muscle separates it from the large blood vessels and other important structures in the cervical region.

A diseased faucial tonsil is generally more or less hypertrophied in all its parts. It does not necessarily project far into the fauces, but it is often grasped be-

tween the pillars of the palate and the triangular fold, or so-called plica triangularis, by means of which it is held down in its bed in the tonsillar fossa. These submerged tonsils are not, as a rule, obstructive, but they are sometimes very large, extending upward and backward even as far as the Eustachian tube, on which they often press, interfering with the air, and blood circulation of the ear, and causing disturbances of its function.

In addition to the triangular fold which partially covers the inner and anterior portions of the tonsil, the gland is enveloped in a fibrous capsule which separates it from the surrounding tissues and lines the crypts, which extend through the entire gland and open upward into the supratonsillar fossa. The drainage, therefore, of these tonsils is extremely faulty, and the result is that the pent-up secretions become foul-smelling, and exceedingly irritating when once they have been discharged into the mouth, to say nothing of the vast numbers of bacteria which are constantly being absorbed into the general system through the lymphatics and glands of the neck, causing tuberculosis, rheumatism, scarlet fever and other infections and exanthems.

The function of the normal tonsil is still a subject of discussion. We do not know what it is, but this much we do know, that a diseased tonsil is not only a menace to the general health, but a source of local infection to the oral cavity, harmful alike to the mucous membrane lining this cavity and to the teeth which we are striving so hard to preserve.

Diseased faucial tonsils affect the teeth in three ways. First, they interfere with the general health of the patient and thus with the proper nourishment of the teeth. Second, they contribute very largely to the local invasion of the teeth by the numerous bacteria which emanate from their crypts. And, third; they interfere by pressure with the alignment of the teeth and with the normal development of the maxillary bones.

That the general health is impaired by direct infection from, and through, these glands is a fact which has been proved beyond any possibility of doubt. Dr. George B. Wood has shown, in a series of experiments on hogs, that tubercle bacilli of a virulent nature frequently invade the tonsillar tissues in preference to other portions of the throat, and that even an apparently normal tonsil is unable to filter them out. He and others have also shown that the tonsils and lymphatic glands of the neck combine to form a direct route for the invasion even of the contents of the thoracic cavity, such as the pleura and apices of the lungs. Tuberculous glands of the neck and even pulmonary tuberculosis may therefore be traced directly to diseased faucial tonsils; and my own experience has led me to believe that cervical adenitis, whatever may be the specific character of the infection, may, in the great majority of instances, be traced directly either to diseased tonsils or teeth, or to both of these sources combined. Moreover, when we consider the fact that the efferent lymphatics drain into the venous circulation, we have an explanation of the anemia and other symptoms of blood impoverishment which always accompany diseased tonsils and teeth. We have here, therefore, what has been called a "vicious circle." The diseased tonsil, or tooth, transmits its infection through the cervical glands and lymphatics to the circulation, impoverishing the blood which, on its return, fails to nourish the tonsils and teeth properly, and thus disease of these organs is further elaborated and extended.

* Read in the Section on Stomatology of the American Medical Association, at the Sixtieth Annual Session, at Atlantic City, June, 1909.

Futhermore, a diseased faucial tonsil is usually more or less catarrhal in its character and its secretions are often filthy in the extreme. The oropharynx is thus kept more or less bathed in infectious secretions, and the teeth naturally suffer as a result. In a similar way, of course, the normal tonsil may be affected by infectious material from diseased teeth.

The third manner in which the teeth are affected by hypertrophied tonsils is by pressure of the glands on the posterior molars and on the ends of the alveolar arches. So far as I know, this factor in the production of alveolar irregularities has not been referred to in literature, and yet it seems to me to be one of no little importance. These glands are sometimes very large and of firm consistency, and the more or less constant pressure which they exert on the surrounding structures produces marked deformities. I have already referred to the injurious effect of tonsillar pressure on the Eustachian tube, the lumen of which is often so altered as to interfere with the circulation of air in the middle ear, and I need now only to mention, in addition, the marked bowing of the palatal half-arches, the posterior one being crowded backward against the lateral portion of the post pharyngeal wall, interfering with the normal nasal breathing, and the anterior one crowded forward against the molar teeth and their alveolar processes, this latter pressure being alternately increased and diminished by the acts of articulation, mastication and deglutition.

A similar outward bowing of the superior constrictor muscle also takes place, causing pressure, both on the large vessels of the neck, interfering with the blood circulation in all the structures of the head and face, and on the important nerve trunks in this region, causing neuralgias and various trophic changes in the facial and even the cerebral tissues.

The indirect effect of diseased and hypertrophied tonsils on the teeth and their settings, through forced mouth-breathing, has been described fully by numerous observers; and here, by the way, we have another vicious circle. Just where the circle begins is a mooted question, but whether the tonsils cause the mouth-breathing and the resultant dental irregularities, or whether the dental irregularities cause the mouth-breathing and the resultant tonsils, should not concern us so much as the fact that it is obligatory on us as dental and oral surgeons to break in on this vicious circle at as many points as possible and promptly destroy its disastrous cumulative effects.

We can not cure mouth-breathing and its resultant disastrous effects, in all cases, merely by the removal of tonsils and adenoids. When there are dental irregularities which make it impossible, difficult or even a little inconvenient to close the mouth, something more than tonsillectomy and adenoidectomy must be done. And likewise we can not always cure mouth-breathing by making it possible or convenient to close the mouth, but the nasopharyngeal and oropharyngeal cavities must be made free for the passage of the breath currents, else the breathing can not be normal, nor indeed can the dental arches long remain normal, at least in young children.

My plea in this paper, therefore, is for the eradication of all glandular obstructions to the normal development of the teeth and the alveolar arches, prior to any attempt to remedy the structural defects of these organs.

The tonsils, like the teeth, are subject to change and decay. The structural changes of the tonsils are far greater than those of the teeth. Certain portions of them, up to the age of puberty, undergo marked hypertrophy and thus, in some instances, they become very large. In later years, by a process of disintegration or degeneration, it is true, they grow smaller, but except for the ill effects of the pressure, these small and degenerated tonsils, owing to their catarrhal condition, are more harmful than the larger ones, and give rise to more or less trouble during the life of the individual.

It is not good practice, therefore, to wait for the so-called atrophy of large tonsils. An atrophied, like a hypertrophied tonsil, is usually diseased and it bears some resemblance to a diseased tooth, but inasmuch as the tonsil can not, by any possible means, have its original function restored, whatever that function may have been, the only method of dealing with it is to enucleate or extirpate it. No half-way measures will suffice. I should as soon think of leaving the diseased root of a tooth in the mouth as of taking off only a portion of a diseased tonsil. The modern operation, therefore, is tonsillectomy and not tonsillotomy.

SUMMARY

The faucial tonsils and the teeth are in close approximation and they are alike subject to disease or degeneration.

Diseased tonsils and teeth are locally and systemically unhygienic.

Secretions from the tonsils may infect the teeth, and contrariwise, the tonsils may be infected by the teeth.

Diseased tonsils and teeth cause headache, earache and facial neuralgia, and they become a direct source of infection to the glands of the neck and through the efferent lymphatics to the general respiratory and circulatory systems.

Hypertrophied faucial tonsils often become so large as to effect the hearing, the circulation of blood, the nerve supply of the face and head, and the normal development of the alveolar arches.

The teeth serve important purposes, but the exact function of the tonsil has not yet been demonstrated.

The importance of preserving the teeth is fully recognized, but the diseased tonsil is not worth preserving, because it has lost its usefulness and become a menace to the human economy.

The only rational remedy for diseased faucial tonsils is total extirpation.

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[THE DISCUSSION ON THIS PAPER WILL APPEAR IN A LATER ISSUE OF THE JOURNAL.]

Doctors, Dogs and Other Detriments.—According to press reports the physician is now to come under the ban in high class apartment houses, with “dogs or cats or children of a tender age.” The reasons are two-fold: First, their “signs mar the esthetic appearance” of the building, and second, “there is an almost constant stream of people running in and out of their halls.” We bow to the genius of the inventor of the first objection. Regarding the second, as is the case with children, so with practices. There are those of tender age that are not overburdened with callers, as well as more mature ones with “a constant stream of visitors.” Why not establish an age line for practices, the reverse of that prevailing in the case of children—say children under eight not admissible, and physicians whose practice exceeds ten callers a day? The advent of an “addition” to cancel the lease in one case; the eleventh patient in one day to cancel that in the other. There is nothing like having a fixed standard.

AMEBIC DYSENTERY

A PRELIMINARY NOTE BASED ON CLINICAL AND PATHOLOGIC STUDIES

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The subject of amebic dysentery is one that is commanding increasing attention in all tropical and temperate countries. It has not been a great while since it was universally believed that this form of dysentery existed only in tropical countries, except in those cases in which it was imported from the tropics to temperate climates. Many cases, however, have been reported from various sections of temperate countries, and in patients who have never been away from their immediate surroundings. There is, then, no doubt about amebic dysentery having been contracted out of the tropics. Just how this infection could occur is difficult to understand; a theory has been suggested, and is accepted by many, that the cases of infection away from the tropics occurred from eating uncooked tropical fruits on which the amebæ had been imported. There is no one who has established any scientific facts in support of this theory, so it remains altogether problematic. There are cases, however, of amebic dysentery in which the patients did not become infected by eating or handling tropical fruits. My partner, Dr. J. M. Mathews, and I, with our assistant, Dr. C. D. Render, have had a half dozen of such cases under our care in the past few months.

CASE 1.—History.—A young man aged 28, came under our observation last September. He lived in an isolated district in the mountains of this state. He declared that he could scarcely remember having eaten tropical fruits at any time, and especially at any time near that of his infection. The patient did give a history, however, of living in a valley and of drinking water from a well in which surface water finds its way easily when heavy rains have fallen. He was drinking water from this well at the time when he was stricken with dysentery, and he stated that the well was almost overflowing a short time before he was taken ill.

Present Illness.—Last December he was taken suddenly ill with intense cramping pains in the lower portion of his abdomen and a violent diarrhea. His condition grew rapidly worse and it was thought that there was no hope for his life. After four or five weeks he began to improve slowly and during the latter part of the following February and March he could walk around the house. His diarrhea continued, however, and in April he had a relapse in which his condition was even worse than at the time of his first attack. His weight before his first illness was 140 pounds; it was now reduced to 85 pounds. He had periods of improvement and relapse until he came to Louisville during the following September. When he first appeared in our office his general appearance was typical of one in the advanced stages of cancerous disease or tuberculous infection. He was using, and had been for months, opium suppositories for the relief of intense suffering in his rectum and lower portion of his abdomen. Examination revealed, at once, numerous ulcers in the rectum and sigmoid. Scrapings from these ulcers showed myriads of motile amebæ.

CASE 2.—Patient.—A man aged 61 consulted us recently on account of a distressing diarrhea. There was no history of having eaten or handled any kind of tropical fruits. He did not eat raw fruits of any kind and his occupation did not require his handling or being about fruits.

Present Illness.—This patient's condition was quite as bad as that of the young man referred to and the amebæ that were found on examination were as numerous. His infection dates from last September. During the previous months there had

been little or no rain and the water supply in his section of the country was completely exhausted. Water that was acknowledged to be absolutely unfit for drinking purposes was shipped in from the surrounding country and was so used.

Other patients have given similar histories, both as to the abstinence from eating or handling tropical fruits and the impurity of the water supply. I feel confident that the chief source of infection, in the cases of amebic dysentery occurring in this country, is from drinking-water. We have been so thoroughly saturated with the teaching that amebæ are indigenous to the tropical countries only that we can with great difficulty see the plausibility of any opposing arguments. In the tropical countries amebæ are most numerous and active; therefore, amebic dysentery occurs in these countries with the greatest frequency and severity. I am confident that amebæ are indigenous to our own country, but that they are situated in a less favorable environment and are necessarily fewer in number and less vigorous. We would then naturally expect that the disease they produce would be less frequent in its occurrence and less severe in its effect in temperate climates.

DIAGNOSIS

It is well known to those who are at all familiar with this character of work that the diagnosis is almost always made from the microscopic examinations of the material excreted from the bowel, especially the bloody mucus. It is in this material that amebæ are most abundantly found. It is not in every case, however, that we find bloody mucus, and if it were present the amebæ may be very inactive and much more difficult to make out at one time than another. Where there is but little or no mucus the fecal material must be made liquid by adding water until a suitable consistency is obtained for microscopic examination. The specimen now prepared is one that contains but few amebæ, and there can be no difficulty in understanding that when it has been much diluted numerous examinations would most likely reveal negative findings. If it be true that amebæ produce the ulcerations found in the mucous membrane of the intestine in these cases, is it not reasonable to suppose that these ulcers afford the sites of greatest amebic activity? Admitting this, we would expect to find but few amebæ present in a case of amebic dysentery in which there are but few pathologic conditions in the intestine. Only those that were cast off from a very inactive pathologic process would occur in the discharges.

I do not rely on the examinations of the intestinal discharges, but invert the patient and thoroughly scrape the ulcers with a sharp curette. In this way the amebæ will be observed at once if they can be found at all. We have failed only in a few instances to find the amebæ when sought for in this way, and in these cases they were found later, after all treatment had been discontinued for a few days. In the twenty-four cases treated in the last ten months I have not failed in a single instance to observe ulcers in the rectum and sigmoid and from these demonstrated the presence of motile amebæ.

There is no difficulty in making out the presence of any kind of ulceration, or any other pathologic condition, in the mucous membrane of the lower bowel when this method of examination is employed. If the mucous membrane is found to be soiled by any kind of discharges two or three glassfuls of water can be poured through the proctoscope into the rectum and the patient allowed to pass it out at once, after which the examination can be easily made.

I have called attention to the fact that it is often very difficult to find motile amebæ when the patient is under active treatment. In such cases we advise a discontinuance of the treatment for a few days, after which the motile amebæ can be found. Numerous motile amebæ may be found, however, when the patient is being actively treated. Unless the stage is kept warm the amebæ can not be made out. I have often failed to observe them at first, but after the stage had been warmed they were seen in large numbers.

There are numerous individuals, all over the country, who have amebic infection which is not recognized as such. My partner, Dr. J. M. Mathews, says that he is confident he has treated hundreds of such cases in the past and did not recognize the nature of the infection.

Nearly all the cases in which the patients have become emaciated are diagnosed as having cancer or intestinal tuberculosis. A certain percentage continue to grow worse and die; others linger along with periods of improvement and relapse. Careful scientific investigation will reveal the real nature of the disease in all such cases.

TREATMENT

Since this form of dysentery is due to the presence of a parasite located in the lower portion of the alimentary tract it has very naturally been treated both from above and below. No one plan of treatment has, however, been accepted as being far superior to another; and, what is especially peculiar in the treatment of this disease, is the uncertainty that any treatment yet suggested has been successful in effecting a permanent cure. Everyone who has had experience in the treatment of amebic dysentery feels that his patient is very liable to relapse; and, since relapses have been reported to occur from one to five years after treatment, little faith may be had in a permanent cure. When such long periods have elapsed before the symptoms return, however, I think some consideration might be given to the suggestion that reinfection has taken place. There is no argument produced against reinfection, whether the period dating from a supposed cure be long or short, unless the environment of the patient be materially changed.

Diet.—I believe a great mistake is made in restricting the patient's diet too severely, both as to quantity and quality of food. Unless the patient is in the acute stage of the disease his diet should consist of liberal quantities of rich nourishing foods, barring most vegetables, fruits, and sweets. Especially is this true if the patient is anemic and emaciated, as we find this condition so often obtains. The second patient above referred to, who is 61 years of age, was advised to eat a good full meal before any kind of treatment was suggested. He did this, and when he returned to the office he had experienced no discomfort; half of his trouble seemed to have been dissipated. This is one of many similar cases. All of our patients, except for some special reason, are fed liberally.

Rest.—This is, without doubt, a very valuable feature in the treatment of this disease. We had one patient, however, in whom rest in bed was of no value whatever. Rest, of course, is of most service to those who are acutely attacked or much weakened from emaciation. It has often been observed that patients do exceedingly well when they remain quiet, but when they begin to go about and resume business cares they relapse into the former condition.

Dr. W. E. Deeks¹ speaks of absolutely curing patients in from one to four weeks by what he terms the "rest supportive treatment." He gives a milk diet, with a preliminary dose of castor-oil; the only internal medicine thereafter being heroic doses of bismuth subnitrate, with a few normal saline irrigations if there is much tenesmus. I am strongly of the opinion that he will have a number of relapses if he keeps these patients under observation.

Remedies Administered by Mouth.—Of these agents none have been relied on in any comparison to that of ipecacuanha. While it is held in much less favor than formerly in the temperate countries, it has many ardent supporters, especially in India and Egypt. Sir Patrick Manson² says: "Ipecacuanha does influence amebic dysentery. It perhaps does not kill the ameba, but deprives it of its pathogenic powers. Quinin, opiates, bismuth and all kinds of intestinal antiseptics have been given with uncertain results.

Remedies Administered by Rectal Injections.—Various sedatives have been employed for the relief of pain—flax-seed water with laudanum, starch water with laudanum, etc. A large number of parasiticide injections have been used—bichlorid of mercury, permanganate of potassium, silver nitrate, thymol, boric acid, quinin, etc. The latter has been used more extensively than any other parasiticide injection. None of these agents acts well in all cases. Tannic acid solution and ice water have also been used extensively in this country. Two years ago we had a Philippine soldier under our observation; quinin irrigations had been used through his appendix for months with no favorable results.

Coal-Oil.—Having failed in the employment of various agents recommended I conceived the idea of irrigating the bowel with refined petroleum, commonly known as coal-oil. I had observed that this agent undiluted would kill all varieties of parasites inhabiting the skin surfaces of any animal; so I reasoned that if it could be used in sufficient strength, considering the safety of the tissues, it would probably act as a parasiticide in the case of amebic infection. Not knowing just what effect it would produce on the mucous membrane, etc., I exercised great care in the amount of oil employed at each irrigation. I began with about an ounce in each quart of water and carefully watched for complications; none were manifest, so I began systematically increasing the percentage of coal-oil with each irrigation. I would continue for a while and then cease to increase the amount for several days, and again I would carefully increase the percentage of oil, until finally I was amazed; I would inject four or five ounces of undiluted coal-oil into the bowel with no untoward results whatever. Having lost much of my sense of fear, I began increasing the amount of pure oil at each irrigation, until now I have no hesitancy whatever in injecting a quart or more of undiluted coal-oil through the rectum, or, in cases of appendicostomy, the appendix. We have never had an untoward symptom from its use in any quantity.

I have treated all of our amebic dysentery patients for the past ten months with undiluted coal-oil. The general plan has been first to place the patient in the inverted position and introduce a proctoscope, through which a normal saline solution is poured into the bowel for the purpose of cleansing it of fecal material, mucus,

1. Med. Rec., lxxiv, No. 24.

2. Brit. Med. Jour., Oct. 24, 1909, p. 1253.

neurotic tissue, etc. The patient is allowed sufficient time to return this solution—from one-half hour to an hour and a half. He is again placed in the inverted position, the proctoscope introduced and any amount of oil, from one glassful to a quart or more of undiluted coal-oil, is poured into the bowel; the patient is then requested to remain in the recumbent posture for a half hour or longer.

The inverted position herein referred to is fully described and illustrated in a previous article.³ Since that publication I have done some original work⁴ on the introduction of various instruments into the rectum and sigmoid. In this experimental work I demonstrated, by the introduction of bismuth, etc., that it was not difficult to introduce various solutions along the entire length of the colon, and even beyond the cecum, when the inverted position was employed. No tubes or bougies are necessary. They, in fact, serve to defeat the object sought.

If it is true that the chief focus of infection is in the cecum and ascending colon, in amebic dysentery, there is no other way that parasitocides and astringent solutions can be so easily conveyed to the site of greatest pathologic activity. Of course, it is impossible entirely to cleanse the cecum and ascending colon by preliminary irrigations with plain water or normal saline, so the subsequent irrigation of oil or other parasiticide is necessarily diluted and is, therefore, deprived of the effects of its full force.

All our patients have responded satisfactorily to this treatment with the exception of two; and these have not allowed us to carry out every detail of the treatment. We have advised appendicostomy in these cases, however, and if such a procedure is agreed to the oil will be used through the appendix, as we have done successfully in a number of other cases. Of course, we will keep, so far as it is possible, these patients under observation and note later the results of this plan of treatment.

We are not now prepared to make definite statements as to the influence of coal-oil on the amebæ outside the intestinal tract, but we expect to be able to do so in the future.

Masonic Temple.

The Regeneration of Peripheral Nerves.—F. Karl Walter (Inaug. Dissert., U. Rostock, 1908) gives a summary of the previous work on this subject and especially discusses the work of Bethe and of Cajal. He does not deny the existence of a chemotactic influence, exerted by a degenerating stump, on the outgrowth of nerve fibers. It is thought outgrowth from the central stump does not extend throughout the peripheral stump (thus forming a new nerve fiber) as maintained by Cajal. Sectioned nerve fibers are capable of regenerating, independently of any influence from the central stump, to the axial band-fiber stage of Bethe, or the embryonic nerve fiber stage of Howell and Huber. This is an atypical nerve fiber of embryonic appearance not yet capable of functional activity or of electrical response. Unless connection with the central stump is established, further regeneration ceases and degeneration follows. When united to the central stump a normal functioning nerve fiber results. The new nerve fiber is formed from the neurolemma—the sheath of Schwann—the fibrils from the nuclei, the medullary sheath from the protoplasm. Connection with the central stump immediately after section hastens all stages of regeneration in the peripheral stump.

3. Hanes, Granville S.: A New Position for the Diagnosis and Treatment of Diseases of the Rectum and Sigmoid Flexure, *THE JOURNAL A. M. A.*, Oct. 3, 1908, li, 1134.

4. *Kentucky Med. Jour.*, March, 1909, vii, 173-181.

THE ACCOMMODATION AND DONDERS' CURVE AND THE NEED OF REVISING OUR IDEAS REGARDING THEM

AN EXPERIMENTAL STUDY *

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NEW YORK

NEED OF REVISING DONDERS' WORK

Of the many invaluable contributions that Donders made to our science certainly one of the most important was his determination of the range of accommodation at different ages. His researches, indeed, all admit to be fundamental. For that very reason we must avoid ascribing to them an exactitude and a validity which they do not possess and which Donders himself did not claim for them.¹ For we must remember that the number of cases utilized by Donders was small and the individual variations that they presented were rather considerable. Thus his estimate that 7 D represents the normal range of accommodation at the age of 30 is based on but five cases, the accommodation of which was found to vary between 6 and 9 D. It is obvious that more numerous observations might have extended these limits in either direction and have given a different value for the mean. Furthermore, the observations of Donders were based on the assumption that his subjects were actually emmetropic—an assumption which, in the absence of precise cycloplegic tests, must be regarded as erroneous for at least some of them.² Finally clinical experience has proved to many of us that in some respects the course of presbyopia runs otherwise than Donders taught.

In view of these facts and of the great practical importance of the subject it seems advisable to extend and check Donders' investigations as fully as possible.

OUR OBSERVATIONS; METHODS EMPLOYED

The observations here detailed, made by Dr. J. B. Thomas and myself, are a contribution in this direction. The plan which we have been pursuing—for our investigations are still unfinished—is to render each patient emmetropic by applying the full correction of his refractive error and then to determine his near point with Prince's rule. This gives the corresponding amount of accommodation in diopters, which, as the patient's far point has been placed at infinity by his glass, evidently represents his full accommodative power.

In carrying out such a plan the following precautions must be observed:

1. The subject must be made really emmetropic, i. e., his refraction must be wholly and accurately corrected. To effect this in our cases the refraction was carefully determined in every one, and a cycloplegic was used in

* Read in the Section on Ophthalmology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

* A preliminary statement of the results here given was presented to the American Ophthalmological Society last summer. This statement, however, being based on insufficient data, was intended to be provisional only, and as a matter of fact contains some inaccuracies.

1. He says: "The deviations [from] the mean course are not particularly great. And still they must undoubtedly in part be ascribed to errors of observation."

2. Thus Donders, speaking of the hyperopia which he believes to develop later in life, says: "I have not infrequently met with this in persons at sixty years of age, who in their youth probably exhibited no H whatever. This was inferred when they did not before the forty-fifth year of their life, need spectacles in the evening for minute work." As up to the age of forty-five a hyperopia of one or even two D may remain latent, such an inference is not to be relied on. Donders himself admits: "In some a slight degree of [latent] H may also increase the deviations."

all but a very few under 48 and in some over that age. Special care was taken to determine the astigmatism accurately to within 0.12 D.

2. The subject's vision must be such that he can make the fine distinctions required. We were, therefore, obliged to reject cases of irregular astigmatism, most cases of high myopia and of high astigmatism even when corrected, of amblyopia from any cause, but especially amblyopia associated with any defect of central vision, of poor sight from corneal or lenticular opacities, etc. Persons thus affected can not discriminate between the blurring due to accommodative failure and the blurring due to their naturally defective vision. In general no subject was utilized whose vision was less than 20/20.

3. The full correction being applied, and the eye not under examination being screened, the test object is brought up until it blurs, then withdrawn until it clears, and then carried back and forth several times until we can be sure of the very nearest point where it begins to blur. This will be the near point, and the corresponding amount of accommodation in D, read off from the scale, will give the patient's range.

4. If the near point is closer than 10 cm. a slight error in determining its position will involve an error of one or more D in the value found for the range of accommodation. In such cases, after making the test with the full correction alone, it is well also to make it with this correction combined with a -3.00 or -4.00 D sphere, so as to carry the near point out beyond 10 cm. The value then found for the range must be increased by the amount of this added lens. But it must be noted that the estimate thus obtained is generally too low, and a value found in the ordinary way which does not exceed such estimate by more than one or two D, may be regarded as accurate.

5. If the near point is beyond 40 cm. it must be brought within measurable distance by the addition of a convex glass to the patient's full correction. From the value of the range thus found the strength of this convex addition must, of course, be subtracted. The addition in any case must be as small as possible, for a strong convex glass often brings the near point closer than it should be theoretically, so that the value of the range found with it is too great by a diopter or more. This will not happen if the convex addition is made only just large enough to bring the near point to between 30 and 40 cm.

6. For reasons that will be enlarged on later it is necessary to make repeated tests in the same case in order to discover the subject's accommodative power. This is especially true of young subjects in whom the first test rarely reveals the true range. Because of this fact we have been obliged to exclude a number of observations in which we were able to make the test but once under proper conditions, or in which the subject later exhibited a greater accommodation.

7. We must make sure that the patient tested understands just what is required of him. In particular we must tell him (a) to put forth all his efforts and strain as hard as he can, so as to focus down on the test object at the closest possible point; (b) to be careful to indi-

cate the precise point where the test object begins to blur—not the point where it becomes entirely confused.

8. We must be sure that the patient is physically fit for the test. He must not be incapacitated from exerting his full accommodative power by muscular exhaustion, neurasthenia, or similar causes. In our series of cases we had to reject a number of observations in which the patient exhibited a temporary incapacity thus occasioned.

9. The test object must be satisfactory. None has proved perfectly so for all persons and at all ranges. Donders used a wire optometer and fine print. For most people, however, these two tests, and especially the latter, make the near point appear too close—giving thus an overestimate of the range. After trying various objects—dots in pairs and groups, parallel lines, simple geometric figures, etc.—we found the best test

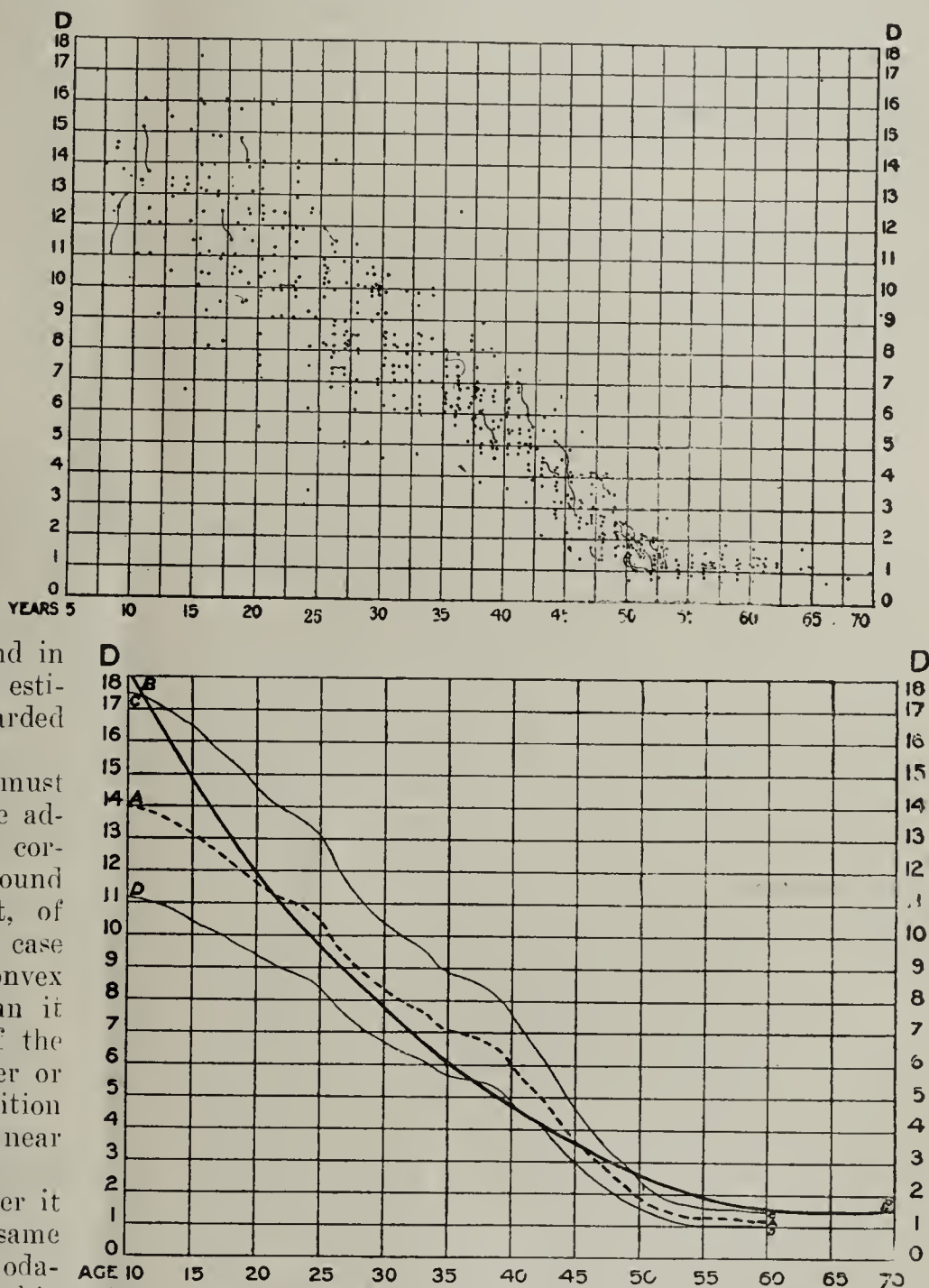


Fig. 1.—Range of accommodation at different ages. Each dot denotes a separate subject, the position of the dot indicating the subject's age and the amount of his accommodation. Two dots connected by a wavy line mean the same subject at different ages. The near point in all cases was measured from the anterior focus of the eye (i. e., from a point 13 mm. in front of the cornea).

Fig. 2.—Comparison of observations with Donders' curve. AA, curve representing the mean of our observations. (Before the age of 25 and especially before the age of 15, this curve can not be regarded as certainly determined, although it is probably not over 1 D out of the way.) BB, Donders' curve, modified so as to conform to our plan of measurement (from the anterior focus of the eye) and to represent the absolute range and not, as is usually done, the absolute near point in his cases. CC, represents the upper and DD the lower limits for normal subjects according to our observations.

object³ to be a single engraved black line, 0.2 mm. thick and 3 mm. long, bisecting a dull, white, oblong card which is 3 mm. long and 1.25 mm. wide and is mounted on a disc of black velvet. The moment the line is brought within the near point it blurs (broadens) and then doubles. The line should be so held as to be most clearly seen. Most people see it best when held vertical.

10. The illumination should be suitable. This is a matter of great importance, and lack of attention to it may cause an underestimate of one or more D. The light must be good but not dazzling (diffused daylight is the best), and must come almost straight from behind—over the right shoulder when the right eye is tested and over the left shoulder when the left eye is tested. There must be no shadow on the card which bears the line and no dazzling reflections nor confusing lights beyond it or alongside. For this reason when the test is made with Prince's rule, the latter should be held with its broad side vertical, for if held horizontal the graduations on the rule and the glare from its surface are apt to distract the patient's attention or cause confusion.

11. We must be careful to define the point from which we make our measurement, and take care that we do actually measure from this point each time. Donders measured from the nodal point of the eye, while the tables usually given presuppose a measurement made from the anterior principal point of the eye, i. e., practically from the anterior surface of the cornea. I prefer to measure from the anterior focus of the eye, i. e., from a point 13 mm. in front of the cornea, because this is the point at which we place the convex glass that we use to measure the accommodative power with and to replace the latter when absent. Thus when we speak of a deficiency of accommodation of 6 D we mean one that will be compensated for by a lens of that strength placed at the anterior focus—not at the anterior principal point—of the eye. So, too, when we speak of a hyperopia of 6 D we mean one which is corrected by a convex glass of that strength placed at the anterior focus of the eye. If we shifted the compensating glass to the anterior principal point of the eye we should need one of 6.5 D to accomplish the desired result.

COMPARISON OF OUR RESULTS WITH THOSE OF DONDERS

The values that we found in the range in our cases are plotted in the accompanying diagram (Fig. 1). Each subject is denoted by a separate dot, and the same subject at different ages is denoted by two dots connected by a wavy line. In Figure 2 the broken line, AA, denotes the mean of our observations; the continuous line, BB, the similar curve that Donders constructed from his observations; CC denotes the upper, and DD the lower of the limits between which the great majority of our observations are comprised.

BB, it will be observed, differs from Donders' curve as ordinarily depicted in the text-books in two particulars. In the first place, it rises higher at the start, reaching 18 instead of 14 D. In the second place, it does not touch the base line or O even at the age of 70. The reason for the first difference is that Donders' curve

as ordinarily drawn represents the near point when measured from the anterior principal point of the eye, while, in order to make it comparable with our curve, we had to draw it as if measurement had been made from the same point as for the latter, i. e., the anterior focus of the eye. The second point of difference arises from the fact that Donders' curve as usually drawn shows the absolute position of the near point in his patients, whether they were emmetropic or hyperopic, while, to make it comparable with ours and to show the actual range of accommodation as he found it, we had to change the curve to what it would be if his elderly hyperopic patients were rendered emmetropic by glasses. To do this we had to shift the far point in all his hyperopic cases up to the base line and shift the near point correspondingly upward.

It will be noted that our curve differs from that of Donders in three important particulars:

1. Before the age of 20 our curve falls below his. Here, owing to the comparatively small number of cases and to the difficulty of getting accurate results when the accommodation is high and the patient is young, the results must be regarded as uncertain. Yet we think that the probable error in our findings is not over one D, and that in any case Donders' results for the early ages (10 to 15) are distinctly too high.

2. From 20 to 45 our curve rises above his.

3. From 45 on it falls below his. The difference here is due to the sharp plunge that takes place between 38 and 50.⁴

Both according to our observations and those of Donders the accommodation remains nearly constant after the age of 51, diminishing not more than 0.50 D in ten years. We find a somewhat lower range than Donders did for this time of life.

Hess believes that the accommodation shown in advanced life is in part spurious, the patient being able to see distinctly within his true near point, because his pupil is very narrow and hence has the sharp defining power of a stop or stenopæic aperture. But in a num-

TABLE 1.—NUMERICAL DIFFERENCE BETWEEN DONDERS' OBSERVATIONS AND CONTROL OBSERVATIONS

Range in D, near point being measured from anterior focus of eye = 1.3 cm. in front of the cornea.

Our Observations.				Donders' Observations.		
Age.	No. of Cases.	High.	Low.	Mean.	Mean.	No. of Cases.
10	6	16.0	11.0	14.0*	18.0	5
15	16	17.5	10.0	13.2*	15.0	8
20	17	14.0	6.5†	11.4*	11.8	7
25	15	12.0	5.5†	10.3	9.7	4
30	20	10.5	4.5†	8.5	7.8	5
35	9	8.1	6.0†	7.0	6.0	2
40	19	7.3	3.7	6.0	4.8	5
45	16	5.0	1.8†	3.8	3.7	..
50	16	2.6	0.7	1.8	2.6	..
55	4	1.6	0.8	1.3	2.0	..
60	5	1.7	0.7	1.2	1.5	..

* Approximate.

† Probably abnormal.

TABLE 2.—NUMERICAL DIFFERENCE BETWEEN DONDERS' OBSERVATIONS AND CONTROL OBSERVATIONS

Range in D, near point being measured in the ordinary way from the anterior principal point (practically from the anterior surface of the cornea).

Our Observations.		Donders' Observations.		Our Observations.		Donders' Observations.	
Age.	Mean.	Age.	Mean.	Age.	Mean.	Age.	Mean.
10	11.6*	40	5.5	40	5.5	40	4.5
15	11.0*	45	3.6	45	3.6	45	3.5
20	9.9*	50	1.9	50	1.9	50	2.5
25	9.0	55	1.3	55	1.3	55	2.0
30	7.6	60	1.3	60	1.3	60	1.5
35	6.4	65	1.2	65	1.2	65	1.5

* Approximate.

4. The fall in accommodation between these ages according to our observations is 4.8 D, or just double the amount found by Donders.

3. Hess recommends Scheiner's test. We have tried this in various modifications, but none has proved satisfactory as a clinical test, that shall be applicable to all sorts of patients, intelligent and otherwise. Moreover, experimenting on myself, I find that the single line, if made fine enough and sharp enough, gives almost precisely the same results as Scheiner's test and is not subject to certain chances of error that inhere in the latter.

ber of patients that we examined between the ages of 50 and 60 the pupil was fully 3 mm. in diameter, so that Hess' explanation would not account for the range of 1 D or more that these patients showed.

The numerical differences between Donders' observations and ours is shown in Table 1.

NORMAL VARIATIONS IN THE RANGE OF ACCOMMODATION

What chiefly concerns us as clinicians is not so much the mean value of the accommodation at any given age as the limits within which the accommodation at that age must lie in order to be regarded as normal. A study of Figure 1 shows that the great majority of our cases lie between the limits indicated by the lines CC and DD in Figure 2, i. e., have a range of not more than 20 per cent. below or of 25 per cent. above the mean. The numerical values of these limits for each age are given in Table 3. An accommodation which is persistently above the upper limit or persistently below the lower must be regarded as abnormal. But it can not be so regarded on the strength of a single observation, no matter how aberrant the finding. For such a finding is usually erroneous, the error occurring because:

1. Our method of examination is faulty and, in particular, the test object is unsuitable or the illumination is defective.

2. The patient is inattentive or fails to comprehend what is required of him.

3. Through inertia, laziness or fatigue he fails to exert his full accommodative power.

Owing to these sources of error the same patient when examined at short intervals often shows wide variations—variations which, however, do not mean any real change in his accommodative power.

The usual effect of these sources of error is to make us underestimate the patient's accommodation. Provided we can be sure that the proper conditions are fulfilled, the highest measurement obtained in a series of observations represents the true accommodative power. If, however, this maximum occurs but once, and numerous other observations, made under as good conditions, show a uniformly lower range, we should regard the high finding as probably erroneous.

It is usually the first one or two observations that give the most erroneous findings. This is evidently due to the patient's unfamiliarity with the test and his failure to appreciate just what is expected of him. In any event, it is essential to multiply observations in the same case in order to eliminate error and get at the true result.

If it is thus essential to examine the same patient repeatedly when we wish to determine his individual accommodative power, it is still more essential to multiply observations when we are trying to find the normal average and the normal limits of the accommodation in general. We must examine a great many patients and examine them a great many times and always under the proper conditions and with the proper restrictions. When we do this we find that the accidental variations tend to disappear and the true maxima and minima lie closer to the mean range than we had supposed. The low values, in particular, tend to drop out. It is likely, therefore, that the true limits are not so far apart as indicated in Figure 2 and Table 3, and that a case to be really normal must be well within these limits, and especially must be well above the lower limit.

RANGE IN MYOPIA

Myopia—particularly myopia that has been corrected by glasses—is not regularly associated with a low range of accommodation. Out of thirty cases in which the myopia exceeded 3 D the accommodation was found subnormal in only two. In several cases it was strikingly high; thus:

Dorothy J., aged 18, myopia 12 to 13 D, acc.=12 D.
B. P., aged 18, myopia 4.25 D, acc.=14 D.
F. K. M., aged 13, myopia 7 D, acc.=12 D.
E. C. H., aged 23, myopia 3.75 D, acc.=14 D.
H. P. R., aged 25, myopia 5.50 D, acc.=12 D.
A. E. F., aged 37, myopia 5 D, acc.=8.5 D.

CONCLUSIONS

These may be stated—somewhat dogmatically—as follows:

1. To determine the accommodation we first provide the patient with the glass that fully corrects his refraction. If with this correction his near point lies beyond 40 cm. we add a convex glass of sufficient strength to bring the near point to between 30 and 40 cm. We then

TABLE 3.—NUMERICAL VALUES OF LIMITS FOR EACH AGE.

Normal range in D, near point being measured from the anterior focus of the eye (—1.3 cm. in front of the cornea).

Age.	Mean.	Mini- mum.	Maxi- mum.	Age.	Mean.	Mini- mum.	Maxi- mum.
10	14.0*	11.2	17.5	36	6.8	5.5	8.5
11	13.9*	11.1	17.4	37	6.7	5.4	8.4
12	13.8*	11.0	17.2	38	6.6	5.3	8.0
13	13.6*	10.9	17.0	39	6.3	5.0	7.9
14	13.4*	10.7	16.7	40	6.0	4.8	7.5
15	13.2*	10.5	16.5	41	5.6	4.5	7.0
16	12.9*	10.3	16.1	42	5.1	4.1	6.4
17	12.6*	10.1	15.7	43	4.7	3.8	5.9
18	12.3*	9.8	15.4	44	4.2	3.4	5.3
19	11.9*	9.5	14.9	45	3.8	3.0	4.7
20	11.5*	9.1	14.2	46	3.5	2.8	4.4
21	11.2	9.0	14.0	47	3.3	2.6	4.1
22	11.0	8.8	13.7	48	2.8	2.2	3.5
23	10.9	8.7	13.6	49	2.3	1.8	2.9
24	10.6	8.5	13.1	50	1.8	1.4	2.3
25	10.3	8.2	12.9	51	1.6	1.3	2.0
26	9.9	7.9	12.4	52	1.4	1.1	1.8
27	9.6	7.7	12.0	53	1.4	1.1	1.8
28	9.2	7.4	11.5	54	1.3	0.9	1.6
29	8.8	7.0	11.0	55	1.3	0.9	1.6
30	8.5	6.8	10.6	56	1.3	0.9	1.6
31	8.1	6.5	10.1	57	1.3	0.9	1.6
32	7.9	6.3	9.9	58	1.2	0.9	1.5
33	7.7	6.2	9.6	59	1.2	0.9	1.5
34	7.4	5.9	9.2	60	1.2	0.9	1.5
35	7.0	5.6	8.8	61	1.2	0.9	1.5

* Approximate.

place the patient with his back to a window, turning him so that a good diffuse light comes over the shoulder on the side of the eye we are testing—the other eye, of course, being covered. We now put in the carrier of Prince's rule a dull white card 3 by 1.5 mm. in size, mounted on a dead black surface and having engraved on it a vertical black line, 0.2 mm.⁵ broad and 3 mm. long. The rod itself we place with its proximal end one-half inch from the cornea and with its broad side vertical. We now push the carrier up to the eye, exhorting the patient to focus on the line as hard as he can. When the line blurs we withdraw it until it is distinct, and then carry it back and forth several times until we are sure we have the very nearest point at which the patient can still see it clearly. Marking this point we now read off from the scale the corresponding amount of accommodation in D. From this we subtract the value in D of any convex glass that we may have added to the patient's full correction. The remainder gives the true range. It is necessary to make the test several times, especially in young subjects, getting as many reliable observations as possible. Provided

5. If the patient's vision is not sharp, or if his near point is remote, 0.4 mm.

we can be sure that the patient is intelligent and accurate in his observations, the maximum found in a series of tests represents the real range.

2. If the determination is made in this way the range should be between the limits shown in Table 3.

3. An accommodation which is persistently above or persistently below these limits must be regarded as abnormal—provided always that the proper conditions of examination above noted have been fulfilled.

4. We are not, however, justified in pronouncing the accommodation abnormal on the strength of any single observation.

5. The results above given differ from those of Donders in the manner shown in Figure 2 and in Tables 1 and 2, and particularly in the following points: (a) Before the age of 20 the range is lower than that found by Donders; (b) from 20 to 45 it is higher; (c) from 45 on it is lower.

6. We believe that our results are more reliable than those of Donders because of the following facts:

A. They were obtained from three times as many subjects. Over 500 are shown in the chart, and in making up the statistics 600 have been utilized.

B. Our patients were rendered absolutely emmetropic by glasses, and no subject was utilized in whom the total refraction had not been carefully determined; while it is probable that many of Donders' cases, especially between the ages of 20 and 45, had an uncorrected latent hyperopia, which would make his estimate of the accommodation too low by 1 or 2 D. Hence the fact that our curve rises higher than his during this period.

C. The test object that we use for determining the near point (the fine hair-line and the rule) was better calculated to give accurate results than the tape and wire optometer used by Donders.

7. The idea, still somewhat current, that the accommodation in advanced life becomes zero is in accord neither with Donders' findings nor with ours. A true range of 1 D or over exists up to and beyond the age of 60.

8. Myopes have as good a range of accommodation as emmetropes.

49 East Thirtieth Street.

[THE DISCUSSION ON THIS PAPER WILL APPEAR IN A LATER ISSUE OF THE JOURNAL.]

Clinical Notes

ACUTE DILATATION OF STOMACH DURING ANESTHESIA

REPORT OF A CASE

EDWARD L. MOORHEAD, A.M., M.D.
CHICAGO

The following case is reported on account of its rarity:

Operation.—Mrs. Q., aged 22; perineorrhaphy; double salpingo-oophorectomy; appendicectomy; ether anesthesia, preceded by morphin sulphate grs. 1/4, atropin sulphate grs. 1/120.

Complication.—After repair of the perineum the patient's position was changed to the horizontal, and my assistant was about to give the abdomen its final preparation, when there suddenly appeared a large swelling extending to midway between the umbilicus and pubes, the convex border of the swelling pointing towards the pubes. There was no perceptible change in the pulse or respiration. The abdomen was opened

between the lower border of the swelling and the pubes and the immensely dilated stomach presented. A careful examination failed to elicit the cause. The stomach and intestines were protected by gauze sponges and the operation completed. A stomach-tube was introduced and the swelling gradually disappeared. There was no odor to the gas which passed from the tube, and on washing out the stomach the water came away clear.

Postoperative History.—When the patient was put to bed the pulse was 108 and temperature 99. She reacted nicely and did not vomit that day. The following day gas passed from the bowel and the patient had several slight vomiting spells. About 11 p. m. the stomach again began to dilate, and at 12 p. m. the stomach-tube was again introduced. The morning of the second day the patient's condition was not so good, the pulse being 120 and temperature 99. Normal salt solution was now given per rectum by the drop method and strychnin sulphate, grs. 1/30 every six hours, was ordered. At 10 a. m. on the second day it was necessary to resort to the stomach tube as dilatation again recurred. Eserin salicylate, gr. 1/50, was given at 11 a. m. and at 3 p. m. hypodermatically. On the morning of the third day the bowels moved several times, and from that time on the patient made an uneventful recovery. During the first few days following operation nothing was given by mouth. The patient left the hospital at the end of three weeks and there has been no recurrence of the trouble.

The case is of interest on account of the dilatation coming on at the time it did, without any appreciable cause. There had been no traumatism to the abdominal contents. The work on the perineum was done in a very short time. There was nothing in the stomach (food, etc.) to give rise to the production of gas. Whether the change in position having been a factor in its production is a question.

103 State Street.

A CASE OF SYCOSIS, PROBABLY DUE TO THE GONOCOCCUS

EDWARD F. WRIGHT, M.D.
ROYSE CITY, TEXAS

Mr. W., aged 35, weight 165, consulted me Feb. 20, 1909, for pustular folliculitis involving the bearded part of the face, which had existed for two years. The picture was that of an ordinary sycosis. On examining hairs extracted from the infected areas I found in their sheaths, not common pus organism, but great numbers of intercellular and intracellular biscuit-shaped diplococci which were morphologically identical with gonococci. In an examination of the literature I found in Pusey's work a reference to a report by Cronquist of a case of gonococcus folliculitis of the hairy region of the abdomen of a woman who had gonorrhea. Further observations tended to confirm my opinion that the case was one of gonococcus folliculitis. The organisms in my case were rather smaller than the cocci found in the acute stages of gonorrhea, but did not differ from the gonococci found in the prostate in cases of long standing. I found further from my records that the barber had been under treatment for gonorrhea at the time of this patient's infection.

Therapeutics

INCONTINENCE OF URINE IN CHILDREN

This is a frequent and a very troublesome condition, and logically can not be properly treated unless the cause has been determined. Yet how frequently physicians administer drugs for this condition without any investigation into its etiology!

Obviously, the first thing to determine, in a patient presented to the physician with a story of incontinence of urine (which is most generally incontinence only at night), is the condition of the urine. An examination

of the urine will rule in, or out, such causes as nephritis, diabetes, cystitis, and often calculi. An abnormal alkalinity of the urine or an increased acidity may be a factor in the irritation which causes the bladder to contract without due notice. If much mucus and blood are found, with a history of pain referred to the end of the penis in the boy, or to the urethra in the girl, and especially if there is chronic cystitis, such bladder investigations should be made as to prove the presence or absence of calculi.

The rectum, and the vagina in the female, should be carefully investigated for the presence of pin-worms, and if these are present it is not infrequent that in girls they may have invaded the urethra and bladder.

A frequent cause of incontinence is an adherent prepuce, both to the glans in the male and to the clitoris in the female. These conditions can be readily determined. In the boy, if the prepuce is long though not adherent, concretions and deposits of sebaceous material form, which may produce reflex irritation sufficient to cause incontinence.

An actual mild cystitis may be present which may cause the incontinence in the child, while in the adult it would cause only frequent voluntary urination.

Constipation, and feces remaining long in the rectum and sigmoid flexure, may cause pressure on the bladder in children sufficient to render it unable to hold the normal amount of urine.

The abdomen should be carefully examined to exclude any growth that would cause bladder pressure.

A bladder may be congenitally small, or, perhaps more frequently, it becomes contracted, because the urine is so frequently passed that it does not grow or has never grown to its normal size; in other words, the bladder may be contracted.

Nervous conditions, such as chorea, may cause incontinence; and, of course, there is often incontinence during an epileptic attack. Consequently, although epilepsy is not known to be present, in nocturnal incontinence when a tangible cause can not be determined the child should be carefully watched for the possible occurrence of epileptic attacks in the night. It is well known that epileptic attacks may occur in the night in patients in whom epilepsy has never been suspected, and patients who have epilepsy probably frequently have attacks in the night.

The cause may be the more intangible, viz.: the urine may be irritating to the neck of the bladder, or there may be an insufficiency of the bladder sphincter.

Lastly, and by no means infrequently, nocturnal incontinence is because a young child with its bladder of normal size for its age is put to bed at an early hour in the evening and expected to go till morning without urination, which the child's parents could not do. In other words, a child that goes to bed at 6 or 7 o'clock to sleep until 7 o'clock in the morning should be awakened about 11 o'clock to evacuate the bladder.

The general rules for the treatment of incontinence are limitation of the liquids taken during the last hours of the child's day; a bland diet that does not cause indigestion which will cause irritants to reach the bladder in the urine; proper and perfect cleanliness of the genitals; sleeping on a straight, smooth bed that does not sink and bury the child; warm, proper coverings, but not hot and suffocating wrappings; fresh, clean air in the bedroom, and the awakening of the child the last thing before the parents go to bed.

If any of the tangible causes above described have been discovered, the proper treatment for the individual condition, if the condition is curable, will stop the incontinence.

If the urine is found to be alkaline, small doses, proper for the age of the child, of hexamethylenamin (urotropin), or possibly small doses of phenyl salicylate (salol), will render the urine acid and perhaps cure the condition. If, on the other hand, the urine is too acid, the administration of potassium citrate in proper dose, three or four times in twenty-four hours, will reduce the acidity or render the urine alkaline, and the condition will thus be improved.

If there is found to be an adherent prepuce, in the male circumcision may be necessary, or the mere freeing of the adhesion may be all that is needed. In the female, after freeing the prepuce from the clitoris, which may be often done with the fingers alone, the incontinence of urine may cease immediately. It is a fact, however, that incontinence of urine, like any other result of nervous irritation, may be prolonged by the "habit spasm" after the cause has been removed, so that generally a cure of the incontinence can not be expected immediately to follow the removal of the cause.

If there is inflammation of the bladder or even an irritable bladder, a milk and cereal diet, rest in bed, hot water baths and alkaline medication is the treatment.

If it has been decided by injecting boric acid or other bland solution, into the bladder, that it is abnormally small, its increase in size should be encouraged by teaching the child to retain its urine, if possible, more hours while it is awake, and the bladder may thus be educated and developed to retain the night urine longer.

An irritability of the posterior urethra and neck of the bladder is sometimes greatly diminished and incontinence lessened by the administration of atropin. For such purposes the dose should be fairly large, of course depending on the age of the child, and should generally be administered at bedtime, although it may be needed once or twice during the day. If atropin is to do any good, it must be given in sufficient dose almost to cause symptoms of its primary physiologic action, viz., the patient's tolerance should be ascertained. As soon as the atropin causes flushing of the face and drying of the throat it should be stopped for twenty-four hours, and then the dose given should be less than that which caused the symptoms. While atropin is a stimulant to smooth muscle fiber and perhaps tones up the bladder sphincter, it also soothes and dulls the peripheral nerves of the bladder and urethra, perhaps even more than other peripheral nerves, as it is largely excreted in the urine.

If the cause of the incontinence is decided to be an insufficient bladder sphincter, ergot is sometimes excellent treatment. Ergot is a stimulant to smooth muscle fiber and a sedative to the central nervous system, and may thus inhibit bladder reflexes. Sometimes electricity, used locally, has seemed of value in incontinence from such cause, but many more times it fails.

Various hydrotherapeutic measures are sometimes of value. Often, however, when there is this muscular defect, the bed wetting will be continued until puberty, when, by the general development of the genitals, the local muscles also develop and the condition is cured.

Bromids have been given to stop the local irritability and the reflexes which cause the bladder to contract, but they soon produce general debility, and, unless epilepsy is present, are certainly inadvisable.

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[For other information see second page following reading matter]

SATURDAY, JUNE 19, 1909

To give our readers a full report of the legislative proceedings of the annual session, we omit some of our regular departments and curtail the space usually given to others.

THE CAUSE OF EPIDEMIC POLIOMYELITIS

The occurrence during recent years in various places of epidemic poliomyelitis or epidemic infantile paralysis has given impetus to active study by modern means of various phases of this disease. The general features of a number of epidemics have been described, that in this country in 1907 involving about 2,000 cases by Starr¹; that in Sweden, in which more than 1,000 cases occurred, was made the subject of an elaborate monographic study by Wickman,² while the epidemic or series of outbreaks of poliomyelitis in Norway furnished material for an exhaustive investigation of the pathologic anatomy by Harbitz and Scheel.³

According to the latter observers, the principal point of attack is the gray matter of the spinal cord, the poliomyelitis being associated with inflammatory infiltrations in the spinal membranes, and also with more or less strongly marked changes in the medulla and brain, the process being in reality more diffuse than at first thought.

Naturally, attention was early directed to the discovery of the cause of the disease, but, outside of the finding of micrococci in the cerebrospinal fluid in some cases of poliomyelitis, no final results have been reached. It is noted by several observers that during the course of epidemics instances of paralytic diseases would occur among horses, dogs and other animals, but it is wholly problematic whether such instances had any relation to the human disease.

Recently Landsteiner and Popper⁴ claim that they have transmitted the disease to monkeys. They seem to be the first to have attempted to communicate the disease to animals by direct inoculation of supposedly infectious materials from patients, using in their experiments parts of the spinal cord of a boy who died of poliomyelitis, the inoculations of this material emulsified in salt solution being made into the peritoneal cav-

ity of monkeys, rabbits, guinea-pigs and mice. This material was sterile so far as indicated by the results of the microscopic examination and of a large number of culture experiments in blood-broth and serum-broth. Only the two monkeys showed any effects of the inoculations, one (*Cynocephalus hamadryas*) becoming severely ill on the sixth day and dying two days later, the other (*Macacus rhesus*) becoming completely paralytic in the posterior extremities about seventeen days after the inoculation; two days later it was killed. Both these animals showed the lesions typical of poliomyelitis only, other organs than the spinal cord being free from changes. Efforts to communicate the disease to other monkeys with material from the rhesus monkey failed. Landsteiner and Popper conclude that poliomyelitis is communicable to monkeys and suggest that, inasmuch as the material they used in their inoculations seemed to be free from bacteria, the virus of poliomyelitis probably is not demonstrable by the methods usually employed in the study of bacteria and that it may concern a so-called invisible virus or a virus of protozoon nature.

Evidently further experiments are needed, but it seems reasonable to hope, on the basis of the results outlined in the foregoing, that a method has been found by the help of which our knowledge of the cause of poliomyelitis may be advanced.

TUBERCULOSIS A BACTEREMIA

That tubercle bacilli occur in circulating blood under certain conditions has long been known. In 1884 Weichselbaum found them postmortem, especially in the coagulated blood in the heart. Several observers have cultivated the organism directly from the blood in pure growth in acute cases, and the well-known lesions of miliary tuberculosis, diffusely scattered everywhere in the system, is explained as an infection of hematogenous origin due generally to vascular lesions. Generalized distribution of miliary lesions, however, is less common than local lesions in lungs, bones, lymph glands, etc., with little involvement or change in other parts of the body, and the prevailing idea in such instances has been that the bacilli are limited to such foci where they remain or slowly invade the neighboring tissues by direct extension or through the lymphatic vessels. We know such foci occasionally break into blood vessels and especially into the thoracic duct and a shower of tubercle bacilli occurs into the organs, with miliary tuberculosis as a result. At such times the blood necessarily must contain the bacilli, but the conception has been that they do not multiply or remain long in the blood, but are deposited in various organs, especially in the lymphatic glands, lungs, liver, etc.

Recent observations by Rosenberger¹ are of unusual interest in this connection and deserve critical comment. After finding tubercle bacilli in the thoracic duct in 72.7 per cent. of patients dead of tuberculosis and also

1. THE JOURNAL A. M. A., July 11, 1908, II, 112.

2. Berlin, 1907.

3. THE JOURNAL A. M. A., Oct. 26, 1907; Norsk Mag. f. Lægevidensk., October, 1907; abstracted in THE JOURNAL, Dec. 7, 1907, p. 1963.

4. Ztschr. f. Immunitätsf. u. Exp. Therap., 1909, II, 377.

1. Amer. Jour. Med. Sci., February, 1909, p. 267.

commonly in the feces, he was led to think that all forms of tuberculosis may be bacteremias, and attempted to demonstrate this by a direct blood examination. The technic for detecting the tubercle bacilli consists in adding 5 c.c. of blood drawn from a vein to an equal quantity of 2 per cent. sodium citrate in normal salt solution. This is well shaken and allowed to sediment in the refrigerator for 24 hours. Smears are made of the sediment, and after drying the film by heat the hemoglobin is removed by water. The preparation is then stained in the ordinary way for tubercle bacilli. In 125 cases examined in various stages of the disease, bacilli in the blood smears were found in all. In some the bacilli were not numerous; in others, especially the acute miliary tuberculosis, clumps of 30 or 40 bacilli were not unusual. Phagocytosis of the circulating bacilli was occasionally observed. Of especial interest is the fact that the bacilli were found in incipient cases, fibroid tuberculosis and laryngeal tuberculosis, as well as in advanced and miliary tuberculosis. Furthermore, they were encountered in cases even before the appearance of the bacilli in the sputum, and hence the method may be valuable for early diagnosis. In this respect the method should be of value also in the diagnosis of suspected miliary tuberculosis, in which cases tuberculin tests are of little or no value.

In confirmation of the work of Rosenberger may be mentioned the results of Forsyth,² who found the bacilli in the blood in all of twelve cases of pulmonary tuberculosis examined, in ten of which physical signs were present in the lungs and tubercle bacilli found in the sputum. Six of these were patients who showed decided and progressive improvement and at the time of the examination had no temperature, showing that the positive findings are not limited to acute advancing tuberculosis.

The morphology of these bacilli appears to be identical with typical tubercle bacilli and, as Forsyth says, if they were seen in sputum no doubt would be entertained as to their identity. The question may be raised as to whether or not they are living and virulent bacilli. In some cases, inoculations into animals gave positive results, but this has not been proved in all cases and further experimental work along this line is needed.

These facts appear to place tuberculosis in the group of bacteremias, a conception which has not generally prevailed in regard to any of the forms of the disease, except possibly acute miliary tuberculosis. This may perhaps alter some of our ideas concerning the distribution of lesions of tuberculosis and will raise certain other questions of interest. If tuberculosis is commonly a bacteremia even in the early stages, it does not seem reasonable to attribute as much importance to lymphatic distribution as is commonly given to it. On the other hand, the bacilli being so numerous and constant in the blood, why do we not more frequently have a

miliary tuberculosis if according to our present conception this condition depends on flooding the circulation with bacilli?

Evidently the miliary distribution must depend on factors other than the mere presence of bacilli in the circulation, among which may be mentioned virulence of the bacilli, resistance of the tissues and possibly the presence of some clumps or masses of tubercle bacilli which, as emboli, may cause lesions, whereas single bacilli in the circulation might not localize.

As Forsyth points out, the relation these facts bear to the use of tuberculin and to the opsonic theory are interesting and may alter some of our present conceptions regarding inoculation.

THE PRESIDENT-ELECT

The Association made a wise choice at the Atlantic City session in selecting as president-elect for the coming year a scientist whose name and work are known throughout the scientific world, a pathologist whose study and research work have placed him in the front rank of his specialty, a teacher of unusual ability, and a man of charming personality, Dr. William Henry Welch of Johns Hopkins University, Baltimore.

He was born in Norfolk, Conn., April 8, 1850, the son of Dr. William Wickham Welch and Emeline Collin. His university education was received at Yale, from which he was graduated in 1870 with the degree of A.B., and his medical studies were undertaken at the College of Physicians and Surgeons, New York City, from which he was graduated in the class of 1875. He took postgraduate work in Strassburg, Leipzig, Breslau, and Berlin from 1876 to 1878 and in 1884 and 1885.

Soon after his return from his first postgraduate trip abroad, he was made professor of pathologic anatomy and general pathology in Bellevue Hospital Medical College, New York City, and held this position from 1879 to 1884, when he became professor of pathology in Johns Hopkins University, Baltimore, a position which he still holds; from 1893 to 1898 he was also the dean of the medical faculty of the university. He has been pathologist of Johns Hopkins Hospital since 1889; president of the Maryland State Board of Health since 1898; president of the board of directors of the Rockefeller Institute for Medical Research since 1901, and a trustee of the Carnegie Institute since 1906. He served as president of the Congress of American Physicians and Surgeons in 1897, of the American Association for the Advancement of Science in 1906 and 1907, of the Association of American Physicians in 1901, and of the Medical and Chirurgical Faculty of Maryland in 1891-1892, and was Huxley lecturer in the Charing Cross Medical School, London, in 1902.

Dr. Welch delivered the Oration on State Medicine before the American Medical Association in 1889, his subject being "Considerations Concerning Some External Sources of Infection in Their Bearing on Preventive

² British Med. Jour., April 24, 1909, p. 1001; abstracted in THE JOURNAL, May 22, 1909, p. 1722.

Medicine." For the last six years he has been a member of the Board of Trustees of the Association.

In 1894 he was given the honorary degree of M.D. by the University of Pennsylvania, and had conferred on him the degree of LL.D. by the Western Reserve University, Cleveland, in the same year. He was given the degree of LL.D. by Yale University in 1896, by Harvard University in 1900, by the University of Toronto in 1903, by Columbia University in 1904, and by Jefferson Medical College, Philadelphia, in 1907.

Dr. Welch has written numerous articles on pathologic and bacteriologic subjects, and also general addresses. Among his more notable literary works are his book on the "General Pathology of Fever," which has been a standard text-book since 1888; "Biology of Bacteria," and "Infection and Immunity," which were published in 1894, and "Bacteriology of Surgical Infections," which appeared in 1895.

The Association is to be congratulated on its choice for president, for it has honored itself in electing Dr. Welch to the position.

Medical News

COLORADO

Graduating Exercises.—The annual commencement exercises of the Denver and Gross College of Medicine, Medical Department of the University of Denver, were held May 13, and a class of 23 was graduated. Diplomas were awarded by Chancellor Henry A. Burhtel, and the doctorate address was delivered by Rabbi William S. Friedman.

Alumni Election.—The Alumni Association of the Denver and Gross College of Medicine, at its annual meeting, May 15, elected the following officers: Honorary president, Dr. Arnold S. Taussig; president, Dr. Carl G. Parsons; vice-presidents, Drs. H. S. Shafer and Miller E. Preston; secretary, Dr. Robert L. Charles; treasurer, Dr. Adam J. Simpson, and historian, Dr. Ida V. Beers, all of Denver.

Deaths for First Quarter of Year.—During the first three months of the year, there were 2,948 deaths reported in the state, equivalent to an annual death rate of 18.80 per 1,000. Of the decedents, 1,774 were male; 1,074, female; 2,861 white and 87 colored. Among the principal causes of death were tuberculosis, 521; pneumonia, 472; violence, 288; nervous diseases, 217; heart diseases, 209; nephritis, 158, and cancer, 109. Scarlet fever caused 51 deaths; whooping cough, 46; influenza, 44; diphtheria, 29; typhoid fever, 24; and measles, 9.

Hospital Notes.—The new Red Cross hospital, established at Salida by Dr. Frank N. Cochems, has just been completed. The building contains accommodation for 65 patients.—Work on the new hospital for the treatment of contagious diseases, Denver, is well under way. It is located back of the county hospital, between the Steele Hospital and the old diphtheria hospital, and is connected with these buildings. In the center of the group of buildings will be an administration building, and on either side one-story wings, built at an angle that will insure sunlight to each room. Each wing will contain one ward and two or three rooms for private patients.

CONNECTICUT

Communicable Diseases.—During April, there were reported to the State Board of Health more than 804 cases of measles in 63 towns; 183 cases of scarlet fever in 43 towns; 115 cases of diphtheria in 34 towns; more than 125 cases of whooping cough in 22 towns; 47 cases of typhoid in 16 towns, and 118 cases of tuberculosis in 33 towns.

April Deaths.—There were 1,493 deaths reported during April, or 79 less than in March, 167 more than in April, 1908, and 117 more than the average April number of deaths for the five years preceding. The death rate was equivalent to an annual mortality of 17.3 per 1,000. Of the deaths reported, 16.9 per cent. were due to infectious diseases.

Society Meetings.—At the annual meeting of the Northern Connecticut Medical Society, which includes the towns of Windsor Locks, Enfield, Thompsonville and Suffield, the following officers were elected: President, Dr. Joseph A. Coogan, Windsor Locks; vice-presidents, Drs. Thomas G. Alcorn, Thompsonville, Howard O. Allen, Broadbrook, A. Proctor Sherwin, Suffield, Simon W. Houghton, Hazardville, and Alonzo L. Hurd, Somers, and secretary-treasurer, Dr. Richard A. Outerson, Windsor Locks.—The annual meeting of the Norwich Medical Society was held May 17. Dr. Newton P. Smith was elected president, Dr. Patrick H. Harriman, vice-president, and Dr. Leone F. LaPierre, secretary-treasurer.

Personal.—Dr. William H. Burr, Snfield, has been appointed resident physician at the Miners' State Hospital, Fountain Springs, Pa.—Dr. Thos. F. Kane has been elected president of the board of health of Hartford; Dr. Edward K. Root, a health commissioner; Dr. Charles P. Botsford, superintendent; Dr. Arthur J. Wolff, bacteriologist, and Drs. Alfred M. Rowley, Robert S. Starr and James F. Rooney have been made medical inspectors.—Dr. Edward K. Root has been made a member of the board of medical visitors of the Hartford Retreat.—Dr. Frank A. J. Benedict, Seymour, has been appointed medical examiner for Oxford, vice Dr. Lewis Barnes, deceased.—Dr. James S. Maher, New Haven, has been re-elected president of the board of health.

GEORGIA

Tuberculosis Camp Opened.—Richmond County Tuberculosis Hospital, Augusta, was opened to receive patients, May 17.

Personal.—Dr. Willis F. Westmoreland, Atlanta, has been appointed a member of the commission to investigate the charges against the Georgia State Sanatorium, Milledgeville.—Dr. Ernest A. von Boeckh is reported to be seriously ill at his home in Atlanta.—Dr. Frank L. Eskridge, city physician for the first ward, Atlanta, has resigned, to take effect June 15.—Drs. William C. Pumpelly, Weenes R. Winchester, William F. Carroll and Leighton J. Brown, all of Macon, and Dr. James W. Cowart, Walden, have been appointed members of the Bibb County board of health.—Dr. Isham H. Goss, Athens, has been elected president of the State Board of Medical Examiners.

ILLINOIS

Bequest.—By the will of the late S. E. King, Ottawa, \$40,000 is devised for an annex for Ryburn Hospital.

Personal.—Dr. Robert F. Hayes, Freeport, who fell and fractured his leg several months ago, is now reported to be convalescent.—Dr. George W. Mitchell, first assistant physician at the Peoria State Hospital, Bartonville, has returned from Europe.

Hospital Dedicated.—The dedicatory exercises of St. Margaret's Hospital, Spring Valley, were held June 3. The services were conducted by Bishop O'Reilly of Peoria. The hospital has cost \$30,000, and is in charge of the Daughters of the Mary of the Presentation.

State Hospitals to Change Name.—On July 1, the state hospital for the insane Bartonville, which was first known as the Illinois Hospital for the Incurable Insane, and then as the Illinois General Hospital for the Insane, will be known as the Peoria State Hospital. The other state hospitals for the insane will hereafter be known as the Jacksonville State Hospital, Watertown State Hospital, Kankakee State Hospital and Elgin State Hospital, respectively.

Hospital Notes.—The contract for the hospital for the Naval Training Station, North Chicago, has been awarded to the Noel Construction Company. The building is to cost about \$250,000.—Emanuel Hilb has offered to contribute \$15,000 to a fund to secure a hospital for Rochelle provided a like amount is subscribed by the citizens.—June 5 was "Hospital Tag Day" for the new hospital at De Kalb.—The Galesburg Hospital Association has let the contract for the erection of a wing and annex for \$34,000.

Chicago

Money for Charity.—By the will of the late Henry C. Durand, \$10,000 is bequeathed to the Presbyterian Hospital.

Commencement Exercises.—At the annual commencement exercises of the Northwestern University Medical School, June 9, a class of 170 was graduated. At the alumni banquet, tendered by the faculty, 600 members were present.

Changes in Hospitals.—Plans are under consideration for a six-story addition to Wesley Hospital to cost \$150,000.—Sixty-six hospitals and sanitariums of Chicago have complied with the new ordinance under which hospitals are licensed.

Need of Scarlet Fever Hospital.—Dr. Hyman Cohen of the Department of Health calls attention to the need of a scarlet fever hospital. He states that there are 500 cases of scarlet fever in the city at present, and that quarantining of houses and apartments is not a sufficient step against the spread of the disease.

Personal.—Dr. Filip Kreissl has been appointed attending surgeon to the genitourinary department of the Columbus Hospital.—Dr. Oscar C. Willhite, superintendent of the Cook County Institutions, Dunning, has been selected as delegate to the State Conference on Charities.—Dr. John T. Binkley has left Chicago for Europe.

Hospital Day.—June 27 and 28 have been tentatively selected as "Hospital Days," which will be devoted to raising funds for various denominational hospitals. Contributions will be taken up on the streets and in churches for this good object. The organization is composed of club women and representatives of about 25 denominational hospitals.

Fraternity Banquet.—At the seventieth annual banquet of the Alpha Omega Alpha Fraternity at the Great Northern Hotel, about fifty members were present. Dr. John M. Dodson was toastmaster. The principal address of the evening was made by Dr. William E. Quine, and was a tribute to the life of Dr. Nicholas Senn, "who did more for humanity and the medical profession than all the other physicians in this great city combined."

To Reduce Infant Mortality.—A campaign has been inaugurated under the supervision of the health department to safeguard infant lives in Chicago during this summer. The milk supply is to receive first attention, and food contamination is to be considered. Nurses are to be provided for children who are seriously ill; medical attention is to be urged for the ailing; mothers will be instructed concerning proper clothing, care and food of children; day nurseries are to be established, and tent hospitals for babies will be provided in the eighth, sixteenth, seventeenth, nineteenth and twenty-ninth wards.

Alumni Elections.—The class of 1899, Rush Medical College, at its tenth annual meeting and dinner, June 2, elected the following officers: President, Dr. Harry C. King, Fort Smith, Ark.; vice-president, Dr. Stephen E. Gavin, Fond du Lac, Wis.; secretary-treasurer, Dr. John B. Ellis, Chicago, and historian, Dr. Benjamin H. Breakstone, Chicago.—The annual alumni meeting of the Alumnae Association of the Woman's Medical School of the Northwestern University was held June 7, and the following officers were elected: President, Dr. Eliza H. Root, Chicago; vice-presidents, Drs. Annette S. Mack, Chicago, and Harriet E. Garrison, Dixon; secretary, Dr. Anna Ross Lapham, Chicago; treasurer, Dr. Mary C. Hollister, Chicago; historian, Dr. Anna White Sage, Chicago; and trustees, Drs. Louise Acres, Rachel Hickey Carr and Rose Willard, Chicago.—The College of Physicians and Surgeons' Alumni Association, at its annual meeting, June 4, elected the following officers: President, Dr. Charles E. Humiston; vice-presidents, Drs. Calvin W. Harrison and Geoffrey J. Fleming; secretary, Dr. Philip H. Holmes; treasurer, Dr. Clyde D. Pence; necrologist, Dr. Louis J. Mitchell, and member of the executive committee, Dr. Bernard Fantus.

INDIANA

Dispensaries Consolidated.—Plans for consolidating the Indianapolis City Dispensary with the Bobbs Free Dispensary have been completed. They include the opening of a downtown emergency hospital at the State College.

District Society Meetings.—At the annual meeting of the Second District Medical Society, held in Bloomington, May 12, Dr. Henry W. Shirley, Shoals, was elected president; Dr. Thomas N. Braxton, Loogootee, vice-president, and Dr. Thomas A. Hays, Burns City, secretary. The next annual meeting will be held at Trinity Springs.

Hospital Notes.—The Indiana Branch of the National Red Cross Society proposes to build open-air movable cottages near Evansville under the auspices of the Vanderburgh County Antituberculosis Association. Six cottages will be built as soon as a location can be secured. The Evansville association has promised to take charge of the colony, and has pledged itself to raise the necessary funds.—The Southeastern Hospital Commission has let a contract for four additional cottages to accommodate 225 patients on the hospital grounds near Columbus for \$163,000.

KENTUCKY

Cornerstone Laid.—The cornerstone of the Children's Free Hospital, Louisville, was laid May 15, with impressive ceremonies.

Baptist Sanitarium in Louisville.—The Kentucky Baptist Association has bought for \$44,000 property in Louisville known as the University College and Hospital, on Chestnut street, between Eighth and Ninth, and will spend \$100,000 or more in the establishment and equipment of a sanitarium.

Sanitary Investigation.—Mrs. Caroline Bartlett Crane, Kalamazoo, Mich., is making a tour of the principal cities in the state on invitation of the State Board of Health, investigating from a sanitary standpoint. She has spent a week in Louisville investigating slaughter houses, dairies, milk depots, schools and tenements. As a result of her investigation and of sensational charges said to have been made in her address in Harrodsburg, Dr. W. Horace Witherspoon is said to have filed suit in the Mercer Circuit Court against Mrs. Crane for \$1,995.

Milk Dispensary Opened.—The first milk dispensary of the Babies' Milk Fund Association was opened at Neighborhood House, Louisville, May 17. The object of the association is to provide pure, clean, modified milk for the babies of the poor at a minimum cost, and without expense where applicants are unable to pay. The cost is about 40 per cent. of the total cost of the milk, and the work is supported by voluntary contributions of the public. The association also has an educational department. The association nurse visits the homes of the children and gives practical instruction to mothers in regard to the hygiene of infants. Milk is furnished in individual feeding bottles for a period of twenty-four hours.

LOUISIANA

Ex-Internes Meet.—At the annual meeting of the Charity Hospital Alumni Association, New Orleans, the following officers were elected: President, Dr. Charles N. Chavigny, New Orleans; vice-presidents, Drs. Allen C. Eustis, Abbeville, and W. E. Sistrunk, Lake Charles; secretary, Dr. Lucien H. Landry, New Orleans, and treasurer, Dr. Philip W. Bohne, New Orleans.

Medical Society Organized.—The physicians of East Feliciana parish met in Clinton, May 20, to reorganize the parish medical society, and elected the following officers: President, Dr. Emmett L. Irwin, Clinton; vice-president, Dr. Albert J. Roberts, Olive Branch, and secretary, Dr. Robert P. Jones, Clinton.—At the annual meeting of Plaquemines Parish Medical Society, at Pointe a la Hache, Dr. Charles Y. Seagle, Belair, was elected president; Dr. Hewitt L. Ballowe, Burns, vice-president, and Dr. Valery O. Schayot, Pointe a la Hache, secretary-treasurer (re-elected).

MARYLAND

Alumni Election.—At the annual meeting of the Medical Alumni Association of the University of Maryland, held May 31, it was decided not to disband and join the general alumni association. The following officers were elected: President, Dr. William H. Pearce, Baltimore; vice-presidents, Drs. Guy Steele, Cambridge, and Joseph T. Smith and Armenius C. Pole, Baltimore; recording secretary, Dr. Charles E. Sadtler, Baltimore; corresponding secretary, Dr. John Houff, Baltimore, and treasurer, Dr. John I. Pennington, Baltimore.

Baltimore

Cartright Prize Awarded.—Dr. S. O. Mast has been awarded the Cartright prize of \$500 for his thesis on "The Reactions of Lower Organisms to Light."

Must Raise Much Money.—The Johns Hopkins University trustees are about to enter on a vigorous campaign to raise the \$750,000 necessary to avail themselves of the \$250,000 offered by the General Education Board. The university is allowed eighteen months to raise the balance required.

Convicted Unlicensed Practitioner Appeals.—Robert H. Darrah, said to have been convicted on March 17 of practicing medicine without a license, has been sentenced to imprisonment in jail for thirty days, and a fine of \$32.25. An appeal was taken and he was released on a bond of \$1,000. The state's attorney stated that Darrah had been a persistent violator of the law for two years, while the defendant alleges that he was the pupil of a practicing physician.

MICHIGAN

Women Physicians Meet.—At the annual meeting of Blackwell Medical Society, held in Detroit May 19, Dr. Jeanne C. Solis, Ann Arbor, was elected president; Dr. Mary G. Haskins, Detroit, vice-president; Dr. Anna O'Dell, Detroit, secretary-treasurer, and Drs. Lucy J. Utter and Grace M. Clarke, Detroit, councilors.

Alumni Election.—At the annual dinner and meeting of the Detroit College of Medicine Alumni Association, held May 27, the following officers were elected: President, Dr. Richard E. Mercer, Detroit; vice-president, Dr. Ellsworth Mills, Holly; financial secretary, Dr. Frederick Buesser, Detroit, and historian, Dr. Fred W. Robinson, Sturgis.

Against Tuberculosis.—The Bay County Association for the Prevention and Relief of Tuberculosis was organized in Bay City, May 20. Dr. John McLurg was elected first vice-president; Dr. Frank E. Ruggles, secretary; and Dr. John W. Hauxhurst a member of the general committee. —Clinton County Association for the Study and Prevention of Tuberculosis was organized in St. Johns, May 21. Dr. Walter A. Scott was elected president and Dr. Frank C. Dunn, secretary.

MINNESOTA

New Building for State Sanatorium.—The legislature has appropriated \$60,000 for an addition to the main building of the State Sanatorium for Tuberculosis, Walker, and \$15,000 for the building of shacks for outdoor treatment.

Hospital.—St. Lucas Hospital, Faribault, was dedicated with impressive ceremonies May 16, under the auspices of the Evangelical Synod of the district. The building has cost \$80,000, is fire-proof and thoroughly equipped and contains 12 private rooms and a men's ward on the second floor, and on the third floor operating rooms, wards for women and children, and 21 private rooms.

Personal.—Dr. Owen J. Evans has succeeded the late Dr. Allen S. Whetstone as U. S. pension examining surgeon, Minneapolis. —Dr. Archibald E. Wilcox has succeeded Dr. Peter M. Holl, resigned, as superintendent of the Minneapolis City Hospital. —Dr. Edward A. Meyerding, St. Paul, has been appointed medical inspector of public schools. —Dr. George R. Curran, Mankato, first lieutenant and assistant surgeon, Second Infantry, N. G. Minn., has resigned.

MISSOURI

Commencement.—The twenty-eighth annual commencement exercises of the University Medical College, Kansas City, were held May 14, when a class of 47 was graduated. Dr. J. N. McCormack, Bowling Green, Ky., delivered the address to the graduating class.

College Election.—At the annual election of officers of the University Medical College, Kansas City, Dr. Jabez N. Jackson was elected president; Dr. George W. Davis, secretary; Dr. Caleb A. Ritter, treasurer; Dr. Walter M. Cross, member of the board of curators; Dr. Samuel C. James, member of the board of directors, and Dr. John M. Frankenburger, dean of the school, vice Dr. James E. Logan, retired.

Hospital Staff Chosen.—At the annual meeting of the Board of Control of Levering Hospital, Hannibal, the following official appointments of the medical staff were made: Physician in charge, Dr. James N. Baskett; attending surgeon, Dr. Thomas Chowning; consultants, Drs. Charles E. Paxon and Henry L. Banks; attending physician, Dr. Archie L. Shanks; consultants, Drs. John J. Farrell and Richard M. Winn; attending gynecologist, Dr. Elmer E. Waldo; consultants, Drs. William H. Hays and Isaac E. Hill; attending obstetrician and pediatrician, Dr. John J. Bourn; consultants, Drs. Arthur B. Blue and W. Cloy Guss; genitourinary diseases and syphilis, Dr. Richard Schmidt; consultants, Drs. C. E. Vandiver and Edward H. Bounds; pathologist, Dr. Clifton R. Dudley; attending oculist and aurist, Dr. Edward T. Hornback; consultants, Drs. Ulysses S. Smith and James S. Howell, and x-ray specialist, Dr. Isaac E. Hill.

NEBRASKA

Verdict in Favor of Physician.—In the case of Luther Rich versus Dr. Charles C. Allison, Omaha, in which damages of \$10,000 were claimed for the alleged leaving of a drainage tube in the chest following a surgical operation, the judge directed for the defendant May 25, as no evidence was adduced to show that a tube was used in the case.

Hospital Association Meeting.—The health officers of Nebraska met in Omaha, June 7, and organized the Nebraska Health Association, and elected the following officers: President, Dr. Daniel T. Quigley, North Platte; vice-president, Dr. Ralph W. Connell, Omaha; secretary, Dr. George H. Marvel, Aurora, and treasurer, Dr. J. H. Mackey, Norfolk.

Orthopedic Hospital.—The Nebraska Orthopedic Hospital will be located at 42d street and Dewey avenue, on a tract of more than six acres, purchased by the committee. This hos-

pital was authorized by the legislature of 1905, and is designed to provide hospital care for crippled and deformed children of the state, and is intended to take the place of the present hospital which occupies a portion of the Home for the Friendless at Lincoln.

Personnel of Hospital Staff.—The official list of the recently appointed staff of the Douglas County Hospital, Omaha, is as follows: Executive committee: Drs. Frank E. Coulter, Frederick W. Lake and Paul G. Woolley. Consulting staff: Dr. Wilson O. Bridges. Pathology: Dr. Paul G. Woolley. Internal medicine, heads of staff: Drs. William F. Milroy, Paul H. Ludington, Thomas Truelsen, Arthur D. Dunn, Millard Langfeld and Burton W. Christie; assistants, Drs. Rodney W. Bliss, A. C. Petersen, F. McClanahan, and Adolph Sachs. Surgery, heads of staff: Drs. Herschel P. Hamilton, John E. Summers, August F. Jonas, John P. Lord, Arthur C. Stokes and Ernest W. Powell; assistants, Drs. Robert R. Hollister and Samuel R. Hopkins. Gynecology: Drs. Palmer Findley, Ewing Brown and Walter O. Henry. Eye, ear, nose and throat: Drs. Frank S. Owen, Henry B. Lemere, Harry L. Arnold and Louis B. Bushmann. Skin and venereal: Drs. Alfred Schalek, Herbert C. Sumney, John J. Kliek and John W. Hellwig. Nervous and mental: Drs. Frank E. Coulter, Joseph M. Aikin, Clement B. Little and H. A. Wigton. Obstetrics: Dr. Alonzo E. Mack, Andrew B. Somers, Charles Rosewater, Mary Strong and Charles W. Pollard. Pediatrics: Drs. Frederick W. Lake and Rudolph Rix. Hygiene and sanitation: Dr. Solon R. Towne.

NEW YORK

New Asylum Named.—Governor Hughes has signed Senator Allds' bill which gives the name of Letchworth Village to the Eastern New York State Custodial Asylum.

Bequests to Albany Institutions.—The will of the late Jacob Lowenthal, Albany, bequeaths \$5,000 each to the Albany Hospital and the Albany Hospital for Incurables.

Personal.—Dr. Joseph R. Culkin, Rochester, was operated on May 27, for appendicitis. —Dr. John B. Neary, Troy, has been appointed chief surgeon at the new government hospital, Panama. —Dr. Jesse Crounse, Altamont, who has been seriously ill with septicemia due to an operation wound, is now believed to be convalescent.

Semi-Annual Meeting of Society.—The semi-annual meeting of the Medical Society of the County of Columbia was held at Chatham, May 11. It was announced that the annual meeting of the society would be held in Hudson, October 5, in connection with the meeting of the Third District Branch of the Medical Society of the State of New York.

Alumni Elections.—The following officers of the Alumni Association of the Medical Department of the University of Buffalo were elected May 25: President, Dr. Henry J. Nichols, Bradford, Pa.; vice-presidents, Drs. Marshall Clinton, Buffalo; Charles L. Preisch, Lockport; N. Victoria Chappell, Buffalo; Eugene B. Horton, Niagara Falls; and Edgar A. Forsyth, Buffalo; secretary, Dr. Franklin W. Barrows, Buffalo; treasurer, Dr. Herman K. DeGroat, Buffalo; and trustee, Dr. Albert T. Lytle, Buffalo. —The class of 1899 of the Medical Department of the University of Buffalo, at its annual meeting, May 25, elected the following officers: President, Dr. Charles L. Kelley, Franklinville; secretary, Dr. Dean O. Thompson, Buffalo; and executive committee, the secretary, Dr. Louis J. Beyer, George S. Staniland, New York City, and Francis M. O'Gorman. —At the thirty-sixth annual meeting of the Association of the Alumni of Albany Medical College, May 17, the following officers were elected: President, Dr. Sheldon Voorhees, Auburn; vice-presidents, Drs. Zophar F. Dunning, Philmont; John J. D. McAllister, New York City; Charles Burnstein, Rome; Marshal Latcher, Oneonta, and Christian G. Hacker, Albany; recording secretary, Dr. Jesse M. Mosher, Albany; corresponding secretary, Dr. Andrew MacFarlane, Albany; treasurer, Dr. Robert Babcock, Albany, and historian, Dr. Arthur J. Bedell, Albany.

Tuberculosis Campaign.—The new dispensary for the treatment of incipient cases of tuberculosis was opened in Cohoes, June 2. The work is under the supervision of the health officer, Dr. Albert Mott, and Drs. John Archibald, Joseph C. E. Daunais and William E. Curtin are in charge. —The Rochester Day Camp for the Treatment of Tuberculosis was reopened June 1, under the charge of Drs. J. Raymond Haggan and Edward G. Nugent. —A gift of \$1,000 has been made to the board of health of Watertown, to be used according to the best judgment of the health officer for the check-

ing of the spread of tuberculosis. It is proposed to establish a summer tent colony on the grounds of the State Hospital. —The Albany Chapter of the Red Cross Society has decided to establish a temporary camp for tuberculous patients near the city. The chapter now has about \$2,000 at its command for the establishment and maintenance of the camp.—Dr. Charles E. Townsend, president of the staff of St. Luke's Hospital, Newburgh, has announced that arrangements have been made whereby tuberculosis patients will be examined, instructed, and treated in the hospital, free of charge two afternoons of the week.—A consumptive day camp was opened at Buffalo for its second season, June 1, with thirty patients. It is announced that accommodation will be provided later for twenty more, or a total of fifty. The camp will be under the direction of George H. Eckel.

New York City

Office Building for Physicians.—A new office building, twelve stories in height, to be devoted entirely to offices of physicians and dentists, is to be erected on Joralemon street, Brooklyn, between Court and Clinton streets.

Tuberculosis Hospitals for the City.—Plans have been filed for four four-story buildings for the open air treatment of tuberculosis on North Brother Island. The buildings are to be of concrete, roofed with copper and slate, and will cost \$140,000.

Dermatological Election.—The following officers were elected at the annual meeting of the New York Dermatological Society, May 25: President, Dr. Samuel Sherwell, Brooklyn; secretary and treasurer, Dr. William B. Trimble, and executive committee, Drs. Henry H. Whitehouse, Andrew R. Robinson and George H. Fox.

Personal.—Dr. and Mrs. Walter B. James sailed for Europe June 9. Two days later Dr. James' residence on West 54th street was practically destroyed by fire. The loss was estimated at \$75,000, which does not cover the library, which was one of the best in this country.—Dr. and Mrs. Warren A. James, Dr. and Mrs. James Belden Gere and Dr. Beatrice M. Hinkle have sailed for Europe.

Private Ambulances Must Slow Down.—It has just been decided in Jefferson Market police court that the drivers of ambulances must obey the orders of the traffic police. While the city ordinance gives ambulances the right of way at all times, the charter places the control of street traffic in the hands of the police commissioner. The present decision was rendered necessary because although private ambulances rarely go out on emergency cases they have been dashing about town at top speed.

More Bequests for Hebrew Charities.—The will of the late Ernest Ehrmann bequeathes \$5,000 each for the Mount Sinai Hospital, the Montefiore Home for Chronic Invalids and the Beth Israel Hospital. In each instance the bequest is to be devoted to the founding of a bed in perpetuity to be known as the Ernest Ehrmann bed. The testator also left \$10,000 to the Arthur Ehrmann memorial fund in connection with the United Hebrew Charities.

Physicians Graduated.—Fifty-two men and two women graduated June 9 from Cornell Medical School. The address to the graduating class was made by Prof. T. F. Crane, dean of the Cornell faculty, who made a strong plea for a more liberal education as the basis of a medical education.—The Fordham University School of Medicine held its first annual commencement June 1 and conferred the degree of doctor of medicine on eleven candidates. The program included the rectorial address by Rev. Daniel S. Quinn, president of Fordham University, and one by Dr. James J. Walsh on "The Profession for Six Thousand Years."

Plans Consumptive Home.—Believing that there is need of a special establishment in or near New York City where persons of means suffering from tuberculosis can receive treatment under the care of their own physicians and near their friends and business, Mme. Laurence Fiedler, who has already founded a hospital near Paris for poor girls, has started the present movement which has taken definite form in the shape of the Laurent Manor company. It is planned to take part of the earnings of the institution as a sinking fund for the purpose of establishing a free hospital for the treatment of the poor suffering from tuberculosis. The proposed establishment will offer the attractions and the organization of a high class hotel.

Charitable Bequests.—The will of Mrs. Anson G. Phelps, Jr., bequeaths \$10,000 to the Presbyterian Hospital and \$5,000 to the Lincoln Home and Hospital; also \$5,000 to the

Tarrytown (N. Y.) Hospital.—According to the will of Mrs. Margaret J. P. Graves, about \$200,000 is to be distributed among the hospitals of the city. St. Vincent's Hospital is to receive \$25,000; the Society of the New York Hospital, \$10,000; Mount Sinai Hospital, \$10,000; the Presbyterian Hospital, \$10,000 for general purposes and \$10,000 for the maintenance of the emergency ward; the New York Mothers' Home, \$10,000; the New York Infirmary for Women and Children, \$10,000; St. Luke's Hospital, \$20,000 for hospital society work and \$10,000 for the care and treatment of crippled children, and the Society for the Treatment of the Ruptured and Crippled, \$10,000.—The will of Frank J. Walgering leaves about \$81,000 to charitable institutions. Each of the following institutions receives \$5,000: St. Francis' Hospital, St. Francis' Home, St. Vincent's Hospital, Presbyterian Hospital, German Hospital and Dispensary, St. Joseph's Hospital for Consumptives, St. Catherine's Hospital, Brooklyn, and St. Gabriel's Sanitarium for Convalescents in the Adirondacks.

Buffalo

Contagious Disease Pavilion.—The Buffalo General Hospital is constructing a pavilion with a capacity of eight to ten patients for the treatment of patients suffering from communicable diseases.

Anti-Spitting Ordinance.—The Buffalo Health Department is prepared to enforce the anti-spitting ordinance which takes effect July 1. Small yellow cards bearing the words, "You are violating the law against spitting. You are subject to imprisonment or fine, or both. By order of the Health Department," are being prepared for distribution.

PENNSYLVANIA

Personal.—Dr. Otto F. Berrand, Erie, sailed for Europe June 10.—Dr. W. J. Winters, Shenandoah, was thrown from his carriage June 10 and seriously injured.

Jewish Charities.—At the recent annual meeting of the Federation of Jewish Charities it was reported that \$139,300 had been distributed to various charities during the past year. The following were some of the beneficiaries: Jewish Hospital, \$32,300; Jewish Foster Home, \$22,000; United Hebrew Charities, \$34,500; Jewish Maternity, \$9,500; and National Jewish Hospital for Consumptives, \$3,000.

Plans for Sanatoria.—Plans for the new Jewish Sanitarium for Consumptives, to be erected at Eagleville, at a cost of \$35,000, have been submitted. The main building will be the administration building, on each side of which will be an infirmary, one for men and one for women, surrounded by enclosed porches. Near the administration building a dining hall will be provided, and four shacks will be erected, each accommodating eight patients. These buildings will be located on a long slope, each having a different altitude. A new pavilion for tuberculosis patients is being erected at Byberry on the 700-acre tract recently purchased for a new almshouse. This building is being constructed for the accommodation of the city's poor consumptives.

State Tuberculosis Exhibit on Tour.—A new feature in the State Health Department's campaign against tuberculosis has been inaugurated by the health commissioner, who has sent on a tour throughout the state the exhibit which the department made at the recent International Congress on Tuberculosis at Washington. The exhibit consists of models of cottages, open air pavilions and tents in use at the State South Mountain Sanitarium. It includes a large relief map of the sanitarium and land assigned by the legislature to the department of health for sanitarium purposes. There are numerous charts and photographs illustrating the work of the department, and also a model dispensary illustrating how this part of the health department's work is conducted.

Philadelphia

Red Bank Sanitarium Opens.—The thirty-third annual opening of the Sanitarium for Children at Red Bank, New Jersey, which is operated by the Sanitarium Association of Philadelphia, was held with appropriate exercises at the institution June 12. One thousand children were conveyed from this city to the institution on steamboats. The opening address was delivered by Congressman George D. McCreary, president of the Sanitarium Association.

Portrait for the University of Pennsylvania.—A painting of the late Dr. John S. Dorsey was recently placed in the Medical Hall of the University of Pennsylvania. Dr. Dorsey was professor of materia medica and botany from 1816 to 1818, when he was elected professor of anatomy. He died a few days after his introductory lecture on that subject.

Personal.—Dr. James W. Kennedy was painfully injured in an automobile collision June 9.—Dr. Charles B. Penrose received the honorary degree of LL.D. from the University of Pennsylvania, June 16.—Dr. William C. Gorgas, President of the American Medical Association, received the honorary degree of LL.D. from Jefferson Medical College, June 7.—Drs. Alfred Stengel, Henry Norris and Dr. J. William White have gone to Europe.

Alumni Banquets.—The annual banquet of the Alumni Association of the Jefferson Medical College was held June 7. The following officers were elected: President, Dr. John M. Fisher; corresponding secretary, Dr. James T. Rugh; recording secretary, Dr. S. Mumford; treasurer, Dr. Randle C. Rosenberger, and chairman of the executive committee, Dr. Alfred Heineberg, all of Philadelphia.—The annual banquet of the Alumni Association of Medico-Chirurgical College was held at the Bellevue-Stratford, June 4. The following officers were elected: President, Dr. John H. Egan; secretary and treasurer, Dr. Arthur C. Morgan.

RHODE ISLAND

Personal.—Dr. Reginald Morse, Providence, has been appointed medical missionary, and will take station in India.—Dr. Fred B. Jewett, Howard, has been made superintendent of the State Almshouse, the State Workhouse, and the House of Correction.

Must Keep Register of Tuberculosis.—The Senate and House on April 13, passed concurrently an act providing that the State Board of Health shall keep a register of all cases of laryngeal and pulmonary tuberculosis. This act makes it obligatory on all physicians to report every case of tuberculosis on penalty of a fine of \$10.

VERMONT

New Isolation Hospital.—The aldermen of Rutland have appropriated \$2,500 for an isolation hospital for contagious diseases to be erected near the poor farm.

Personal.—The State Board of Health has appointed Dr. Charles F. Dalton, at present health officer of Burlington, to succeed Dr. Leonard P. Sprague as medicolegal chemist at the state laboratory of hygiene. Dr. Sprague will take up practice in Chateaugay, N. Y.

Meetings.—At the fourth annual session of the Association of Rutland Railroad Surgeons, held in Rutland, the following officers were elected: President, Dr. Clayton W. Bartlett, Bennington; vice-president, Dr. Frank M. Rogers, Alburg; secretary-treasurer, Dr. Stanton S. Eddy, Middlebury; and executive committee, Drs. James S. Hill, Bellows Falls; Clifford A. Pease, Burlington, and M. Richards Crain, Rutland.—Windham Medical Club, at its annual meeting in Bellows Falls, elected Dr. Fred L. Osgood, Townshend, president; Dr. Edward Kirkland, Bellows Falls, secretary, and Dr. James S. Hill, Bellows Falls, treasurer.—At the annual meeting of Franklin County Medical Society, held in St. Albans, May 20, the following officers were elected: President, Dr. Alan Davidson, St. Albans; vice-president, Dr. Charles A. Pratt, Enosburg Falls; secretary-treasurer, Dr. Edwin A. Hyatt, St. Albans; delegates to the state society, Drs. Albert D. Patton, East Fairfield; Arthur O. Morton, St. Albans; and Columbus S. Scofield, Richford, and censors, Drs. Francis W. Norris, Swanton; John Gibson, St. Albans, and Charles G. Abell, Enosburg Falls.

GENERAL NEWS AND COMMENT

Railway Surgeons Meet.—At the second annual convention of the Association of the Atlanta, Birmingham and Atlantic Railroad in Atlanta, May 20, the following officers were elected: President, Dr. Henry B. Disharoon, Roanoke, Ala.; vice-president, Dr. William W. Jarrell, Thomasville, Ga., and secretary, Dr. W. S. Goldsmith, Atlanta (re-elected).

Personal.—Dr. J. P. Perry, chief quarantine officer of the Canal Zone, returned May 18, from an inspection trip to the ports of the north coast of South America, and the islands of the Antilles.—Dr. and Mrs. Paul C. Freer, Manila, left for Europe by way of the Trans-Siberian Railroad, April 10. In the absence of Dr. Freer, Dr. Richard B. Strong assumes the duties of director of the bureau of science and dean of the medical school.—Dr. Fred B. Bowman, Manila, who has been ill with scarlet fever, is improving.

Alumni Meet.—On May 18, the Alumni Society of Harper Hospital, Detroit, was organized and the following officers were elected: Honorary president, Dr. Henry O. Walker, Detroit; president, Dr. Angus McLean, Detroit; vice-presidents,

Drs. Channing W. Barrett, Chicago; Preston M. Hickey, Detroit; and Earl S. Bullock, Silver City, N. M.; secretary-treasurer, Dr. Alexander W. Blain, Detroit; and executive board, Drs. Clark D. Brooks, William G. Hutchinson, Archibald D. McAlpine, and C. P. Clark, all of Detroit.

Leprosy Hospital to Be Erected.—The Hawaiian legislature has made an appropriation of \$40,000 for a leprosy hospital at Kalihi, and plans for the building will soon be ready.

Pension Examiners Meet.—At the annual meeting of the National Association of U. S. Pension Examining Surgeons, held in Atlantic City, the following officers were elected: President, Dr. Henry B. Walter, Harrisburg, Pa.; secretary, Dr. Philip Y. Eisenberg, Norristown, Pa.; treasurer, Dr. Charles H. Glidden, Little Falls, N. Y., and member of the executive committee for three years, Dr. S. Walter Woodyard, Greeneville, Tenn. The association will meet next year in Washington.

Carroll Fund.—The following subscriptions have been received since the last report:

Medical officers of the army.....	\$ 5.00
Escambia County Medical Society, Pensacola, Fla.....	5.12
New York Post-Graduate Hospital Alumni Association...	28.00
Iowa State Medical Society.....	100.00
Richmond County Medical Society, Augusta, Ga.....	15.00
Whitman County Medical Society, Pullman, Wash.....	10.00
Dr. Julius Harold Hurst, Montecito, Cal.....	5.00
"Three Friends," of New York City.....	3.10
Dr. S. Hoberman, Malden, Mass.....	2.00
Students of sophomore and freshman classes of Rush Medical College, Chicago.....	46.00
St. John-St. Charles Bi-Parish Medical Society, Reserve, La.	5.00

Previously reported \$ 224.22
5,168.64

Total amount received.....\$5,392.86

The Harvey Society.—The Harvey Society of New York calls the attention of the profession, and of all interested in the development and diffusion of knowledge of the medical and allied biologic sciences, to the permanent value of the lectures delivered under the auspices of the society. To make the work as widely accessible as possible, the council has decided to publish the collected lectures in book form at a price sufficient merely to defray the costs of publication. Two volumes have appeared already, the first containing the lectures of the year 1905-1906, and the second the lectures of 1906-1907. The lectures of 1907-1908 will be issued in a short time, and the volume containing the lectures for the current year is about to go to press. The price per volume is \$2, and permanent subscriptions may be sent to the secretary, Dr. Francis Carter Wood, 437 West Fifty-ninth street, New York City.

FOREIGN

Special Seroreaction in the Blood of the Insane.—Considerable interest has been aroused by the recent announcement of Much and Holzmamm that the serum of patients with dementia præcox and manic-depressive insanity constantly inhibits the hemolytic action of cobra venom, while other serums fail to display this property.

Cuban Scientific Commission.—The national board of health of Cuba has organized a special bureau for scientific research on subjects of practical utility for general hygiene. The bureau has been placed in charge of Dr. M. G. Lebrede, hitherto vice-director of the hospital "Las Animas," and one of the editors of the *Revista de Medicina y Cirugia* of Havana.

International Cancer Research.—The Germano-Ibero-American Association at Berlin is obtaining the cooperation of the different Spanish-American countries for the study of cancer, and the Argentine Republic has appointed E. Marino of Buenos Aires as the delegate in charge of the matter in Argentina, thus becoming a member of the International Cancer Research Association.

The Swedish Radium Society.—An association has been formed in Sweden for the purpose of studying radium and exploiting the radium-bearing ores of that country. It has been found that "kolm," a material found in the alum-slate quarries in the province of Westgothland, contains radium, and the association has obtained control of this district, as also of the new patented Helsing process for obtaining uranium and radium from kolm and other ores. The new association is said to be quite large and to include the great physicist, Svante Arrhenius, as one of its leading spirits. Other countries are also investigating their radium-bearing ores, Portugal having found some very encouraging deposits, and similar news comes from Mexico.

International American Congress of Medicine and Hygiene.—The Argentine government and medical profession invite the nations of America to cooperate in an international congress, to open May 25, 1910, the centennial of the birth of the republic. It is to be held at Buenos Aires, and the committee of organization is already actively at work. The official languages are Spanish, English, French and Portuguese, and the members of the profession in the three Americas are urged to cooperate in making the congress a scientific event. The secretary will send bulletins, membership blanks, etc., and special steam and rail rates on request. Address Faculty of Medical Sciences, Buenos Aires, Argentina. An exposition of appliances for hygiene will be made a special feature of the congress, and manufacturers are urged to exhibit.

Appeal for Data on Reinfection with Syphilis.—Prof. A. Neisser of Breslau appeals through the German medical journals to physicians the world around begging them to inform him if they know of any instance in medical practice or in the literature of progressive paralysis in which a reinfection of syphilis occurred with the existing paralysis. He is collecting data to determine whether a positive seroreaction indicates the presence somewhere in the body of a spirochete focus or whether it is merely an indication that the patient has had syphilis at some time in the past. Is it possible, he asks, for persons giving a positive reaction to contract an unmistakable primary sore followed by secondary lesions? True reinfection we know almost never occurs with existing manifestations of syphilis. We also know that the resistance on the part of the skin to renewed infection can not be ascribed to genuine immunity. Apparently all individuals with progressive paralysis give a positive seroreaction, and consequently if paralytics could be found bearing evidences of recent infection along with their psychosis, this would be an important argument in favor of the assumption that a positive reaction may be obtained even in the absence of existing disease or spirochetes.

Foreign Congresses in the Next Few Months.—The Twelfth International Antialcohol Congress is to be held in London the fourth week in July; the Eighth International Tuberculosis Conference at Stockholm the second week, while an interesting meeting of the medical staffs of the hospitals of Germany will be held the same week, probably at Berlin. In August, the Fourth Latin-American Congress will be held in Rio de Janeiro; in the second week of August the Sixth International Psychologic Congress meets at Geneva and the French Congress of Alienists and Neurologists at Nantes. In the third week the Second International Leprosy Conference meets at Bergen, Norway; the fourth week the Fifth International Dental Congress at Berlin. The International Medical, including the International Otologic Congress, assemble at Budapest, August 29. A number of German congresses are to be held in September, including the Eighty-first *Naturforscher* Congress at Salzburg, the German Public Health Congress to meet at Zurich, and the German Neurologic Congress at Vienna the third week. The Ninth International Veterinary Congress opens at The Hague, September 13. The French hold their national surgical and medical congresses in October. Preparations are already under way for the Third International Congress of School Hygiene at Paris, March 29, 1910, and for the International American Congress of Medicine and Hygiene at Buenos Aires in May, 1910, the centenary of the Independence of the Argentine Republic.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, June 5, 1909.

The International Congress of Applied Chemistry

The Seventh International Congress of Applied Chemistry, which met for the first time in London, was largely attended by chemists from all over the world. All branches of applied chemistry were represented and much of the proceedings was of medical importance. The variations in the strength of preparations of drugs according to the country in which they are prepared, was discussed in the section on pharmaceutical chemistry. The variations were ascribed to two sets of causes—variations in the strength of the roots, leaves, etc., employed and variations in the formulas. A recommendation to the congress to appoint an international committee to investigate the subject and report to the next congress in 1912, was passed. An Austrian chemist recommended the formation of an international commission for the purpose of arriving at uniform methods of testing all drugs.

Australian Institute of Tropical Medicine

An Institute of Tropical Medicine is being founded in Townsville, Queensland, where there is already a large general hospital, the committee of which has undertaken to set apart, free of charge, an isolated building in the grounds for the investigation of tropical diseases, and also to maintain in the wards of the hospital under special observation patients suffering from these diseases. The institute will be controlled by a committee appointed by the Universities of Sydney, Melbourne and Adelaide, and will include one representative of the government of Queensland. Applications are invited for the post of director, who must devote his whole time to organization, research and tuition. The position will carry with it a salary of \$3,000.

The Development of Trypanosomes in Tsetse Flies

Some time ago Dr. Kleine, director of the German organization against sleeping sickness, made the important announcement that the tsetse fly is not a mere vehicle for the carriage of trypanosomes, but that these organisms undergo in it a development analogous to that of the malarial parasite in the mosquito. Sir David Bruce, who is in charge of the Sleeping Sickness Commission in Uganda, has announced to the Royal Society that he has confirmed this observation. He has repeated Dr. Kleine's experiments with the *Trypanosoma gambiense* and *Glossina palpalis*, and also with a trypanosome of the dimorphon type. He has found the flies infective after 16, 19 and 22 days, but not before. It is thought that this discovery has considerable importance with regard to the prophylaxis of sleeping sickness, because once the cycle of development of the trypanosome is completed it may be capable of transmitting infection for long periods, just as the *Stegomyia fasciata* does yellow fever.

Remarkable Indemnity Fund

In 1905 an action for \$10,000 was brought against Mr. Lynn Thomas, the leading surgeon in South Wales, and Mr. W. Skryme, a general practitioner, by a patient who was dissatisfied with the result of the treatment of a fracture-dislocation of the upper end of the humerus. The jury disagreed and the case was again tried in 1906. As it was of considerable interest to the profession, a full report was given in THE JOURNAL of Jan. 5, 1907, p. 61. The plaintiff alleged that Mr. Skryme diagnosed only the dislocation which he wrongly attempted to reduce with his heel in the axilla and put the arm up in a sling. Mr. Thomas was then consulted and recommended that the treatment should be continued. Subsequently, a skiagram was made and showed a transverse fracture of the surgical neck of the humerus with displacement outward of the upper fragment. Union took place in this position with much loss of function. The case attracted great attention from the profession, for most of the leading surgeons of London gave evidence on one side or the other. Mr. Thomas said that he had not recommended the application of a splint because he had known gangrene to follow in a similar case. The jury appears to have been influenced by the evidence for the plaintiff that the treatment laid down in the text-books had not been followed, and awarded the damages of \$500. The low amount appeared to be the result of the fact that the verdict was a compromise between the divergent views of jurymen. The defendants, however, had to pay the costs. Though part of these were borne by the Medical Defence Union, the expenses of the trial were so great that defendants had to pay the large sum of \$15,000. An appeal over the signatures of the leading surgeons of this country, which was subsequently endorsed by eminent foreign surgeons, was made to indemnify the defendants against having to pay a penalty for following other treatment than that laid down in text-books. It was pointed out that the practice of surgery is constantly changing, and that it would be monstrous if progressive surgeons should be made liable for damages every time they adopted a treatment in advance of that laid down in text-books. The appeal was well responded to, sums varying from \$3.50 to \$50 being subscribed. The total amount received was \$9,000. The presentation of the fund will be made at Cardiff, June 4, by M. Lucas-Championnière, president of the International Surgical Society.

The Falling Birth Rate

The annual summary of the registrar-general, just issued, shows that the birth rate of England and Wales in 1908 was 26.5 per 1,000 of the population, being an increase of 0.2 over that of 1907, but a decrease of 1.6 compared with the decennial average.

The Children's Infirmary

The government, which has made a record in its provisions for the care of children, has made another new departure by establishing a children's infirmary at Carshalton in Surrey. Previously, there was no special infirmary for children among the institutions for the poor. The building has been erected at a cost of \$11,500,000, and will be devoted to sick and convalescent children from the workhouses and infirmaries of London. It is anticipated that it will provide accommodation for 1,000 children. Motor ambulances have been provided for patients who can not be conveyed by train. Mr. Burns, president of the local government board, gave an address at the opening ceremony in which he said that nothing was more creditable than the way in which modern society had responded to the call of the child.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, June 3, 1909.

Prize in Naval Medicine

The prize in naval medicine has been awarded to Chastang for his memoir, "The Ear and Detonation; a Clinical and Therapeutic Study."

Congress of Alienists and Neurologists

The nineteenth congress of the alienists and neurologists of France and of French-speaking countries will be held at Nantes, August 2 to 8, under the presidency of Dr. Vallon, head physician of the Asile Ste. Anne, Paris. Three topics, bearing, respectively, on psychiatry ("The Fugues in Psychiatry," to be presented by Dr. Victor Parant fils of Toulouse), on neurology ("Chronic Chorea," by Dr. Sainton of Paris), and on legal medicine ("The Insane in the Army from the Medicolegal Point of View," by Drs. Granjux of Paris and Rayneau of Orleans) have been assigned for discussion.

Death of Dr. Bourneville

Dr. Bourneville, physician of the Bicêtre Hospital, has just died, aged 69. He was known especially for his works on abnormal children; he was also the promoter of municipal schools for nurses who are not members of religious orders. He founded the *Progrès médical* in 1873. Of late he had occupied the post of director of the Vallée Foundation, an annex of the Bicêtre for young girls of backward development.

Favoritism and Medical Studies

Even though the laws and regulations allow no one without the bachelor's degree to matriculate at a college of medicine, many students have evaded this requirement through the intervention of influential politicians. This favoritism is now eliciting a strong protest. A few days ago the Corporate Association of Medical Students in Paris organized, under the patronage of the French medical societies, a mass-meeting of protest against favoritism, and addressed to the Minister of Public Instruction a long letter in which some instructive facts are cited. For instance, an Algerian, son of a high dignitary, was permitted through favoritism to begin his medical studies without having taken any secondary studies at all. Physicians and students having protested, the favor was granted at Montpellier, and, to cap the climax, this Algerian was allowed to obtain his medical education at the expense of the state. A veterinary who wished to treat human beings was allowed to dispense with the first two years of medical studies.

The Minister of Public Instruction has now ordered that no student may become a candidate for any of the degrees or honors given by the state in any of the colleges or schools of higher education without placing on deposit the diploma required as a preliminary. Foreign students will be obliged to deposit their original diplomas, along with a translation made by a translator under affidavit. No exception is to be made hereafter.

The Corporate Association of Medical Students has another equally serious complaint, namely, that the provincial colleges, through favoritism, carry some students along without requiring them to attend either lectures or clinics. These phantom students sometimes live so far away that it would be physically impossible for them to be present at classes. For instance, a village schoolmaster was authorized to take a medical course while continuing to teach; he merely went, four times a year, for his quarterly enrolment. A professor in a high school over forty-three miles away from a medical school was allowed to enroll himself at this school without ceasing his duties; and in the same way a pharmacist did likewise, hoping no doubt to extract clinical experience from his pupils. Still more re-

markable is the story of the naval pharmacist who was learning medicine on board of an armored cruiser.

Such instances of favoritism are not merely flagrant injustice toward regular medical students and physicians, but a real public danger.

The Number of Medical Students in the French Medical Colleges

The Minister of Public Instruction has just published the statistics of the students enrolled Jan. 15, 1909, in the colleges and schools of higher instruction. Following are the figures for the medical colleges: Paris has 3,576 students; in the provinces, the most important center is Lyons, in which there are 942 students in the mixed college of medicine and pharmacy; the mixed College of Bordeaux has 675 students; the College of Montpellier (medicine alone) has 606 students; the mixed College of Toulouse has 435 students; the College of Nancy has 337; and the mixed College of Lille has 271 students.

Out of the total of 6,842 students, there are 912 foreigners, of whom 559 are Russians, 76 Ottomans, 47 Bulgarians, 42 Roumanians, 20 Greeks, etc. There are only 5 students from the United States, of whom 3 are at Paris.

The total number of women medical students is 689, of whom 294 are French and 395 foreigners.

These figures have to do only with the seven colleges of medicine. Besides these, there are in France two other classes of institutions of medical instruction, namely, the schools of the full practice of medicine, of which there are four, at Algiers, Marseilles, Nantes and Rennes, with a total of 795 students; and preparatory schools of medicine, of which there are 12, with a total of 644 pupils.

The Pierre Budin Foundation

Prof. Pierre Budin, who died two years and a half ago, was the first in France to popularize the infant consultations, where several times a week babies are weighed and carefully examined, and where mothers come to receive valuable instructions. In an excellent work which I have mentioned in a preceding letter, Dr. Ausset of Lille has shown the good influence which these consultations have exercised on infantile mortality (THE JOURNAL, Jan. 23, 1909, lii, 310; see also THE JOURNAL, 1905, xlv, 1033).

Two years ago an association called the Pierre Budin Foundation was formed to honor the memory of the lamented professor and to establish a practical school of puericulture with an infant consultation. This model establishment was opened on May 24, under the presidency of M. Emile Loubet, former president of the French Republic, assisted by M. Paul Strauss, a senator, Professor Landouzy, dean of the college of medicine, M. Mirman, director of charities under the minister of the interior, M. Mesureur, director of the Public Charities of Paris, etc. An ode by Jean Richepin, addressed to Pierre Budin, on the subject of the children of France, closed the program, and the guests were at liberty to admire the perfect equipment of the school of puericulture and the infants' consultation—its garden for the mothers, its sterilizing room, its chemical laboratory, its reception room and weighing room, etc.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, May 26, 1909.

Death of Professor Engelmann

Professor Engelmann, formerly director of the physiologic institute of this city, died on May 21, aged 66, from an apopleptic attack caused by arteriosclerosis of the brain. He was chiefly noted for his work on the physiology of the heart, but he was scarcely the equal of his predecessor, Du Bois-Reymond. Professor Rubner, who succeeds Engelmann, gives greater promise of rivalling the activity of Du Bois-Reymond.

Antituberculosis Convention

As usual, the convention instituted by the German central committee for the fight against tuberculosis held its meeting in Berlin in May of this year. The convention consists essentially of the general meeting of the central committee and the session of its executive board and a convention of physicians from the tuberculosis sanatoria. This year there was added a session of the board of directors of the recently founded commission for the campaign against lupus. To begin with the last, the transactions included a report of the work of the

committee to date and an address by Professor Lesser of this city on the modern treatment of lupus with the resulting discussion, the conclusion of which was that the Finsen treatment gives relatively the best results but that it must be supplemented by other methods.

The organization extends over the whole of Germany. The institutions for the campaign against tuberculosis are to be entrusted with the discovery and care of lupus patients. The existing lupus sanatoria are to be provided, where necessary, with the best apparatus possible and above all the necessary capital is to be collected. Including the \$7,500 (30,000 marks) which the German central committee contributes there are at present \$20,000 available. This sum is indeed small for the extensive plans of the association. In the general meeting of the German central committee for the tuberculosis campaign which was held under the presidency of the secretary of state (*Staatssekretär*) von Bethmann-Hollweg it was reported that the receipts of the committee were about \$108,000 of which \$89,000 were derived from a lottery which the government granted permission to the central committee to conduct. About \$40,000 were contributed to sanatoria and tuberculosis institutions. The number of places for intelligence and care has increased to 244. At present there are in Germany 99 public sanatoria for adults with 6,584 beds for men and 3,802 for women. In addition 2,013 beds are available in 34 private institutions. On the average, allowing three months for the occupancy of each bed by one patient, about 52,000 adult patients are treated annually. There are 18 children's sanatoria with 695 beds, and 7,329 beds are available in 79 institutions which exist for scrofulous children and those threatened with tuberculosis. The number of forest convalescent stations has risen to 92 and there are 7 forest schools. The question of disinfection in tuberculosis with especial reference to disinfection of dwellings was taken up. The essential prerequisite of thorough house disinfection, namely, the general requirement of notification of tuberculosis, is lacking in Germany as tuberculosis is not included in the law regarding epidemics. One must therefore be contented with the promotion of voluntary notification; notices are to be sent to the hygienic bureaus for this purpose and the disinfection of dwellings is to be carried out by them. As there are so far no suitable means for disinfection on a small scale, the emphasis must be placed on making the expectoration harmless. The disinfection of linen, especially of handkerchiefs, is important. Dr. Hamel, member of the imperial health office, presented a thorough report regarding the tuberculosis campaign in the United States, especially in New York, and its applicability to German conditions. The reporter made a thorough study of American tuberculosis institutions during his visit to the Washington tuberculosis congress last year. Both the official and voluntary organizations are highly commended. The American sanatoria enjoy a greater popularity than the German.

Fish Poisoning

A young bacteriologist presents in the last number of the *Deutsche medizinische Wochenschrift* an interesting contribution to the question of the origin of fish poisoning, new cases of which will surely be brought to notice with the beginning of hot weather. He has shown the presence of paratyphus bacilli in the ice in which sea-fish were packed for transportation and is of the opinion that the fish may become infected by these bacteria from the ice. He concludes that the usual packing of sea-fish in ice does not prevent the occurrence of fish poisoning and urges that the method of preserving fish be improved. Only natural ice from a source free from infection should be used for packing.

Antivaccination

In spite of the brilliant results which have followed compulsory vaccination in Germany, there exists with us a party, not numerous, but very obstinate, opposed to vaccination, on the ground that it is superfluous, an invasion of the freedom of the individual and dangerous to health. To be sure, there is no doubt that formerly a not inconsiderable injury was produced by vaccination. Many diseases of the skin, probably scrofula, and certainly syphilis, were conveyed by the formerly widespread custom of arm-to-arm vaccination. In preantiseptic times not a few infections occurred from vaccination, so that many a child has lost his life as a victim of the measure. But all these dangers of vaccination have grown constantly fewer and accidental bad results occur rarely at the present time. According to a recently published report on the results of vaccination in Prussia, in 1907, it appears that during that year eleven deaths occurred shortly after the

first vaccination and none after revaccination. Six of these fatal cases had no etiologic relation to vaccination, and the remaining five could not be attributed to any imperfection of the lymph or to faulty technique. One child died from gangrene of the skin around the vaccine vesicles, ten days after the operation; two died from gangrene of the vaccinated area several weeks after the vaccination, and it is probable that the disease arose from subsequent scratching of the vaccine vesicles. In two cases erysipelas was the cause of death. Complications of vaccination with favorable outcome were quite frequently observed. They are generally due to improper treatment of the pustules by the vaccinated or their relatives (rubbing, scratching, washing with a dirty sponge, unclean clothing, etc.). These complications consisted of inflammation and suppuration of the subcutaneous connective tissue, gangrenous changes in the vaccination pustules, suppuration of the neighboring lymph gland, erysipelas, eczema, general eruptions of the skin, appearance of vaccination pustules on other parts of the body (so-called generalized vaccinia) and transmission of pustules to unvaccinated persons. All these complications are greatly exaggerated by the opponents of vaccination and used as propaganda material to secure the repeal of the vaccination law. These efforts of the laity are supported by some physicians (fortunately, only a few). Last April an association of antivaccinationist physicians petitioned the imperial chancellor to appoint a non-partisan commission for the investigation of the question of compulsory vaccination. They complain that in spite of "alarming facts" and in spite of repeated protest from "unnumbered" opponents of vaccination, compulsory vaccination is still constantly enforced in Germany. They attribute the present comparative rarity of smallpox epidemics to modern hygiene; and they hold that the occurrence of over a million tuberculous cases in the German Empire yearly is largely due to compulsory vaccination.

It is not too severe a judgment to characterize an agitation of this sort as conscienceless. The physicians belonging to the executive committee of the association are mostly notorious for their participation in the so-called nature-cure movement and other attempts at quackery. Among them is also Professor Jäger of Stuttgart, the well-known "apostle of wool," and discoverer of the alleged fact that "the soul can be smelled."

Students' Home at Kiel

At Kiel a few days ago there was laid the corner-stone of a recreation house for students. A building will be erected on a plot of ground which was transferred to the university by the city at cost price, \$48,000, which is to serve as a meeting place for the student body for intellectual recreation and athletics. In a park-like garden, adorned with old trees, on the Kriegshafen, will be placed a building designed as a casino for students and professors, which will contain, in addition to a large banqueting room, assembly rooms, reading rooms and rooms for gymnastics and fencing. In the garden, tennis-courts, race-courses and bowling alleys will be provided. Especial attention will be given to aquatic sports. The cost of construction, including the interior furnishing and exterior parking will be about \$84,000. The expenses will be met by large donations; among others, \$36,000 from the "docents."

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, June 5, 1909.

An Accident Clinic in the Allgemeines Krankenhaus

Professor Hoehenegg, director of the second surgical clinic, announced to the students that the accident ward, long desired by the leading professors of surgery in this city, has now been granted. This act shows the intimate connection between students and teacher. The two directors of the surgical clinic, who are also the principal teachers of surgery, Hoehenegg and von Eiselsberg, will be jointly directors of the new ward. The advantages expected from the new clinic are very considerable from the standpoint of teaching of students. The regular lectures will be able to deal with the cases that come to the practitioner's notice better than heretofore. An agreement has been arrived at with the general first aid society or street ambulance society, the members of which are the first to be called to any case of accident or emergency in this city. This society will erect a branch office in the general hospital and there students and junior surgeons of the clinic will have to serve a term; nurses will be able to receive proper instruction as to the after-care of

injured persons, a point well worth mentioning in view of the low standard of knowledge displayed here by the majority of nurses in this respect. The transportation of injured persons from the place of accident to the hospital will be watched by students as well. Under the system at present in force both clinics had in the last year no more than 49 injuries to show during the ten months of the university year. All the other victims of accidents had to be conveyed according to regulations to the hospital nearest, and, as there are at present minor hospitals nearly in every district, the cases were lost for teaching purposes. The constant decline of the number of such patients was a long-standing grievance to the professors, and, while Billroth had, some twenty-five years ago, more than 300 cases a year, Albert and Gussenbauer, his successors, had to be content with two or three cases a week. The new ward will have 60 beds, with surgical and internal rooms. Arrangements have been made by the army medical corps to enable medical officers of the force to serve there a term of three months to profit from the opportunity thus offered to them.

Pharmacology

"HYDROCYANATE OF IRON—TILDEN"

W. A. Puckner and W. S. Hilpert

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

Among the many inquiries received regarding the composition of secret remedies was one in reference to "Hydrocyanate of Iron" manufactured by The Tilden Company, New Lebanon, N. Y. This preparation is advertised as being "unexcelled as a remedy for epilepsy, hysteria, chorea, neurasthenia, locomotor ataxia, neuralgia, migraine, anemic headaches, and all convulsive or reflex neuroses dependent on impairment of the brain or spinal cord." It is also said to be "valuable in uterine reflex neuroses due to congestion; in amenorrhea due to anemia and chlorosis and suppressed menstruation."

The term "hydrocyanate of iron" is an unfamiliar one and is not found in any available reference work on chemistry. Thinking that the term might have been loosely applied to ferrocyanid of iron, or Prussian blue (a compound once suggested for epilepsy, but long ago considered useless), the correspondent wrote to the manufacturers asking if such were the case. The Tilden Company answered:

"... our preparation Hydrocyanate of Iron is not Prussian blue in any sense of the word. Prussian blue has no curative properties as applied to all forms of epilepsy. Prussian blue is Ferrocyanid of Iron while our preparation is Hydrocyanate of Iron."

The only statements in the Tilden Company's advertising matter, regarding the composition of hydrocyanate of iron are the following:

"Hydrocyanate of Iron (Tilden's) is a correct and scientific combination of well known principles."

"Hydrocyanate of Iron (Tilden's) combines well known properties of ferruginous salts with the sedative action of Hydrocyanic acid."

The last statement would lead one to expect the presence of available iron and cyanogen ions. In fact, the inference to be drawn from all the company's "literature" is that "hydrocyanate of iron" is a definite chemical compound in the same sense as is ferrocyanid of iron, and that inference is still further borne out in the letter to our correspondent. This being the case, the Tilden Company was again written to and asked for the chemical formula of "hydrocyanate of iron," with the following result:

"Replying to your inquiry regarding the formula of Hydrocyanate of Iron we beg to state the composition of this preparation is a trade secret and we therefore do not care to furnish the desired information."

This reply verified the opinion already formed that "hydrocyanate of iron" is a secret preparation. Its analysis was then taken up in the Association's laboratory.

EXAMINATION OF THE TABLETS

The product appears on the market in cartons said to contain one ounce of one-grain tablets. On the cartons, in addition to the name of the preparation and the name and address of the manufacturers, are the names of diseases for which it

is recommended. The tablets, in the specimens analyzed, were dark blue, rather hard and slightly bitter in taste and had an average weight of 0.1382 gm., or about 2 grains. They were found to be practically insoluble in water and dilute mineral acids; aqueous oxalic acid solution partially dissolved them, yielding a blue solution. Boiling with alkali hydroxid solution decomposed the tablets, yielding iron in an insoluble form and a solution of alkali ferrocyanid, as demonstrated by the appearance of a deep blue precipitate on the addition of ferric chlorid solution. The portion insoluble in alkali when boiled with hydrochloric acid yielded a solution containing iron, approximately equivalent to 50 per cent. Prussian blue. These properties are all characteristic of Prussian blue and, taken together, identify Prussian blue as a constituent of "hydrocyanate of iron (Tilden)." The insoluble residue from the iron determination possessed the properties and constituents of talc and constituted practically one-half of the tablets. Extraction of the tablets with chloroform or ether in the presence of ammonium hydroxid yielded a small amount of organic material which contained bodies having the properties of, and responding to tests for, quinin or einchina alkaloids and caffeine. The presence of a salicylate was also indicated.¹

From the analysis it is concluded that "hydrocyanate of iron (Tilden)" is essentially a mixture of approximately equal parts of talc and Prussian blue, containing traces of organic matter having the general properties of alkaloids.

COMMENT: When a firm exploits an abandoned remedy for so hopeless a disease as epilepsy under a name not known to chemistry and with a false representation of its pharmacologic qualities, such action may rightly be assumed to show ignorance or worse. "Hydrocyanate of iron," if it means anything, means the cyanid of iron, but the preparation put out under that name is, according to our chemists, not cyanid of iron, but the ferrocyanid of iron commonly known as Prussian blue. This substance has been tried for epilepsy and abandoned. Yet the firm recommends it as a "peerless remedy" for this disease. "The Tilden Company holds the key to the situation in the treatment of epilepsy. We have the remedy that does the work."

Not that epilepsy is the only disease for which this hypothetical chemical compound may be prescribed. Torticollis has been "successfully treated with hydrocyanate of iron." In chorea, we are told "a richer and better blood supply" should be furnished the nervous and vascular system and "the irritation of the motor centers" must be allayed.

"Hydrocyanate of iron serves admirably to accomplish both of these purposes. It carries the hemoglobin to the blood in its most easily assimilable form and its hydrocyanic acid possesses remarkable sedative powers"

It is not possible for it to have any value in anemia because of its insolubility, yet we are told:

"In conditions marked by poverty of the blood producing anemia or chlorosis, reacting on the nervous system and calling for a chalybeate, hydrocyanate of iron (Tilden's) takes a front rank among the remedies of this class, combining as it does the blood enriching qualities of ferrum with the sedative action of hydrocyanic acid."

As Prussian blue yields no appreciable quantity of hydrocyanic acid under the conditions existing in the animal organism, "the sedative action of hydrocyanic acid" must be as hypothetical as the chalybeate properties attributed to it.

It is strange that a manufacturer, in introducing a new chemical compound, should have to assure his customers that it "contains no opium or alkaloid, of that drug, cocain, chloral hydrate, conium or any of the bromids." Imagine a firm putting, let us say, potassium iodid—a definite chemical compound—on the market and solemnly guaranteeing that it contained no cocain or chloral hydrate!

Would the Tilden Company of twenty-five years ago have served such mental pabulum in its advertising matter?

One would think that the dictates of common humanity would protect the unfortunate epileptic from the machinations of the nostrum maker, especially from the exploitation of a remedy that has been tried and found wanting. A nostrum, however, merely has to measure up to one standard: Will it pay? Meeting this requirement nothing else matters.

1. Details of the quantitative analysis of "Hydrocyanate of Iron—Tilden" will appear in the Annual Report of the Chemical Laboratory of the American Medical Association or they may be had on request.

Correspondence

Sir Frederick Treves An Ardent Supporter of Animal Experimentation

To the Editor:—In the *Journal of Zoöphily* for May, 1909, p. 45, is a quotation from an address of Sir Frederick Treves, from which any unsuspecting reader would infer that Sir Frederick is utterly opposed to vivisection. I sent him a copy of that journal and have received in reply the letter which follows this. You observe that he refers to a letter published in the *London Times* on April 18, 1902 [which has appeared in *THE JOURNAL* and in other medical periodicals]. This was noticed editorially in the *British Medical Journal* on April 26, 1902, p. 1042. Inasmuch as the *British Medical Journal* is gone over with a microscope by the antivivisectionists every week, it is impossible that this should have escaped their attention, even if they did not see the original in the *London Times*.

In spite of these facts, this misquotation from Sir Frederick Treves is constantly and flaringly made in the *Journal of Zoöphily*, in some of the publications of the New England Antivivisection Society, and probably in others. Surely seven years after such a disclaimer common honesty would require that these allusions be suppressed.

W. W. KEEN, Philadelphia.

Prof. W. W. Keen:

Dear Sir:—I notice from certain papers sent me from America that the antivivisection party are as active in your country as in mine.

I notice also that the methods which have covered the antivivisection party with contempt and ridicule in this country are being reproduced in America.

In England the improper use of my name has very nearly ceased owing to the persistent circulation of the enclosed letter [the one in the *Times* above referred to.—Ed.] and the repeated publication of the fact that I am—as every sane medical man must be—an ardent supporter of vivisection.

The fact that your name has been brought into the matter has led me to trouble you with this letter in the hope that you may be able to make use of it should you consider the matter worthy of notice.

FREDERICK TREVES,
Kingston-on-Thames, Eng.

Old-Age Pensions for Physicians

To the Editor:—I read with interest Dr. Magruder's letter, published in *THE JOURNAL*, May 22, p. 1682, suggesting the establishment of a national home for aged or infirm physicians. Would not a system of old-age pensions be preferable? Many physicians in need of such a retreat as a national home would provide, could not share its advantages because of distance, illness or domestic reasons. I believe that a pension fund placed in the keeping of a board composed of successful business men, or some trust company, the income from this fund to be paid to such worthy physicians as are in need by reason of old age, illness or accident is what we need.

C. BUSEY, M.D., Clearwater, Idaho.

Congregational Practice and Contract Practice

To the Editor:—Several press reports of my paper on "Congregational Practice," read by title before the American Academy of Medicine, tend to convey the idea that I favor the ordinary form of contract practice. Without anticipating the publication of the paper, I may say that it proposes a much broader scope of professional service, which would be put into execution only by a gradual development of professional and public opinion, the basis of payment being only one of the details. Ordinary contract practice starts with a false conception of the value of services and usually involves bad faith both as to demand and fulfillment.

A. L. BENEDICT, Buffalo, N. Y.

Miscellany

THE MIDWIVES OF BALTIMORE

A Report to the Medical and Chirurgical Faculty of Maryland

MARY SHERWOOD, M.D., BALTIMORE

The Evening Dispensary for Working Women and Girls of Baltimore, in cooperation with the Mothers' Relief Society, organized three years ago an obstetric service which cares for indigent parturient women in their homes. Early in this service it was learned that the conditions of the practice of midwives in Baltimore city are, in the light of twentieth century medicine, well-nigh intolerable.

The investigation of the midwives of New York made by Miss Crowell under the auspices of the Public Health Committee of the Association of Neighborhood Workers in 1906 (*Charities and the Commons*, Jan. 12, 1907; abstracted in *THE JOURNAL*, Feb. 23, 1907, p. 712), with the legislation resulting therefrom, suggested a similar study in Baltimore as a basis for asking for legislation on the practice of midwives in Maryland. A special fund for this purpose was contributed to the organizations named by lay women who in their social and philanthropic work had been impressed by the conditions surrounding childbirth among the poor. A committee, consisting of Dr. Lillian Welsh, Dr. Elizabeth Hurdon, and myself, was appointed to direct the work.

The committee has had the cordial cooperation and active assistance of the health department in making this study. It was fortunate in securing the services of Miss Alice H. Small, a trained social worker, to undertake the actual investigation.

Miss Small has personally interviewed the 150 midwives in active practice in the City of Baltimore. The facts she has obtained have been tabulated in a form similar to the tables given in Miss Crowell's report. While our investigation was in progress a report on the midwives of Chicago was published in *THE JOURNAL* of the American Medical Association (April 25, 1908, 1, 1346). These two reports, with ours, give data for an interesting summary and comparison of the conditions of midwifery practice tolerated in three large American cities.

The committee desires to place before the faculty the following facts brought out in our investigation:

1. More than one-third of the births reported at the Health Department are reported by midwives. During the period covered by our tables the percentage of all births reported by midwives was 40.7.

2. There is no adequate registration of midwives, as the law making registration compulsory has no clause providing for notification of change of address; the only knowledge of such change is gained by birth certificates. The registration called for by the health department preliminary to our investigation was the first for many years.

3. No qualifications are required for registration as a midwife. Any one may qualify with no questions asked. Of the 150 included in our tables, 42 (28 per cent.) had foreign diplomas; 9 had American diplomas—worthless as indicating any adequate training; 99 (66 per cent.) gave no evidence of training of any kind. Thirty-seven (24.7 per cent.) could neither read nor write. Twenty-five (16.7 per cent.) could not speak English. In Chicago there is practically no illiteracy, and in New York the percentage is much lower than in Baltimore. The large number of negroes in our number accounts for the high percentage here.

4. There is absolutely no supervision of the work of these midwives. The one law relating to the practice of midwives, secured by this faculty largely through the efforts of Dr. Hiram Woods, provides a penalty for neglect of attention to the eyes, yet an analysis of their practice shows that 3 only out of 150 use a weak solution of nitrate of silver for the eyes, while the remainder use anything from breast-milk to bichlorid of mercury of unknown strength. Sixty-six per cent. care for abnormal cases; they perform version and remove the delayed placenta by internal manipulation. Of the bags examined 41 were found to be clean and in good order; 51 were dirty; 44 midwives had none. A very small number use antiseptics for the hands and sterilized tape for the cord. On account of lack of supervision even well-trained

TABLE 1.—150 MIDWIVES OF BALTIMORE: PERSONAL STATISTICS

Nationality.	Age in Years.								Residence in America.				Education.				Diploma	Registered at Health Board		Home Conditions.				
													Read and Write.		Speak English.									
	20 or less.	20-29.	30-39.	40-49.	50-59.	60-69.	70-79.	80-89.	1 yr. or less.	1-10 years.	10-20.	20 or more.	Yes.	No.	Yes.	No.	American.	Foreign.	None.	No.	Yes.	Good.	Fair.	Bad.
Americans	35	..	..	2	9	15	7	2	..	..	..	..	35	..	35	..	3	..	32	29	6	19	15	1
Negroes	45	..	..	4	6	11	13	10	1	..	..	..	9 (R) 6	30	45	..	3	..	45	43	2	11	15	19
German	27	..	..	1	6	9	10	1	..	1	9	17	25	..	19	8	3	15	9	23	4	18	6	3
Russian Hebrew	13	1	3	5	4	..	..	..	1	5	6	1	10	..	3	8	5	9	4	11	1	4	6	3
Bohemian	6	..	3	1	2	..	..	..	1	2	3	..	6	..	..	4	1	1	6	..	..	..	..	..
Polish	6	..	1	..	4	1	..	..	..	3	..	3	5 (R) 1	..	3	3	1	2	3	4	2	5	1	1
Austrian	4	..	3	1	..	..	..	..	..	4	..	..	4	..	..	1	3	4	..	4	..	3	1	..
Hungarian	2	..	..	1	1	..	..	..	..	2	..	..	4	..	..	3	..	..	2	..	3	1	..	..
Irish	4	..	..	2	..	2	..	..	..	..	..	4	2	..	2	4	..	..	4	4	..	2	2	..
French	1	..	..	1	..	..	..	..	..	..	1	1	1	..	..	1	..	1	1	..	1	..	..	..
Italian	2	..	1	..	1	..	..	..	..	1	..	1	1	..	..	2	..	1	2	..	..	..	..	..
Swedish	2	..	..	..	1	1	..	..	..	..	..	2	2	..	..	2	..	1	2	..	2	..	..	..
Swiss	1	1	..	..	..	..	..	..	1	..	..	2	1	..	..	2	..	2	2	..	2	..	..	..
Norwegian	1	..	..	1	..	..	..	..	..	1	1	..	1	..	1	..	1	..	1	..	1	..	..	..
English	1	..	..	..	..	..	1	..	..	..	1	1	1	..	1	..	1	..	1	..	1	..	..	..
Total	150	2	18	33	48	34	14	1	2	19	19	30	106 (R) 7	37	125	25	9	42	99	124	15	72	51	27

TABLE 2.—150 MIDWIVES OF BALTIMORE: FACTS ABOUT THEIR PRACTICE

Nationality.	Length of Practice ; Years.				Methods of Practice.														
	1 or less.	More than 1 and less than 10.	10-19.	20 or more.	Attends Normal Cases Only.		Uses Anti-septics.		Equipment and Cleanliness of Bag.				Care of Infants' Eyes and Cord.		Attention to Mother.		Suspected of criminal practice.	Receives and cares for patients in home.	
					Yes.	No.	Yes.	No.	Good.	Bad.	Not seen.	None.	Good.	Bad.	Yes.	No.			
American	35	..	7	7	21	14	21	35	..	10	8	4	13	22	13	35	..	14	2
Negro	45	1	6	12	26	29	16	14	31	5	21	6	13	11	34	43	12	11	4
German	27	..	..	4	18	16	11	22	5	10	9	3	5	14	13	27	..	11	1
Russian Hebrew	13	..	3	2	8	13	..	13	..	5	5	..	3	9	4	13	..	..	..
Bohemian	6	..	..	4	2	5	1	6	..	3	3	..	..	6	..	6	..	..	..
Polish	6	..	1	2	3	3	3	2	4	1	1	..	4	4	2	6	..	3	..
Austrian	4	..	4	..	..	4	..	4	..	2	1	1	..	4	..	6	..	3	..
Hungarian	2	..	..	2	..	1	1	1	1	1	1	..	..	4	..	4	..	..	..
Irish	4	..	..	2	2	4	..	..	4	..	1	..	3	2	2	4	..	1	1
French	1	..	..	..	1	1	..	1	..	..	..	..	1	1	..	1	..	..	..
Italian	2	..	..	1	1	..	2	1	1	1	1	..	..	1	1	2	..	..	..
Swedish	2	..	..	..	2	1	1	2	..	1	..	..	..	1	1	..	..	..	..
Swiss	1	..	1	..	..	1	..	1	..	1	..	..	..	1	1	1	..	2	1
Norwegian	1	..	1	..	..	1	..	1	..	1	..	..	..	1	..	1	..	1	1
English	1	..	..	1	..	..	1	1	..	..	..	..	1	1	..	1	..	1	1
Total	150	1	28	36	85	92	58	104	46	41	51	14	44	80	70	147	2	48	11

midwives take no precautions to insure asepsis. One foreign midwife showed a sterilizing apparatus required in her native country, whose use in her adopted country would, she said, expose her to ridicule.

The practice of midwives has been controlled in France since 1803; in Austria, Norway and Sweden, since 1810; in Belgium since 1818; in Russia and in Prussia for many years. Finally, after a long and bitter controversy, Great Britain has adopted and put in operation (1903) an act establishing a "statutory certified midwife."

This report is presented to the Medical and Chirurgical Faculty of Maryland in the hope that it will take the initiative in a movement to secure the better training of midwives and to regulate their practice in the City of Baltimore and the State of Maryland.

Some Fallacies in the Care and Treatment of Children.—In summing up this subject, Dr. H. W. Cheney (*Quarterly Bulletin of Northwestern University Medical School*, March, 1909) gives the following pithy advice:

Don't put a flaxseed poultice or a clay mixture on the child whose breathing is already embarrassed.

Don't allow the filthy "baby comforter" in your presence without a protest.

Don't blame the baby's teeth for a disease you do not take the trouble to find.

Don't be afraid of fresh flowing air for children at all times.

Don't forget to examine the new-born babe and circumcise if necessary.

Don't prescribe medicine when other measures are better—and have the courage to tell your patients so.

Railroad Accidents.—According to Accident Bulletin No. 30, of the Interstate Commerce Commission, the number of persons killed in train accidents during October, November and December, 1908, was 184, and of injured 2,924. Accidents of other kinds—employés killed at work, passengers getting on and off cars, etc.—bring the total number of casualties up to 17,644 (798 killed and 16,846 injured). The number of passengers killed in collisions and derailments, namely 34, is only two-thirds as large as in the last preceding quarter, and if those killed in one case under very unusual circumstances be deducted, the number is reduced to 21, or exactly the same as one year ago. The total number of collisions and derailments in the quarter now under review was 2,684 (collisions 1,373, derailments 1,311) of which 206 collisions and 130 derailments affected passenger trains.

Human Muscular Activity and Pulse Rate.—T. A. Anlo (*Skandin. Arch. f. Physiol.*, xxi, 146) performs a series of experiments on human subjects which verify the observations

of Johansson on animals. It is claimed that the increase in pulse rate during muscular activity is accomplished through the cardiac center, motor impulses being sent to the heart by way of the cardiac nerves. Increased respiration which accompanies muscular exercise is a sufficient explanation for the increase in the pulse rate. An increase of blood pressure does not affect the pulse rate. Although there is usually a parallelism between body temperature and pulse frequency, yet an increase in body temperature is to be looked on more as a result than an explanation of an increased pulse rate. The latter appears first. The products of metabolism after violent exercise were thrown into the circulation by massage. No change in the pulse rate was experienced. Massage and electrical stimulation of the skin also had no effect on the pulse rate. Peripheral centripetal nerves have no appreciable influence on the activity of the heart.

Stokes-Adams Disease and the Nerves of the Bundle of His.—J. Gordon Wilson, in a communication to the Royal Society, London, February 17 (reported in *Nature*, March 4, 1909), combats the myogenic theory of the Stokes-Adams syndrome. He mentions that both Tawara and Retzer had found nerve fibers and cells in the atrio-ventricular bundle, and gives the results of his own researches. The material used was obtained from the pig, calf and sheep, and the methylene blue "vital" method was followed. His conclusions were that the atrio-ventricular bundle, besides containing a special type of muscular fiber, differing from the ordinary heart muscle, contains an important and intricate nerve mechanism, in which are seen ganglion cells, monopolar and multipolar, the processes of which pass to adjacent cells and nerve fibers and to the muscle fibers and through the muscle bundle so far as it was examined; abundant nerve fibers running through it in strands; an intricate plexus of varicose fibers around the muscle fibers and an ample vascular supply with well-marked vascular nerves and sensory endings. These findings demonstrate that the interruption of an important nerve pathway must be reckoned with in the pathology of Stokes-Adams disease, and that this is at least as important a factor as the muscular involvement.

The Proportion of the Sexes.—At the session of the Royal Society, London (reported in *Nature*, March 11), Mr. Walter Heape presented a paper based on the statistics of births issued by the chief sanitary officer of Cuba, 1904-1906, covering 177,704 births, namely whites 135,881, and colored 41,823, including still-births. These statistics show the following points: 1. There is a racial difference in the proportion of the sexes born; for whites, 108.44 males; for colored 101.12 males, for every 100 females. This agrees with other statistics for both races. 2. In both living births and still-births in both races there is a consistent variation in the proportion of the sexes produced by legitimate as compared with illegitimate union; for whites, legitimate 109, illegitimate 105.95 males per 100 females; for colored, legitimate 107.73, illegitimate 97.91 males per 100 females. There is therefore a marked increase in the proportion of females born in illegitimate births and it is asserted that they are chiefly induced by individual physiologic conditions affecting the metabolic activity of the woman. 3. In both whites and colored there are two sharply defined breeding seasons each year correlated with marked climatic changes tending to increase individual metabolic activity. At these times of greatest fertility the largest proportion of females are born. 4. A considerably higher proportion of females are born in towns than in country districts, where life is harder. 5. Although heredity in the main governs the proportions of the sexes born in the two races, there are sometimes variations under certain conditions, and these are similar in character for both races. These conditions are directly associated with forces which affect the metabolic activity of the mother, and suggest the probability that the ripening and production of ova of the different sexes is influenced thereby. Thus it is held that a struggle for existence is always going on among the sexual ovarian ova, and that these extraneous forces influence the result. Speaking generally it appears that the greater the metabolic activity of the ovary the more females are produced.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

CHEWING-GUM IN THE MALE BLADDER

To the Editor:—A young man, aged 28, well-developed, was referred to me from Portsmouth, Ohio, June 5, 1909. His physician was Dr. Merchant of Columbus, Ohio. The patient was a masturbator and used chewing-gum in the form of a bougie; one day he lost control of the gum, which worked into the bladder. Examination showed a decidedly contracted meatus. Performed meatotomy, not only to allow introduction of cystoscope, but in the hope that the contracted meatus was the cause of irritation inducing masturbation. Through the cystoscope the gum was seen doubled on itself in the form of a horseshoe. In the absence of operating cystoscope perineal section was performed and the gum delivered without difficulty. Though the gum had been in the bladder for thirty-five days there was no incrustation.

STARLING S. WILCOX, Columbus, Ohio.

HAT-PIN IN THE MALE URETHRA

To the Editor:—I wish to report another case of a hat-pin in the male urethra. I was consulted by W. E., aged 57, who had inserted a six-inch hat-pin in his urethra and it had escaped from his grasp and the point was imbedded in the urethra about one inch from the meatus. I moved it by grasping the hat-pin with a pair of common hemostat forceps, pushing it back till the point was disengaged, then lifting the point of the pin between the blades of the forceps it was removed with no further injury to the urethra.

M. P. MESSENGER, M.D., Oakfield, N. Y.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, for the week ended June 12, 1909:

Bispham, William N., major, ordered from San Francisco to Fort Leavenworth, Kan., for duty at the U. S. Military Prison.

Lambie, John S., Jr., 1st lieutenant, granted leave of absence for 16 days.

Blanchard, Robert M., captain, ordered to duty with troops from Fort Sheridan, Ill., at Toledo, O., military tournament, July 5 to 10.

Pipes, Henry F., captain, granted leave of absence for 1 month.

LaGarde, Louis A., lieutenant-colonel, when relieved at Denver, will proceed to Washington, D. C., for temporary duty at the Army Medical School.

Russell, Frederick F., major, granted leave of absence for 1 month, 15 days.

Christie, Arthur C., 1st lieutenant, granted leave of absence for 1 month, on arrival in the United States.

Gilchrist, Harry L., major, granted leave of absence for 1 month, about June 20.

Freeman, Paul L., captain, ordered from Fort Riley, Kan., to Fort Leavenworth, Kan., for temporary duty, about July 1.

Howell, Park, captain, relieved from duty at the Army General Hospital, Fort Bayard, N. M., and ordered to Fort Huachuca, Ariz., for duty.

Hoff, John Van R., colonel, granted leave of absence for 7 days.

Baker, Frank C., major, when relieved from duty at Fort Oglethorpe, Ga., will proceed to Fort Moultrie, S. C., for duty.

Hartsock, Frederick M., major, relieved from further duty at Fort Meade, S. D.; will proceed at the expiration of his present leave of absence to Fort Wayne, Mich., for duty.

Conzelmann, Fred J., 1st lieutenant, M. R. C., relieved from duty at Fort Williams, Me.; will proceed to Fort Caswell, N. C., for duty.

McPheters, Samuel B., 1st lieutenant, M. R. C., honorably discharged from the service of the United States, his services being no longer required.

Suggs, Frank, 1st lieutenant, M. R. C., ordered from Fort Niagara, N. Y., to Fort Strong, Mass., for temporary duty.

Kerr, Robert W., 1st lieutenant, M. R. C., granted leave of absence for 10 days.

Hayne, James A., 1st lieutenant, M. R. C., ordered to active duty. Will proceed to Fort Assiniboine, Mont., for duty.

Brown, Polk D., 1st lieutenant, M. R. C., ordered to Fort Clark, Texas, to march with troops to Fort Sam Houston, Texas.

Dunbar, Lee R., 1st lieutenant, M. R. C., granted leave of absence for 10 days.

Fronk, Clarence E., 1st lieutenant, M. R. C., granted leave of absence for 10 days.

Goldthwaite, Ralph H., 1st lieutenant, M. R. C., granted leave of absence for 10 days.

Hill, Eben C., 1st lieutenant, M. R. C., granted leave of absence for 6 days.

Leary, Thomas J., 1st lieutenant, M. R. C., granted leave of absence for 10 days.

Mueller, Armin, 1st lieutenant, M. R. C., granted leave of absence for 14 days.

Shields, William S., 1st lieutenant, M. R. C., granted leave of absence for 10 days.

Heath, George D., Jr., 1st lieutenant, M. R. C., granted leave of absence for 10 days.

McDiarmid, Norman L., 1st lieutenant, M. R. C., granted leave of absence for 10 days.

Smith, William H., 1st lieutenant, M. R. C., granted leave of absence for 14 days.

Snow, Corydon G., 1st lieut., M. R. C., granted leave of absence for five days.

Waring, John B. II., 1st lieut., M. R. C., granted leave of absence for 7 days.

Bastion, Joseph E., 1st lieut., M. R. C., ordered to duty with troops marching from Fort D. A. Russell, Wyo., to Fort Robinson, Neb.

Garcia, Leon C., 1st lieut., M. R. C., granted leave of absence for 15 days.

Stayer, Morrison C., 1st lieut., M. R. C., granted leave of absence for 10 days.

Slater, Ernest F., 1st lieut., M. R. C., relieved from duty at Madison Barracks, N. Y.; will proceed to Fort Adams, R. I., for duty.

Davis, Addison D., 1st lieut., M. R. C., granted leave of absence for 8 days.

Bierbower, Henry C., 1st lieut., M. R. C., granted leave of absence for 2 months, when relieved from duty in the Philippines Division.

Hasseltine, Hermon E., 1st lieut., M. R. C., granted leave of absence for 14 days.

Mount, James R., 1st lieut., M. R. C., granted an extension of 10 days to his leave of absence.

Baker, Charles L., 1st lieut., M. R. C., relieved from duty at Fort Huachuca, Ariz.; will proceed to the Presidio of San Francisco, Cal., for duty.

Foster, George B., Jr., 1st lieut., M. R. C., ordered from Fort Totten, N. Y., to Fort Strong, Mass., for temporary duty.

Griswold, W. Church, 1st lieut., M. R. C., relieved from duty at Fort Du Pont, Del.; will proceed to Fort Oglethorpe, Ga., for duty.

Murray, Wilson, 1st lieut., M. R. C., ordered from Fort William Henry Harrison, Mont., to Fort Yellowstone, Wyo., for temporary duty.

Kearny, Richard A., 1st lieut., M. R. C., honorably discharged from the service of the United States, his services being no longer required.

Holmes, Thomas G., 1st lieut., M. R. C., relieved from duty in the Philippines Division; will proceed to San Francisco, and thence to his home, Detroit, Mich., for orders.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended June 12, 1909:

The following officers have been detached from the Naval Medical School, Washington, D. C., and ordered as follows:

Bell, W. H., surgeon, Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

Kennedy, R. M., surgeon, home and granted leave for 1 month.

Orvis, R. T., surgeon, to duty at the Naval Hospital, Navy Yard, New York.

Ledbetter, R. E., surgeon, to the Naval Academy, Annapolis, Md.

Murphy, J. F., P. A. surgeon, home to wait orders.

Smith, C. G., P. A. surgeon, to duty at the Naval Hospital, Norfolk, Va.

Wheeler, L. H., P. A. surgeon, to the *Hancock*.

Rodman, S. S., P. A. surgeon, to examination for promotion and then to wait orders.

Strite, C. E., asst.-surgeon, to Naval Recruiting Station, Baltimore.

Robnett, A. H., Cohn, I. F., Reed, E. U., Eytinge, E. O. J., Woods, E. L., Brooks, F. H., Munger, C. B., and Olson, G. M., asst.-surgeons, to examination for promotion and then to wait orders.

Foster, T. G., asst.-surgeon, to duty at the Naval Prison, Portsmouth, N. H.

Blackwood, N. J., surgeon, to the Navy Yard, Washington, D. C.

Brown, E. W., asst.-surgeon, to the *Vermont*.

Riddick, W. J., acting asst.-surgeon, to the Navy Yard, Charleston, S. C.

Trotter, C. E., acting asst.-surgeon, ordered to duty at the Naval Hospital, Portsmouth, N. H.

Jenkins, H. E., acting asst.-surgeon, ordered to duty at the Naval Hospital, Norfolk, Va.

Cecil, A. B., acting asst.-surgeon, ordered to duty at the Naval Hospital, New York.

Bass, J. A., acting asst.-surgeon, ordered to duty at the Naval Hospital, Naval Home, Philadelphia.

Walton, D. C., ordered to duty at the Naval Hospital, Norfolk, Va.

DeValin, C. M., surgeon, detached from the Navy Yard, Washington, D. C., and ordered to the Marine Recruiting Station, Philadelphia.

Whitmore, G. B., asst.-surgeon, detached from the Naval Recruiting Station, Baltimore, and ordered to the *Wisconsin*.

Traynor, J. P., P. A. surgeon, detached from the *Georgia* and ordered to the Navy Yard, Boston.

Moran, C. L., asst.-surgeon, detached from the Navy Yard, Boston, and ordered to the *Georgia*.

Cuthbertson, R., asst.-surgeon detached from duty at the Naval Hospital, Mare Island, Cal., and ordered to the *West Virginia*.

Raison, T. W., asst.-surgeon, detached from duty on board the *West Virginia* and ordered to the Naval Hospital, Mare Island, Cal.

Smith, F. W., asst.-surgeon, detached from the *Wisconsin* and resignation accepted, to take effect June 15, 1909.

Peck, A. E., P. A. surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to examination for promotion and then to wait orders.

Smith, C. G., P. A. surgeon, orders of June 4, to duty at the Naval Hospital, Norfolk, Va., revoked; detached from the Naval Medical School, Washington, D. C., and ordered to examination for promotion and then to wait orders.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended June 9, 1909:

Bailhache, P. H., surgeon, granted 7 days' leave of absence from June 8, 1909, under paragraph 189, Service Regulations.

Gwyn, M. K., P. A. surgeon, granted 10 days' leave of absence from June 11, 1909.

Long, J. D., P. A. surgeon, granted 14 days' leave of absence from June 1, 1909.

Trask, J. W., P. A. surgeon, granted 2 days' leave of absence from June 8, 1909.

Spratt, R. D., P. A. surgeon, granted 20 days' leave of absence from June 2, 1909.

Bready, J. E., acting asst.-surgeon, granted 3 days' leave of absence from June 17, 1909.

Browne, R. W., acting asst.-surgeon, granted 5 days' leave of absence from June 7, 1909, under paragraph 210, Service Regulations.

Gregory, George A., acting asst.-surgeon, leave granted May 3, 1909, for 7 days from May 4, 1909, amended to read 5 days from May 4, 1909.

Hughes, Charles W., acting asst.-surgeon, granted 15 days' leave of absence from June 5, 1909.

Onuf, B., acting asst.-surgeon, granted 4 days' leave of absence from May 26, 1909, under paragraph 210, Service Regulations.

Rodman, J. C., acting asst.-surgeon, granted 7 days' leave of absence from June 8, 1909.

Schwartz, Louis, acting asst.-surgeon, granted 2 days' leave of absence from May 18, 1909, under paragraph 210, Service Regulations.

Simonson, G. T., acting asst.-surgeon, granted 2 days' leave of absence from June 8, 1909.

Slamberg, N. L. A. K., acting asst.-surgeon, granted 30 days' leave of absence from May 27, 1909.

Thornton, M. J., acting asst.-surgeon, granted 6 days' leave of absence from May 18, 1909, under paragraph 210, Service Regulations.

Walker, T. Dyson, acting asst.-surgeon, granted 14 days' leave of absence from June 2, 1909.

Gibson, R. H., pharmacist, granted 11 days' leave of absence from June 8, 1909.

Scott, E. B., pharmacist, granted 6 days' leave of absence from June 14, 1909.

Troxler, R. F., pharmacist, granted 1 day's leave of absence in May, 1909, under paragraph 210, Service Regulations.

Van Ness, George L., Jr., pharmacist, granted 30 days' leave of absence from June 10, 1909, without pay.

Megaw, H., pharmacist, granted 1 day's leave of absence, June 1, 1909, under paragraph 191, Service Regulations.

Stump, F. A., pharmacist, leave granted May 11, 1909, for 30 days from May 15, 1909, amended to read 30 days from May 27, 1909.

BOARD CONVENED

Board of medical officers convened to meet at the Bureau June 14, 1909, for the examination of candidates for admission to the service. Detail for the board: Surgeon L. L. Williams, chairman; P. A. Surgeon John McMullen; P. A. Surgeon A. M. Stimson, recorder. June 5, 1909.

APPOINTMENT

Dr. Edward G. Whipple appointed an acting asst.-surgeon for duty at Malone, N. Y. June 8, 1909.

RESIGNATION

Pharmacist R. H. Gibson resigned, to take effect June 18, 1909.

Health Reports

The following cases of smallpox, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended June 11, 1909:

SMALLPOX—UNITED STATES

Alabama: Birmingham, May 15-22, 1 case.
California: San Francisco: May 15-22, 4 cases.
District of Columbia: Washington, May 22-29, 1 case.
Georgia: Macon, May 16-30, 13 cases.
Illinois: Chicago, May 22-29, 2 cases, 1 death; Danville, May 23-30, 5 cases; Springfield, May 21-28, 1 case.
Indiana: Indianapolis, May 23-30, 1 case; South Bend, May 15-29, 7 cases.
Iowa: Cedar Rapids, May 1-31, 3 cases; Davenport, May 23-30, 2 cases.
Kansas: Kansas City, May 15-29, 7 cases; Wichita, 11 cases.
Kentucky: Lexington, May 15-29, 3 cases.
Louisiana: New Orleans, May 15-29, 14 cases.
Maine: Van Buren, May 15-22, 3 cases.
Massachusetts: Northfield, April 1-24, 2 cases.
Michigan: Grand Rapids, May 15-29, 8 cases; Saginaw, May 8-22, 6 cases.
Minnesota: Duluth, May 20-27, 2 cases.
Missouri: Kansas City, May 22-29, 2 cases; Neosho, March 15, 6 cases; St. Louis, May 22-27, 1 case.
Montana: Butte, May 20-27, 1 case.
Ohio: Ashtabula, May 22-29, 1 case, 1 death; Cincinnati, May 14-27, 11 cases; Columbus, May 22-29, 1 case.
Tennessee: Nashville, May 22-29, 3 cases.
Texas: Fort Worth, May 1-26, 20 cases, 1 death; Galveston, May 21-28, 1 case; San Antonio, May 8-29, 13 cases, 1 death.
Utah: State of, April 1-30, 81 cases.
Washington: Spokane, May 8-22, 15 cases.
West Virginia: Wheeling, May 22-29, 1 case.

SMALLPOX—INSULAR

Philippine Islands: Manila, April 17-24, 13 cases.

SMALLPOX—FOREIGN

Brazil: Bahia, April 16-30, 5 cases, 1 death.
Canada: Halifax, May 15-22, 4 cases.
China: Amoy, April 17-24, present; Canton, March 27-April 17, 20 cases; Tientsin, April 17-May 1, 8 cases.
Egypt: Cairo, April 29-May 6, 4 cases, 9 deaths.
Great Britain: Bristol, May 8-15, 2 cases; Cardiff, April 24-May 1, 1 death.
India: Bombay, April 27-May 4, 17 deaths; Calcutta, April 19-24, 131 deaths; Madras, April 24-31, 5 deaths; Rangoon, April 17-24, 2 deaths.
Japan: Formosa, April 24-May 1, 1 case.
Java: Batavia, April 17-24, 4 cases, 1 death.
Mexico: Chihuahua, May 9-23, 2 cases; Mexico City, March 27-April 17, 93 deaths; Monterey, May 16-23, 3 deaths.

Russia: Moscow, April 24-May 8, 46 cases, 29 deaths; Odessa, May 1-8, 1 case; Riga, May 8-15, 2 cases; St. Petersburg, April 17-24, 22 cases, 7 deaths.

Siam: Bangkok, April 1-30, 6 cases, 2 deaths.

Spain: Almeira, April 1-30, 6 deaths; Barcelona, May 10-17, 6 deaths; Valencia, May 1-8, 8 cases, 1 death.

Uruguay: Montevideo, March 1-31, 8 deaths.

CHOLERA—INSULAR

Philippine Islands: Provinces, April 17-24, 17 cases, 30 deaths.

CHOLERA—FOREIGN

India: Bombay, April 27-May 4, 18 deaths; Calcutta, April 17-24, 98 deaths.

Siam: Bangkok, April 1-30, 1 case, 1 death.

Straits Settlements: Singapore, April 8-24, 5 deaths.

PLAGUE

Azores: Fayal, March 1-31, present; Terceira, April 1-30, 2 cases, 1 death.

China: Amoy, April 17-24, present; Canton, April 3-17, 20 cases, 13 deaths; Chang Poo, April 26, epidemic.

India: April 17-24, 4,681 cases, 4,007 deaths; Bombay, April 27-May 4, 430 deaths; Calcutta, April 17-24, 117 deaths; Rangoon, 24 deaths.

Japan: Formosa, April 10-May 1, 209 cases, 173 deaths; Osaka, April 25-May 1, 1 case, 1 death; Yokahama, May 15-18, 8 cases, 2 deaths.

Persia: Bahrein, May 12, 3 cases, 2 deaths.

Siam: Bangkok, April 1-30, 3 cases, 1 death.

Straits Settlements: Singapore, May 18-24, 1 death.

Trinidad: May 27, 1 death.

Venezuela: Caracas, May 20-June 3, 6 cases, 3 deaths.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phoenix, July 5-6. Sec., Dr. Ancil Martin.

ARKANSAS: Homeopathic, Little Rock, July 13. Sec., Dr. P. C. Williams, Texarkana.

ARKANSAS: Regular, Little Rock, July 13. Sec., Dr. F. T. Murphy, Brinkley.

COLORADO: Denver, July 6. Sec., Dr. S. D. VanMeter, 1723 Tremont Place.

CONNECTICUT: Regular, New Haven, July 13-14. Sec., Dr. Charles A. Tuttle, 196 York St.; Homeopathic, New Haven, July 13. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, New Haven, July 13. Sec., Dr. T. S. Hodge, 17 Main St., Torrington.

DISTRICT OF COLUMBIA: Washington, July 13-16. Sec., Dr. George C. Ober, 210 B St., S. E.

INDIANA: 120 State House, Indianapolis, July 13-15. Sec., Dr. W. T. Gott.

IOWA: Des Moines, June 1-3 and June 22-24; Iowa City, June 8-10. Sec., Dr. Louis A. Thomas, Des Moines.

KENTUCKY: Louisville, July 6. Sec., Dr. J. N. McCormack, Bowling Green.

MAINE: State House, Augusta, July 13-14. Sec., Dr. Frank W. Searle, 806 Congress St., Portland.

MASSACHUSETTS: State House, Boston, July 13-15. Sec., Dr. Edwin B. Harvey, Room 159, State House.

NEW HAMPSHIRE: Concord, June 29-30. Regent, Mr. H. C. Morrison.

NEW MEXICO: Santa Fe, July 12. Sec., Dr. J. A. Massie.

NEW YORK: Albany, June 22-25. Chief of Examinations Division, Dr. Charles F. Wheelock, Albany.

NORTH DAKOTA: Grand Forks, July 6-8. Sec., Dr. H. M. Wheeler.

OKLAHOMA: Guthrie, July 13. Sec., Dr. Frank P. Davis, Enid.

OREGON: Portland, July 6. Sec., Dr. R. C. Coffey.

PENNSYLVANIA: Philadelphia and Pittsburg, June 22-25. Sec., Mr. Nathan C. Schaeffer, Harrisburg.

RHODE ISLAND: Room 313, State House, Providence, July 1-2. Sec., Dr. Gardner T. Swarts, 315 State House.

SOUTH DAKOTA: Watertown, July 14-15. Sec., Dr. H. E. McNutt, Aberdeen.

TEXAS: Cleburne, June 22-24. Sec., Dr. M. E. Daniel, Honey Grove.

UTAH: Salt Lake City, July 5. Sec., Dr. G. F. Harding, 310 Templeton Bldg.

VERMONT: Burlington, July 13-15. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 22-25. Sec., Dr. R. S. Martin, Stuart.

WASHINGTON: Seattle, July 6-8. Sec., Dr. Kenneth B. Turner, Walker Bldg.

WEST VIRGINIA: Charleston, July 13-15. Sec., Dr. H. A. Barbee, Point Pleasant.

WISCONSIN: Madison, July 13-15. Sec., Dr. J. V. Stevens, Jefferson.

WYOMING: Laramie, June 23-25. Sec., Dr. S. B. Miller.

Higher Entrance Requirements Adopted

We are informed that the faculty of University Medical College, Kansas City, voted that, beginning with the college session of 1910-11, in addition to a four-year high school education, a year's college work be required to include courses in physics, chemistry, biology and foreign language. Only about ten of the better class of medical colleges remain which have not adopted this advanced standard.

Marriages

WILLIAM A. STEEL, M.D., to Miss Frieda Spierling, both of Philadelphia, June 4.

HENRY A. STRECKER, M.D., to Miss Nellie M. Carrol, both of Philadelphia, June 2.

HENRY C. DOOLING, M.D., to Miss Nellie S. Essler, both of Clayton, N. J., June 3.

BURTON C. MCGARRY, M.D., Fenton, Mich., to Miss Hazel J. Brown, of Howell, Mich., June 3.

EARLE G. SHAFFER, M.D., Ely, Nev., to Miss Tina Hartnagle, of Denver, at Golden, Colo., May 29.

EDWARD MELLUS, M.D., West Newton, Mass., to Miss Marion Heath, of Augusta, Maine, June 1.

SPENCER P. BASS, M.D., Tarboro, N. C., to Miss Ethel Denver Pike, at Leesburg, Va., May 26.

ARTHUR HUBERT LONGSTREET, M.D., to Mrs. Miriam Annette Kent, both of Brooklyn, N. Y., May 26.

ALBERT E. STRIPP, M.D., Laurel, Mont., to Miss Montana Mildy Tschudy of Billings, Mont., June 3.

JAMES EDWARD BENSON, M.D., Cockeyville, Md., to Miss Laura Taylor, at Hagerstown, Md., June 1.

ARTHUR G. VADEX, M.D., Matthews, Va., to Miss Mabel L. Anderton, in Middlesex county, Va., June 3.

HARRY M. ROBINSON, M.D., New York City, to Miss Verna Beatrice Wilson, at Violetville, Md., May 25.

Deaths

Richard E. Haughton, M.D. Western Reserve University, Cleveland, 1853; Jefferson Medical College, Philadelphia, 1861; since 1857 a member of the American Medical Association, and for many years a member of the Mississippi Valley Medical Association; in 1873, professor of descriptive and surgical anatomy in Indiana Medical College; in 1874, made professor of physiology in the College of Physicians and Surgeons, Indianapolis, holding this chair for four years; in 1879, one of the founders of, and for fifteen years a professor in the Central College of Physicians and Surgeons, Indianapolis; one of the oldest and best known practitioners of Indiana; died at his home in Richmond, June 4, from chronic bronchitis, aged 81. Wayne County Medical Society, at a special meeting, held June 4, took action on the death of Dr. Haughton, and the society as a body attended the funeral two days later.

Valery O. Schayot, M.D. Tulane University, New Orleans, 1891; of Pointe a la Hache; a member of the Louisiana State Medical Society; from 1897 to 1900, coroner of Plaquemines parish; and from that time on parish health officer, president of the parish board of health, and secretary of the parish medical society; died in the New Orleans Sanitarium, May 29, from pneumonia, aged 39.

Joseph Leo De Varona, M.D. Cornell University Medical College, New York City, 1905; physician to the genitourinary department of Williamsburg Hospital; assistant visiting cystoscopist to St. Katherine's Hospital, and a member of the staff of St. Vincent's Hospital, Brooklyn; died at the home of his sister in Newark, N. J., May 29, aged 28.

Pliny Rand Watts, M.D. New York Homeopathic Medical College, New York City, 1887; once president of the California State Homeopathic Medical Society; president of, and surgeon to, the Sutter Heights Hospital, Sacramento, Cal.; died in the hospital, June 1, four days after an operation for appendicitis, aged 45.

William Riley Blakeslee, M.D. University of Pennsylvania, Philadelphia, 1853; surgeon of the One Hundred and Fifteenth Pennsylvania Volunteer Infantry during the Civil War; and local surgeon for the Pennsylvania Railroad; died at his home in Coatesville, Pa., June 3, from cerebral hemorrhage, aged 86.

Ernest A. von Boeckh, M.D. Atlanta College of Physicians and Surgeons, 1906; formerly in the hospital corps of the Army with service in the Philippine Islands; for two years an interne in Grady Hospital, Atlanta; died at his home in that city, from pleurisy, June 2, aged 31.

Joseph F. Cole, M.D. Atlanta Medical College, 1875; a member of the American Medical Association; secretary of the Carroll County (Ga.) Medical Society, secretary of the board of health and sanitary inspector of Carrollton; died suddenly at his home, June 1, aged 57.

John J. Schubert, M.D. Rush Medical College, Chicago, 1888; of Kankakee, Ill.; a member of the Illinois State Medical Society; in 1880, a member of the executive committee of the Illinois Pharmaceutical Association; died in the Presbyterian Hospital, Chicago, June 2, from cirrhosis of the liver, aged 49.

William Judson Riggs, M.D. Jefferson Medical College, Philadelphia, 1872; of Pittsburg; assistant surgeon, U. S. Navy, 1873 to 1876; a member of the Medical Society of the State of Pennsylvania; died at the home of his daughter in Cambridge Springs, Pa., May 31, from heart disease, aged 59.

Ryland D. Pratt, M.D. University of Louisville (Ky.), 1882; of Shelbyville, Ky.; a member of the American Medical Association; referee for Shelby county; and local surgeon for the Chesapeake and Ohio Railway; died in Mersey Hospital, Chicago, June 1, after a surgical operation, aged 49.

John M. Huffman, M.D. Jefferson Medical College, Philadelphia, 1870; a veteran of the Civil War; for many years a practitioner of Savannah, Mo., and later a resident of St. Joseph; died suddenly in Long Beach, Cal., May 25, from heart disease, aged 66.

Charles Ludwig Koch, M.D. Rush Medical College, Chicago, 1877; Chicago Homeopathic Medical College, 1878; of Quincy, Ill.; died suddenly, May 29, at a sanitarium in St. Louis, while being prepared for an operation, aged 50.

James Barney Welsh, M.D. Medical College of Ohio, Cincinnati, 1858; for many years U. S. pension examining surgeon for Preble county, Ohio, and a member of the board of education; died at his home in Eaton, May 29, aged 88.

Cornelius Robert Reagan, M.D. New York University, New York City, 1893; local surgeon for the New York Central Railroad; died suddenly at his home in North Tonawanda, N. Y., June 1, from angina pectoris, aged 45.

Elizabeth E. Francis, M.D. Homeopathic Medical College of St. Louis, Mo., 1898; of St. Louis; died May 31, from the effect of carbolic acid, said to have been self-administered with suicidal intent, aged 48.

Richard Mott Durbin, M.D. Cleveland College of Physicians and Surgeons, 1883; of Woodville, Ohio, and once mayor of that city; died near Hessville, Ohio, May 30, from cancer of the esophagus, aged 52.

Harry Annis Hill, M.D. University of Pennsylvania, Philadelphia, 1901; of Bethlehem, Pa.; died in St. Luke's Hospital in that city, April 23, from a self-inflicted gunshot wound of the head, aged 30.

James Gardner Laing, M.D. Berkshire Medical College, Pittsfield, Mass., 1854; Albany (N. Y.) Medical College, 1855; died at his home in Dallas, Pa., April 24, from chronic nephritis, aged 78.

Joseph Ulysses Roach, M.D. Tennessee Medical College, Knoxville, 1898; of Lafolette, Tenn.; died in the Lincoln Memorial Hospital, Knoxville, June 3, after a surgical operation, aged 32.

Silas M. Gleason, M.D. Hahnemann Medical College, Chicago, 1880; a member of the American Medical Association; died at his home in Ionia, Mich., May 31, from nephritis, aged 53.

W. E. Pearson, M.D. Medical College of the State of South Carolina, Charleston, 1859; of Scooba, Miss.; a Confederate veteran; died in Meriden, May 31, from cerebral hemorrhage, aged 73.

Elizabeth Marshall Knell, M.D. Homeopathic Medical College of Missouri, St. Louis, 1866; formerly of Baltimore; died at her home in Slatehill, Pa., June 4, from septicemia, aged 54.

George Albert Moulton, M.D. Rush Medical College, Chicago, 1885; a member of the Colorado State Medical Society; died at his home in Alma, May 7, from influenza, aged 49.

Armeritus B. Bixby, M.D. Castleton (Vt.) Medical College, 1858; a surgeon during the Civil War; died at his home in Poultney, Vt., May 3, from chronic pyelitis, aged 74.

Philip B. Tolford, M.D. Starling Medical College, Columbia, 1898; of Pittsford, Mich.; died in Sylvania, Ohio, May 28, after an operation for appendiceal abscess, aged 35.

Edward Franklin Gage, M.D. Harvard Medical School, Boston, 1893; a member of the Massachusetts Medical Society; died at his home in Winthrop, May 31, aged 46.

Alexander Fairley, M.D. Tulane University, New Orleans, 1876; a member of the Mississippi State Medical Association; died at his home in Mount Olive, May 29.

Richard Henry Hudson, one of the oldest residents of Sierra Madre, Cal., died at his home Nov. 16, 1908, from disease of the stomach and heart, aged 68.

Frank McClintock Macklin, M.D. Columbus (Ohio) Medical College, 1890; died at his home in Tarlton, Ohio, May 31, after an operation for appendicitis, aged 43.

Harriette Daggett Beebe, M.D. Pulte Medical College, Cincinnati, 1883; died at her home in Minneapolis, Minn., Nov. 19, 1908, from nephritis, aged 68.

Orin C. McCracken, a pioneer practitioner of California; died at his home in Oakland, April 2, from senile debility and chronic nephritis, aged 95.

John M. Kitchen, M.D. Willamette University, Salem, Ore., 1877; a Confederate veteran; died at his home in Stayton, Ore., March 16, aged 66.

Moses Livingston Allen, M.D. Western Reserve University, Cleveland, 1888; died at his home in Cleveland, June 3, from influenza, aged 55.

George Inglis, M.D. Pennsylvania Medical College, Philadelphia; of Pittsburg; died in Denver, Colo., June 5, from pneumonia, aged 78.

John C. Outhet, M.D. Barnes Medical College, St. Louis, 1899; of Chicago; died in San Mateo, Cal., June 7, from pneumonia, aged 34.

William M. Cunningham, M.D. Tulane University, New Orleans, 1878; died at his home in Bastrop, Texas, May 24, aged 59.

George W. McMurray, M.D. University of Nashville, Tenn., 1858; died suddenly at his home in Hurricane, Tenn., May 21, aged 70.

William J. Bricker (license, Ill., 1878, years of practice); died at his home near Makanda, Ill., February 12, aged 67.

Eugene J. Setze, M.D. Medical College of Georgia, Augusta, 1852; died at his home in Marietta, Ga., May 30, aged 80.

Society Proceedings

COMING MEETINGS

American Ophthalmological Assn., New London, Conn., July 14-15.
Idaho State Medical Association, Seattle, Wash., July 19.
New Jersey Medical Society, Cape May, June 23-25.
Washington State Medical Association, Seattle, July 20.
Wisconsin State Medical Society, Madison, June 30-July 2.

NEW HAMPSHIRE MEDICAL ASSOCIATION

Annual Meeting, held at Concord, May 12-14, 1909

(Continued from page 1951)

Development of Milk Laboratories, Foodstuffs They Can Provide, and Principles of Infant Feeding

DR. THOMAS MORGAN ROTCH, Boston: There has been little real progress in infant feeding the last four or five years. We never have accomplished in so-called artificial feeding what has been done by Nature's process of feeding from the human breast, but there is no question that in many cases human breast milk is exceedingly bad for young infants. The baby is fed on routine mixtures as a rule, with less scientific knowledge, less real practical knowledge, and almost with ignorance, to a greater extent than occurs in any other branch of our profession. There is no rule for feeding babies. During the first year of life each individual differs from another. A large amount of the practical knowledge has come from the farmers, and the only way is to learn from all who can give it to us. The profession at large is very far behind what it ought to be. Cheap milk is a dangerous factor. There are eighteen model farms in this country and one in London in connection with the laboratories in large cities. On these farms absolute care is taken of the milk, the cow is kept as cleanly as possible, the pail is protected with a top over it, and the milkers are absolutely clean. I do not believe in milking machines; I think the human hand produces better milk than any machine. Cows should not be fed before milking as dust arises. All physicians should see that the

milk is brought in almost direct to the consumer. In one case a baby, the child of wealthy parents, was sent across the water. The mother refused to nurse it. It was fed first in Boston, then went to New York to take the steamer. It carried with it about 200 gallons of milk heated twice to 155 degrees, which went through the Straits of Gibraltar, to Southern France, and was still used after arriving there. If a baby does not digest fat well the digestion of the baby must be fitted to take it, and we make a combination of food fitted for that special baby. Not one man in a thousand can tell you why he gives barley water for diarrhea. It is simply a little peculiarity of the human race. If one combines the elements and knows how to use them he will make a tremendous stride in infant feeding. In Stockholm for a half century babies afflicted with diarrhea have been given butter-milk. America has now taken that matter up and is meeting with great success. In fact, all other countries are twenty years behind us in the matter of infant feeding. We have the best farms in the world, the best research laboratories for milk, and have young American men who come to the front and are not going to be kept down by tradition.

DISCUSSION

MR. C. D. HOWARD, Concord: The whole matter of artificial feeding is still in its infancy. "Patent" foods should be regarded as not only expensive but very poor substitutes. Until the milk-laboratory becomes a more generally established institution the average physician will be compelled to figure the thing out as best he can. In regard to the various brands of milk sugar found for sale in the stores, after making an examination of them I find that the better known brands, those selling at a somewhat higher price, are no better in regard to adulteration than the others. In fact, the brand that sells at the highest price—especially recommended by the packers as being an article of exceptional excellence—was found to be the poorest in the lot.

Milk and Disease

DR. H. W. N. BENNETT, Manchester: Milk is a constant factor in our health, a means of preventing disease, of nourishing patients through acute illness, and is especially important to infants and invalids. We buy milk in the belief that we are getting pure food, but too often receive a mixture of fecal contamination and virulent bacterial poisons, loaded with potential death. If milk were a transparent fluid it would show evidence of its condition to the naked eye. A similar amount of bacterial growth in broth, gelatin, beer, jelly, etc., would result in its condemnation even by the untrained eye. That the milk supply is responsible for a large proportion of the infantile death rate is shown by the decrease in the death rate when attention is paid to milk. In childhood, contagion in two important acute diseases, diphtheria and scarlet fever, is conveyed by milk. When thus conveyed they are epidemic. To the epidemic diseases must also be added typhoid fever. Trask has compiled 179 typhoid epidemics spread by milk, 107 of which occurred in the United States. In 96 of these epidemics all patients were reported as living in houses supplied with the infected milk.

DISCUSSION

DR. GEORGE C. WILKINS, Manchester: The remedy, or rather the prevention of the infection of milk by bacteria must come from a cleaner and more intelligent handling of the milk at the dairy. Two methods can be used for improving this condition: an efficient system of dairy inspection under the State Board of Health, not only into the methods of handling but into the health of the cows and employes; and the placing of added commercial value on clean milk.

DR. H. W. N. BENNETT, Manchester: I have found several farmers trying to sterilize the milking pails by pouring water brought from the kitchen, from one to another, and that water when it starts at the house would be 212° F., the first pail 165°, second 147°, third 127°; and the lowest point at which hot water will kill bacteria is 150° F.

(To be continued)

ASSOCIATION OF AMERICAN PHYSICIANS

Twenty-fourth Annual Meeting, held at Washington, D. C., May 11-12, 1909
(Concluded from page 1950)

Changes in Metabolism Produced by Exclusion of Pancreatic Juice from Intestines

DRS. J. H. PRATT, P. D. LAMSON and H. K. MARKS, Boston: The head of the pancreas was separated from the duodenum, the ducts tied and a portion of the great omentum placed between the pancreas and duodenum. In a dog in which the ducts were tied, but no barrier of living tissue placed between the cut ends and intestinal wall, a small fistulous tract formed and pancreatic juice entered the intestines. Failure to exclude all the pancreatic secretion explains the results obtained by recent investigators who found no marked disturbance of metabolism after ligating the ducts. In all four dogs of the present series there was great interference with the absorption of nitrogen and fat. There was marked loss of weight. The stools were very large. The splitting of the fat was normal.

DISCUSSION

DR. W. G. MACCALLUM, Baltimore: Dr. Pratt tells me that there was some disturbance of carbohydrate metabolism in these cases. It is well known that ligation of the pancreatic duct or its obstruction finally leads to atrophy of the secreting portion of the pancreas, whereas the islands of Langerhans remain intact, and this is the basis of the dispute. Opie and others have assumed, and apparently proved, that the islands of Langerhans alone are responsible for the maintenance of proper carbohydrate metabolism, whereas others think that this is not yet proved, but that in all probability all the pancreatic tissue is necessary.

DR. J. H. PRATT: I have tested the tolerance for carbohydrates in two dogs that survived operation for two months or more. I found that, while a healthy dog would take 75 grams of glucose with a non-carbohydrate diet before any glycosuria developed, in my two dogs a marked glycosuria developed when 35 grams of glucose was given. I found no increase of tolerance as time passed. My observations show that in the first case that came to autopsy two months after the operation, the pancreas, which had formerly been 10 centimeters long, was nothing but a shriveled, firm bit of scar tissue about 3 centimeters long. Cross-sections showed some scattered areas of epithelial cells between wide bands of connective tissue, and not a trace of the islands of Langerhans could be found.

Exophthalmos in Chronic Nephritis

DR. L. F. BARKER, Baltimore: The occurrence of exophthalmos in nephritis is not mentioned in any text-books, and at Johns Hopkins Hospital recently we have done some special work to determine in what proportion of cases it occurs. Out of 33 cases of chronic nephritis in the wards that have been studied since January 1 of this year, 16 presented this condition. This is more than could be merely coincidences. The degree of exophthalmos varied apparently with the degree of uremic poisoning, though not in all cases. It was rather striking that retinitis is often associated with the exophthalmos. There was hypertension in 12 out of the 16 cases. It is our opinion that the intoxication leads to a tonic contraction of the muscle fibers passing from the septum orbitale to the eye, and that this causes the exophthalmos.

DISCUSSION

DR. WILLIAM OSLER, Oxford, England: These are all cases with high blood pressure, and the question is whether that may not have some association, because we know in the inequality of the pupils in aneurism it is largely a matter, not as we had supposed of the sympathetic irritation, but of the blood pressure.

DR. W. S. THAYER, Baltimore: I can heartily confirm all that Dr. Barker has said. I have often been helped as I entered the sick room by noticing the slight staring expression in the eyes of the patient, which would at once suggest chronic nephritis. I had always supposed it was due to high blood pressure. I do not feel that it is a sign of importance.

DR. JAMES TYSON, Philadelphia: I am sorry to say that in a considerable experience in cases of chronic nephritis it has never occurred to me to observe this condition. Now, as I look back over my experience I can recall cases, but I confess it never impressed me as being a part of the symptomatology of the disease. I can not help but think that sometimes this condition must be a coincidence. Especially in the colored race the eyes are rather protuberant independently of association with any condition.

DR. W. H. THOMPSON, New York: For a number of years I have directed the attention of students to the staring expression of the eyes as a very unfavorable sign in chronic nephritis. I ascribed it at that time to the immobility of the pupil, and in some of the cases undoubtedly it was so, for the pupil does not react to light.

Clinical Resemblances Between Pneumococcus and Meningococcus Infections

DR. ROBERT B. PREBLE, Chicago: Certain phenomena occur so constantly in pneumococcus infections that I have come to regard them as the specific effects of this particular organism. These effects are acute at onset, leucocytosis, herpetic eruption usually over one or two branches of the fifth or seventh nerves and a low excretion of chlorids. None is absolutely peculiar to this organism, but the combination is peculiar, there being no other organism except the meningococcus which produces this combination. There is no reference in the literature to a low chlorid excretion in meningitis, but in the cases which I have examined I have found the excretion of chlorids low. There is also a striking similarity between the seasonal distribution of the two infections. Certain complications which we have come to associate with pneumococcus infections, such as arthritis, pleuritis, pericarditis and endocarditis, also occur in meningococcus infections. In view of these resemblances between pneumococcus and meningococcus infections, it has occurred to me that the meningococcus may be the pneumococcus with its virulence lessened.

DISCUSSION

DR. WILLIAM OSLER, Oxford, England: Many of us have had brought before us the great similarity of these two diseases, and yet there are striking peculiarities and differences when we consider simply the meningitis. The pneumococcus infection is uniformly fatal. The pneumococcus meningitis is rarely, if ever, a spinal affair, whereas, as we all know, the meningococcus infection may be a spinal condition only or a cerebrospinal. Endocarditis, which is so common in pneumococcus infection, is rare in cerebrospinal fever. There is no question about the similarity in the seasonal conditions, but I think the two diseases are clinically rather sharply separated from each other—much more so than the organisms are bacteriologically.

DR. HENRY KOPLIK, New York: I think when we consider the entire subject the great similarity between the two infections is manifest, especially in the cerebral symptoms. The more I see of pneumonia with cerebral symptoms, the more I am impressed with the great difficulty at the outset of determining the presence or absence of a meningitis in a given case of pneumonia. We must also remember that in a pneumococcus infection of the lung, complicated with meningitis or peritonitis or endocarditis, these complications may be due to the streptococcus.

DR. L. F. BARKER, Baltimore: The term meningismus as contrasted with meningitis can not be too much emphasized, it seems to me. We all know how common it is in pneumonia, typhoid fever and similar infections to see retraction of the neck and other signs which make us suspect meningitis, and yet lumbar puncture in so many of these cases is negative. If they come to autopsy there is found no meningitis. Often these patients recover in a few days, usually without any definite signs of meningitis. I think that meningismus must be recognized as a definite clinical phenomenon, probably toxic in its origin, and not due to an actual infection of the meninges.

DR. J. J. KINYOUN, Washington, D. C.: Has Dr. Preble made any experiments with the autolysis of the pneumococcal cultures as compared with the meningococcus? Some experi-

ments made two or three years ago with these organisms showed that there was no autolytic toxin formed in the pneumococcus, whether the organism was of a virulent type or not, whereas it was an easy matter to obtain an autolytic toxin from the meningococcus.

DR. LEWIS A. CONNOR, New York: Has Dr. Preble any data bearing on the question of the chlorid excretion in other blood infections—septicemia—particularly streptococcus septicemia? In other words, is he convinced that a low chlorid excretion is a peculiarity of pneumococcus and meningococcus septicemia?

DR. R. PREBLE: I have made no studies on the autolysis. A low chlorid excretion is shared by all acute infections, but there is no other infection in which the excretion of chlorids reaches so low a point—so low sometimes that the urine seems to contain practically no chlorids at all—and that peculiarity of the urine is shared by the meningococcus infection, but not by any other that I know of. I am sorry that the discussion has been on the unimportant aspects of the matter, and not on the four points of resemblance in the clinical effects.

The Present Status of the Serum Treatment of Epidemic Cerebrospinal Meningitis

DR. SIMON FLEXNER, New York: In the more than two years which have elapsed since the serum was first issued more than 1,000 cases of epidemic meningitis, diagnosed bacteriologically, have been treated with it. The histories of over 800 such cases have been collected, but they have not all been subjected to analysis. The last careful analysis which I made covered about 550 cases. I have contended and still contend that the real test of the serum must come at some future time when an epidemic exists, when the serum can be applied at the beginning of the disease. When the serum was perfected, the epidemic which had been raging in this country had practically ceased. In the epidemic in Scotland and Ireland about a year after the American epidemic, the introduction and use of the serum either greatly modified the disease, or the disease was on the point of turning at the time, because the results were in contrast with those which had previously existed. The mortality had been about the same as in this country, namely, 75 per cent. The introduction of the serum in Edinburgh reduced the mortality to about 40 per cent., and in Belfast to less than 30 per cent. The reports received from France are not conclusive, but are very interesting. In Netter's latest report he said he had treated up to that time 10 children under 2 years of age, of which 1 had died, while all the others recovered. Calmette reports that of 14 soldiers taken ill within a few days at the barracks, 13 recovered and 1 died. There have been two localized outbreaks in this country, one at Jefferson Barracks, Mo., and another at McKinney, Texas. At Jefferson Barracks there were 6 cases. In the first soldier to have the disease it was not recognized, and he died without any specific treatment. Subsequently, there were 5 cases. The surgeon made the diagnosis by lumbar puncture in some of the cases even before the localizing symptoms appeared, gave the serum and the patients all recovered. At McKinney, Texas, there had been 5 cases in rapid succession, in all of which the patients had died. The doctors then procured some serum, and 5 subsequent patients who received the serum all recovered. It seems from the evidence at hand that the serum is effective, at least in many cases—not in all.

DISCUSSION

DR. A. C. ABBOTT, Philadelphia: Experience in Philadelphia bears out what Dr. Flexner has said with regard to the presence of an epidemic. The winter before last about 20 patients were treated with the serum, but there was not an epidemic in the city, and many of the patients came to the hospital late in the disease. Notwithstanding this, the results were better than with any other treatment tried. It is my practice to withdraw from the spinal canal the same amount of fluid I intend to inject, thus diminishing the subsequent escape of the serum from the canal.

DR. HENRY KOPLIK, New York: I feel that in this serum we at last have a weapon against this scourge. The results have

been especially gratifying in children under 2 years of age. Hitherto, from a clinical standpoint, physicians have felt that patients of this age were lost. If the child did recover from the meningitis, there was always left some cerebral defect. Up to the present time I have had in my service 6 babies ranging from 5 months to 2 years of age. Of these, 3 made complete recoveries.

DR. W. H. THOMPSON, New York: If this serum continues to give as favorable results as we have now good reason to hope, it is indeed a boon to humanity. Some years ago in Roosevelt Hospital 30 cases occurred in my ward, and of those the first 16 patients all died except 1, and of the remaining 14 all lived except 1. The treatment was the same with all. Therefore, in order to judge the efficacy of any treatment we should wait until not only a great many cases are treated, but the time in the epidemic should be correctly noted.

DR. LEWIS A. CONNOR, New York: The cases treated at the Hudson Street Hospital have been of the worst type, many of them ambulance cases. I do not think, therefore, that our experience was a fair test of the treatment.

DR. L. F. BARKER, Baltimore: At Johns Hopkins Hospital about the same number of cases of meningitis were treated with the serum in one year as had been admitted to the hospital in the previous eighteen or nineteen years of the institution's existence. During these years the mortality was about 80 per cent., and the recoveries about 20 per cent. During this one year when the serum was used the mortality was only about 20 per cent., recoveries about 80 per cent. The figures were just reversed. To us it was a very striking experience, and we feel much encouraged.

DR. JAMES EWING, New York: There are two problems here: Does the injection of a quantity of serum into the spinal canal reduce the mortality, and, if so, how? The first is clinical, the second belongs to the laboratory. The reports show satisfactorily that it does reduce mortality. I feel, however, that the mechanism or action of the serum is still entirely undecided. I think laboratory men as a rule are inclined to believe that the reduction in the mortality of meningitis from the use of this serum may be due to its normal bactericidal action. Dr. Flexner should accomplish something without an epidemic at reaching a conclusion if he would inoculate a certain number of subjects with normal horse serum in the same way that he does with the meningitis serum. If that could be done in 100 cases I think the laboratory men would be satisfied.

DR. S. FLEXNER: I do not believe it would be ethical to inject normal horse serum so long as we could get the other serum. Personally, I would not accept the responsibility of carrying out that experiment on human beings. Experiments have been carried out on monkeys, though not on a large scale, and in them there was apparently a considerable difference. The experimental work on animals was interrupted on the supposition that the final decision would come from the application of the serum in the treatment of the disease in man.

The Cammidge Reaction in Experimental Lesions of the Pancreas

DRS. JOHN SPEESE and EDWARD H. GOODMAN, Philadelphia: The Cammidge reaction is a constant feature in acute hemorrhagic pancreatitis, in mechanical injuries to the gland (crushing of the tail, partial extirpation) and in total extirpation. In certain cases of the subacute type of pancreatitis, the reaction is inconstant. The nature of the phenylhydrazin compound is not definitely established. If pentose, it is not that derived from the pentose-yielding material of the pancreas. A positive reaction is indicative of altered carbohydrate metabolism due to disturbance of the internal secretion of the pancreas.

A Case of Scarletina and Diphtheria Successfully Treated Without Medicine

DR. W. H. THOMPSON, New York: The patient was a girl aged 5 who was first attacked with scarlatina and on the seventh day developed diphtheria. When I saw her first, in consultation, the membrane had extended over the pharynx,

uvula, and into the nose, and had a very fetid odor. She was wholly unable to swallow. The further complications were abscesses in both ears, pneumonia and plenisy on left side and persistent heart weakness with very intermittent pulse. She wholly recovered after thorough douching of the throat with two gallons of hot water every two hours. This result I regard as in keeping with my recommendation to douche the throat in every case of scarlatina from the first onset of symptoms, so as to prevent invasion by streptococci, which, in my opinion, are the main cause of the complications of both scarlatina and diphtheria.

Influence of Ductless Glands on Pancreas

DRS. RALPH PEMBERTON and J. EDWIN SWEET, Philadelphia: The inhibition of pancreatic secretion by adrenalin is, in part at least, independent of systemic blood pressure, as shown by its persistence when the blood pressure is much below normal and by other evidence. The inhibition by extracts of pituitary and suprarenal bodies also occurs when the pancreas is stimulated by its normal excitant, hydrochloric acid in the duodenum. In dogs rendered diabetic by extirpation of the pancreas the mucosa of the duodenum remains abundant, in striking contrast to the emaciation of other tissues; and acid extracts of the mucosa are as active as, if not more so than, those from normal animals. Studies of the inhibition of pancreatic flow by adrenalin in thyroidectomized and parathyroidectomized dogs have indicated no clear departure from the normal in this regard. The evidence now at hand indicates that the suprarenal glands exercise at all times an inhibitory power on the pancreas and that on the removal of this influence by ablation, the pancreas secretes more rapidly. The agonal period of life is accompanied by an exacerbation of the normal rate of pancreatic flow.

Clinical and Experimental Observations on Adrenalin

DR. J. T. HALSEY, New Orleans: Oral administration of ordinary amounts of adrenalin does not cause changes in blood pressure or heart action. Subcutaneously administered in doses of from 1/100 to 1/40 gr. adrenalin is uncertain in its effects on the blood pressure, but usually causes a slight rise and may cause a marked rise with distinctly more forcible heart action. Given intramuscularly in this dosage it usually causes a rise in blood pressure which may be so great as to cause alarming symptoms and perhaps serious results. The initial dose in any case should be a small one, for individuals vary markedly in the degree to which they react to suprarenal active principle when administered hypodermically.

The Importance of Blood Culture in the Study of Infections of Otitic Origin

DRS. E. LIBMAN and H. L. CELLER, New York: The investigations of the blood for bacteria are of great importance to the otologist and to the clinician in the study of borderline cases. Positive findings often give the indication for important therapeutic procedures. Incidentally, the studies give the opportunity for investigation of the rapidity with which the body can get rid of a bacteremia.

Wassermann Reaction in Cardiac and Vascular Disease

DRS. JOSEPH COLLINS and B. SACHS, New York: We have collected a large number of cases of cardiac and vascular disease in order to test the value of the Wassermann reaction, with reference to the claim that the test is positive in many of these, and above all in aortic insufficiency. The results of these various tests tend to prove the great importance of syphilis as an etiologic factor in disease of the heart and blood vessels.

Other Papers Read

"Symmetrical Adenolipomatosis," by Dr. Irving P. Lyon, Buffalo; "Case of Cerebral Tumor Presenting an Unusual Clinical Course," by Dr. R. D. Rudolph, Toronto; "A Case of Stenosis and Insufficiency at the Pulmonary Orifice of the Heart, with Exhibition of a Specimen," by Dr. Joseph Sailer, Philadelphia; "Experimental Infection with *Leishmania In-*

fantum," by Dr. F. G. Novy, Ann Arbor; "Study of the Development of the Bones in Childhood by the Roentgen Method, with the View of Establishing a Developmental Index for the Grading and Protection of Early Life," by Dr. T. M. Rotch, Boston; "The Pathologic Relationship of Gastric Ulcer and Gastric Carcinoma, Based on a List of 150 Resections," by Drs. Louis B. Wilson and William C. McCarty, Rochester, Minn.; "The General Movement of Typhoid and Tuberculosis in the Last Twenty-five Years (Lantern Slide Demonstration)," by Dr. G. M. Kober, Washington, D. C.; "Respiratory Variations of the Intrathoracic Pressure," by Drs. S. J. Meltzer and John Auer, New York; "Hyperplasia of the Hemolymph Nodes," by Dr. A. S. Warthin, Ann Arbor; "Further Studies on the Disorder of the Muscles Due to Intense Heat," by Dr. D. L. Edsall, Philadelphia; "A Systematic Comparison of Radiographs of Cadavers with Autopsy Findings in the Pathologic and X-Ray Departments at the Boston City Hospital," by Dr. F. H. Williams, Boston; "A Small Epidemic of Jaundice with Symptoms of Gastrointestinal Catarrh," by Drs. L. F. Barker, Sladen and Clough, Baltimore; "The Effects of Cutting the Branch of the Bundle of His Going to the Left Ventricle," by Drs. L. F. Barker, Hirschfelder and Bond, Baltimore; "A Comparative Study in the Serodiagnosis of Syphilis," by Drs. Homer F. Swift and R. M. Pearce, New York; "The Effects of the Injection of Bile Constituents on the Circulation," by Drs. John H. King and H. A. Stewart, Baltimore; "The Relation of the Thyroid to Carbohydrate Metabolism," by Dr. John H. King, Baltimore; "Studies on Isoagglutinins and Isohemolysins," by Dr. W. L. Moss, Baltimore; "Renal Suppurations in Typhoid Fever," by Dr. Charles F. Withington, Boston

ARKANSAS MEDICAL SOCIETY

Thirty-third Annual Meeting, held at Pine Bluff, May 18-21, 1909

The officers elected and resolutions adopted regarding public health were given in THE JOURNAL, June 5, 1909, page 1843.

Symposium on Tuberculosis

A symposium on tuberculosis to which the public was invited was given under the auspices of the Arkansas Association for the Relief and Control of Tuberculosis; it was well attended and aroused great interest. The following were the papers read: "The Causation, Mode of Prevention, and Hygiene of Tuberculosis," by Dr. E. R. Dibrell, Little Rock; "The Economic Importance of Tuberculosis," by Dr. J. S. Shibley, Paris; "The Protection of Schools from Tuberculosis," by Prof. Junius Jordan, superintendent of schools, Pine Bluff; "Prophylaxis of Tuberculosis," by Dr. D. S. Warren, P. A. Surgeon, U. S. Public Health and Marine-Hospital Service.

President's Address: Education of Public Concerning Preventable Diseases

Dr. J. CLEGG, Siloam Springs, said that the profession should enlighten the public in regard to sanitation and hygiene. He deplored the annual inroads of tuberculosis, diphtheria, typhoid, malaria, and the vast amount of cost, poverty, crime and human misery incident thereto. While the task was herculean and the results possibly long delayed, still the great need was everywhere apparent, and the presence of the sallow-faced women, the sickly babes and the yellow-skinned men, were a constant reminder both to the profession and the public of the value of prophylaxis and the great need of the education of the laity. He favored state aid to medical schools, hospitals and laboratories, and higher standards of medical education, literary attainments and mental capacity for those desiring to enter the profession. Industry and observation plus thought and learning made the ideal practitioner. He condemned in severest terms so-called medical journals conducted not for altruistic motives, conveying no information of new truths and discoveries in the advancement of medical science, but published in the interest of some worthless proprietary or quack remedy. Such journals were truly coyotes in the fleece of lambs. It was absurd to require of medical men learning and literary quali-

fications, while faith-cure, scientist, and mental-suggestion dabbles were permitted to foist themselves on the public. He emphasized the great need of a state board of health with authority to compel action in matters of sanitation and hygiene. He recommended the distribution of antitoxins at convenient places in the hands of competent custodians, and that an effort be made to abolish the duty on surgical instruments and physicians' accessories, that exorbitant prices might be discountenanced. He counseled cooperative work in county societies; much had been done and much should be done to increase the efficiency and helpfulness of every county society.

Advances in Research Work in Syphilology

DR. ELLIS, Hot Springs, referred to the rapid strides in research work, serodiagnosis of syphilis, and the new methods for demonstrating the presence of spirochetes. He favored the inhalation method of administering mercury, especially in cases of syphilitic sore throat. He believed syphilis should be deemed notifiable, and that affected individuals should be restricted during the infective period. He recommended regulations in regard to indiscriminate use of drinking fountains and other public utilities; referred to restrictions of railroads and life-insurance companies regarding syphilitics, which he said should stimulate the profession to renewed effort toward palliation and eradication. He also mentioned the increase in pellagra in the south and suggested inauguration of a rigid system of inspection of maize.

Prevention of Disease

DR. H. H. NIEBUSS, Wesson, dwelt on the duty of the practitioner to the laity in the prevention of disease. He believed in extended education along sanitary lines; favored the teaching of hygiene in the public and private schools; and stated his belief that the profession should share the blame for defective health regulations and lax indifference to duty in failing to enforce cleanliness everywhere.

Advances in Surgery

DR. A. E. SWEATLAND, Little Rock, called attention to the tremendous advancement in surgery; emphasized the great value of prompt operative measures; condemned vigorously dilatory conservatism; referred to the great improvement in gall-bladder surgery, and treatment of uterine displacements; and condemned the shortening of round ligament in uterine and ovarian fixations.

Responsibility of the Surgeon in Gynecologic Conditions

DR. C. S. PETTUS, El Dorado, condemned in severest terms the laxity in appreciation of responsibility on the part of the surgeon, and the wholesale extirpation of the female reproductive organs. He reminded the profession of the care and sympathy due the pregnant woman, and commended future womanhood to the care of the conscientious gynecologist.

Other Papers Read

The following papers were also contributed: "Duration of Treatment of Syphilis," Dr. E. C. Hay, Hot Springs; "Pneumococcus Endocarditis," Dr. C. H. Hoffman, Little Rock; "Clinical Observations in Mastoid Surgery (with Demonstrations)," Dr. Robert Caldwell, Little Rock; "The Education of the Laity," Dr. John S. Jenkins, Pine Bluff; "Race Suicide from the Physician's Viewpoint," Dr. E. E. Barlow, Dermott; "The Office Treatment of the More Common Diseases of the Rectum," Dr. C. P. Meriwether, Little Rock; "Polypharmacy and Therapeutics," Dr. L. P. Gibson, Little Rock; "Report of a Medicolegal Case," Dr. H. C. Dunavant, Osceola; "Tetanus, with Report of Cases," Dr. G. A. Warren, Black Rock; "Per- nicious Malaria," Dr. F. O. Mahoney, Hitting; "Vital Statistics," Dr. D. S. Warren, P. A. Surgeon U. S. Public Health and Marine-Hospital Service, St. Louis; "Acute Dilatation of the Stomach and Duodenum," Dr. C. H. Carhile, Bentonville; "Amebiasis," Dr. J. T. Jelks, Memphis, Tenn.; "Venereal Prophylaxis," Dr. G. A. Hebert, Hot Springs; "Therapeutic Value of Some of the Electric Modalities," Dr. W. T. Lowe, Pine Bluff; "Physiologic Laws Governing the Action of Purga-

tives," Dr. G. E. Pettey, Memphis, Tenn.; "Postoperative Ileus," Dr. Anderson Watkins, Little Rock; "Appendicostomy in Treatment of Epilepsy," Dr. J. P. Runyan, Little Rock; "A Case of Neuroparalytic, or Trophic Uleer, Treated Surgically," Dr. R. C. Dorr, Batesville; "An Interesting Case of Abdominal Surgery," Dr. G. S. Brown, Conway; "Emergency Surgery," Dr. J. A. Foltz, Fort Smith; "Ectopic Pregnancy," Dr. G. E. Cannon, Magnolia; "Extrauterine Pregnancy," Drs. W. V. Laws and W. Chestnut, Hot Springs; "Neuroses Due to Pelvic Lesions Treated Surgically," Dr. W. C. Dunaway, Little Rock; "Too Much Operative Gynecology," Dr. J. W. Meek, Camden; "The Relief of Suffering During Labor," Dr. G. W. Murphy, Strong; "Report of a Case of Uremia," Dr. J. A. Moore, Lisbon.

MEDICAL ASSOCIATION OF GEORGIA

Sixtieth Annual Meeting, held at Macon, April 21-23, 1909

The President, DR. T. D. COLEMAN, in the Chair

A list of the officers elected was given in THE JOURNAL, May 8, 1909, page 1503.

History of Modern Treatment of Penetrating Wounds of the Abdomen

DR. THOMAS R. WRIGHT, Augusta, read an interesting paper giving a summary of the modern treatment of penetrating wounds of the abdomen, which was considered so valuable by the association that it was recommended that a copy be sent to every physician in the state.

Symposium on Pellagra

Papers on this subject were read by the following: Drs. N. P. Walker, Milledgeville, Lawrence Lee and Earnest S. Cross, Savannah, and H. F. Harris, Atlanta.

The Common House Fly the Principal Cause of Typhoid Fever

DR. J. W. PALMER, Ailey, read this paper, and Dr. J. G. Dean, Dawson, offered the following resolution, which was adopted:

Resolved: That there shall be appointed a "typhoid fly" committee, consisting of five executive members and one member from each county of the state, whose duty it shall be to educate the public by giving public lectures, especially to public schools, high schools and colleges, and through the press on the dangers of the common house fly, and other insects which are notorious for conveying typhoid fever and other diseases.

State Sanitarium for Tuberculosis

The Committee on Public Policy and Legislation reported that last June a bill introduced in the Georgia legislature, providing for the establishment of a state sanitarium for tuberculous, was passed and an appropriation made for that purpose.

Contribution to Carroll Fund

On motion of Dr. Thomas J. McArthur, an appropriation of \$100 was voted toward the fund for raising the mortgage on the home of the late Major James Carroll.

Antirabic Serum

Two papers were read on this subject by Drs. J. N. Brawner, Atlanta, and J. E. Paullin, giving reports from the Georgia Pasteur Institute and the Georgia State Board of Health, showing that there is a marked increase of rabies in the state.

Following the reading of these papers, Dr. Claude A. Smith, Atlanta, said that as it has been demonstrated in Great Britain and other countries that rabies can be stamped out by the muzzling of dogs, the Committee on Public Policy and Legislation of the association should be asked to take up the matter of securing the enactment of the bill which was introduced before the legislature requiring the muzzling of dogs; and that, if in the judgment of the committee it be wise, the cooperation of the daily press be secured in disseminating knowledge regarding this disease, and in the enactment of the bill.

ILLINOIS STATE MEDICAL SOCIETY

Fifty-Ninth Annual Meeting, Held at Quincy, May 18-20, 1909

(Concluded from page 1953)

Recognition and Treatment of Extrauterine Pregnancy

DR. CHANNING W. BARRETT, Chicago: From a study of implantation and the progress of the ovum there are grounds for the conception that the ovum is a parasite living at the expense of its host. Previous pelvic disease, frequently of gonorrheal origin, seems to play an important part as an etiologic factor. A study of the pathology indicates in the case of extrauterine pregnancy, a parasitic growth which develops malignant tendencies due to the incapacity of the maternal tissues to cope with it. The extrauterine ovum is suicidal and matricidal in its tendencies. The risk to the mother is largely, though not entirely, that of hemorrhage.

The less frequent causes of death or morbidity are sepsis, obstruction of bowels, fistulas, etc. The prognosis for the ovum is so uniformly bad that it should receive no consideration except in cases of visible embryo. The menace of extrauterine pregnancy to life and health of the host is so great that an early diagnosis and prompt removal of the ovum is of prime importance. Extrauterine pregnancy should be thought of when a woman of child-bearing age gives a history of sudden, severe pain in the region of the ovary, with a hemorrhage from the uterus, accompanied by collapse, and evidences of concealed hemorrhage; a pelvic mass helps to confirm the diagnosis. The more urgent the symptoms, the greater the need of operation, as the collapse is due to hemorrhage and vessels may still be bleeding or hemorrhage may be resumed. The clinical evidence is that patients do die of hemorrhage, experiments on dogs to the contrary notwithstanding. Pathology indicates and clinical evidence teaches that prompt surgical measures will decidedly lower the mortality. Suprapubic instead of vaginal incision should be chosen in all unruptured cases, and in most old cases, unless contraindicated by sepsis or pus accumulation. No vaginal puncture or exploration should be undertaken for diagnostic or therapeutic purposes unless preparations have been made for immediate laparotomy.

Embolie Aneurisms

DRS. V. L. SCHRAGER AND DEAN D. LEWIS, Chicago: This paper deals with four aneurisms observed in three patients suffering with endocarditis. The relationship between embolism and aneurism formation has been definitely established, as in some cases the sharp, calcified embolus has been found in the aneurismal sac; while in other cases the bacteria which have been recovered from the aneurism were the same as those found in the vegetations upon the valves of the heart. About sixty cases of aneurism of this type are recorded in the literature. The frequent involvement of the cerebral and superior mesenteric artery is noted. It is interesting that veterinarians have recognized for some time the occurrence of parasitic aneurisms in the horse, the *Strongylus armatus* being found in the sac. These aneurisms develop most frequently at the bifurcation of arteries where the emboli are apt to lodge. Embolic aneurisms differ from the ordinary type in that they are often multiple. Four and five aneurisms have been seen in the arch of the aorta, while in some cases a brachial aneurism has been associated with one of the superior mesenteric. In one case an aneurism of the right brachial and right popliteal aneurism developed almost simultaneously. The diagnosis is readily made when the aneurism develops on peripheral arteries. But one case is recorded in which the diagnosis of aneurism of the superior mesenteric artery was made during life.

Medical Treatment of Exophthalmic Goiter

DR. D'ORSAY HECHT, Chicago: In our modern conception of the therapeutics of exophthalmic goiter I think we need take into account little else than a consideration of the efficacy of bed rest and serum, on the one hand, and bed rest and surgical intervention, on the other. This abridgement of the subject-matter appeals to me as both convenient and ample for current discussion. Eulenberg has probably been the staunchest protagonist of the medical treatment of this dis-

ease, and his defense of it is based on a consideration of 600 carefully recorded cases. He has taken the stand that exophthalmic goiter should not even be regarded as debatable borderland, and that we should not swerve to the surgical side until the medical treatment is regarded as entirely hopeless. Perhaps in the light of increasingly convincing surgical statistics of a most favorable kind Eulenberg will recede from his original position. The rest cure remains probably the essential, if not the only rational, medical treatment, and when it is advised it should not be done indifferently, but with due emphasis as to the exact length of time the patient will be required to remain in bed. Patients are more readily reconciled to a bed rest régime when one specifies that it is to take place for two, three, four or six months. The technic, in a general way, is much the same as that applied in the so-called Weir Mitchell treatment. The earlier these patients are subjected to this treatment, the better, and I might add that the neurologist not infrequently is the first to see them, at which time they present merely quick fatigue nervousness, sweating, feelings of anxiety and apprehension, together with marked sleeplessness. There can be no doubt that bed rest when given early has a most profound influence for good on the toxemia.

In my hands antithyreoidin Moebius has given some satisfaction. This product is derived from thyroidectomized sheep. It is put up in small vials of 10 c.c. and kept stable by the addition of 0.5 per cent. carbolic acid solution. It is given by mouth in an ascending dosage of from 5 to 40 or 50 drops diluted in a wine glass of water three times a day, after meals. My experience with it has been rather gratifying in the eight cases in which it was used, and I may add without serious or even adverse results. In two patients there was an increase in symptoms, with a slight rise of temperature that called for its discontinuance. In no case was it used for longer than six weeks, nor was the dosage ever carried beyond forty drops. Rogers and Beebe have been the latest investigators in the field of serotherapy in this disease, their product being referred to as a specific (cytolytic) serum, derived from human thyroid glands. They report its use in many hundreds of cases, but dwell particularly on a series of 105 patients personally treated by Rogers, up to Jan. 1, 1908, giving results which are relatively good, although to me not entirely convincing. Their serum is given hypodermatically under the skin, preferably on the outer upper aspect of the arm, at the lower insertion of the deltoid, and they report in many cases a local and in some a systemic reaction of considerable intensity. Although their arguments in behalf of a specific serum are sound, nevertheless I doubt if in our present state of serologic therapy a specific serum can be made that will not of necessity contain substances so toxic for the body as to be harmful and ever dangerous. If we could produce a serum that would be specific for thyroid and neutralize only the toxins of hyperthyroidism without in any way influencing other metabolic processes, then indeed we would arrive at an ideal solution of the therapeutic problem of this disease. That would put surgical intervention into disuse. Of organotherapeutic specialties, or of the value of electrotherapy I need say little except to emphasize their negative value. The symptomatic remedies that have at one time or another been used are quinin hydrobromate, grs. 5, combined with ergotin, gr. 1, a formula strongly advocated by Forchheimer, who records good results in over 40 cases. My experience with it is limited and not gratifying. A long list of remedies might contain a few that could be considered of avail but not necessarily of much service. I may recommend, however, administration of small doses, from 15 to 30 grains, of sodium phosphate given with water, three times a day, after meals, particularly in early cases in which the patients are taking the rest cure. Whether this acts only as an eliminant and so reduces the toxemia, I do not know but I can subscribe to its good effect. Where there is diarrhea and the sodium phosphate has a tendency to increase it, it is well to substitute the phosphate of potassium, as recommended by Bramwell. In conclusion, I would say that called on to treat a case of incipient Graves' disease, I should encourage immediate bed rest with a view to early operative interference. In advising the latter I would specify and insist if I dared that only a surgeon competent and experienced in thyroid surgery be called on to perform operation. I believe that to temporize and to tide patients over from

one exacerbation of acute thyroidism to another and so on for several periods before advising operation means subjecting them needlessly to constantly increasing toxemia, diminished resistance, goiter heart, etc., eventually bringing them into the realms of a high mortality.

Surgical Treatment of Exophthalmic Goiter

DR. CARL E. BLACK, of Jacksonville, reviewed the principles connected with the surgery of the thyroid gland. He compared the surgical with the medical treatment; how and why cases should be selected for surgical in preference to medical treatment, and cited an illustrative case.

Thyroidectomy for Dementia Præcox

DR. ALLEN B. KANAVEL, Chicago, presented a preliminary report of the results in 10 old cases of dementia præcox. Following Berkeley's suggestion of the relation of the thyroid gland to dementia præcox and his report that certain patients had been benefited, and through the courtesy of C. C. Willhite, several well-established cases of dementia præcox were placed under the observation of Dr. Louis J. Pollock, who made a careful study of the condition for a number of weeks. These patients have been operated on in association with Dr. Eustace, and the glands have been carefully studied from the pathologic point of view in association with Professor F. R. Zeit. Microscopic sections of the gland were shown and the clinical histories of the cases following operation were discussed with a short review of the results in this series of old cases and in the series of early cases reported by Berkeley.

Other Papers

The following papers were also read: "The Advantages of Intermittent Positive Pressure for Resuscitation," by Drs. J. A. Capps and D. D. Lewis, Chicago; "The Doctor in Civic Life," by Dr. John A. Witherspoon, Nashville, Tenn.; "Medical Treatment of Goiter and Duodenal Ulcers," by Dr. B. W. Sippy, Chicago; "Pyloric Stenosis in Infancy," by Dr. Frank X. Walls, Chicago; "Value of Wassermann Test in Nervous and Cardiovascular Diseases," by Dr. F. G. Harris, Chicago; "Nature of the Cardiovascular Changes in Nephritis," by Dr. Alfred C. Croftan, Chicago; "Report of a Case of Hodgkin's Disease; Primary Tumor in Gall Bladder," by Drs. E. H. Weld and P. L. Markley, Rockford; "Fracture of the Acetabulum with Central Dislocation of the Femur," by Dr. W. Fuller, Chicago; "Fracture of the Pelvis with Rupture of the Bladder, with Report of Four Cases," by Dr. E. K. Lockwood, Virden; "Skin Grafting with Report of a Case," by Dr. G. H. Galbraith, Clifford; "Tuberculosis in Infants and Children," by Dr. C. W. Lillie, East St. Louis; "A Rare Case of Pemphigus Requiring Surgical Attention," by Dr. S. C. Glidden, Danville; "Conservative Joint Surgery," by Dr. L. Ryan, Chicago; "Diagnosis of Disease of the Lung and Pleura, with Presentation of Patient," by Dr. Emil G. Beck, Chicago; "Diagnosis and Treatment of Ureteral Calculus," by Drs. A. D. Bevan and H. L. Kretschmer, Chicago; "Vesical Symptoms Due to Diseases External to the Bladder," by Dr. L. E. Schmidt, Chicago; "A Prostatic Brief," by Dr. Gustav Kolischer, Chicago; "Diagnosis of Exophthalmic Goiter," by Dr. H. T. Patrick, Chicago; "The Pus Appendix," by Dr. G. W. Green, Chicago.

Medicolegal

Liability for Bad Effects of Indicated Second Operation—Admissibility of Radiographs—Future Pain and Suffering

The Supreme Court of Pennsylvania lays, in the personal injury case of Wallace vs. Pennsylvania Railroad Co., that on September 7 the plaintiff, while a passenger, was injured in a collision between two of the defendant's trains, sustaining a fracture of both bones of his left limb between the knee and ankle. He was at once removed to a city hospital, where he was placed in charge of a physician and surgeon in the employ of the defendant company, who proceeded without delay to place the injured limb in alignment and apply splints. The plaintiff remained in the hospital under treatment for nearly a month, when, being able to go about on crutches, he was

taken to his home. About the middle of November following, the same surgeon removed the plaster cast and directed moderate use of the limb.

The plaintiff testified that after the removal of the cast he suffered pain in his limb so severe that he was scarcely able to endure it. Because of its continued severity, he procured radiographs to be taken of the injured part, and, in view of what these were supposed to disclose, he employed a surgeon of repute. The latter, from an examination of the radiographs and the patient, concluded that what caused the pain was an overriding of the fibula to the extent of three-fourths of an inch, and that an operation was necessary to make the small bones unite squarely, and thus relieve the pressure on the vessels and nerves of the foot resulting from the overriding. The operation involved not only an incision, but a severance of the bones which had partially united, the removal of the oblique ends, and the bringing them into a more perfect apposition and securing them in proper place by artificial tendons. This operation was performed by this second surgeon, with the assistance of another surgeon, and in the presence of several, at the same hospital where the patient was first treated.

This second surgeon testified that he found the conditions to be just as the radiographs represented them, and in addition he found the tissues about the place of fracture devitalized; the blood supply having been interfered with by the pressure of the bone.

Several months later another operation was required for the removal of a piece of dead bone which resulted from the devitalized tissues.

The railroad company contended, among other things, that if the jury found that the second operation caused the dead bone, and that this dead bone was not a sequence or result of the original injury, they should not take this dead bone into account in making up their verdict. But the court thinks that this point was rightly refused because it did not comprehend sufficient matters of fact to justify the conclusion sought to be drawn. If the operation was performed in good faith, before the recovery of the plaintiff from the original injury, with a view to promote and insure complete recovery or mitigate the plaintiff's pain, either by correcting what had been done or by supplementing it, by a surgeon in whose skill and judgment the ordinarily prudent person would have a right to rely, the consequences following the operation and resulting directly therefrom were in a legal sense the sequence and result of the original accident.

The court also considers that it was entirely proper to allow the second surgeon to state the grounds on which he based his conclusion as to what caused the pain from which the plaintiff suffered, and prevailed with him in determining that an operation was necessary. His conclusions were based largely on what the radiographs revealed. This circumstance made the radiographs admissible in evidence. While it was not a material inquiry in the case whether the operation was a prejudicial one or not, if made in good faith by one on whose skill the plaintiff had a right to rely, yet it was around this question that the controversy was waged; the defendant company insisting that no excuse whatever existed for the operation. Under such circumstances it would have been most unjust to the witness to refuse him permission to show by the radiograph what directed his judgment. He testified that when operating he found the conditions to be just as the pictures represented. In view of this testimony the objection that they were not taken by a professional came to nothing.

Again, the court says that nothing is better settled than that in cases of personal injury pain and suffering are to be reckoned as distinct elements for which compensation is to be allowed. It is equally well settled that this rule admits of compensation for future as well as past pain and suffering.

With what degree of certainty must it be made to appear that the future pain and suffering will ensue before compensation for them can be allowed?

In the multitude of cases of like character which have come before this court for review, one unvarying rule has been observed regarding the quantity of proof required, and it is this: The jury may and should award compensation for future

pain and suffering whenever the evidence furnishes just ground for the belief that such pain and suffering will likely or probably ensue. This standard has met with the approval and sanction of this court in every case, and that without qualification.

With such explicit and repeated recognition by the Pennsylvania courts of a rule which admits compensation for pain and suffering likely to ensue, it comes to nothing to show that in some jurisdictions recovery for these is allowed only when it is made to appear that they are reasonably certain to result. This court is not called on to vindicate the justice or reasonableness of the rule which obtains in Pennsylvania. It is only necessary to assert it and express the court's continued adherence to it. All that is required in Pennsylvania is that there be sufficient evidence from which the jury may fairly derive the conclusion that the chances that the plaintiff will endure future pain and suffering preponderate over those that he will not. Such preponderance denotes probability or likelihood, and that is sufficient.

Requisites to Liability of Parents for Failure to Provide Medical Attendance for Minor Child

The Supreme Court of New Jersey says that in the case of *State vs. Watson and wife*, where the defendants were convicted of manslaughter, the specific charge was a failure to provide medical attendance for their minor child, aged 7 years.

The court, however, does not find it necessary to consider the interesting, and, in New Jersey, novel question which was argued as to how far the religious belief of the defendants, who were Christian Scientists, would excuse them. It simply holds that the conviction could not be sustained under the New Jersey statute because the jury had no opportunity to find whether the neglect was wilful.

The case was tried, apparently, the court says, without regard to the New Jersey Act of March 22, 1901, which provides that any person having the care, custody or control of any minor child, who shall wilfully neglect to supply the same with sufficient food, clothing, and regular school education, or who shall wilfully abandon or neglect the same, shall be guilty of a misdemeanor. This act did not seem to have been called to the attention of the trial judge, and he, therefore, did not put to the jury the question whether the parents had wilfully neglected the child. However strong the evidence may have been on this point, the defendants were entitled to the verdict of a jury thereon.

Instead of submitting this question, the case was tried as arising under the common law. The judge properly charged the jury in one part of his charge that the defendants could not be convicted unless the jury found that they were guilty of culpable negligence, and in another part of the charge he put to them the question whether the child died as the result of their being grossly negligent; but in other portions of the charge he told them that, as it had been proved that the defendants did provide medical attendance, they must consider whether they provided this aid with the same diligence that a reasonable and prudent person would have done, and subsequently charged that, if they found that the defendants called in medical aid as soon as a reasonable and prudent person would have believed it to be necessary, the verdict must be not guilty, and toward the end of his charge the judge defined negligence as the omission to do something which a reasonable man, guided by those considerations which ordinarily regulate the conduct of human affairs, would do, and that in this case negligence, if it existed at all, was the failure to observe, for the protection of the interests of another person, that degree of care, precaution and vigilance which the circumstances justly demanded, whereby others suffered injury—failure to do what a reasonable and prudent person would have done.

The Supreme Court thinks that the effect of this charge was to allow the jury to infer that the defendants had been grossly and culpably negligent if they failed to furnish medical aid with the promptness of a reasonable and prudent person. This ignored the distinction between such negligence

as forms the basis of civil liability and that gross and more culpable negligence which is required at common law to constitute a crime. The charge was therefore faulty as a definition of the common-law offense.

The court also says that under a somewhat similar statute to that of New Jersey it has been held in England that the religious belief of the parents was not a sufficient defense. *Queen vs. Senior* (1899), 1 Q. B. 283.

Law as to Privileged Communications Not Abolished

The Court of Appeals of New York says, in the case of *Homnyack vs. Prudential Insurance Co. of America*, that, by the first section of Chapter 331 of the Laws of New York of 1905, Section 834 of the New York Code of Civil Procedure, which prohibits physicians or professional registered nurses from disclosing professional information, was amended by adding a provision intended to remove the privilege, and permit the disclosure of information acquired by physicians or nurses in treating their patients, where it should appear that the information so acquired indicated that the patient had been the victim or subject of a crime. Then Section 2 of said Chapter 331 provided: "Nothing in this act contained shall affect any actions or proceedings now pending." But the court holds that the plain meaning of this was that the amendment added to Section 834 by Chapter 331 of the Laws of 1905 should not affect any pending actions or proceedings. It was the amendment which was not to have any effect on suits already begun. The provision had no application to the pre-existing part of the section which remained unchanged by the amendment. That was left still in full force and effect. Under the contrary construction contended for, the court would have to hold that the legislature had abolished the law of privileged communications in favor of physicians so far as that law may have been applicable to innumerable litigations then pending in New York state. An intention thus to change a long established rule of evidence should not be imputed to the lawmakers in the absence of a clearer manifestation thereof than was to be found in this amendatory statute.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

June 5

- 1 Alcohol injections in Neuralgias, Especially in Tic Douloureux. O. Killani, New York.
- 2 Etiology of Arthritis Deformans. J. Heckmann, New York.
- 3 A Little Abdominal Surgery by the Family Physician. W. H. Inkeman, Los Angeles, Cal.
- 4 A Study of the Urinary Acidity and Its Relations. H. R. Harrower, Chicago.
- 5 *Adams-Stokes Syndrome (Heart Block). A. A. Robinson, Ogden, Utah.
- 6 The Present Status of Prostatectomy. J. B. Squier, New York.

5. **Adams-Stokes Syndrome.**—Heart block, according to Robinson, is not a specific disease, but a combination of symptoms in which the Adams-Stokes syndrome is constant. Its etiology, therefore, varies with the individual case; its effects are most noticeably shown on the vascular system, the other organs suffering as a result of the faulty cardiac action. Though varying in degree, a slowing of the ventricular action is a constant feature; the ventricular beat may be from twenty-three to twenty-eight a minute. Because the right auricle does not empty itself, it becomes distended and by back pressure produces a congestion in the great vessels of the neck. The cerebral symptoms are due to the reduced flow of blood from the left ventricle and may manifest themselves as convulsions, epileptiform attacks, vertigo, syncope or coma. The prognosis in this condition is bad and there is no very satisfactory treatment.

New York Medical Journal

June 5

- 8 *Cutaneous Cyst Formations and an Unusual Disease of the Hair Follicle. A. R. Robinson, New York.

- 9 Flagellation of Leucocytes in the Presence of Chemical Excitants and in Other Conditions. E. M. L'Engle, Philadelphia.
- 10 Deficient Oxidation and Its Relation to the Etiology, Pathology, and Treatment of Nephritis. N. E. Ditman and W. H. Welker, New York.
- 11 Sinus Thrombosis of Otitic Origin and Its Relation to Streptococemia. E. Gruening, New York.
- 12 Malarial Fever as Seen at Close Range in the Deep Jungle of the Malay Peninsula and in the "Country of the Ghosts." C. S. Braddock, Haddonfield, N. J.
- 13 A Case of Bromoform Eruption. I. W. Voorhees, New York.
- 14 A Case of Typhoid Fever Ushered in by an Attack of Uremia. R. M. Goepp, Philadelphia.
- 15 Chimaphila in Diabetes. S. G. Soules, Stanbridge East, P. Q., Canada.

8. **Cutaneous Cyst Formations.**—Robinson gives the results of his studies of those pathologic conditions of the skin described as follicular cysts, horn cysts, sebaceous cysts, comedo and milium. He states that there has been more or less difference of opinion regarding the mode of origin, the anatomic seat, and the structure of these lesions. In his opinion the views given by a majority of writers on dermatology are not the result of personal experience but merely the reiteration of statements of previous authors. According to Robinson, cysts of the pilosebaceous system should be classified according to the character of their contents as horn cysts, mixed cysts and sebaceous cysts. It is possible, he believes, for a pure horn cyst to exist but not for a pure sebaceous cyst. A sebum cyst never arises primarily in the secretory part of the sebaceous gland nor in a special excretory duct of this structure, but always in some part of the common excretory duct of the pilosebaceous system. On the other hand, a pure horn cyst may be found in the follicle opening or on one side of the excretory duct and by changing the position of the orifice may make it invisible or appear to have no connection with the cyst. Whether a horn cyst appears as a milium-like body or not, it usually arises from the external root sheath of the hair. In some cases it is due to misplaced embryonic rudiments from follicle or epidermis when the cyst is separated from the follicle. An isolated cyst may arise from the horn cyst and appear later as an independent formation. Robinson closes his paper with the description of a case in which the objective characters resembled the comedo or milium condition, in fact, it was regarded by several dermatologists as an atypical form of one or the other of these formations. Robinson is of the opinion, however, that it was an independent condition, a clinical entity, and one which he has been unable to find described in literature on cutaneous diseases.

Lancet Clinic, Cincinnati

May 29

- 17 Tuberculin Reactions and their Interpretation. L. A. Levison, Toledo, O.
- 18 Difference Between Suggestion and Persuasion. Importance of the Distinction. T. A. Williams, Washington, D. C.
- 19 Obscure Fractures Discovered by Roentgen Examination. S. Lange, Cincinnati.

American Journal of Obstetrics and Diseases of Women and Children

May

- 20 Ephraim McDowell, the Father of Ovariectomy. J. R. Goffe, New York.
- 21 A Sequel to McDowell's Triumph. Being a Brief Sketch of the Rise and Progress of the Samaritan Free Hospital. A. H. G. Doran, London.
- 22 *Ligation or Excision of Thrombosed Veins in Treatment of Puerperal Pyemia. J. W. Williams, Baltimore.
- 23 Exophthalmic Goiter and Pregnancy. H. M. Stowe, Chicago.
- 24 Treatment of Inoperable Cancer of the Uterus. G. Gellhorn, St. Louis.
- 25 Tuberculous Peritonitis. L. Brown, New York.
- 26 Diagnosis of Tuberculous Peritonitis in Women. J. N. West, New York.
- 27 Case of Symphysiotomy. D. W. Prentiss, Washington, D. C.
- 28 Meckel's Diverticulum and Other Bands as Causes of Ileus. G. T. Vaughan, Washington, D. C.

22. **Ligation or Excision of Thrombosed Veins.**—Williams analyzes the reported cases of ligation or excision of thrombosed veins in puerperal pyemia and finds that the gross mortality does not differ materially from that following expectant treatment. By deducting incurable cases and those in which the technic was faulty, a corrected mortality of 21.4 per cent. is obtained for the transperitoneal method of operation. Williams reports five cases with a mortality of 20 per cent.

The indication for the operation is given whenever a positive diagnosis can be made by feeling a worm-like mass at the outer portion of the broad ligament, in patients suffering from chills and a hectic temperature. In case the thrombosed vessels can not be palpated through the vagina, the determination to interfere should be governed entirely by the general condition of the patient and if this is serious and shows no signs of improvement, the abdomen should be opened, provided that peritonitis or broad-ligament abscess has not developed. Excision of the thrombosed vessels is rarely necessary and only when the vessel appears likely to rupture or is surrounded by periphlebitic inflammation should it be substituted for ligation. If there is reason to believe that the hypogastric veins are involved, they should be exposed and ligated before closing the peritoneal incision over the spermatic vein. The prognosis becomes more serious in proportion to the number of veins which must be ligated. The transperitoneal is preferable to the extraperitoneal route. It is technically easier, affords a much more extensive view of the vessels, and with proper precautions, scarcely increases the likelihood of peritoneal infection. The vaginal route suggested by Taylor, Latzo, and others is applicable only to a small class of cases in which the thrombotic process is limited to the vessels of the broad ligament. As such diagnosis can not be made Williams considers that laparotomy should be done in all cases in which interference appears to be indicated.

The American Journal of Physiology

June

- 29 *The Effects of Bone Ash in the Diet on the Gastrointestinal Condition of Dogs. A. P. Lothrop, New York.
- 30 An Improved Method of Desiccation, with Some Applications to Biologic Problems. L. F. Shackell, St. Louis.
- 31 Influence of the Temperature of the Heart on the Activity of the Vagus in the Tortoise. G. N. Stewart, Cleveland, O.
- 32 An Apparatus for Studying the Respiratory Exchange. G. Benedict, Boston.

29. **Bone Ash in the Diet of Dogs.**—Lothrop employs bone ash in metabolism experiments on dogs, because he finds that it lessens putrescence of the feces and makes the feces more convenient to handle. His experiments were undertaken to determine whether this use of bone ash affects the metabolism in such a way as to interfere with metabolism experiments. He concludes that the use of bone ash seems to offer no metabolic disadvantages whatever.

Pennsylvania Medical Journal, Athens

May

- 33 *Etiology and Pathogenesis of Gastric Ulcer. W. T. Longcope, Philadelphia.
- 34 *Medical Treatment of Gastric Ulcer and Its Results. J. A. Lichty, Pittsburg.
- 35 *Surgical Treatment of Gastric Ulcer. G. P. Muller, Philadelphia.
- 36 Analytic Description of the Eye as an End Organ. J. E. Willetts, Pittsburg.
- 37 *Value and Results of Eight Years of Fumigation and House Isolation for Contagious Diseases in Williamsport. C. W. Youngman, Williamsport.
- 38 Question of Drainage in Surgery of Pelvic Organs. F. H. Maier, Philadelphia.
- 39 Need of Endowments for State and County Medical Societies. J. B. Roberts, Philadelphia.
- 40 Eternal Persistence the Price of Success. H. W. Gass, Sunbury.
- 41 Local Society a Useful Adjunct to the County Society. J. P. Strickler, Scottsdale.
- 42 How Can the State and Local Secretaries Best Help Each Other. C. L. Stevens, Athens.
- 43 Early Diagnosis of Tuberculosis. L. N. Boston, Philadelphia.

33. Abstracted in THE JOURNAL, Oct. 31, 1908, p. 1541.

34. **Gastric Ulcer.**—The treatment which Lichty uses in most cases is similar to that first described by von Leube and Ziemessen, except that he uses a more mixed diet when he begins feeding by mouth. The 140 cases are divided into three classes according to treatment. The first class consisted of 92 patients who were treated by diet, medication and other measures. Of these, 3 are unimproved, 52 improved, 33 well, and 4 have died. The second class consisted of 32 patients who were treated by rectal feeding. Of these, 8 improved, 22 are well, and 2 have died. The third class consisted of 16 patients and includes those treated surgically. Of these, 1 is unimproved, 6 are improved, 7 are well and 2 have died. The mortality in the 140 cases is 5 per cent. Four of the 8

patients who died became carcinomatous and 3 died of perforation. The number of cases which Lichty has studied in this compilation, while not large enough to furnish conclusions, serve as the basis for the following observations: 1. The 140 cases reported occurred among about 1,395 gastric cases, which are included in over 8,000 patients which make up a general practice. 2. The mortality need not be high. The most frequent cause of death is cancer, the next frequent is perforation. Death from hemorrhage in an uncomplicated ulcer did not occur in the series. 3. The medical treatment of gastric ulcer gives results which show that it has a definite place in the general treatment of gastric ulcer, and only those cases having certain complications become surgical.

35. **Idem.**—According to Muller the indications for surgical treatment are perforation, repeated hemorrhage, pyloric stenosis, perigastric adhesions, dilatation and hour-glass contraction. Symptoms indicating disturbance in secretory function which fail to respond to prolonged medical treatment, and especially when motor disturbances become prominent, should lead to operation. The most important point in the surgical treatment, to the general practitioner, is the after-history of patients on whom gastrojejunostomy has been performed.

37. **Fumigation and House Isolation in Contagious Diseases.**—Youngman says that in Williamsport for the past two years they have used for fumigation in contagious diseases a pint of 40 per cent. formaldehyd to 8 ounces of potassium permanganate for each 1,000 cubic feet of space. With this process they have had no trouble. It is quick and effective, a saver of time and apparatus, and comparatively safe. He upholds the criticized rule, that where a case of scarlet fever or diphtheria exists and the patient is effectually isolated in a remote part of the house with a nurse, holding no direct communication with the rest of the household, and the physician in attendance gives assurances that this will be carried out, the health board, if satisfied that the public will not be endangered, will omit the placard. This works, particularly in hotels and boarding-houses, with benefit to the people directly concerned; prevents loss of business, and also the secreting of cases. Placarding is done to protect the public. If the public is protected by as complete isolation as is possible in any house, what is the use of simply advertising the disease? Absolute quarantine with guards is usually only a bluff. It can be, and is, broken in spite of all guards, if the quarantined people are so inclined. To carry out absolute quarantine would be so expensive that the city fathers would succumb to financial nightmare, and then it would be ineffectual. So the best we can do is to persuade and educate the people by word of mouth and printed rules bearing on the particular disease in question. This works well with the great majority. With others, force is necessary.

Surgery, Gynecology and Obstetrics, Chicago

May

- 44 *Ephraim McDowell, the Father of Ovariectomy. J. R. Goffe, New York.
- 45 Acute Dilatation of the Stomach. B. MacMonagle, San Francisco.
- 46 *Ovarian Tumors Complicating Pregnancy, Labor and the Puerperium. H. R. Spencer, London, Eng.
- 47 *Cesarean Section in the Treatment of Complete Placenta Prævia. F. S. Newell, Boston.
- 48 *Operative Treatment of Cases of Extensive Cystocele and Uterine Prolapse. T. J. Watkins, Chicago.
- 49 *Ureteral Fistulas as Sequelæ of Pelvic Operations. J. A. Sampson, Albany, N. Y.
- 50 We are no Longer Justified in Sterilizing Every Woman who has a Cesarean Section. A. L. Smith, Montreal.
- 51 *Ovarian Tumor with Twisted Pedicle, Complicating Pregnancy. E. P. Davis, Philadelphia.
- 52 Experimental Studies of Postoperative Peritoneal Adhesions. G. Gellhorn, St. Louis.
- 53 *What to Teach the General Practitioner Concerning the Treatment of Abortion and Miscarriage. F. J. Taussig, St. Louis.
- 54 Thrombophlebitis with Peroneal Neuritis and Paralysis Following Supravaginal Hysterectomy. R. Peterson, Ann Arbor, Mich.
- 55 *Improvements in Anesthesia. J. C. Webster, Chicago.
- 56 *Methods of Administration of Anesthetics. S. C. Gordon, Portland, Me.
- 57 *Advisability of Making the Practical Administration of Anesthetics a Required Part of the Medical Course. R. Peterson, Ann Arbor, Mich.
- 58 *The Trained or Untrained Anesthetist? H. Robb, Cleveland, O.
- 59 *Treatment of Placenta Prævia by Cesarean Section. E. H. Grandin, New York.

44, 46, 49, 51, 55, 56, 57, 58. Abstracted in THE JOURNAL, May 15, 1909, pp. 1612, 1613, 1614 1615 and 1616.

47, 53, 59. Abstracted in THE JOURNAL, May 8, 1909, pp. 1528, 1529, 1530.

48. **Uterine Prolapse and Cystocele.**—Watkins discusses, first, the pathology; second, what the operative treatment should accomplish; third, the transposition of the uterus and bladder in the treatment of diseases; the results obtained by this operation, etc. He speaks of modifications of the operation (a) during the reproductive period, and (b) for very extensive cases.

Therapeutic Gazette, Detroit

May

60 Surgical Treatment of Complicated Vaginal Delivery. E. P. Davis, Philadelphia.

61 *Surgery of the Stomach. J. B. Deaver, Philadelphia.

62 *Treatment, General and Local, of "Cold in the Head." C. P. Grayson, Philadelphia.

63 Tetanus of Short Incubation—Recovery. E. M. Harvey, Media, Pa.

64 The Chopped Meat Diet. A. L. Benedict, Buffalo, N. Y.

61. **Surgery of the Stomach.**—Deaver discusses gastric ulcer and its complications, malignant disease, gastroptosis and dilatation of the stomach. He insists on the great frequency of ulcer, and says that a long rest in early cases is the essential indication; but it has been abundantly proved that it is impossible to provide rest by medical means for a sufficient time to permit a cure in the majority of cases. Gastric drainage is the solution, and gastroenterostomy, the treatment of choice in cases of simple chronic persistent symptom-giving ulcers of the stomach and duodenum. In regard to cancer, he insists on the importance of acting on suspicion. There is little use in the practitioner bothering his head about a diagnosis if he insists on certainty. By the time he is certain of his diagnosis, he is also certain of a prognosis. "The latest device which has been invented to defer operation until it is too late is gastric analysis." In dilatation of the stomach in the presence of a patulous pylorus an operation may be serviceable and give truly brilliant results. Deaver has never seen a fatal case of acute dilatation of the stomach, such as is described in the literature, which fact he attributes to the early and free use of the stomach tube in all cases which show accumulation of fluid or gas in the stomach. The treatment of dilatation is early recognition of the onset and prevention by means of lavage. Elevation of the foot of the bed, by preventing sagging downward of the stomach, and the obstruction of the duodenum by the root of the mesentery as the intestines prolapse downward, may be valuable adjuncts, whether in primary cases or as a complication.

62. **Cold in the Head.**—Grayson says that the treatment of this condition has not advanced much from that employed by our professional grandfathers, or even apparently from the period of the Egyptian dynasties. Besides the microbic infection, there are commonplace non-microbic colds in the head, due only to exposure and chilling, and not free from the possibility of serious results. Underlying all acute cases of rhinitis is a chronic catarrhal rhinitis. If we were to imagine a perfectly normal man, a severe chilling would be followed by no more than a transient congestion of the internal structures, with a coincident rise of temperature, which would disappear under the recovery of control by the vascular inhibitory mechanism. In the physical degenerate man of our acquaintance, however, there are so many spots of enfeebled resistance, so many of actual, or more or less latent, disease, that a severe chill is almost certain to be followed by a tedious struggle to overcome the ill effects. Grayson believes that back of the predisposing chronic rhinitis is always an equally chronic predisposing intestinal toxemia. He holds that an acute coryza represents the results of a triple pathogenetic alliance—a chronic rhinitis, a chronic intestinal toxemia, and an exposure to an accidental stress of some kind, not necessarily thermometric or hydrometric, for just as effective as these are others of an emotional, dietetic, dynamic or microbic nature. Although in all cases the general principles of treatment will be the same, considerable discrimination in the matter of detail must be exercised in the individual case, because of the varying nature of the exciting cause. The rational treatment

for acute rhinitis will be directly and vigorously addressed to the predisposing systemic conditions. Begin with a cathartic dose of one of the natural saline waters. The patient should fast for twenty-four hours, and several times during this period he should, for fifteen or twenty minutes, indulge in the most active exercise of which he is safely capable. For those to whom, owing to age or some organic unsoundness, it would be unsuitable, the cabinet bath or some other non-depressant method of promoting diaphoresis is to be preferred. If drugs must be used, to fortify the patient's confidence, let them be only such as will harmonize with the foregoing therapeutic plan—the salicylates or their synthetic substitutes, the saline laxatives on rising and retiring, a few minims of aromatic spirit of ammonia or tincture of nuxvomica. These may not help very greatly, but at least they will not delay the relief afforded by the hygienic measures. Local treatment can be no more than palliative. Before making any application or even spraying, it is wise to reduce oversensibility by a preliminary spray of 1 or 2 per cent. solution of cocain. Two or three drops of this should be used in each fossa. A small tuft of cotton on a light and slender applicator, moistened with the 2 per cent. cocain solution, carried up to the middle turbinates, will enable us to reach and flush almost the entire nasal chamber with an alkaline antiseptic wash. The mucosa should be covered with a protective and soothing fluid or powder: Two parts of zinc stearate, with menthol, and one part of zinc stearate with balsam of Peru, dusted throughout the fossæ from a nasal insufflator.

Chicago Medical Recorder

May

65 *Choice of Operation for Chronic Inguinal Hernia. W. H. Allport, Chicago.

66 *Reminiscences of Ten Years as Commissioner of Health in Chicago, and Suggestions for the Future. A. R. Reynolds, Chicago.

67 Intravenous Infusion, its Technic, and Some Personal Observations in 5,000 Intravenous Operations. W. G. Fralick, New York.

68 *Christian Science from a Physician's Standpoint. A. D. Kohn, Chicago.

65. Published in the *Iowa Medical Journal*, April, 1908, and abstracted in THE JOURNAL, May 8, 1909, p. 1543.

66. **A Health Commissioner's Reminiscences.**—Reynolds interestingly reports his ten years' experience as health commissioner for Chicago, in reference to the water supply, milk inspection, antitoxin treatment of diphtheria, vaccination and smallpox, infant feeding, venereal diseases, and the sterilization of criminals.

68. **Christian Science.**—Kohn gives an admirably reasoned exposition of the factors that enter into Christian Science success, notably self-limiting of disease, diseases of spontaneous remission, the effect of fear, coincidence, etc. Many interesting examples are given of cures subsequent to the adoption of Christian Science, which are clearly coincidental. The following is a typical case: An old lady was suffering from what we may term recurrent hysteria with melancholia. The attacks, which were accompanied by fits of profound mental depression, usually lasted from six to twenty months, and she had a number of such attacks, each of which was followed in the past by freedom from the disease for from six to eighteen months. When Kohn first called to see her, she had rapidly drifted from doctor to doctor, had even tried osteopathy, and at the time of his first visit he saw a copy of the "Key to the Scriptures" lying on her table. After a time she recovered, and as usual came a relapse, and after a year or more at the various sanatoria she, for the second time, embraced Christian Science, and, wonders to behold, in three weeks she was well. She now forgets that she made similar recoveries long before the days of Eddyism, and could not possibly be convinced that what she thought was a marvel from on high, was merely a coincidence, and that the tractors, or blue glass, or Dowie could have done the same, providing her time was up. She even forgets her former fruitless study of Christian Science. What is more, when the vicious circle swings around again, she will have another attack, in spite of the "Key to the Scriptures," which will probably look tarnished by that time.

Journal of the Michigan State Medical Society, Detroit

May

- 69 *Symptoms and Diagnosis of Incipient Pulmonary Tuberculosis. C. H. Johnston, Grand Rapids.
70 Observations on the General Principles of Hospital Organization. W. F. Metcalf, Detroit.
71 Ergot. D. Ingalls, Detroit.
72 Trifacial Neuralgia Treated by Alcohol Injections. R. J. Walker, Saugatuck.

69. Incipient Tuberculosis.—Johnston says that too many wait until bacilli are present in the sputum before making up their minds as to the diagnosis of tuberculosis. One has to be constantly on guard for the incipient signs, loss of weight, failing appetite, general debility, and increased pulse rate and a daily slight elevation of temperature, or many cases of incipient disease will escape notice. Repeated examinations of the chest may have to be made before distinct physical signs are detected. Of these, one of the earliest is a change from the continuous, breezy, inspiratory rhythm to an interrupted, cogwheel rhythm. Next in importance is the finding of fine, crepitant râles on inspiration. Cough may or may not be present. Hemoptysis, when present, is most important. Ninety per cent. of cases of hemoptysis are said to be followed sooner or later by evidences of pulmonary tuberculosis. Percussion of the chest is frequently negative in the incipient stage. One of the most reliable signs of consolidation is the whispering voice sign. Johnston's experience leads him to believe that the ophthalmic test is much less reliable than the hypodermic test in incipient disease. Recent investigations have shown tuberculosis to be much more prevalent among infants and children than it was formerly supposed to be. He particularly emphasizes the fact that fine crackling râles often constitute the only physical signs to be found in incipient cases of pulmonary tuberculosis, and if they are persistently localized in one lung, they may be considered almost pathognomonic of this disease.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

May 22

- 1 Classification and Nomenclature of Diseases, with Remarks on Diseases Due to Treatment. H. D. Rolleston.
2 Treatment of Chronic Diseases of the Heart. F. J. Wethered.
3 Effect of Radium on Pathogenic and Non-Pathogenic Bacteria. C. E. Iredell and E. P. Minett.
4 Therapeutic Effects of Radium Emanations in Skin Diseases. H. R. Crocker.
5 Electrocardiogram of Man and of the Dog as Shown by Einthoven's String Galvanometer. A. D. Waller.
6 Cause of Death After Operation in Acute Appendicitis. C. A. Morton.
7 Prostatic Calculi. J. L. Thomas.
8 *Double Pneumonia After Childbirth: Pulmonary Infarcts; Injections of Vaccine of Mixed Pneumococci; Recovery. G. B. Batten.
9 Disappearance of a Sarcoma Following Injections of Coley's Fluid. W. C. G. Ashdowne.
10 Normal Menstruation with Absence of the Body of the Uterus. A. Brown.

8. Vaccine Treatment of Double Pneumonia Following Childbirth.—Batten reports the case of a woman of 27 who had an attack of influenza with bronchitis, beginning three weeks before her confinement and from the effects of which she had not fully recovered. Four days after delivery pneumonia began in the left side and on the fourteenth day after her confinement an alarming dyspnea occurred which was attributed to infarcts of the lung. Examination of the sputum and also of swabbings of the uterus showed pneumococci. From these organisms a vaccine was prepared and injected. The patient's condition which had been desperate, improved forty-eight hours after injection and a repetition of the vaccine treatment was followed by further improvement. The opsonic index to the pneumococci which was 0.49 rose to 1.43 after the injection. The injection of a double dose nine days after increased the index to 1.5. There was gradual convalescence and complete recovery. In Batten's opinion her recovery was due to the vaccine injected.

British Medical Journal, London

May 22

- 11 Early Diagnosis of Carcinoma of the Prostate. C. M. Moullin.
12 Diagnosis and Treatment of Some Common Inflammatory Affections of the Eye. E. E. Henderson.
13 *Partial Thyroidectomy. T. P. Dunhill.
14 Surgery of Lingual Thyroids. W. Stuart-Low.
15 Removal of Portions of Doubtful Tumors for Diagnostic Purposes. A. Lelch.
16 Incidence of Morgan's Bacillus No. I in the Normal Feces of Young Children. J. W. H. Eyre and E. P. Minett.
17 Employment of Iodiplin in Syphilis. D. Freshwater.
18 Prostate Weighing Seventeen Ounces Removed by the Suprapubic Route. A. Fullerton.
19 Jejunal Ulcer Following Gastrojejunostomy. H. J. Paterson.
20 Carbon Monoxid Method of Determining the Total Oxygen Capacity and the Blood Volume in Animals. A. E. Boycott and C. G. Douglas.

13. Partial Thyroidectomy.—Dunhill bases his conclusions on his experience in 113 operations in which partial thyroidectomy was performed in the great majority of cases (88) for exophthalmic goiter. All the latter patients had been treated medically until it had become apparent to the physician or the patient that improvement was not taking place. The author believes that in patients who are not definitely improving under medical treatment there can be no question as to the necessity for surgical interference, so that a state of equilibrium as regards the output of thyroid secretion may be regained and maintained. He believes that there is no need to fear death either at or following operation, provided it is performed under local anesthesia. Dunhill divides the cases into four classes: 1. Cases presenting all the classical signs, but without organic heart disease, in which the patients are still able to do some work. 2. Cases with classical signs and organic changes in the heart. 3. Cases with incompletely developed signs, but often presenting great toxemia. 4. Exophthalmic goiter, secondary to ordinary goiter. In regard to response to operative treatment, cases of the first class are very favorable. Practically complete recovery can be promised and the period of convalescence is short. Cases of the second class are usually regarded as too far advanced for operation, but in Dunhill's opinion this statement is not true. He would go so far as to say that no case, unless the patient is almost moribund, is too far advanced to obtain immense relief from operation. The extent of relief is in inverse ratio to the extent of organic heart lesion. Under local anesthesia the danger of the operation, even in the most advanced cases, is practically nil. The third class of case he regards as the worst type to handle. There appears to be an altered secretion and not simply an excessive one. Removal of half the gland does not give the relief of certain symptoms that it affords in typical cases. Every patient should be treated medically, for three months, and if there is continuous improvement medical treatment should be persevered with. Operations should be performed as soon as it is recognized that the patient is not improving. At the same time, it should be clearly recognized that it is practically never too late to operate, and that the operation in itself need never prove fatal if performed under local anesthesia. Under general anesthesia the operation can not be recommended as safe. Local anesthesia makes it possible to avoid injury to the recurrent laryngeal nerve, as the effect on the voice from pressure on this nerve may be immediately detected. The danger of injury from vomiting is also much less. The anesthesia is usually very good, though a little dragging sensation is felt while the deep connections of the gland are being divided. As much gland substance should be removed as is necessary to effect a cure, but not more. Usually one lobe and the isthmus should be removed at the first operation and half of the other lobe at a subsequent operation some months after the first. Dunhill attributes his one death to the fact that he crushed a lobe before dividing it. He believes that crushing the lobe causes a retention of toxic substances, the absorption of which may prove fatal. Avoidance of crushing and free drainage are of the greatest importance. The severity of the operation is not to be underrated. All handling should be of the gentlest nature. The vessels are increased in number and size and they are very brittle. If one gets off the track hemorrhage may be uncontrollable and, if the operation is prolonged, the bleeding is bound to be excessive.

Medical Press and Circular, London

May 19

- 21 *The Feeble-Minded and their Care. G. H. Savage.
 22 *Blackwater Fever and the Intimate Pathology of Malaria. C. A. Bentley and S. R. Christophers.
 23 Acute Multiple Sclerosis. H. Koch.
 24 Some Enlargements of the Kidney. L. G. Gunn.

21. **The Feeble-Minded.**—Savage lays down the following principles: 1. All persons who, whatever the form or degree of their mental disorder, are unfit to take part in the struggle of civilized life, are to be considered as feeble-minded. 2. Persons suffering from disease should be looked on rather from the standpoint of disease than with the social view. 3. If the mentally weak are to be properly recognized and treated, their condition must be reported early. 4. The control or treatment must be continued as long as needed. 5. It is essential that the whole of the insane and weak-minded should be under one definite line of control.

He discusses at length the various phases of feeble-mindedness, and dwells on recurring insanity. Such individuals can not be considered as permanently insane. Heredity is the strongest factor in these cases. Children begotten of very aged fathers are often weak-minded—not from age *per se*, but because aged lust is often a sign of lack of higher control. Simple consanguinity, as in the case of cousins, etc., is not an important point *per se*; but should there be neuroses in either branch, then it intensifies the effect. He concludes that some neuroses are much more readily transmitted than are others. There is a simple all-around feebleness. Such individuals are said to be easily led, to be wanting in will and in adaptability. All these simple things are readily transmitted. Anything allied to epilepsy seems also to be likely to be represented in the next generation by feeble-mindedness. One has also to remember the child who might otherwise have developed all right, but who is affected with some acute disorder in early life, especially if that disorder be a nervous one. With care, such children may be reared and trained to become useful members of society. One child having convulsions at 2 years of age has never been the same since. Many children become weak-minded as a result of some febrile attack. Savage saw a child who was said to have had meningitis. Meningitis is sometimes recovered from, but many children who have febrile attacks have not meningitis; but they may be left permanently weak-minded. An interesting point is the frequency with which feeble-minded children are found to have had, early in life, some interference with respiration. There is a history that the child was all right until it had measles, followed by bronchitis. A still more common occurrence is to find permanent mental enfeeblement follow whooping cough. That in itself is a nervous disorder.

22. **Blackwater Fever.**—Bentley and Christopher discuss the different species of material parasite, the question of blood destruction, and find that two distinct processes may result from the action of a hemolytic serum, which they name, respectively, erythrokatalysis and dysemia: (a) An easily produced and constant effect due to the holding up in the organs and ultimate phagocytosis of red cells. (b) A condition which may or may not supervene, characterized by actual solution of the cells within the blood stream, the accompanying hemoglobinemia being followed by the occurrence of hemoglobinuria. They conclude that in blackwater fever there is reason to believe that we are not dealing with the effects of a toxin elaborated by the malarial parasite, but with the action of substances produced by the human organism itself; in other words, with the effects of an autolysin. And if human autolysin is to occur, what diseased condition is more likely to produce it than malaria? Malaria actually gives rise within man's body to the very condition we try to bring about in the attempt to produce an autolysin experimentally. Under the circumstances which appear necessary for the occurrence of blackwater fever, it is obvious that repeated and persistent blood destruction and resorption must result, and, say the authors, we see again that if this hypothesis, which is only a hypothesis, be the true one, why the malignant tertian parasite, its special action on the red cells, and consequent stimulation to their phagocytosis, should above all be the one

concerned in the causation of blackwater fever. This is hypothesis, but it may serve its purpose of indicating in a very broad and general way how blackwater may be malarial in origin and yet not be malaria.

Clinical Journal, London

May 19

- 25 Cancer of the Gall Bladder, Bile Ducts, and Duodenum. J. Bland-Sutton.
 26 Gout and Its Treatment. W. Murrell.
 27 Criminal Responsibility of Aments. A. F. Tredgold.

Dublin Journal of Medical Science

May

- 28 Local Anesthesia in Minor Surgery. W. I. de C. Wheeler.
 29 Irish Recommendation of the Royal Commission on the Care and Control of the Feeble-Minded. W. R. Dawson.
 30 *Atrophy of the Testicle. C. G. Cumston.
 31 *Gas in the Stomach; Its Causation and Treatment. F. K. Cahill.

30. Published in The Albany Medical Annals, May, 1909, and abstracted in THE JOURNAL, May 29, p. 1793.

31. **Gas in the Stomach.**—Cahill deprecates the loose manner in which the terms fermentation and putrefaction are used in reference to flatulence. He contrasts them as follows:

FERMENTATION

1. Involves carbohydrates.
2. Produces acids mainly.
3. Numerous bacteria, especially long threads and yeasts or fungi.
4. Mainly in stomach or upper portion of alimentary canal.

PUTREFACTION

1. Involves fats and proteids.
2. Produces alkalies mainly.
3. Colon bacillus mainly.
4. Mainly in lower bowel and colon.

He enumerates and describes the various causal factors in the production of gastric gas, namely: (1) Air swallowing; (2) chemie gastric respiration; (3) mechanic gastric respiration; (4) inorganic production of carbon dioxid; (5) organic production of carbon dioxid and associated gases; (6) spasm of cardia or pressure from without. He urges more careful investigation in this class of cases, in place of the resort to routine mixtures for flatulence.

Journal of Laryngology, Rhinology and Otology, London

May

- 32 The Nasal Accessory Sinuses and the Optic Nerves. D. Grant.
 33 *Erroneous Results from Testing Persons with only one Functional Ear. M. Yearsley.

33. **Erroneous Results of Testing with Only One Functional Ear.**—Yearsley says that from time to time cases have been shown, of persons hearing well after removal of the stapes or with serious labyrinthine lesions. He quotes the case of a child of 12, recently under his care, who had some carious bone removed, establishing a communication with the middle ear some years ago, and on whom he subsequently performed the radical mastoid operation, the patient making a slow recovery. In this case, the labyrinth had received sufficient damage to render the equilibratory portion functionally inactive, and it is at least doubtful whether the cochlea was intact, yet careful tests of the hearing, repeated by Yearsley himself, showed a large amount of hearing in the operated ear. The subsequent use of Barany's noise producer to the left ear, however, clearly demonstrated that the hearing of the right ear was *nil*, yet his patient, a sharp intelligent child, insists that she can hear with her right ear. Yearsley suggests that the reported wonderful cases of restoration of hearing after serious interference with the labyrinth are probably of this character.

Annales de l'Institut Pasteur, Paris

April, XXIII, No. 4, pp. 273-359

- 34 *Septicemic Form of Cerebrospinal Meningitis. Cohen (Brussels).
 35 Paralyzing Action of Certain Acids on Peroxidase. G. Bertrand and M. Rozenband.
 36 Physiologic Research on Papain. Its Rapid Digestive Action. Immunization of Animals. E. Pozerski. Commenced in No. 3.

34. **Septicemic Form of Cerebrospinal Meningitis.**—Cohen regards the microbe causing the syndrome of this form of meningitis as a special bacillus, previously confounded with the influenza bacillus. It is found in the blood and induces, besides the meningeal lesions, purulent effusions in serous cavities. The infection occurs by way of the upper air passages, and he was able to reproduce it thus at will in animals, to

vaccinate them against infection and to cure other animals with the serum of the immunized animals. In the three clinical cases reported, the first child had bronchopneumonia and left-sided purulent pleurisy besides the meningitis; the second, bronchopneumonia and empyema in the left maxillary sinus, and the third bronchopneumonia and a suppurating process in the left wrist.

Annales de Méd. et Chir. Infantiles, Paris

May 1, XIII, No. 9, pp. 289-324

- 37 *Gastric Diseases in Children. (Affections locales de l'estomac chez l'enfant.) R. Fischl.
38 Main Routes of Infection with Tuberculosis in Young Children. (Principales voies de tuberculisation chez le jeune enfant.) E. Terrien.
39 Scarlatinal Paralysis of Ocular Muscles. (Paralysies oculaires au cours de la scarlatine.) E. Terrien.

37. **Gastric Diseases in Children.**—Fischl is professor of diseases of children at Prague, and he here remarks that congenital stenosis of the pylorus and congenital megacolon are almost unknown in his country. He thinks that this has some connection with the universal prevalence of breast nursing. He deplors the way in which subacute and chronic catarrhal affections of the stomach in children are treated by old routine methods instead of utilizing the modern means of diagnosing chronic gastric affections and thus learning the bases for effectual treatment. One great mistake of parents is in considering milk as a drink instead of a food; the children are urged to drink it in addition to their regular food; a stomach affection may often be cured by merely restricting the child to a pint of milk in the twenty-four hours. The diet should be light; the meat should be chopped fine and vegetables given in the form of purées. Constipation should be combated by suppositories or enemas, and a wet pack should be applied around the abdomen and back when the child goes to bed, and left till morning. If necessary to stimulate the appetite, he orders 10 or 15 drops half an hour before meals of compound tincture of cinchona or bitter tincture, avoiding preparations containing alcohol and glycerin. In case of much anemia he gives a little iron, preferably a mixture of 1 gm. carbonate of iron with 5 gm. sugar, divided into ten doses, two of which are taken during the day in milk. The severest cases may require lavage of the stomach and complete fasting at first. In conclusion, Fischl expatiates on the importance of curing gastric affections in children, as many adults suffering from stomach trouble can trace its origin back into childhood.

Archives Générales de Chirurgie, Paris

April, III, No. 4, pp. 331-440

- 40 *Treatment of Severe Forms of Hypospadias and Epispadias by "Tunnelization" with Transplanted Flap of Skin as Lining for the new-formed Urethra. G. Nové-Josserand.
41 *Treatment of Aneurisms on the Limbs. Sencert. Commenced in No. 3.

40. **"Tunnelization" with Transplanted Flap in Treatment of Hypospadias.**—Nové-Josserand gives a minute illustrated description of his method of remedying hypospadias and epispadias. The only objections that have been made to this method are the insufficient caliber of the new-formed urethra and the persistence of a fistula at the junction of the new passage with the old. It is easy to remedy these if they occur, the results of the technique on the whole having proved extremely satisfactory in his hands. It is applicable in all cases of loss of substance in the urethra, of traumatic or inflammatory origin, and it ensures a new and permeable urethral passage, of the proper length. The skin flap is cut from the thigh and is twisted spirally over a sound to form a tube with the raw side out, or is rolled up over the sound like a cigarette paper; the edges are caught together with very fine catgut. The sound with its outer tube of skin is then drawn into the new tunnel by means of a special clamp which bulges where it seizes the sound and skin tube, thus preventing dislodgement of the latter as the sound is pulled through the new tunnel.

41. **Treatment of Aneurism on the Limbs.**—Sencert gives a number of rules as to what arteries stand ligating, and the best points for the ligation, deduced from comparative study of cases in his own and others' experience, with other suggestions for treatment of aneurisms on arms and legs.

Bulletin de l'Académie de Médecine, Paris

April 27, LXXIII, No. 17, pp. 461-504

- 42 *Cerebrospinal Meningitis. L. Vaillard.
43 *Emigrants and Trachoma at Paris. (Les émigrants et l'ophtalmie granuleuse à Paris.) A. Chantemesse.
44 *Eleven Cases of Abscess in the Brain. (Abscess du cerveau.) E. Boinet.

May 4, No. 18, pp. 505-560

- 45 *Cerebrospinal Meningitis. A. Netter.
46 *Prevention of Blindness. (Prévention de la cécité dans le travail.) Motais. Id. (Traitement de l'ophtalmie des nouveau-nés par le protargol.) Id.

42. **Cerebrospinal Meningitis.**—Vaillard states that during the first three months of this year 139 cases of epidemic cerebrospinal meningitis developed in 45 garrisons throughout France, with 38 deaths. The value of serotherapy was demonstrated in a number of the epidemics. The patient is isolated and his two neighbors in the dormitory are also isolated for 15 days, and all the men in the dormitory are kept apart from the other troops and are examined for the germs. The rooms are disinfected. Among 372 men thus isolated 72 germ-carriers were discovered, but only one of these carriers developed the disease later.

43. **Emigrants and Trachoma.**—Chantemesse says that 288 persons with trachoma have been treated at the Quinze-Vingts hospital during the last two years; most of them were emigrants passing through Paris on their way to America.

44. **Abscess of the Brain.**—Boinet gives the details of 11 cases, study of which shows that abscess of the brain is often the manifestation of a general infection or the direct action of germs from foci elsewhere. In some cases, the pneumococcus was found in pure cultures, in others a suppurative meningitis, and in one case the abscess in the right occipital lobe was the result of puerperal infection. Operative success depends on the stage of the abscess. When intervention occurs early, the abscess is encysted and occupies only the tolerant regions of the gray substance and psychomotor centers. Later than this, the abscess spreads and entails complications.

45. **Epidemic Cerebrospinal Meningitis.**—Netter has had 69 cases of epidemic meningitis in his charge and estimates that there have been fully 300 cases in Paris during the prevailing epidemic. He is enthusiastic over the benefits of serotherapy, stating that it not only attenuates and shortens the course of the disease, but seems to prevent the development of sequels. He used serum of six different makes, but found Flexner's superior to the others. He continues the injections for three or four days, even when the disease seems to be favorably modified by the first injections. In one case, he made 10 injections in the course of two weeks, injecting 265 c.c. of serum; treatment in this severe case did not commence until the tenth day of the disease. He advocates injecting the serum in every case suggesting the possibility of epidemic meningitis, without waiting for the results of bacteriologic examination. No harm followed the injection in several cases in his experience in which the disease proved to be of other origin. The injection was made into the lateral ventricle in 4 infants with contractures so severe that lumbar puncture was impossible or there was reason to suppose that the communication between the ventricle and the spinal canal was interrupted. The details of 48 cases are tabulated; the list includes one of his own children, a child of 11, promptly cured by 3 injections of Flexner's serum, a total of 90 c.c. He acknowledges that he was himself the carrier in this case; meningococci were cultivated from his own nasopharyngeal mucus. He had had an intense coryza during the few days before his child's illness, following a long call on a meningitis patient whom he sent to the hospital the same day. This was just five days before his child developed symptoms. Direct contagion seemed evident in 10 of his cases, but the rarity of familial cases, the long intervals between the cases, and the almost total absence of direct transmission during the course of the disease, seem to indicate that convalescents and healthy carriers are responsible for the propagation of the disease. Nothing observed suggests direct, immediate contagion, by places or objects, while everything is in favor of the intermediation of germ-carriers and transmission by old convalescents. He found that 25.7 per cent. of 35 persons examined in 11 families, including 2 well-to-do families, were

healthy carriers. In well-ventilated apartments, in hospitals, etc., the proportion of carriers is very small, and physicians and nurses are rarely attacked. There was only a single case of the kind in the recent Silesia epidemic with 3,700 patients. His experience has confirmed the assumption that the patients retain the meningococci only a short time, and it has also shown that meningitis, like pneumonia, displays a predilection for the winter and spring months, the maximum in March. There seems to be something in the season, he thinks, which exalts the virulence of the germs of these diseases in these special months, as also possibly of influenza, scarlet fever, mumps, etc. External influences modify the virulence of the meningococci and favor their diffusion, these influences being felt simultaneously over large areas of country and affecting the germs harbored by healthy carriers. This assumption explains the almost simultaneous development of meningitis epidemics in places without direct communication.

46. **Prevention of Injury of Vision in Various Trades and in the New-Born.**—Métais has found an alarming percentage of defective vision in certain trades requiring close application of the eyes or in which these organs are exposed to injury from fumes or dust, and suggests a number of measures for prophylaxis. His suggestions in regard to prevention of ophthalmia neonatorum were given in the Paris Letter, page 1849.

Presse Médicale, Paris

May 12, XVII, No. 38, pp. 337-344

- 47 *Osteomyelitis of the Spine. (Ostéomyélite vertébrale.) Kirmisson.
48 Ring Discoloration of the Skin. (Livedo annularis.) L.-M. Bonnet.

47. **Osteomyelitis of the Vertebrae.**—Kirmisson reports a case of vertebral osteomyelitis, the fourth he has encountered in his long practice. The patient was a little girl with a spindle-shaped tumor in the left dorsolumbar region, following the direction of the sacrolumbar muscles, and fully 15 cm. long by 7 wide, the lower end on a level with the iliac crest and the top reaching to the eleventh and twelfth dorsal vertebrae. The tumor was hot and fluctuating, slightly painful, but there was no suggestion of a tendency to a gibbus and the spine could be flexed readily. The tumor had developed in the course of fifteen days; the child had been suffering from chilblains during the month or two before. Puncture revealed numbers of staphylococci, and the child was at once anesthetized and the focus opened by a long incision, and the cavity cauterized with pure carbolic acid, neutralized with alcohol; drainage was provided. The child was soon cured. He adds that it is important in such cases to avoid touching the bones, as in all cases of osteomyelitis. The bones should be left intact, and the prognosis depends on whether they are involved or not, especially whether the lesion involves the body of the vertebra or the arches. If the spongiosa of the vertebrae is affected the lesion rapidly spreads and the vessels become involved, as also the venous plexus in and outside of the spine, with serious sequels and pyohemia. When the process is limited to the posterior segment, the prognosis is much more favorable. In 43 cases collected by Grisel in 1903 the body was involved in 22 with 22 deaths, and the arch alone in 21 with 16 recoveries. When the abscess is in the lumbar region the psoas muscle may become involved, with suppurative psoitis and destruction of muscular tissue; this has been observed a number of times in young children, but sequestrs and fistulas are rare.

Semaine Médicale, Paris

May 12, XXIX, No. 19, pp. 217-228

- 49 *Comparative Differential Value of Orthodiagraphy and Percussion of the Heart in Pure Mitral Stenosis. (Valeur comparée de l'orthographie et de la percussion du cœur dans le rétrécissement mitral pur.) H. Vaquez and E. Bordet.

49. **Comparative Diagnostic Value of Orthodiagraphy and Percussion of the Heart.**—Vaquez and Bordet refer especially to differentiation of pure mitral stenosis, and show by twenty diagrams of the findings that these two methods of diagnosis supplement each other and should not be regarded as destined one to supplant the other; one may be applied when conditions render the other impracticable.

Berliner klinische Wochenschrift

May 10, XLVI, No. 19, pp. 862-908

- 50 *Chromocystoscopy. (Erfahrungen mit der Chromocystoskopie.) E. Joseph.
51 *Influence of Treatment on Serodiagnosis of Syphilis. (Die Wassermann'sche Reaktion und ihre Beeinflussung durch die Therapie.) F. Hoehne.
52 Staining Technic for Diagnosis of Syphilis. (Luesnachweis durch Farbenreaktion.) Symanski, Hirschbruch and Gardewski.
53 *Prevention of Conception. (Ueber antikonzepationale Mittel.) F. Lehmann.
54 Diazo Reaction in Yellow Fever. (Diazoreaktion beim Gelbfieber.) C. Vargas and H. Seidelin.
55 Pathology of Secretion of Gastric Mucus. (Zur Pathologie der Magenschleimabsonderung.) L. v. Aldor. Commenced in No. 18.

50. **Chromocystoscopy.**—THE JOURNAL, Jan. 2, 1904, page 69, published a detailed description of this new method of testing the functioning of the kidneys by the elimination in the urine of a stain injected into the buttocks. Joseph here relates his experiences with it to date, and quotes other writers who after a period of skepticism are now using the test as a routine diagnostic measure (THE JOURNAL of Dec. 5, 1908, page 2005). He states that it has fulfilled all its promises and more, and frequently does away with the necessity for catheterization of the ureters and other functional tests. In seventeen cases in which the operation was done on the findings of chromocystoscopy alone, they were confirmed in every respect. A few minutes after injection of the stain the blue urine can be seen spurting from the ureter mouths. The interval before its appearance, the intensity of the stain, the number of jets to the minute, the force of the jet—all these points are borne in mind in comparing the urine from



the two kidneys. If one ureter eliminates dark blue urine while there is no trace of the stain in the urine from the other kidney, this may be due to obstruction by a stone, to compression of the ureter by an abscess or to such extensive destruction of kidney tissue that it is impermeable for the stain. It may be important then to catheterize the ureter. With an incipient tuberculous focus, the hyperemia may induce exaggerated functioning of the kidney at first, and bacteriologic examination of the urine is then more instructive than chromocystoscopy. But as soon as this stage is past, the change in the elimination of the blue urine is so striking that the surgeon can never mistake it. In one case reported, the diagnosis of a left tuberculous pyonephrosis was unmistakable, but the condition of the other kidney was dubious, as cystitic lesions rendered catheterization of the ureter impossible; the general condition was extremely bad, and there was considerable edema. Chromocystoscopy, however, showed that the right kidney was functioning normally, and the left kidney was successfully removed. A number of such instances are related where even cystoscopy was barely possible and the mouths of the ureters unfindable. The blue jet cleared away all doubts and permitted proper treatment. It shows whether the kidney is capable of taking up from the blood the urine-producing substances and of eliminating them in due amounts and time; this information is liable to be much more reliable than that obtained from catheterization of the ureters, as he illustrates by several examples. One particularly instructive case was that of a woman requiring nephrectomy on account of multiple abscesses. The blue jet from the other kidney was normal and this kidney functioned satisfactorily until the woman succumbed to an intercurrent affection when the remaining kidney was found extremely small and not fully developed, yet its functional capacity had been ample. If its condition had been known, the surgeon would never have dared

to trust to it. The chromocystoscopy is thus a guide to the true functional capacity of the organ, regardless of anything else. In high fever the urine may turn blue in one minute instead of requiring the usual interval of five minutes. He thinks that this suggests that the general conditions in the circulation have not been sufficiently regarded hitherto in functional tests of the kidneys. Joseph concludes his long article with an account of a case in which a woman complained of intense kidney stone colics, but he advised against operating, as the chromocystoscopic findings were normal. Stones voided in the urine and occasional hematuria were accepted by the surgeon, however, as sufficient reason for operating. The kidney was exposed, but found normal, and the woman confessed that she made up the stones out of tooth powder and blotting paper and pushed them into her bladder with a hairpin, with which she had also induced the hematuria.

51. Serodiagnosis of Syphilis Under Influence of Treatment.—This communication analyzes the findings in 1,512 cases of certain or suspected syphilis and 320 non-syphilitic patients. The findings confirm the specific importance of the test and show that energetic mercurial treatment is able to transform the positive into a negative reaction in a large proportion of cases. Calomel proved most energetic in this respect, with mercury salicylate next. A strong positive reaction was obtained in 23 out of 107 prostitutes, with apparently no signs or history of syphilis; the serodiagnosis is thus able to reveal syphilis in latent cases. Fourteen were given energetic mercurial treatment on the basis of the seroreaction alone, and in half of these the findings became negative by the end of the course. There were only 3 positive responses in the 320 control cases, and one of these patients had scarlet fever; another had scars suggesting a possibility of old syphilitic infection, and the third had a soft chancre which possibly may have been traceable to mixed infection.

53. Means to Prevent Conception.—Lehmann suggests that possibly the use of chemical means to destroy the spermatozoa may be responsible for certain deformities in the fetus as the spermatozoon may be injured while yet retaining vitality enough to fertilize the ovum.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena
May 14, XII, No. 8, pp. 289-320

56 *Stenosis of the Pylorus in Infants. (Die Pfortnerenge im Säuglingsalter.) W. Kaupe. Commenced in No. 5.

56. Stenosis of the Pylorus in Infants.—Kaupe has found 346 articles in the literature on this subject of congenital stenosis of the pylorus, and concludes from study of them that the etiology of the condition is still a mystery. The symptoms are sometimes ascribed to dyspepsia, atrophy, inanition, syphilis, etc., and the true cause ignored. When the vomiting is not accompanied by signs of indigestion, pyloric stenosis should be suspected, as also when the stools contain meconium and there is a tendency to constipation. Visible peristalsis in the stomach is an unmistakable sign, but it may require great patience to watch for it. Palpation of the hypertrophied pylorus (possibly under chloroform) and scanty urine further confirm the diagnosis, especially in connection with the failure of therapeutic measures. The consensus of opinion seems to be in favor of regarding the condition as exclusively belonging to the domain of internal medicine. Regulation of the diet is the main point according to most of the writers. Breast milk is preferable, drawn and given with a spoon, a little at a time every hour, supplemented possibly by lavage of the stomach. Carlsbad salts are recommended by some to prevent acidity, and opium by others, while some denounce it as liable to increase the acidity by promoting gastric secretion. Strümpell recommends atropin, Heubner tincture of valerian with a trace of opium. Magnesia proved beneficial in one case. A number of writers urge operation if internal measures do not promptly relieve, and cases are on record in which children three and five weeks old were successfully operated on.

Deutsche medizinische Wochenschrift, Berlin

May 13, XXXV, No. 19, pp. 825-864

57 *Is Muscular Dystrophy ever Curable? (Gibt es heilbare Fälle von Dystrophie?) E. Jendrassik.

- 58** Immunization against Hydrophobia with Normal Brain Substance. (Immunisierung gegen Wut mittels normaler Hirnsubstanz.) W. Krauschkin.
59 *Traumatic Neuroses. (Zur kritischen Symptomatologie der Unfallsneurosen.) E. Schlesinger.
60 *Cultivation of the Spirochaeta Pallida. (Züchtung der Spirochaete pallida Schaudinn.) J. Schereschewsky.
61 Sunlight Treatment of Tuberculous Laryngitis. (Zur Therapie der Kehlkopftuberkulose mit besonderer Berücksichtigung der Sonnenlichtbehandlung. Ein neuer praktischer Sonnen Spiegel.) T. Janssen.
62 Local Quinin Treatment of Tuberculous Foel. (Lokale Chininbehandlung der Tuberkuloseerde.) O. Bey.
63 *Treatment of Ringworm with Ultraviolet Rays. G. Joachim.
64 *Perils of Hyperemic Treatment. (Ueber die Gefahren des Bierschen Stauungsverfahrens.) A. Schäfer.

57. Curable Dystrophia.—Jendrassik adds two more to the few cases on record in which partial paralysis dating from childhood was evidently the result of insufficient developing power of certain elements, and when the organism entered on a phase of exceptionally energetic growth, these elements shared in the increased vitality and developed to such an extent as to restore conditions nearly to normal. In one of his cases the improvement was probably to be ascribed to the vigorous gymnastic exercises which the patient, a young man, perseveringly kept up. The familial nature of the dystrophy was peculiarly evident in this case, as the patient's sister, brother and uncle presented the same kind of disturbances, but in them they had continued a slowly progressive course to almost complete helplessness. His other patient was a girl of ten with insufficiency of muscular action with loss of tendon reflexes and weakness in the muscles of the back, abdomen and shoulders. Two years later great improvement was apparent; the tendon reflexes were normal or nearly so, and the girl was able to take part in mountain climbing, etc., although still somewhat awkward with her hands.

59. Traumatic Neuroses.—Schlesinger raises a warning voice that the symptoms ascribed to a traumatic neurosis are liable in many cases to be due to some pre-existing affection. He was able to examine 100 victims of various accidents in the textile trades within ten days of the accident, and he was amazed at the large proportion of pathologic conditions encountered. Only 22 of the 100 persons were found normal; 58 of the others had exaggerated tendon reflexes, attenuated in 6, with complete absence in 2; the visual field was normal in only 69; only 38 were free from dermatography; 30 from tremor of the lids, and the pulse rate in 28 was abnormal. In one case the symptoms indicated intense neurasthenia, probably attributable to still manifest syphilis. If the man had not been examined early, before sufficient time had elapsed for development of a functional neurosis, the condition would have been regarded as a typical traumatic neurosis. His findings emphasize the importance of a complete examination as early after the accident as possible to detect pre-existing affections, and thus be able to separate them from new symptoms for which the accident is responsible.

60. See Berlin Letter, page 1850.

63. Treatment of Alopecia Areata with Ultraviolet Rays.—Joachim gives several illustrations to show the rapid improvement under phototherapy with the ultraviolet rays. Success was obtained in many cases in which previous measures applied for months had failed to benefit.

64. Dangers of Constriction Hyperemia.—Schäfer calls attention to two cases which show that there is possible danger in the application of the constricting band. In one case the Roentgen findings proved misleading and constriction was applied for supposed osteitis and periostitis, when in reality the trouble was a sarcoma. The only effectual treatment, amputation, was postponed so long while hyperemia was being applied that he fears for the ultimate outcome in this case, and he warns others not to fall into this same error in similar cases of destructive processes in the bones. In the other case, neuritis developed in the radial nerve below the band, although there was no evidence of atrophy from the pressure.

Deutsche Zeitschrift für Chirurgie, Leipsic

April, XCVIII, Nos. 4-5, pp. 311-501

65 Fatal Case of Torsion of Epiploic Appendix with Multiple Diverticula in Sigmoid Flexure. (Torsion eines Fetthanhangs und multiple Darmdivertikel an der Flexure sigmoidea.) A. Ebner.

- 66 *Carcinoma of Common Bile Duct. (Choledochuscarcinom an der Papilla Vateri.) R. Morian.
 67 Laparotomy by Transverse Incision in Posterior Rectus Aponeurosis. (Laparotomie durch Querschnitt in der hinteren Rektusscheide.) K. Winkelmann.
 68 *Operative Treatment of Ascites with Cirrhosis of the Liver. Y. Soyesima.
 69 Outcome of 38 Operations for Hydatid Cysts in Liver. (Erfolge der Leberechinococcus-Operationen an der I. chir. Universitätsklinik zu Budapest, 1897-1906.) G. von Lohmayer.
 70 *Idiopathic Osteopsathyrosis. M. Matsuoka.
 71 Pathology of Mammary Tumors, Especially Carcinomatous Degeneration of Fibroadenoma. (Zur Geschwulstlehre.) H. Kuru.
 72 *Primary Tuberculous Splenomegaly. C. Ciaccio.
 73 Operating for Cleft Palate with Peroral Tube. (Operation des Wolfkrachens mittels peroraler Intubation.) F. Kuhn.
 74 Suture of Aponeurosis, especially in Operations for Umbilical Hernia. (Experimentelle und histologische Beiträge zur Frage der Aponeurosennaht bei Laparotomien.) Esau.

66. **Carcinoma in the Common Bile Duct Near the Papilla.**—Morian has encountered four cases of this kind and performed a palliative operation in three, while a radical operation was possible in the fourth case, and the patient is still in good condition and well nourished, without signs of metastasis, nine months since the intervention. Patients with carcinoma of the papilla are generally seen late, when the cachexia is advanced and there is considerable cholemia, but more than half of the patients in the seven cases on record in which a radical operation was possible, survived the intervention. In his case transduodenal excision preceded the cholecystenterostomy.

68. **Anastomosis of Saphenous Vein to Peritoneum for Ascites.**—THE JOURNAL recently published (May 22, page 1183) an account of Ruotte's method of treating chronic ascites with cirrhosis of the liver by suturing to the peritoneum, just above Poupart's ligament, the peripheral end of the saphenous vein, severed 8 cm. above its mouth. Soyesima here reports from Kyoto three cases in which this treatment was applied with success in one case. He lauds this operation as an important addition to our surgical measures against ascites from cirrhosis of the liver. In the first case reported, the patient, a man of 38, feels constantly well, with no trace of ascites, and a year has elapsed since the operation which proved successful after omentopexy, decapsulation of both kidneys and continuous drainage of the abdominal cavity had failed to cure. In the other cases the ascites was the result of pericarditic pseudocirrhosis of the liver, and neither cardiomyolysis nor decapsulation of the right kidney, splenopexy or hepatopexy or the Ruotte operation gave relief; the latter failed also in the third case.

70. **Idiopathic Osteopsathyrosis.**—In Matsuoka's case the Roentgen rays showed eighteen fractures which had occurred in the course of two years; the patient was a girl of 6, whose older sister displayed the same tendency to abnormal fragility of the bones. The fractures occurred symmetrically. He insists that the affection has nothing in common with rachitis.

72. **Primary Tuberculosis of the Spleen.**—Ciaccio summarizes from the literature nine cases of a primary tuberculous process in the spleen and reports another from his own experience. His patient was a woman of 45, free from tuberculous antecedents or family history, and except that she was rather pale, seemed healthy and well nourished. A sensation of oppression and slight pain and tenderness in the spleen region had commenced about a year before, and the spleen was found enlarged. The symptoms were attributed to malaria, but quinin failed to benefit, and the spleen was exposed and a wedge cut out, after which the abdomen was sutured. The microscope revealed the tuberculous nature of the process and the presence of a few tubercle bacilli, and inoculated animals soon succumbed to miliary tuberculosis, so that splenectomy is advised.

Fortschritte der Medizin, Leipsic

April 30, XXVII, No. 12, pp. 449-480

- 75 Work Cure in Mental and Nervous Affections. (Arbeit als Kurmittel in der Psychotherapie.) A. Stegmann. Commenced in No. 11.
 76 *Plastic Substitute for Lost Finger or Thumb and Palm. (Ersatz von verlorenen Fingern, insbesondere des Daumens, und Handtellerplastik.) K. Noesske.
 76. **Plastic Substitute for Lost Finger or Thumb.**—Noesske has succeeded in restoring function, after complete loss of the

right thumb, by forming a new thumb over a bayonet-shaped piece of bone taken from the tibia. The patient was a boy of 13, and the new thumb has been in use for nine months and shows no signs of absorption or shriveling. The thumb was made from a pedunculated skin flap from the chest, the pedicle cut after three weeks; the tip of the thumb was then modeled and sutured. Not until all this had healed was any attempt made to insert the bone support. Then the new thumb was incised and the piece of bone from the tibia introduced. It grew to the first metacarpal bone in three or four weeks, and there is now merely a linear scar. The boy can use his new thumb to good effect, writing well with it, and sensation is nearly normal. Noesske intends to transplant a nail from a toe to complete his work. He abstained from using a piece of rib for the support for several reasons, among them the fact that the rib tissue is liable to be more flexible and not so firm as the tibia. He reports a number of similar plastic operations on the hand.

Medizinische Klinik, Berlin

May 9, V, No. 19, pp. 687-722

- 77 Dieting for Over and Under Nourishment. (Ueber- und Unterernährungskuren.) L. Kuttner.
 78 *Diabetic Balanoposthitis. O. Scheuer.
 79 Torticollis after Removal of Adenoid Vegetations. (Ueber Schiefhals nach Entfernung der Wucherungen des Nasenrachenraums.) J. Weinstein.
 80 Spinal Cord Diseases and Pernicious Anemia. (Rückenmarkserkrankung und perniziöse Anämie.) Boldt.
 81 Mechanism of Carbonated Baths. (Verhalten der Kohlensäure in künstlichen und natürlichen Kohlensäurebädern.) K. Beerwald and R. v. d. Heide.
 82 Measurement of Volume of Human Body at Different Periods. (Wachstum des menschlichen Körpergewichtes in den verschiedenen Lebensaltern. Volumenmessung von Lebewesen.) H. Friedenthal.

78. **Diabetic Balanoposthitis.**—Scheuer describes a case in which he was able to ward off the threatening phimosis by daily careful cleansing and mobilization of the prepuce. Cases are known of fatal gangrene after operations for diabetic phimosis. In his case the affection developed about the fifth year of the diabetes, and was treated at first on the assumption that it was of venereal origin, but without benefit. It finally subsided under more energetic antidiabetic measures.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

LEGAL MEDICINE AND TOXICOLOGY. By R. L. Emerson, A.B., M.D., Member of the Massachusetts Medico-Legal Society. Cloth. Pp. 593, with illustrations. Price, \$5. New York: D. Appleton & Co., 1909.

FURTHER ADVANCES IN PHYSIOLOGY. Edited by Leonard Hill, M.B., F.R.S. Cloth. Pp. 440, with illustrations. Price, \$4.20. New York: Longmans, Green & Co., 1909.

VACCINE AND SERUM THERAPY. Including also a Study of Infections, Theories and Immunity, Opsonins and the Opsonic Index. By Edwin Henry Schorer, B.S., M.D., Assistant Professor of Parasitology and Hygiene, University of Missouri. Cloth. Pp. 131, with illustrations. Price, \$2. St. Louis: C. V. Mosby Co., 1909.

A POCKET FORMULARY. By E. Quin Thornton, M.D., Assistant Professor of Materia Medica in the Jefferson Medical College, Philadelphia. Edition 9. Flexible leather, with flap and pocket. Pp. 287. Price, \$1.50. Philadelphia: Lea & Febiger.

BLUTUNGEN UND AUSFLUSS AUS DEM UTERUS: IHRE URSACHEN UND BEHANDLUNG. Von Hofrat Dr. A. Theilhaber. Paper. Pp. 87, mit 9 Figuren im text und 4 Tafeln. Price, 2.50 marks. München: Verlag von Ernst Reinhardt, 1909.

UNIVERSITÉ DE GENÈVE: SÉANCE SOLENNELLE DE DISTRIBUTION DES PRIX DE CONCOURS ET DE PRÉSENTATION DU NOUVEAU RECTEUR, 4 Juin, 1908. Rapports du Recteur et des Jurys; Allocution du Nouveau Recteur Précédés d'une Leçon Inaugurale sur les Caractères Distinctifs du Français Moderne. Paper. Pp. 81.

NINETEENTH ANNUAL REPORT OF THE EYE, EAR, NOSE AND THROAT HOSPITAL OF New Orleans, La. 1908. Paper. Pp. 75.

MODERN MEDICINE. Edited by William Osler, M.D., Regius Professor of Medicine in Oxford University, England. Assisted by Thomas McCrae, M.D., Associate Professor of Medicine and Clinical Therapeutics in the Johns Hopkins University, Baltimore. Vol. VI. Diseases of the Urinary System—Diseases of the Ductless Glands—Diseases of Obscure Causation—Diseases of the Muscles—Vasomotor and Tropic Disorders—Life Insurance. Cloth. Pp. 799, with illustrations. Price, \$6. Philadelphia: Lea & Febiger, 1909.

PRACTICAL MEDICINE SERIES. Edited by Gustavus P. Head. Series 1909. Vol. III: The Eye, Ear, Nose and Throat. Edited by Casey A. Wood, C.M., M.D., D.C.L., Albert H. Andrews, M.D., Gustavus P. Head, M.D. Cloth. Pp. 366, with illustrations. Price, \$1.50. Chicago: The Year-Book Publishers.

PROCEEDINGS OF THE ATLANTIC CITY SESSION

MINUTES OF THE SIXTIETH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, N. J., JUNE 7-11, 1909

House of Delegates

First Meeting—Monday Morning, June 7

The House of Delegates convened in the Solarium of the Traymore Hotel at 10:30 a. m., and was called to order by the First Vice-President, Dr. T. J. Murray, Montana, in the absence of President Burrell.

In calling the House to order, Vice-President Murray said: I regret very much that President Burrell will not be here on account of illness, and in his absence he has asked me to preside.

Dr. H. Bert Ellis, California, presented the preliminary report of the Committee on Credentials as Chairman.

The Secretary called the roll, and seventy-four members responded.

THE FIRST VICE-PRESIDENT: The next in order is the presentation, correction and adoption of the minutes of the Fifty-ninth Annual Session.

DR. ALEXANDER R. CRAIG, Pennsylvania: I move that the minutes of the previous session be adopted as printed.

This motion was seconded by several and carried.

THE FIRST VICE-PRESIDENT: President Burrell's address will be read by the General Secretary.

President's Address

To the Members of the House of Delegates of the American Medical Association:

It is with many regrets that I have concluded to follow the advice of my medical advisers not to attend the meeting at Atlantic City. There are a few suggestions and some recommendations that I beg to make to your body.

A question has arisen as to the wisdom of increasing the number of the members of the Board of Trustees, and of adding the President of the Association *ex officio*. I believe that it would be a mistake to increase the number of the members of the Board of Trustees, or to make the President of the Association *ex officio* a member of the Board. During the last two years I have watched with great interest the work of this body, and I have been much impressed with the judicious care that its members have taken in formulating the policies of the Association. A larger body would be less apt to be conservative, and I take it that there should be in the Association a distinctly conservative body.

Recommendation 1.—I respectfully recommend that the President and President-elect of the American Medical Association be invited, and that all of their expenses be paid, to be present at all meetings of the Board of Trustees, in order that they may be conversant with the policies there formulated. The present need, to my mind, of the American Medical Association is a more closely knit organization, and the vesting of executive power in the hands of the Board of Trustees, delegated, as it must be eventually, to the General Manager of the Association.

I think that there are too many committees in the American Medical Association which are acting more or less independently of the Board of Trustees. It is true that they are controlled financially by the Board of Trustees, but this is not sufficient; their policies should be approved by the Board of Trustees. This is particularly true of the Committee on Medical Legislation, the Council of Medical Education and the Council of Pharmacy and Chemistry. Too frequently in the past well-defined policies have been presented by committees as if they were approved by the whole Association; such policies should be presented, before they are published, to the Board of Trustees for approval. The expenses of travel of the Committee on Medical Legislation, the Council on Medical Education and the Council of Pharmacy and Chemistry should be paid for by the Association. Small, special committees

appointed for a year are undoubtedly of value, but the continuance of these committees over a number of years is unwise. Special committees have in the past been appointed by the sections, and it is my belief that these committees before publishing their reports, which too frequently appear to carry with them the authority of the whole Association, should be submitted to the Board of Trustees for approval.

The policies of all committees should be submitted to the Board of Trustees for its approval, but naturally the committees should always be answerable to the House of Delegates.

Recommendation 2.—I suggest that the defined policies of all committees and sections of the American Medical Association shall, before being issued to the public, be approved by the Board of Trustees.

Recommendation 3.—I suggest the expenses of travel of members of the standing committees, the Committee on Medical Legislation, the Councils on Medical Education and on Pharmacy and Chemistry be paid by the Association.

There is a growing tendency on the part of certain members of the Association to use political methods in influencing legislation, state and national. I believe that this movement is fraught with danger. If such work could always be done judiciously, well and good; but this influence is frequently exerted by members of the medical profession who are "babes in arms" politically. Their motives are excellent, but their discretion is open to question. The employment of one individual to serve as a lobbyist in Washington, or elsewhere, is a mistake; it is the adoption of trades-union methods, and will sooner or later bring the medical profession into discredit.

Recommendation 4.—I suggest that the Board of Trustees be requested to report to the House of Delegates at the meeting in 1910 their opinion as to the wisdom of separating the offices of Editor and General Manager and Secretary of the Association. The reason for this recommendation is not far to seek. At present the offices of Secretary and Editor and General Manager are held by one man, who, by force of circumstances, has turned on him the limelight of public opinion; he is believed to be, and as a matter of fact is, largely responsible for the policies of the Association. This is not right, nor is it fair to an individual man that he should have this great amount of seeming power placed in his hands. With the keenest possible scrutiny I have considered it my duty as President to observe the acts of your General Secretary during my years as President-elect and as President of the Association. I can report to you only that I think his work is admirable, that his acts have always been so far as was possible, judicious, and that he is deserving of the highest possible commendation for the remarkable conduct of an extremely trying double office. The recommendation that I have made as to the separation of these two offices may seem radical; all the more reason why the Board of Trustees should carefully consider and report to the House of Delegates in 1910 as to the expediency of carrying this measure into effect.

Gentlemen of the House of Delegates, the office of President of the American Medical Association is a great honor, but it should be distinctly understood that the President is practically a figure-head and not responsible for the policies of the Association. The Board of Trustees should be vested with the policies of the Association, always answerable to the House of Delegates.

I am sincerely grateful for the cordial support that you gave me last year at the Chicago meeting. My shortcomings as a presiding officer were overlooked, and a spirit of harmony prevailed which was conducive to good work. Sensible as I am that the honor of being the titular head of the medical profession of this great republic is one that can come to but few, the opportunity of meeting you gentlemen from north, south, east and west, has given me more pleasure than the honor you conferred on me.

The address was referred to the Reference Committee on Reports of Officers.

Reference Committees Appointed

The General Secretary announced the following Reference Committees:

COMMITTEE ON CREDENTIALS

H. Bert Ellis, California, Chairman.
E. W. Weis, Illinois. J. H. J. Upham, Ohio.
Oscar Dowling, Louisiana. D. Chester Brown, Connecticut.

REFERENCE COMMITTEE ON REPORTS OF OFFICERS

A. R. Craig, Pennsylvania, Chairman.
Donald Campbell, Montana. D. S. Fairchild, Iowa.
J. W. Pettit, Illinois. E. Denegre Martin, Louisiana.

REFERENCE COMMITTEE ON MEDICAL EDUCATION

George Dock, Section Practice of Medicine, Chairman.
H. D. Arnold, Massachusetts. W. W. Richmond, Kentucky.
A. Vander Veer, New York. Members of the Council on Medical Education, *ex officio*.
Victor H. Stickney, North Dakota.

REFERENCE COMMITTEE ON AMENDMENTS TO CONSTITUTION AND BY-LAWS

H. Work, Colorado, Chairman.
Geo. W. Guthrie, Pennsylvania. Frank Paschal, Texas.
F. M. Crandall, New York. J. Shelton Horsley, Virginia.

REFERENCE COMMITTEE ON SECTIONS AND SECTION WORK

J. H. Carstens, Chairman, Section on Obstetrics.
S. S. Crockett, Tennessee. J. Howell Way, North Carolina.
L. M. Halsey, New Jersey. Thomas McDavitt, Minnesota.

REFERENCE COMMITTEE ON RULES AND ORDER OF BUSINESS

A. L. Wright, Iowa, Chairman.
C. H. Beecher, Vermont. H. F. Harris, Georgia.
J. Wythe Cook, Dist. of Columbia.

REFERENCE COMMITTEE ON LEGISLATION AND POLITICAL ACTION

Walter B. Dorsett, Missouri, Chairman.
G. L. Taneyhill, Maryland. James W. May, Kansas.
Edwin Walker, Indiana. J. W. Clemmer, Ohio.
Members of the Committee on Medical Legislation, *ex officio*.

REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

T. A. Woodruff, Chairman, Section on Ophthalmology.
J. H. Pierpont, Florida. J. D. Griffith, Missouri.
A. M. Hume, Michigan. John Champlin, Rhode Island.

JUDICIAL COUNCIL

C. E. Cantrell, Texas, Chairman.
J. H. Wilson, Delaware. H. A. Christian, Section Pathology and Physiology.
Harold Gifford, Nebraska.
C. S. Sheldon, Wisconsin.

REFERENCE COMMITTEE ON HYGIENE AND PUBLIC HEALTH

W. N. Wishard, Indiana, Chairman.
O. J. Brown, Massachusetts. G. B. Young, U. S. P. H. and M.-H. S.
J. B. Bullitt, Mississippi.
A. T. Bristow, New York.

THE FIRST VICE-PRESIDENT: The next in order is the report of the General Secretary.

The General Secretary presented his annual report as follows:

Report of the General Secretary

To the Members of the House of Delegates of the American Medical Association:

I submit herewith a report for the year 1908-1909:

MEMBERSHIP

The membership of the American Medical Association on May 1, 1908, was 31,343. During the past year 290 members have died, 1,439 have resigned, 484 have been dropped for non-payment of dues, 290 have been dropped as not eligible for membership under Section 1, Chapter I, Book I of the by-laws, and 55 names have been removed from the rolls on account of being reported "not found" or on account of mail returned by the postoffice department, making a total of 2,558 names to be deducted from the membership list. Since May 1, 1908, there have been added 5,150 names, of which 3,638 were subscribers to *The Journal* previous to becoming members of the association, while 1,512 were new members joining direct. The membership on May 1, 1909, was 33,935, making a net gain for the year of 2,592.

COMMITTEES APPOINTED AD INTERIM

Since the adjournment of the House of Delegates at Chicago on June 4, 1908, the following committees have been appointed by the president:

Committee on Patents and Trademarks: Charles S. Bacon, Chicago, Ill., chairman; Oliver T. Osborne, New Haven, Conn.; Philip Mills Jones, San Francisco, Cal.; A. B. Cooke, Nashville, Tenn.; H. C. Wood, Jr., Philadelphia, Pa.

Committee on Uniform Regulation of Membership in County and State Societies: Thomas S. McDavitt, St. Paul, Minn., chairman; Walter R. Steiner, Hartford, Conn.; Frederick R. Green, Chicago, Ill.

Committee on Elaboration of Principles of Ethics: Frederick C. Shattuck, Boston, Mass., chairman; George W. Guthrie,

Wilkes-Barre, Pa.; Stuart McGuire, Richmond, Va.; Charles R. Bardeen, Madison, Wis.; Charles A. Powers, Denver, Colo.

Committee Appointed to Represent the American Medical Association at the Conference held at Washington on the Conservation of the National Resources: John H. Musser, Philadelphia, Pa.; William H. Welch, Baltimore, Md.; Abraham Jacobi, New York City.

Council on Defense of Medical Research: Walter B. Cannon, Boston, Mass., chairman; Joseph A. Capps, Chicago, Ill.; Harvey Cushing, Baltimore, Md.; David L. Edsall, Philadelphia, Pa.; Simon Flexner, New York City; Reid Hunt, Washington, D. C.; Herbert C. Moffitt, San Francisco, Cal.

Delegates to Represent the American Medical Association in the Council of the American Association for the Advancement of Science: George M. Kober, Washington, D. C.; George H. Simmons, Chicago, Ill.

Conference Committee on Drug Reform: Lewis S. McMurtry, Louisville, Ky., chairman; David R. Silver, Sidney, O.; J. Forest Burnham, Lawrence, Mass.

The death of Dr. Charles Harrington, of Boston, shortly after his appointment as a member of the Committee on Medical Legislation, created a vacancy on this committee as well as on the Board of Public Instruction on Medical Subjects. Dr. George W. Gay, of Boston, Mass., was appointed by President Burrell to fill Dr. Harrington's unexpired term on the Committee on Medical Legislation, and Dr. Myles Standish, of Boston, to fill his unexpired term on the Board of Public Instruction on Medical Subjects.

The secretary has been officially informed that the following members of the Anesthesia Commission were appointed by the Section on Surgery and Anatomy: J. G. Mumford, chairman, Boston, Mass.; J. F. Binnie, Kansas City, Mo.; C. A. Powers, Denver, Colo.; W. D. Haggard, Nashville, Tenn.; W. L. Rodman, Philadelphia, Pa. The various members of these committees were all notified of their appointments and acceptances were received from them.

COMMITTEE ON REAPPORTIONMENT

The by-laws provide (Section 3, Chapter IV, Book II, page 10) for a Reapportionment Committee in 1903, and every third year thereafter, consisting of the president, the secretary and three other members, whose duty it shall be "to examine the membership lists of the Constituent Associations and to determine therefrom the number of delegates to this Association to which each Constituent Association shall be entitled for the ensuing three years." The attention of the House of Delegates is therefore called to the necessity of appointing such a committee. I suggest that the appointment be made early in the session so that the committee may report to the House of Delegates as soon as possible.

REGULATION OF MEMBERSHIP

I also desire to call attention to the report of the committee appointed at the Chicago session on the Regulation of Membership. The importance of this subject is becoming more and more apparent as the membership of the Association and of its constituent state associations increases. If any consistent effort is to be made to enforce the constitutional provisions regarding membership, so that satisfactory results may be secured, it will be necessary to systematize and regulate this matter on a uniform basis throughout the entire organization. I therefore ask for the report of this committee the careful consideration of the House of Delegates, feeling that the question is one of the utmost importance to the future growth and development of the organization.

REVIEW OF THE LAST TEN YEARS

This session brings to a close a period of ten years during which the present incumbent has served the Association as General Secretary. It therefore seems not inappropriate that some brief review of the past decade should be made and a comparison of the conditions of medical organization in 1899 with those of 1909 instituted, in order that we may determine what progress has been made and what further advances remain to be achieved.

MEMBERSHIP

The membership of the American Medical Association in 1899 was 7,997. That on May 1, 1909, as shown in the report given above, was 33,935, an increase in the past ten years of 25,938 members or of 424 per cent., an average growth of approximately 2,600 per year. The increase in state society membership has been even more marked. Complete figures are lacking to show the membership of the various state societies in 1899. The following table, however, shows the membership of some of the state societies ten years ago and to-day:

	1899	1909	Increase
Colorado	326	739	226%
California	309	1,861	602%
Connecticut	660	872	132%
Florida	145	285	190%
Illinois	515	5,265	1022%
Indiana	1,561	2,587	165%
Iowa (Est.)	684	1,850	270%
Kentucky	500	2,231	446%
Louisiana	458	1,069	231%
Michigan	550	1,892	344%
Minnesota (Est.) ...	450	1,214	270%
Nebraska (Est.)	400	863	215%
New Hampshire	360	520	171%
New Jersey	854	1,400	163%
Ohio	885	3,962	450%
Tennessee	400	1,377	344%
Texas	297	3,100	1043%

These figures are incomplete, since in many cases it is impossible to find any record of membership of some of the state associations in 1899, but they show the advance that has taken place in the last ten years in many. As late as 1902, or only seven years ago, in the discussion which preceded the reorganization of the Association, the Committee on Reorganization stated that, as nearly as it was possible to determine, the total membership of all medical societies at that time approximated 34,000. To-day the combined strength of the associations constituent to the American Medical Association is 67,362.

ASSOCIATION PUBLICATIONS

In 1899 not a single state association owned and published an official state journal. To-day there are 19, as follows:

JOURNALS OWNED BY STATE SOCIETIES

Journal of the Arkansas Medical Society, Morgan Smith, Editor, Little Rock, Ark.

California State Journal of Medicine, Philip Mills Jones, Editor, Butler Building, San Francisco, Cal.

Colorado Medicine, George A. Moleen, Editor, Mack Block, Denver, Colo.

Illinois Medical Journal, George N. Kreider, Editor, Springfield, Ill.

Journal of the Indiana State Medical Association, A. E. Bulson, Jr., Editor, Ft. Wayne, Ind.

Journal of the Kansas Medical Society, James W. May, Editor, Kansas City, Kans.

Kentucky Medical Journal, A. T. McCormack, Editor, Bowling Green, Ky.

Bulletin of the Medical and Chirurgical Faculty of Maryland, H. O. Reik, Editor, Baltimore.

Journal of the Michigan State Medical Society, B. R. Schenk, Editor, Detroit, Mich.

Journal of the Missouri State Medical Association, E. J. Goodwin, Editor, Linmar Building, St. Louis, Mo.

Journal of the Medical Society of New Jersey, D. C. English, Editor, New Brunswick, N. J.

Journal of the New Mexico Medical Society, G. S. McLandress, Editor-in-Chief, Albuquerque, N. M.

New York State Journal of Medicine, Algernon T. Bristow, Editor, 17 W. Forty-third street, New York City.

Ohio State Medical Journal, J. H. J. Upham, Editor, 186 E. State street, Columbus, Ohio.

Oklahoma State Medical Journal, E. O. Barker, Editor, Guthrie, Okla.

Tennessee State Medical Journal, George H. Price, Editor, Nashville, Tenn.

Texas State Journal of Medicine, I. C. Chase, Editor, Fort Worth, Texas.

Journal of the South Carolina Medical Association, J. W. Jervy, Editor, Greenville, S. C.

West Virginia Medical Journal, S. L. Jepson, Editor, Wheeling, W. Va.

In addition to the journals named above, the Pennsylvania Medical Journal, while not legally the property of the Medical Society of the State of Pennsylvania, is practically the state association journal, while the following state associations have recognized certain journals as "official organs" in which the transactions of the associations appear: Louisiana, Minnesota, Mississippi, Nebraska, South Dakota, Virginia and Wisconsin. But few of the state associations still adhere to the Transactions which were formerly the only means of disseminating matters of society interest among the members.

OTHER BENEFITS OF REORGANIZATION

The increase in the effectiveness of reorganization in county, state and nation has been marked during the past decade. Medical education, instruction of the public, regulation of pharmaceutical and drug products, the publication of an official directory of the profession, the compilation of uniform laws for the different states, are all matters in which the Association has been vitally interested since the time of its organization, but action on which, up to a comparatively few years ago, was limited to the adoption of resolutions. While these vitally important questions are by no means solved as yet, a practical beginning has been made in the permanent and equitable solution of each of them, and the Association now has permanent boards, committees and councils, striving for a careful solution of these questions throughout the entire year, instead of having to be content with a hasty and inadequate consideration of the general problems and the adoption of resolutions at the annual session, as heretofore. While an enormous amount of work remains to be done, yet the Association can well feel that a beginning has been made toward the definite solution of many of these problems. We may certainly hope to see in the near future many of the questions which have vexed the profession and the public for years past definitely and permanently settled, permitting the profession to advance to greater possibilities of usefulness to its members and the public.

Respectfully submitted,

GEORGE H. SIMMONS,

General Secretary.

The report was referred to the Reference Committee on Reports of Officers.

Dr. William H. Weleh, Maryland, Chairman, presented the report of the Board of Trustees as follows, which was referred to the Reference Committee on Reports of Officers:

Report of the Board of Trustees

To the Members of the House of Delegates of the American Medical Association:

The Board of Trustees in presenting this report for the year 1908 feels that the members of the Association have just reason to be proud of the work done and of the results accomplished, not only by THE JOURNAL, but also by the Association along the various lines which have engaged its activities. The past year has been the most successful year in the history of the organization from the financial as well as from the scientific, educational, legislative and philanthropic viewpoints. Concerning the finances of the Association, a clear, complete and comprehensive statement will be found in the report of the auditing company, appended hereto, and, therefore, it will not be necessary to consider further that phase of the subject here. The various tables which have been compiled illustrating the steady and commendable growth in all the administrative and mechanical features connected with the publication of THE JOURNAL likewise have been placed in the appendix where they may be studied, if desired, at leisure.

There are a number of matters, however, to which the Board feels your attention should be particularly directed at this time and first among these should be mentioned the work which has been done by your various councils and committees. Many of the committees will report directly to you and it is therefore not the intention to enter into the details of their work at this time but merely to state that few members of the Association realize the great amount of time, energy and work which the gentlemen who are serving gratuitously on these committees are constantly giving for the improvement and benefit of the profession as a whole and the community at large. The manner in which the committee of to-day acts and does things is in marked contrast to the manner in which the committee of a few years ago resolved and did nothing, and it is this spirit or desire to do something for the benefit of all that is one of the most encouraging features of our present organization. In order to encourage and facilitate the work of these committees your Board of Trustees appropriated for their use during the past year many thousands of dollars, and the Board feels that the excellent results of their labor have not only justified the expenditure but have entitled every member of these committees to the approbation and commendation of this Association.

COUNCIL ON PHARMACY AND CHEMISTRY

Concerning the committees that report directly to the House of Delegates, nothing further need be said here, but there is one committee, namely, the Council on Pharmacy and Chemistry, which reports to the Board of Trustees, and the Trustees take great pleasure in presenting briefly something of the results accomplished by the labors of the members of this Council, results alone made possible by the fact that the work, which could not have been bought with money, has been done largely gratuitously by men of the highest scientific attainments and imbued with a purely altruistic spirit. The work done by this Council has been enormous, and the good results are far-reaching in the highest degree. Some of the results of this work have been published in *THE JOURNAL*, and with this part of it you are all undoubtedly familiar, but much of it for many reasons, which are readily apparent, can not find its way into print.

The Council is constantly examining a large number of preparations with which the profession is being exploited, and weeding out the frauds and fakes so that the physician to-day need not be deceived by false representations of agents into using or administering anything with which he is not entirely familiar. Many of these fraudulent preparations are put on the market by so-called chemical houses which exist as such only on paper, and which are organized for the sole purpose of "working" the profession or the people, usually both, with the particular fraud in question. Were the exposure of these frauds the only work done by the Council it would still be invaluable, as it is a means of accomplishing that which heretofore had been practically impossible. But this after all is but a minor part of the Council's work. There are many preparations and products placed on the market with honest intent and purpose by perfectly reputable houses, which on thorough investigation by the Council are found either to be below standard or to fall below the claims conscientiously made for them by the manufacturers. On presentation to the manufacturers of the results of the investigations by the Council many of these preparations and products are modified or more carefully standardized, or the claims made to conform more carefully to the facts, or the preparations are taken off the market, so that not only physicians but the people as a whole are constantly being benefited to a degree not realized.

In addition to the great amount of work done by the several members of the Council in their respective laboratories, the Association, as is well-known, has a laboratory of its own in *THE JOURNAL* building, under the direct supervision of Professor Puckner, where analyses of all kinds of preparations are constantly being made. The work here has grown so rapidly and has reached such proportions that the Trustees recently authorized the employment of another chemist to help carry it on. It is impossible to over-estimate the value of this work. The physician is now no longer dependent on the exaggerated, extravagant, and often untruthful and absurd statements of the advertising agent for his knowledge concerning new products and preparations, but may obtain information from a trustworthy source, which has no other aim than to make known the facts in the case. The excellent work of this Council has received general recognition both at home and abroad. It has aroused the medical profession of Germany, which is beginning to take cognizance of conditions which were not realized until this work was commenced, and in the German journals acknowledgments are repeatedly made of the work that is being done on this side.

The Trustees at their annual meeting adopted a vote of thanks to the following gentlemen, not connected with the Council, for their aid and assistance in various investigations connected with the work of the Council:

- Daniel Base, Ph.D., Professor of Chemistry and Vegetable Histology, Dept. of Pharmacy, University of Maryland.
- William B. Day, Ph.G., Professor of Pharmacognosy, University of Illinois School of Pharmacy.
- G. B. Frankforter, Ph.D., M.A., Dean of the School of Chemistry, Professor of Chemistry, University of Minnesota.
- N. McL. Harris, M.B., Assistant Professor of Bacteriology, University of Chicago.

- P. G. Heinemann, Ph.D., Assistant in Bacteriology, University of Chicago.
- William A. Johnson, Ph.G., Instructor in Chemistry, Northwestern University Medical School.
- E. O. Jordan, Ph.D., Professor of Bacteriology, University of Chicago.
- Edward Kremers, Ph.G., Ph.D., Professor of Pharmaceutical Chemistry, Director of the Course in Pharmacy, University of Wisconsin.
- Henry Kraemer, Ph.B., Ph.D., Professor of Botany and Pharmacognosy, Philadelphia College of Pharmacy.
- Charles H. LaWall, Ph.M., Associate Professor of Theory and Practice of Pharmacy, Philadelphia College of Pharmacy.
- S. A. Matthews, M.D., Assistant Professor of Experimental Therapeutics, University of Chicago.
- Herbert N. McCoy, Ph.D., Associate Professor of Physical Chemistry, University of Chicago.
- W. J. MacNeal, University of Illinois.
- Charles H. Miller, Ph.G., M.D., Assistant Professor of Pharmacology, Northwestern University Medical School.
- Atherton Seidell, M.D., Hygienic Laboratory, Public Health and Marine-Hospital Service, Washington, D. C.
- A. L. Winton, M.D., Chief Chicago Laboratory U. S. Department of Agriculture, Bureau of Chemistry.

WORK OF DR. MC CORMACK

So much that is good has been said of Dr. McCormack in the past that it is only necessary to say here that his excellent work has continued throughout the past year. We feel that he has been an educator of the profession, of legislators, and of the people, and a peacemaker to all.

THE AMERICAN MEDICAL DIRECTORY

The next subject presented for your consideration is that of the Directory. The work of revision, preparatory to publishing the 1909 Directory is at present well under way and the first forms will soon go to press. The intention is to improve the Directory with each succeeding edition. This year one of the improvements will be a more extended and complete college key table for quick reference. The college historical matter is greatly enlarged, and we believe the 1909 Directory will contain an historical review of the medical colleges and medical education of the United States more complete than can be found elsewhere. This has been obtained only after considerable labor. Additional personal information regarding individuals, such as college professorships and specialties, will be given. A large amount of additional matter has been secured since the first edition was published so that the 1909 edition will be found to contain many new personal data. The Directory should be regarded not primarily as a commercial enterprise, the fundamental reason for its publication being service to the profession and to the public. The Association is endeavoring to supply the medical profession and the public with an official register of the medical profession, comparable as an authority, for instance, to the Medical Register of Great Britain, combining, however, appropriate biographical and personal information so far as reliable data can be obtained. The book consequently should not be regarded in the first instance as a source of revenue but as an investment for the benefit of the profession and the public.

In this connection the enormous and increasing value of the mass of information of interest and accessible to the medical profession which is being accumulated, both personal and otherwise, must always be kept in mind. It is this personal information department which is really the basis as well as a *raison d'être* of the Directory.

The printed book contains only a small part of the large and constantly growing collection of data which is not only unequalled but which will be of ever increasing value to state boards, medical societies and the profession.

THE JOURNAL

THE JOURNAL during the past year has maintained its high standard of excellence. The practical and the scientific character of its articles, the broad scope of its editorials and the amount of general information from all parts of the land which it contains make it rank with the greatest medical journals of similar scope in the world. Notwithstanding the

fact that the advertisements submitted receive the most careful scrutiny, yet the constantly increasing circulation and the great popularity of THE JOURNAL as an advertising medium have made it possible for its pages to yield a larger revenue this past year than during any year heretofore.

ARCHIVES OF INTERNAL MEDICINE

The Board of Trustees in 1907 authorized the publication, beginning January, 1908, of the *Archives of Internal Medicine*, a journal devoted especially to the clinical and scientific phases of internal medicine. The fact that from the first it has succeeded beyond expectation is sufficient evidence that it has filled a want, but in spite of the fact that a certain number of more extensive and technical articles submitted to THE JOURNAL find an outlet in the *Archives*, THE JOURNAL is still overwhelmed with an abundance of material quite beyond its capacity to publish and therefore it is inevitable that a large number of suitable manuscripts must regretfully be returned to their authors. The circulation of the *Archives* is now about 1800, and the new journal is self-supporting.

NEW BUILDING

The Board of Trustees is called on to meet and handle many problems, but there is one question that continues to rise before it again and again. This is the question of working space in our building. When the present building was erected it was thought ample for our needs for a considerable time to come, but no one then dreamed of the work expanding so rapidly as it has. Three years ago the building was extended to the full depth of the lot and raised an additional story, which is all the walls will stand. The additional room thus acquired was soon fully occupied, and last year it became necessary again to enlarge our space by extending to the limits under the sidewalk and utilizing the space in one of our buildings next door. The relief, however, was relatively slight, and now we are once more confronted by the same problem, but in a more serious way. Additional space is urgently needed in practically every department. Since the councils and standing committees have become active working bodies and since the permanent working forces of these bodies have wisely been centralized in our own building, our entire clerical force has been augmented materially and is at present unavoidably crowded and badly quartered. We need more space for linotype machines and for our stereotyping department. We are working our men in two shifts of eight hours each and on rush days they are worked overtime in two shifts of ten hours, thus keeping our mechanical departments in operation for twenty hours out of the twenty-four. It is therefore not difficult to see the crowded and rushed conditions under which we are now laboring. Your Trustees have given this matter careful consideration for some time, and after thoroughly discussing the matter with our architects and with our general manager we are unanimously of the opinion that the only solution of the question is the erection of a new building large enough not only to accommodate us now, but to allow for our growth for many years to come. We already own the ground adjoining our present building and the available funds and securities will permit the construction and equipment of the building as proposed. In view of the urgent need of more room we believe the work should be undertaken at once. The matter is therefore submitted for your consideration. Owing to the great urgency, however, the Board has gone ahead and secured, provisionally, architects' plans and construction bids, believing that its action would meet with the approval of this body. The estimated cost of the new building, for which the plans will be submitted to the House of Delegates, including architects' fees, is approximately \$200,000. The proposed building will be about sixty-one feet by one hundred and twenty feet, six stories, and a high basement. The foundation will be driven piles and concrete and steel used for foundation to basement floor line. The building will be absolutely fireproof and the walls will be made sufficiently strong to add at least two more stories. We regret that the architects were not able to furnish the elevation plans.

CONCLUSION

The Board, in conclusion, can not refrain from calling your attention to the fact that this meeting marks the close of the most remarkable decade in the history of the organization. For fifty years previous to this period the Association had struggled along, making good resolutions from year to year, but accomplishing only a very small part of the great ends and aims of its existence. THE JOURNAL, with a circulation of only a little over 10,000, had little standing as a scientific periodical and was seldom quoted by the great journals of the world. The assets of the Association were nominal and it was without a fixed home. The profession throughout the land was in an incoherent, unorganized state, an easy, helpless prey to the most glaring impositions and frauds. The various committees appointed by the Association rarely if ever met, except perhaps at the annual meeting and then generally only to draw up a hasty resolution which resulted in nothing being done. But with the beginning of the past decade a new life came into the organization. THE JOURNAL began to make most remarkable strides forward. Its circulation in the ten years increased 500 per cent. It reaches every quarter of the globe and stands without a peer as an educator in all things scientific, political, sociological and medicolegal which in any way relate to the work. It has erected, enlarged and outgrown one of the finest medical printing plants in the world and the Association's assets extend into the hundreds of thousands.

The Association, through its active committees, has made a most comprehensive study of medical education in this country and accomplished most positive results in elevating and standardizing the same. It has made itself felt in national legislation and aided in the molding of laws to just and righteous ends. It has laid bare innumerable frauds and made it impossible for them to be longer unknowingly perpetrated on the profession and the people. It is educating the masses in general matters pertaining to medicine through its Bureau of Public Instruction; it is stimulating scientific investigation by means of rewards for original medical research and commendable scientific exhibits. Through its initiation the profession of the United States has been reorganized, or rather organized, into an intelligent, coherent body which has come to learn its rights, to know its power and to feel its duties and obligations. All of this and much more has been accomplished in the brief period of ten years, and your Trustees feel that they would be derelict in their duty did they not add with pride and sentiments of regard that the one man above all others to whom we are indebted for these great things is our present Editor and General Manager, Dr. George H. Simmons.

As was to be expected when the Council on Pharmacy and Chemistry began the work of exposing the medical frauds and fakes that for years had been foisted on an unsuspecting profession and an innocent public, it brought down on itself and the Association a torrent of ridicule and abuse from the proprietary and patent medicine interests that were so severely hit by the exposure of their dishonest products. For three years these interests kept up against the Association and its officers a fusillade of the most scurrilous invective and obloquy which money could buy. But all to no effect. The officers of the Association were firm in the belief that the vast majority of the physicians were at all times for right, and the good work continued uninfluenced in the slightest by these railings. Failing ignominiously of their purpose in these attacks and finding that the Association continued to grow in numbers and strength from day to day, the method of attack has changed recently. Instead of hurling the forces against the Association and its general officers a most malicious and vindictive attack has been made on the honor and personal character of one who has formed the central figure of our organization for the past ten years. The animus back of this attack and the interests that are aiding and abetting it are not difficult to understand, but it will be found that this attack, like those of the past, will be shattered on the impregnable rock of a great work well done, and it will but show that the American Medical Association is founded on the righteous integrity of the great body of physicians throughout this land and that it will endure.

Dr. T. J. Happel, a member of the board, was taken ill while attending our February meeting in Chicago and never recovered. He died May 24. The board desires to express its appreciation of the devoted and valuable services which Dr. Happel has rendered the Association. As a member of the Board of Trustees for eleven years and as its chairman for seven years, his advice and assistance were of incalculable benefit to his colleagues. By his death the American Medical Association has lost a devoted and indefatigable worker, the medical profession generally, an honored member, and the country a cultured and valued citizen.

Respectfully submitted:

WILLIAM H. WELCH,
MILES F. PORTER,
M. L. HARRIS,
W. W. GRANT,

PHILIP MARVEL,
W. R. TOWNSEND,
PHILIP MILLS JONES,
W. T. SARLES.

Addenda to Trustees' Report

SUBSCRIPTION DEPARTMENT

The regular weekly issue of THE JOURNAL of the American Medical Association, from Jan. 4, 1908, to Dec. 26, 1908, inclusive, 52 issues, was as follows:

January 4.....52,880	July 4.....53,238
January 11.....52,674	July 11.....53,169
January 18.....52,360	July 18.....53,620
January 25.....52,189	July 25.....53,412
February 1.....52,294	August 1.....53,725
February 8.....52,134	August 8.....53,739
February 15.....52,110	August 15.....55,170
February 22.....52,070	August 22.....53,771
February 29.....52,213	August 29.....53,863
March 7.....55,021	September 5.....53,798
March 14.....54,840	September 12.....53,896
March 21.....54,915	September 19.....53,746
March 28.....54,514	September 26.....53,779
April 4.....54,642	October 3.....53,596
April 11.....54,788	October 10.....53,847
April 18.....55,226	October 17.....54,211
April 25.....54,626	October 24.....54,206
May 2.....58,076	October 31.....55,230
May 9.....53,470	November 7.....55,333
May 16.....53,224	November 14.....55,525
May 23.....53,304	November 21.....55,317
May 30.....53,575	November 28.....55,655
June 6.....53,547	December 5.....55,506
June 13.....53,510	December 12.....54,582
June 20.....54,340	December 19.....54,488
June 27.....53,425	December 26.....54,511
Total issue for twelve months.....2,806,900	
Weekly average.....53,978	

The following statement is an approximate count of the mailing list of the members and subscribers by states on Jan. 1, 1909. It also shows the approximate percentage of physicians in each state receiving THE JOURNAL. It does not include copies sent to exchanges, to libraries, to the government services, or abroad:

State	Members	Subscribers	Totals	Approximate Per Cent.
Alabama.....	344	211	555	26.2
Arizona.....	88	49	137	67.4
Arkansas.....	368	344	712	30.6
California.....	1,142	534	1,676	42
Colorado.....	472	262	734	47.3
Connecticut.....	428	218	646	48.4
Delaware.....	57	20	77	34.6
Dist. of Columbia.....	297	215	512	46.5
Florida.....	152	88	240	38.7
Georgia.....	340	193	533	19.1
Idaho.....	75	54	129	49.7
Illinois.....	3,312	1,679	4,991	52.9
Indiana.....	1,203	803	2,006	40.8
Iowa.....	1,061	584	1,645	46.7
Kansas.....	591	403	994	42.8
Kentucky.....	741	500	1,241	32.9
Louisiana.....	386	265	651	41.9
Maine.....	251	137	388	34.7
Maryland.....	513	453	966	53.3
Massachusetts.....	1,702	575	2,277	42.3
Michigan.....	1,060	815	1,875	46.1
Minnesota.....	839	556	1,395	71.6
Mississippi.....	267	236	503	28.5
Missouri.....	1,294	764	2,058	34.5
Montana.....	127	80	207	61.7
Nebraska.....	463	254	717	42.9
Nevada.....	48	25	73	52.8
New Hampshire.....	231	58	289	44.7
New Jersey.....	634	246	880	37.7
New Mexico.....	93	64	157	71
New York.....	3,141	1,589	4,730	39.4
North Carolina.....	241	214	455	31.3

North Dakota.....	182	150	332	73.6
Ohio.....	2,060	1,017	3,077	39.9
Oklahoma.....	365	335	700	37.4
Oregon.....	205	129	334	47.9
Pennsylvania.....	2,744	1,483	4,227	42.3
Rhode Island.....	217	97	314	43.1
South Carolina.....	187	139	326	31.8
South Dakota.....	195	129	324	59.4
Tennessee.....	440	225	665	22.3
Texas.....	1,067	624	1,691	35.04
Utah.....	102	78	180	59.2
Vermont.....	166	36	202	31.2
Virginia.....	369	333	702	36.09
Washington.....	368	240	608	59.4
West Virginia.....	355	158	513	36.4
Wisconsin.....	865	472	1,337	55
Wyoming.....	49	35	84	48.2

TEN YEARS' GROWTH

As this ends ten years under the present management, the following information covering that period may be of interest.

This table shows the number of members and of subscribers for each year, commencing with 1899:

	Members	Subscribers
January 1, 1899.....	7,997	2,453
January 1, 1900.....	8,445	4,633
January 1, 1901.....	9,841	8,339
January 1, 1902.....	11,107	10,795
January 1, 1903.....	12,553	12,378
January 1, 1904.....	13,899	14,674
January 1, 1905.....	17,570	15,698
January 1, 1906.....	20,826	17,669
January 1, 1907.....	26,255	20,166
January 1, 1908.....	29,382	20,880
January 1, 1909.....	31,999	*18,983

* This is not an actual loss, as 4,062 subscribers were transferred to the membership during the year 1908.

The following is the total weekly average issue for ten years:

Year	Issue
1899.....	13,672
1900.....	17,446
1901.....	22,049
1902.....	25,321
1903.....	28,615
1904.....	32,423
1905.....	38,006
1906.....	46,479
1907.....	52,217
1908.....	53,978

It will be noticed that the average gain last year fell off to some extent. This is accounted for principally by the issuance of a new order by the postoffice department regarding second-class rates which was to the effect that weekly journals can not be sent to subscribers and retain second-class rates where more than one year's credit is allowed. This order made it necessary to curtail the time given under certain conditions to subscribers, and consequently to drop a large number of names.

The following shows the steady increase of expenditures on three important items:

	PAY ROLL AND SALARY
1899.....	\$ 31,448.69
1900.....	37,359.49
1901.....	40,416.01
1902.....	46,316.65
1903.....	57,067.34
1904.....	64,471.26
1905.....	78,874.79
1906.....	96,578.71
1907.....	110,455.43
1908.....	123,893.28

	PAPER STOCK
1900.....	\$ 25,598.00
1901.....	29,835.00
1902.....	35,675.06
1903.....	43,966.57
1904.....	51,190.05
1905.....	57,526.69
1906.....	65,381.17
1907.....	89,546.80
1908.....	106,495.12

	POSTAGE ON JOURNAL
1899.....	\$ 3,905.65
1900.....	5,616.06
1901.....	7,591.37
1902.....	8,595.63
1903.....	9,828.41
1904.....	11,773.44
1905.....	14,360.28
1906.....	17,066.62
1907.....	19,203.65
1908.....	20,197.88

Treasurer's Report

REPORT OF THE TREASURER FOR THE YEAR ENDING DEC. 31, 1908

	RECEIPTS
1908	
Jan. 1—Cash balance in First National Bank of Chicago.....	\$20,118.84
Feb. 7—Cash received from Editor of JOURNAL.....	20,000.00
June 6—Cash received from Editor of JOURNAL.....	10,000.00

Sept. 9—Interest 3 per cent. on certificate of deposit in First Trust and Savings Bank.....	487.50
Dec. 19—Interest 3 per cent. on certificate of deposit in First Trust and Savings Bank.....	940.27
Interest 2 per cent. on checking account in First National Bank	173.85
Interest on coupons 54, \$1,000 bonds at 4 per cent.....	2,160.00
	<u>\$53,880.46</u>

DISBURSEMENTS

1908	
Feb. 7—By order of Trustees placed on certificate of deposit at 3 per cent. in First Trust and Savings Bank..	\$30,600.00
June 6—By order of Trustees placed on certificate of deposit at 3 per cent. in First Trust and Savings Bank	10,000.00
Sept. 9—By order of Trustees placed on certificate of deposit at 3 per cent. in First Trust and Savings Bank	10,000.00
1909	
Jan. 1—Cash balance in checking account First National Bank	3,880.46
	<u>\$53,880.46</u>

PROPERTY OF AMERICAN MEDICAL ASSOCIATION IN HANDS OF
TREASURER JAN. 1, 1909

Cash balance in checking account First National Bank..	\$ 3,880.46
Cash on certificate of deposit at 3 per cent. in First Trust and Savings Bank.....	65,000.00

	Cost.	Par Value.	
5/1000 bonds U. P. Ry., 1st 4s....	\$ 5,207.50	\$ 5,000	
5/1000 bonds Erie Ry., 1st 4s....	4,932.50	5,000	
10/1000 bonds Reading Gen. 1st 4s.	9,602.50	10,000	
14/1000 bonds Chicago School 1st 4s	15,168.13	14,000	
10/1000 bonds A. T. & S. Fe 1st 4s	9,521.25	10,000	
10/1000 bonds B. & O. Ry 1st 4s..	9,800.00	10,000	
	<u>\$54,231.88</u>	<u>\$54,000</u>	<u>54,000.00</u>
			<u>\$122,880.46</u>

Respectfully submitted,

FRANK BILLINGS, *Treasurer.*

Auditors' Report

THE INVESTORS AUDIT COMPANY

CHICAGO, FEB. 4, 1909.

To the Board of Trustees of the

American Medical Association, Chicago, Ill.

Gentlemen:

We beg to report that we have examined the books and vouchers of the American Medical Association for the year ending December 31, 1908, and we hand you herewith the following statements:

- Comparative Balance Sheet as at Dec. 31, 1907 and 1908.
- Revenue Account for the year ending Dec. 31, 1908.
- Disposition of Revenue for the year ending Dec. 31, 1908.
- Summary of Investment in Second Edition of Directory as at Dec. 31, 1908.
- Summary of Inventories as at Dec. 31, 1908.
- Details of Bond Account as at Dec. 31, 1908.
- Summary of Publication Expenses for the year ending Dec. 31, 1908.
- Summary of Organization Expenses for the year ending Dec. 31, 1908.
- Summary of Association Expenses for the year ending Dec. 31, 1908.
- Summary of Medical Legislation Expenses for the year ending Dec. 31, 1908.
- Summary of Medical Education Expenses for the year ending Dec. 31, 1908.
- Summary of Pharmacy and Chemistry Expenses for the year ending Dec. 31, 1908.
- Summary of Medical Research Expenses for the year ending Dec. 31, 1908.
- Summary of Depreciation for the year ending Dec. 31, 1908.

As in former years the book values of Buildings, Furniture and Fixtures, etc., have been reduced by charges against Income to provide for Depreciation.

On the other hand we would call your attention to the fact that there has been charged during the year under review to Buildings Account an amount of \$4,325.20. This represented largely the cost of altering an old residence adjoining the main building of the Association to enable it to be used in connection with the latter for business purposes. It is probable that an arrangement of this kind will not be permanent so that the amount whereby the actual value of the buildings has been increased by these expenditures is questionable.

We would call your attention to the item carried among the Assets on the Balance Sheet representing the expenditures to date on the second edition of the Directory. Inasmuch as the Directory has not yet been issued, it is technically proper to carry this amount as an Asset, but in view of past experience it seems quite probable that a portion of it will eventually be charged off Profit and Loss Account.

We would call your attention to the following items included in the statements attached:

In the Balance Sheet is shown among the Assets "Net Investment in Second Edition of Directory \$14,801.87," which represents the total expenditures to the close of the year for labor, material, etc. used in preparing the second edition not yet distributed. Details of this account are shown in "Schedule A" attached hereto.

We believe that the other items included in the statements do not need any special comment.

In the course of our audit we examined vouchers for all cash disbursements with the exceptions of a few made during the latter part of the year, vouchers for which had not been returned by the bank at the time of our visit. These we will take up later and report upon if it appears necessary.

In checking the vouchers for disbursements we took care to examine invoices or other evidence that the items covered by them

represented proper liabilities of the Association, and that there had been proper authority for the payments of the same by the Officers.

We verified the cash in bank by means of statements furnished by the bankers and that on hand by actual count. We verified the securities by means of certificates furnished by the bankers in whose care they were deposited.

In the course of the audit we made tests of the lists of subscribers, which tests resulted in no inaccuracies being discovered. We also did certain other work which appeared advisable for the protection of the Association.

We are of the opinion that the bookkeeping and office work are handled in a very efficient manner and that every attempt is being made to conserve the interests of the Association by the employees connected with the Accounting Department.

We would be pleased to furnish you with any further information in our possession that you may require regarding these accounts.

Yours faithfully,

THE INVESTORS AUDIT COMPANY,

—Manager.

COMPARATIVE BALANCE SHEET AS AT DECEMBER 31, 1907 AND 1908

ASSETS		
Dec. 31, 1907		Dec. 31, 1908
\$112,937.04	Real Estate and Buildings.....	\$117,262.24
49,006.76	Machinery	45,535.59
1,646.95	Stereotype Plant	1,509.25
7,203.06	Furniture and Fixtures.....	8,301.24
1,175.16	Library	1,185.61
5,809.24	Net investment in Second Edition of Directory (see Exhibit A).....	14,801.87
19,151.70	Inventory of materials and supplies (see Exhibit B)	23,059.13
54,231.88	Bonds at cost (see Exhibit C).....	54,231.88
15,000.00	Certificates of deposit	65,000.00
13.50	Bills Receivable	10.00
18,302.98	Accounts Receivable:	
	Chicago Postmaster deposit..	480.00
	Advertising	14,878.16
	Sundry	933.70
	Reprints	1,263.10
	Directory (proportion considered good)	100.00
		<u>17,654.96</u>
	Unexpired Insurance	621.02
24,577.79	Cash:	
	Treasurer's account	\$ 3,880.46
	Office	2,710.75
	Petty cash	50.00
		<u>6,641.21</u>
250.00	Rent paid in advance (Exhibit hall)	
<u>\$309,306.06</u>		<u>\$355,814.00</u>

LIABILITIES		
\$ 7,435.41	Accounts payable	\$ 120.71
	Advance Payment on "Archives of Internal Medicine"	834.07
	Advance payments on Second Edition of Medical Directory	191.40
301,650.15	Balance: Being excess of assets over liabilities	354,667.82
<u>\$309,306.06</u>		<u>\$355,814.00</u>

REVENUE ACCOUNT FOR THE YEAR ENDING DECEMBER 31, 1908

INCOME:		
Advertising	\$ 132,993.37	
Subscriptions	100,883.74	
Dues	134,509.80	
Jobbing	30,352.60	
Reprints	7,938.96	
Books	7,038.69	
Physicians Manual of U. S. Pharmacopeia and N. F.....	4,435.30	
Buttons	1,796.18	
Rents of Association properties.....	2,740.00	
Sale of waste paper, sweepings, paper cases, etc.....	2,863.31	
Chicago Session	370.78	
Interest:		
Bonds	\$2,160.00	
Certificate of Deposit....	1,601.62	
Daily Bank Balance.....	555.43	
	<u>\$ 4,317.05</u>	
		<u>\$ 430,239.78</u>
DEDUCT:		
Publication expense (see Exhibit D)...	\$ 308,647.67	
Organization expense (see Exhibit E)...	12,227.15	
Association expense (see Exhibit F)...	6,727.37	
Medical legislation (see Exhibit G)...	2,511.95	
Medical education (see Exhibit H)...	4,418.31	
Pharmacy and chemistry (see Exhibit I).....	6,587.01	
Defense of medical research (see Exhibit J)	133.61	
Depreciation (see Exhibit K).....	8,438.97	
Books	6,270.18	
Physicians' manual of U. S. Pharmacopeia and N. F.....	2,915.71	
Buttons	1,334.44	
Insurance and Taxes.....	2,266.17	
Discount	1,235.88	
Exchange	1,242.40	
Building maintenance	1,226.52	
House Expense	389.97	
Commissions for securing new members	398.40	
Bad debts written off less recoveries	1,320.87	
Educational	1,111.74	

Loss on sale of machinery.....	40.78
Wages account of Biographical card work and Directory information...	2,589.26
Net revenue for the year ended Dec. 31, 1908	\$372,034.36
	\$ 58,205.42

DISPOSITION OF REVENUE FOR THE YEAR ENDED DEC. 31, 1908

INCREASE IN ASSETS:	
Real estate and buildings.....\$	4,325.20
Furniture and fixtures	1,108.63
Inventory	3,907.43
Certificates of deposit	50,000.00
Unexpired Insurance	621.02
Net investment in second edition of Directory	14,180.38
	\$ 74,142.66
ADD: DECREASE IN LIABILITIES:	
Accounts payable	7,314.70
	\$ 81,457.36
DEDUCT: DECREASE IN ASSETS:	
Depreciation on machinery	\$ 3,471.17
Depreciation of Stereotype plant....	137.70
Accounts receivable	651.52
Cash	17,936.58
Rent, paid in advance.....	250.00
	\$ 22,446.97

INCREASE IN LIABILITIES:	
Advance payments on "The Archives of Internal Medicine".....	613.57
Advance payments on second edition of American Medical Directory.....	191.40
	\$ 804.97
	\$ 23,251.94

Net revenue for year ended Dec. 31, 1908	\$ 58,205.42
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EXHIBIT A

SUMMARY OF NET INVESTMENT IN SECOND EDITION OF DIRECTORY
AS AT DEC. 31, 1908

Salaries	\$ 8,777.28
Postage	2,421.11
Jobbing	1,554.15
Commissions	1,395.01
Sundry expense	654.32
	\$ 14,801.87

EXHIBIT B

SUMMARY OF INVENTORIES AS AT DEC. 31, 1908

Paper Stock	\$ 7,366.00
Books	2,278.91
Physicians' Manuals	108.50
Buttons	378.20
Fuel	164.00
Ink	218.30
Type	3,862.59
Metal	6,080.63
Stamps	2,602.00
	\$ 23,059.13

EXHIBIT C

DETAILS OF BOND ACCOUNT AS AT DEC. 31, 1908

	Par Value	Cost
5 Atchison, Topeka & Santa Fe Ry. Co. 4 per cent. 100-year gold bonds.....	\$ 5,000.00	\$ 4,988.75
5 Erie R. R. Co. 4 per cent. gold bonds...	5,000.00	4,932.50
5 Baltimore & Ohio R. R. first mortgage 4 per cent. bonds.....	5,000.00	5,032.50
5 Reading Company general mortgage 4 per cent. bonds.....	5,000.00	4,870.00
5 Union Pacific R. R. Co. first Mortgage 4 per cent. bonds.....	5,000.00	5,207.50
14 City of Chicago 4 per cent. school bonds	14,000.00	15,168.13
5 Reading Company and the Philadelphia and Reading Coal and Iron Co. general mortgage 4 per cent., payable January and July, Nos. 29367, 29366, 24483, 24482, 66964, par value of \$1,000.00 each at 94½.....	5,000.00	4,732.50
5 Atchison, Topeka & Santa Fe Ry. Co. first mortgage 4 per cent. bonds payable April and October. Principal due 1995, Nos. 32785, 35162, 40517, 40516, 40515. Par value of \$1,000.00 each at 90½.....	5,000.00	4,532.50
5 Baltimore & Ohio R. R. Co. first mortgage 4 per cent bonds payable April and October. Principal due 1948, Nos. 53591, 53594, 53593, 34986, 34987. Par value of \$1,000.00 each at 95....	5,000.00	4,767.50
	\$54,000.00	\$54,231.88

EXHIBIT D

SUMMARY OF PUBLICATION EXPENSES FOR THE YEAR ENDING DEC.
31, 1908

Paper	\$106,495.12
Type, metal and electros.....	4,668.22
Ink	3,466.59
Salaries	38,165.96
Pay roll	85,727.32
Editorial news and reporting.....	7,764.74
Binding	3,088.91
Machinery repairs and renewals.....	2,638.79
Commissions	11,537.36

Power	2,117.54
Light	2,026.28
Fuel	1,039.32
Postage:	
First class	\$ 8,652.14
Second class	20,197.88

Factory supplies	28,850.02
Office supplies	2,563.88
Office jobbing	549.65
Express and cartage	2,280.71
Telegrams and telephone	2,374.69
Legal expense	\$ 358.55
Traveling expense	270.00
Miscellaneous expense	566.55
	2,097.47
	\$ 3,292.57
	\$308,647.67

EXHIBIT E

SUMMARY OF ORGANIZATION EXPENSES FOR THE YEAR ENDING DEC.
31, 1908

Dr. J. N. McCormack:		
Salary	\$ 5,583.30	
Expense	1,726.75	7,310.05
Dr. J. H. Blackburn:		
Salary	600.00	
Expense	212.00	
Agents' salaries.....		812.00
Jobbing		3,425.50
Miscellaneous		613.00
		66.60
		\$ 12,227.15

EXHIBIT F

SUMMARY OF ASSOCIATION EXPENSES FOR THE YEAR ENDING DEC.
31, 1908

	31. 1908	
Scientific Research		\$ 600.00
Scientific Exhibit		482.00
Scientific Exhibit, medals		218.75
Trustees' meeting		672.65
Secretary Board of Trustees.....		100.00
Reporting Sections		1,447.18
Section Secretaries		600.00
Reporting House of Delegates.....		294.70
Public Instructions:		
Dr. Max Goepp:		
Salary	\$800.00	
Expense	77.55	
		<hr/>
Salary Assistant to Secretary		877.55
Jobbing		891.67
Treasurer's bond—premium		304.45
Care of bonds		50.00
Judicial Council		40.00
Safety box rentals		25.00
Binding Journals		10.00
Express		44.00
Stamps		36.88
Supplies		23.04
		9.50
		<hr/>
	\$	6,727.37

EXHIBIT G

SUMMARY OF MEDICAL LEGISLATION EXPENSES FOR THE YEAR
ENDING DEC. 31, 1908

Dr. C. A. L. Reed:		
Traveling expenses, clerk hire, etc.....	\$ 782.88	
Salaries and pay roll	1,323.67	
Meetings	110.75	
Reporting	115.70	
Jobbing	101.55	
Postage	61.22	
Information	7.50	
Express	4.68	
Supplies	4.00	
	\$ 2,511.95	

EXHIBIT H

SUMMARY OF MEDICAL EDUCATION EXPENSES FOR THE YEAR ENDING
DEC. 31, 1908

Salaries and pay roll.....	3,050.70
Meetings	520.07
College inspection	404.55
Charts	52.00
Information	37.00
Jobbing	115.80
Stamps	197.25
Supplies	40.94
	\$4,418.31

EXHIBIT I

SUMMARY OF PHARMACY AND CHEMISTRY EXPENSES FOR THE YEAR
ENDING DEC. 31, 1908

Salaries and pay roll.....	\$5,311.10
Chicago session	468.78
Drugs	229.73
Analysis	90.00
Supplies	171.20
Stamps	158.72
Jobbing	135.05
Express	22.43
	\$6,587.01

EXHIBIT J

SUMMARY OF MEDICAL RESEARCH EXPENSES FOR THE YEAR ENDING
DEC. 31, 1908

Philadelphia convention	\$ 69.00
Dr. Cannon	16.95
Books and Reprints	35.72
Supplies	7.25
Express	3.22
Stamps	1.47
	<hr/>
	\$133.61

EXHIBIT K

SUMMARY OF DEPRECIATION FOR THE YEAR ENDING DEC. 31, 1908

Buildings	\$2,329.41
Machinery	5,059.50
Furniture and fixtures	783.49
Laboratory equipment	98.87
Stereotype plant	167.70
	<hr/>
	\$8,438.97

DR. ARTHUR T. McCORMACK, Kentucky: I move that when the House of Delegates adjourns, that it adjourn in honor to the memory of Dr. T. J. Happel, a former member of this body and of the Board of Trustees.

This motion was seconded by several and carried.

THE FIRST VICE-PRESIDENT: We will now listen to reports of the standing committees.

Report of Judicial Council

To the Chairman and Members of the House of Delegates:

The Judicial Council would respectfully report that there has been nothing come before it on appeal from county societies nor state associations. The Chairman has received a few letters of inquiry and requests for interpretations of the principles of ethics, which have easily been disposed of by sending marked copies of the Principles of Ethics, together with instructions to make inquiry of their state associations and county societies for any local additions to these principles.

Respectfully submitted,

C. E. CANTRELL, Chairman.

DR. ARTHUR T. McCORMACK, Kentucky: I move that the Chairman appoint a committee of three on Triennial Reapportionment.

Seconded and carried.

THE FIRST VICE-PRESIDENT: I will announce this committee later.

Report of the Committee on Medical Legislation

The report of the Committee on Medical Legislation was read by Dr. Charles S. Bacon, Illinois, in the temporary absence of the Chairman, Dr. Charles A. L. Reed, as follows:

To the Members of the House of Delegates of the American Medical Association:

Your Committee on Medical Legislation begs leave, herewith, to submit its annual report, and, as a part of the same, the accompanying *Bulletin* comprising the record of the "Annual Conference of the Committee on Medical Legislation and the National Legislative Council," held at Washington, D. C., Jan. 18, 19 and 20, 1909.

An examination of this *Bulletin* will show that your committee has had under consideration during the past year (a) the Navy Medical Reorganization Bill; (b) bills relating to the Public Health and Marine-Hospital Service; (c) measures relating to the Federal and State Regulation of the Public Health; (d) relief measures for the surviving families of persons who have died in the medical service of the country; (e) the uniform regulation of the practice of medicine by the different states; (f) uniform regulation of vital statistics by the states; (g) uniform state laws on foods and drugs; (h) the attitude of the last administration in appointing a commission for the purpose of reviewing and thus overriding certain findings of the governmental agencies lawfully established for the interpretation and enforcement of the National Pure Food and Drugs Act, and (i) the general question of expert medical testimony.

Although these several questions are considered at length, and although the conclusions reached by the Conference are fully set forth in the *Bulletin* submitted herewith, it seems important that further, but brief, allusion should be made to certain of the subjects therein mentioned, and particularly, that certain information that naturally does not occur in the formal record should be placed before the House of Delegates.

THE HEARING OF THE PUBLIC HEALTH BILL

On January 19, your committee, accompanied by the attending members of the National Legislative Council, appeared before the subcommittee of the House Committee on

Interstate and Foreign Commerce, and were accorded a full hearing on the pending measure to protect the public health and to impose additional duties on the Public Health and Marine-Hospital Service. This bill, known as Senate Bill 6102, had passed the Senate, had been reported out of committee in the House and was then on the open calendar. It had been agreed, however, between the Surgeon-General of the Public Health and Marine-Hospital Service and the representatives of the Committee of One Hundred, that an amendment to the bill should be offered either on the floor or by having the bill referred back to the committee, which amendment should embody a provision for the transfer of certain existing bureaus and services with the object more especially of creating a new national public health bureau.

A NATIONAL BUREAU OF PUBLIC HEALTH

The amendment was based on the recommendations contained in the message of President Roosevelt and had been drawn in conference with him and the representatives of the Committee of One Hundred. It consisted, in effect, of a provision authorizing the President at his discretion and by executive order, to transfer any existing bureau or service from any department in which it now exists to any other department of the government and similarly to reassemble and reorganize the bureaus thus transferred. The Conference endorsed the amendment to the extent of approving the proposition to transfer and reassemble "into a single department the various existing national public health agencies." The Conference further proposed an amendment to the bill to invest the Public Health and Marine-Hospital Service with power to regulate the sanitation of interstate streams. It was these two amendments that the subcommittee, through the intervention of Hon. A. J. Barchfeld, M.D., member of Congress from the thirty-first Pennsylvania District, consented to hear in anticipation of their actual presentation. Your committee urged the importance of the effect aimed at by both propositions. The fact that the bureau of health amendment contemplated the creation of such a bureau by means at variance with the previously expressed policy of the American Medical Association, was waived in view of the fact that the amendment in question had been based on the message of President Roosevelt; that it had been submitted by the representatives of the Committee of One Hundred only after consultation with him, and in view of the additional fact that the American Medical Association stood precommitted to cooperate with the Committee of One Hundred on any proposal that it might bring forward relative to this particular question.

It became apparent, however, in the course of this hearing and other interviews (1) that there was some sentiment in Congress favorable to the creation of a Department of Public Health with representation in the cabinet, and that looked on this measure as obstructive; (2) that the proposed amendment was looked on as being so framed that the present organization of any and all departments could be changed at the discretion of the President, and that changes outside of the health services were believed to be the real object of the measure which, in this particular, was looked on as being disingenuous; (3) that there was a decided objection, pointedly expressed by the members of both branches of the Congress, that the proposition contemplated the surrender by the Congress of a constitutional prerogative, and was an additional instance of the attempted encroachment of the executive on the legislative branch of the government; and (4) that the creation of a governmental bureau by executive order was without precedent, and that such a precedent ought not to be established. In view of these considerations it is not surprising that the measure did not come up for passage, and consequently that no occasion arose by which the amendment could be offered from the floor. Your committee is now authorized to state that its effort to secure the establishment of a more highly organized national public health service by practicable and constitutional legislation will receive the cordial support of President Taft.

THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE

The bill to which allusion has just been made and another bill (Senate 6101), known as the "Personnel Bill," naturally died with the Congress before which they were pending. They are both meritorious measures, and with some slight amendments of the original bills ought to be enacted into law. At the time of the preparation of this report they had not been resubmitted to the Congress, as your committee is advised by the Surgeon-General of the Public Health and Marine-Hospital Service that the Secretary of the Treasury under

the present administration has had as yet no opportunity to go over the measures. The present organization of our government makes it impossible for any move to be made by the administration in public health matters until they shall have been considered and passed on by the layman who happens to be at the head of the Treasury Department. This fact makes it very pertinent to enquire whether or not there would be a practical advantage in having, if not a physician, at least some man with a technical knowledge of public health problems, as the particular Assistant Secretary of the Treasury to whom the Surgeon-General of the Public Health and Marine-Hospital Service reports, and who, in the nature of things, must be the adviser of our National Officer of Health, otherwise known as the Secretary of the Treasury.

THE NAVAL MEDICAL REORGANIZATION BILL

Senate bill S. 1017 and House bill H. R. 6184, "To Reorganize and Increase the Efficiency of the Hospital Corps of the United States Navy and Regulate Its Pay," has been repeatedly introduced, and passed the House last session; it is now before both the House and Senate, and should pass the regular session of this Congress on its merits. This bill provides for the reorganization of the Hospital Corps, together with the creation of the grade of chief pharmacist. The creation of this additional grade represents the only additional expense. Pharmacists now represent the only warrant officers to whom the benefits of this advanced grade are not extended. The naval appropriation bill, approved March 3, 1909, having provided for the promotion of machinists to chief machinists. It is with a view to correct this unfair discrimination that the present bill has been introduced.

THE NAVAL DENTAL SERVICE

Senate Bill S. 1015 and House Bill H. R. 6741, "Authorizing the Appointment of Dental Surgeons in the Navy," deserves a special word of consideration.

For many years the Navy Department has consistently recommended legislation providing for the services of dentists in the Navy. The arguments in favor of authorizing the employment of skilled dentists in the Navy may be found clearly and exhaustively set forth in the various annual reports of this Bureau and also may be found ably epitomized and compiled in Report No. 1227, accompanying the dental bill when, on March 13, 1908, it was committed to the Committee of the Whole House. Bills looking to the appointment of dental surgeons, which have the approval of this Bureau, have been introduced both in the Senate and House at the present session of Congress and have taken their place on the calendars and will, it is hoped, duly come up for consideration at the regular session.

Dental surgeons are needed in the Navy quite as much as, if not more than, in the Army, which service enjoys free treatment by dentists employed in accordance with law, and it seems an unjust discrimination against the enlisted men of the Navy not to provide for similar dental work, especially in view of the universally recognized economic importance of sound teeth in military service.

A MEDICAL RESERVE CORPS FOR THE UNITED STATES NAVY

The Navy Department, during the last session of Congress, approved the insertion of a clause in the Navy appropriation act for that year under "Pay of the Navy," providing for the establishment of a reserve corps for the medical department of the Navy, and recommended the insertion of this clause to Congress, but it failed of favorable consideration.

The clause as recommended is based on the act approved April 23, 1908, which established a Medical Reserve Corps for the Army, and by this clause the Bureau seeks exactly similar provisions for the Navy.

A Medical Reserve Corps in the Navy is urgently required to place the medical department on a sound footing in respect to medical assistance available should any occasion arise for emergency expansion.

If this measure is enacted and the desired corps is established:

1. The Medical Department of the Navy will be placed in close contact with the members of the medical profession throughout the country, and will be in a position to call them into consultation and enjoy the advantage of their advice should the occasion require.

2. It would secure for the medical department adequate and efficient assistance, no matter what or how great the emergency demand.

3. It would make the services (Army and Navy) equally attractive. This equality does not exist under the present

policy of requiring all candidates for the Navy Medical Corps to pass through a probationary period as acting assistant surgeons under instruction at the Naval Medical School before being eligible for commissions in the regular service.

The proposed amendment is as follows:

Provided, That a medical reserve corps, to be a constituent part of the medical department of the Navy, is hereby established under the same provisions, in all respects (except as may be necessary to adapt the said provisions to the Navy), as those providing a medical reserve corps for the Army and as set forth in the act to increase the efficiency of the medical department of the United States Army, approved April 23, 1908.

HOSPITAL SHIPS FOR THE NAVY

As permanent adjuncts of the Atlantic and Pacific fleets, such ships have become a necessity and their value, both from economic and humane considerations, has been fully demonstrated by the experience of the hospital ship *Relief*, which was recently with the Atlantic fleet on its cruise. This ship, although a makeshift and scarcely seaworthy, on many occasions during the cruise saved to the fleet the services of men-of-war, which, in former times, were required to be diverted on the occurrence of infectious disease, etc., from their legitimate functions to serve as carriers for the sick or injured.

The Bureau has urged the Department to make provisions in the estimates presented to Congress for two hospital ships based on plans already prepared under the Department's direction, the cost of each not to exceed \$1,500,000.

The unseaworthiness of the hospital ship *Relief* has required that she be retained in Philippine waters, and her services are, therefore, restricted and not available for service with the fleet.

The Department has authorized the refitting of the U. S. S. *Solace* as a hospital ship, and this work is now approaching completion. It must be understood, however, that ships of this nature represent only makeshifts and are not of a type suitable for this purpose.

The amendment as proposed is as follows:

Increase of the Navy; Hospital Ships. The Secretary of the Navy, in his discretion, is hereby authorized to purchase and fit two ships of American registry, having a gross tonnage of not less than eight thousand tons each, to be used as hospital ships;

Provided, That the cost of the two ships shall not exceed three million dollars;

And provided further, That one or both of said ships, in the discretion of the Secretary of the Navy, may be built by contract.

ISTHMIAN SANITATION

The sanitation of the Canal Zone is being maintained at such a high standard, the results achieved are so thoroughly satisfactory, and the status given to the sanitary department under the present administration is so high and influential that no additional legislation relating thereto has been required from Congress.

The fact that the chief sanitary officer is now a member of the commission, and that he now has coordinate rather than subordinate powers, is largely responsible for the fact that the work of constructing the canal with a minimum loss of human efficiency from disease and death, is progressing with a rapidity never before known in the history of such enterprises.

It is, furthermore, a source of satisfaction to report, on authority, that President Taft is already giving careful attention to the future sanitation of the Isthmian Lake, now in course of construction. This body of water will be several hundred square miles in extent and would be an ideal breeding place for the anopheles mosquitoes, the unrestricted multiplication of which would be a serious menace to the health of the Isthmus.

Any apprehension that may arise from these circumstances may be allayed in view of the fact that the problem, which is still several years away, is already in process of solution by President Taft, in cooperation with the distinguished gentleman who presides over our deliberations to-day, Col. William C. Gorgas.

WORK IN THE STATES

During the past winter the legislature has been in session in forty states as follows: Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Mexico, New York, Nevada, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Vermont, Utah, Washington, West Virginia, Wisconsin and Wyoming. In

each of these states the member of the Council on Medical Legislation was asked to designate a member living at the capital city to act as capital correspondent and to keep the Bureau informed regarding the progress of legislation in the state. The only measure actively taken up by the committee was the bill regulating the registration of vital statistics, which was endorsed by the House of Delegates at the Chicago Session, and which, after discussion of its provisions by the Section on Hygiene and Sanitary Science as well as the American Public Health Association, was further amended and a final draft printed, a copy of which is attached herewith. At the request of the Bureau of the Census, special efforts were made to secure the passage of this bill in Illinois and Missouri. Owing to unfortunate and unavoidable political conditions, the passage of the bill in Illinois was impossible. We are glad to report, however, that owing to the energetic efforts of the Committee on Medical Legislation of the Missouri State Medical Association, the model bill was passed by both houses of the legislature and became a law. In addition to this, the bill in a modified form was adopted by the Arizona legislature and the Delaware vital statistics law was so modified as to admit that state to the registration area. It is the intention of your committee to continue its efforts along this line in selected states each year, until the model bill has been adopted in all of the states.

In addition to the special efforts made in Missouri and Illinois, the model bill on vital statistics was also distributed widely in the various non-registration states, not with any expectation of securing its passage this year, but in the hope of laying the foundation for future activity. It was introduced in Tennessee and Kansas, but was not passed. It will undoubtedly be presented in these states at the next session of the legislature. This matter is now in definite form, and it is only necessary to continue systematic efforts to solve this problem permanently.

OTHER STATE LEGISLATION

In addition to the special work done along the line of vital statistics legislation, your committee has endeavored to cooperate, wherever possible, with the committees of the various state associations for the furtherance of desirable legislation and for the defeat of vicious and undesirable bills. As a motion was unanimously adopted at the Washington Conference in December not to take part in any state campaign unless specifically requested to do so by the committee on legislation of the state association, your committee has restricted its efforts to those cases in which it was specifically asked to assist the state committees in their work. As usual, the principal battles have been waged around the question of medical licensure and the recognition of the right to practice. Perhaps the most important effort at constructive legislation was that undertaken in Pennsylvania, in which the so-called Herbst-Shreve bill, introduced into both houses on the endorsement of the state committee on legislation, aroused marked interest not only in the profession, but in the public mind and daily press as well. Owing to the number of amendments introduced and attached to the bill in its progress through the legislature, it finally became unsatisfactory to its friends and was withdrawn, leaving Pennsylvania with the cumbersome and ineffective medical practice act of previous years. Efforts will probably be made at the next session of the legislature to secure the passage of a satisfactory practice act.

Efforts have been made in a number of states to secure the enactment of osteopathic and optometry laws, as well as a class of bills recognizing various "schools" previously unheard of. A brief summary of the legislation in the various states follows:

ARIZONA

Model vital statistics act passed, with amendments. Arizona Medical Association made an effort to secure the passage of a bill providing for a bacteriologic and chemical laboratory in connection with the University of Arizona.

ARKANSAS

Bill creating a separate board of examiners for physio-medics defeated in the senate.

CALIFORNIA

Bill establishing a board of examiners for "naturopaths" defeated.

COLORADO

Bill establishing a state board of osteopathy defeated, also bill amending the Colorado medical practice act. Bill establishing state board of osteopathic examiners defeated by the

introduction of a bill placing the examination and licensing of opticians in the hands of the state board of medical examiners. Bill providing for the licensing of all hospitals, dispensaries and institutions for the treatment of sick by the state board of health became a law.

CONNECTICUT

Antivaccination bills were defeated. It is hoped that an optometry bill will also fail to pass.

DELAWARE

Amendments to the existing vital statistics act were passed, bringing Delaware into the registration area.

FLORIDA

Bill providing for a state board of osteopathic examiners introduced. No word yet received regarding the outcome of this bill.

ILLINOIS

The usual osteopathic and optometry bills which have been introduced throughout the last four sessions of the legislature appeared again and were defeated. A most excellent bill reorganizing the state charitable, eleemosynary and corrective institutions and placing them all in the hands of a state board of administration, was introduced, but failed to become a law. A bill authorizing municipalities to establish and maintain public tuberculosis sanatoria became a law. The vital statistics bill failed to pass.

INDIANA

The following legislation was enacted: 1. Anti-stream pollution act to prevent the introduction of impurities into the public streams of the state and conferring on the state board of health certain powers to enforce its provisions for the protection of the public health. 2. Housing bill, regulating the construction and maintenance of tenements, lodging and apartment houses. This applies only to Indianapolis and Evansville. 3. Amendment to the state health law, defining the powers and duties of the state board of health, etc., and giving all boards of health "power to do what is reasonable and necessary for the prevention and suppression of disease and the protection of the public health." 4. Act regulating bakeries, canneries, packing houses, slaughter houses and all establishments in which food of any kind is stored or produced, also regulating the method of preparation of food products, etc. 5. A law regulating the management of county jails and providing for their sanitary conduct. 6. An act requiring steam railroads to equip trains with medical supplies. 7. An act authorizing the trustees of the Indiana State University to conduct a medical school. 8. An act protecting natural, mineral and medicinal springs of the state and preventing waste, pollution, etc. 9. An act appropriating \$135,000 for a state tuberculosis hospital. 10. An act providing for medical inspection of school children. 11. An act providing for the establishment of a hospital for insane criminals. The usual appropriation bills were also passed with an increase of the amount appropriated for the use of the state board of health. Public health matters in Indiana are in a most excellent condition and the cooperation existing between the state board of health, the state medical association and the various committees on medical legislation is intimate and satisfactory.

IOWA

The optometry bill was defeated in the lower house. The most satisfactory bill passed by the state legislature was the county hospital bill providing for the establishment and maintenance of county hospitals in any county in the state. A bill of special significance was one providing for the consolidation of all the boards of the state, including pharmacy, health, food and drug, medicine, chemistry, veterinary surgery, etc., into a single board to have entire charge of all health matters. This bill, while it did not become a law, is of special interest as representing the inevitable reaction from the multiple boards that have markedly increased in the past years.

KANSAS

Probably the most important legislation was the appropriation of \$10,000 a year for two years for the use of the state board of health in inaugurating a state wide educational campaign for the suppression and prevention of tuberculosis. Other laws looking toward the suppression of tuberculosis were also enacted. The food and drugs act was amended and various sanitary laws adopted. The vital statistics bill failed to pass on account of the appropriation feature. It will doubtless be reintroduced and passed at a later session.

MASSACHUSETTS

Of two bills in opposition to vivisection, one was killed and another is pigeonholed and doubtless is dead. The optometry bill was killed. The osteopathic bill was defeated in the Committee on Public Health, but has been amended several times and has gone through both houses. It has not yet reached the governor. The bill consolidating the boards of registration in medicine, dentistry and veterinary medicine was defeated. Several other bills of less notoriety were defeated, for instance, two bills looking to the prevention of dispensing medicine by the physician! Two bills relating to the registration of nurses are still under consideration.

MICHIGAN

Bills were enacted providing for an optometry board as well as for a board of examination for trained nurses, consisting of the secretary of the state board of health, one member of the state board of registration in medicine and three nurses to be appointed by the governor. A tuberculosis bill requiring all physicians to report cases of tuberculosis within twenty-four hours and also providing for the disinfection of all premises in which tuberculosis patients have died also became a law.

MINNESOTA

The most important bill enacted was one prohibiting advertising in any form containing suggestive or immoral terms. This bill was bitterly fought by the interests affected, but was finally adopted. A bill regulating the sanitary condition of workshops and factories was also passed. A bill providing a board of examiners for "naturopaths" was defeated.

MISSOURI

In addition to passing the model vital statistics bill admitting Missouri into the registration area, the medical practice act was also amended, increasing the power of the state board, giving it the right to subpoena witnesses and compel attendance and also giving it jurisdiction over physicians licensed under and previous to the act.

NEBRASKA

A law was enacted providing for the care of indigent consumptives and providing that persons declared by the courts to be invalids should be entitled to public care. A bill creating a board of osteopathic examiners, as well as one providing for the registration of trained nurses under the supervision of the state board of health, became laws.

NEW JERSEY

An amendment to the medical practice act was adopted giving the osteopaths one member on the state medical examining board and legal status as practitioners.

NEW YORK

The antivivisection bills were killed in the committee on judiciary. The bill regulating medical expert testimony was not adopted.

NORTH CAROLINA

An optometry bill similar to those introduced in other states became a law.

NORTH DAKOTA

An osteopathy bill, creating a separate board of osteopathic examiners, became a law.

OHIO

The optometry bill was defeated. Other legislation was not undertaken on account of the session of the legislature being a special one.

PENNSYLVANIA

The antivivisection bill failed to pass. An osteopathic bill, creating a board of five members, passed both houses and was signed by the governor. A milk adulteration bill, as well as a bill establishing a board of examiners for trained nurses, was enacted. A food bill known as the Todd-Murphy bill, permitting the use of benzoate of soda and sulphur dioxide as preservatives, was also passed. The Herbst-Shreve bill, providing a new medical practice act, was withdrawn.

RHODE ISLAND

A bill providing for a board of optometry examiners became a law.

TENNESSEE

Bills comprising a new medical practice act, as well as the model vital statistics bill, have been introduced into the legislature. No final action has as yet been reported.

VERMONT

The optometry bill was adopted; also a bill amending the medical practice act, various sanitary measures, such as acts providing for the free distribution of antitoxin, amending the pure food and drug law and prohibiting the pollution of public waters, etc.

WISCONSIN

An antivivisection bill referred to the committee on public health was indefinitely postponed.

WYOMING

Efforts were made to amend the medical practice act, but were not successful.

WORK OF THE BUREAU

In addition to cooperating with the various state committees and assisting so far as possible in the legislative campaign in the various states, as outlined above, the Bureau has endeavored to carry on constructive work in the direction of uniform state legislation. The work done on a model bill for vital statistics was outlined in the report of last year. We now have a model bill suitable for enactment by any state (with slight modifications and changes), and endorsed by all the health bodies interested in this work. The continued efforts of the committee and of the Bureau will be directed in the future to securing the adoption of this bill in all non-registration states.

Similar efforts have been made in the direction of uniform food and drug legislation. In August of 1908 the secretary entered into correspondence with Mr. R. M. Allen of the Department of Justice, Washington, D. C., secretary of the Association of National and State Food and Dairy Departments, with a view to securing cooperation between his organization and the American Medical Association along this line. At the annual Conference on Medical Legislation, held at Washington in January of 1909, Mr. Allen and Dr. Bigelow, of the Department of Agriculture, addressed the Conference, submitting a model bill which had been drawn up by the Committee on Uniform State Legislation appointed by the Association of National and State Food and Dairy Departments. This bill, containing an elaborate system of standards and definitions necessary for successful pure food legislation, was endorsed by the Conference and has been printed by the Bureau and distributed widely. A copy is submitted herewith. The secretary is now endeavoring to secure cooperation with the National Wholesale Grocers' Association as well as with the state and national pharmaceutical associations. A section on drugs will later on be drafted and added to the bill and the endorsement of all organizations interested in pure food and drug legislation secured. We will then be in a position to advocate the adoption of uniform legislation on this important subject. The proposed bill was drafted by Mr. R. M. Allen, assistant to the attorney-general of the United States, who also drafted the Kentucky pure food law. He is probably one of the best authorities on the legal aspects of food and drug legislation in the country and is earnestly cooperating with the committee in the furtherance of its work.

The most difficult and intricate question now before the committee is that of the preparation of a uniform bill for the regulation of the practice of medicine. It is impossible to go into this question at length within the limits of this report. The secretary has been endeavoring so far as time permitted during the last two years, to accumulate material for the careful study of this most important question. In the *Bulletin* for Nov. 15, 1907, appeared a synopsis of the existing medical practice acts of the various states, and in the report of the secretary, made at the Washington conference, a synopsis of the history of medical legislation in the United States. The secretary now has on hand a large amount of material, consisting of a complete file of existing medical practice acts, together with many previous acts, a considerable amount of historical matter throwing light on the subject as well as a large number of supreme court decisions in the various states bearing on the question of medical licensure, the power of the state, the powers and duties of examining boards, the definition of the practice of medicine and many other points of vital importance in considering this question. All of this matter, it is hoped, can be published in the *Bulletin* early in the fall. The time now seems ripe for a general discussion and careful consideration of the entire subject of state legislation regulating the practice of medicine. Your committee therefore recommends that it be authorized to call a general conference, to take the place of its annual Conference on Medical Legislation and to be devoted to a discussion of the essentials of a uniform medical practice act for adoption by the various states. To such a conference should be invited all members

of the National Council, all members and especially presidents and secretaries of state examining boards, all members of state committees on medical legislation, representatives of various colleges, etc., and particularly representatives of the sectarian schools of medicine as well as prominent jurists, sociologists and economists. The regulation of the practice of medicine has too long been considered a question which concerned the medical profession alone and which each state must solve alone and unaided. We should not only accept but should earnestly seek for all the assistance which can be secured from those who can enlighten us along legal, sociologic and economic lines.

We should also endeavor to secure uniformity in essentials, so that the present chaotic, shifting and uncertain situation may be remedied.

The committee, and especially the secretary, desire to acknowledge the great assistance afforded by the officers of the various state and county societies, chairmen and members of the committees on medical legislation and the members of the association who have assisted us in securing desired information along legislative lines. Through the continued assistance of all physicians interested in medical legislation we hope to make the Bureau and committee of much greater service during the coming year than it has been in the past.

The work of the Bureau has been under the supervision of Dr. Frederick R. Green, whose services can not be too highly appreciated.

Respectfully submitted,

CHARLES A. L. REED, Chairman.
CHARLES S. BACON.
GEORGE W. GAY.

FREDERICK R. GREEN, Secretary.

The report was referred to the Reference Committee on Legislation and Political Action.

Report of the Council on Medical Education, For the Year Ending June 1, 1909

The report of the Committee on Medical Education was presented by the chairman, Dr. Arthur Dean Bevan, Illinois, as follows:

To the Members of the House of Delegates of the American Medical Association:

For five years the Council on Medical Education has been working for higher and more uniform standards of medical education. In this time many changes for the better have been brought about. Such influence as the Council may have had toward these improvements has been due largely to the following facts:

1. The Council is the committee on education of the medical profession of America, represented by the American Medical Association. As such, its interests are national and its object is the betterment of medical education in all sections of the country.

2. It is a permanent committee, thereby exerting a constant, steady influence for improvement, not possible through temporary committees, however excellent their work might be.

3. Its headquarters at the home of the medical profession of America and its connection with the *Journal of the American Medical Association*, with its extensive body of correspondents, made it possible to obtain much information which otherwise could not have been secured.

4. An abundance of information has been collected, tabulated and published regarding medical colleges, standards, students, graduates, facilities and equipment, as well as much information regarding the requirements for license to practice medicine both in this country and abroad. Information has also been collected regarding elementary, secondary and collegiate education.

5. This information, formerly not available, has thrown much light on medical education, revealing quite clearly problems which otherwise could not have been seen.

6. As problems have arisen they have been presented at annual conferences on medical education for discussion. These annual conferences have been held under the auspices of the Council on Medical Education and to them are invited as delegates those who are interested and whose advice and influence may be helpful in elevating the standards of medical education; from the state licensing boards, state medical societies, confederation of examining boards, college associations and the United States services, as well as from colleges of liberal arts and other interested organizations. They have been attended by an increasing number of delegates each year. They are entirely informal and are devoted to the discussion of the more urgent problems of medical education, the reports of

which have been given wide circulation in the columns of the *Journal of the American Medical Association* and by reprints. These conferences have undoubtedly been a strong influence favoring higher and more uniform standards.

It might be well to briefly review the work of the five annual conferences. The first conference was held in Chicago, April 20, 1905. At this conference the questions of preliminary education, medical curriculum and the relation of the college of liberal arts to the medical school were discussed, as a result of which the Council formulated the following as the minimum standard of the American Medical Association:

MINIMUM STANDARD

(a) A preliminary education sufficient to enable the student to enter the freshman class of our recognized universities, (b) the passing on the credentials of such an education by a state official, (c) the graduation from an approved medical college requiring a four years' course of not less than 30 weeks each year with 30 hours each week, of actual work, (d) the passing of an examination for licensure before a state board.

IDEAL STANDARD

The Council further formulated a so-called ideal standard which should be secured as rapidly as the conditions throughout the country warranted. This ideal standard was briefly as follows:

(a) A four year high school education, (b) a year's university training in physics, chemistry and biology, (c) four years of medicine proper, and (d) one year as interne in a hospital or dispensary.

THE SECOND CONFERENCE

At the second conference, held in Chicago, May 12, 1906, probably the most important facts presented were the standings of the various medical colleges based on the failures of their graduates in examinations before state boards. The colleges were divided into three groups: those having less than 10 per cent. of failures; those having from 10 to 20 per cent., and those having above 20 per cent. A fourth unclassified list was made of those colleges which had insufficient data to permit of comparison. These reports, which are published annually in the State Board statistics prepared by the Council, have been productive of much good in stimulating faculties to guard against the graduation of illy prepared students.

THE THIRD CONFERENCE

At the third conference, held in Chicago, April 29, 1907, a detailed report of a personal inspection made by members of the Council of all the medical schools of the United States was presented. In this inspection the schools were marked on a civil service basis consisting of ten points covering the essentials of a modern medical college, these 10 points making a possible 100. And on this basis the colleges as graded were divided into three groups. The result was as follows: An acceptable group of 82 colleges with marks from 70 to 100, a conditioned group of 46 colleges with marks from 50 to 70, and a rejected group of 32 colleges with marks below 50.

This personal inspection of colleges has been continued and a second inspection will soon be completed.

THE FOURTH CONFERENCE

The fourth annual conference held in Chicago, April, 1908, was from many standpoints most encouraging and interesting. The secretary presented a graphic study of medical education in the various states of the union and in the twenty most important countries of the world showing the comparative position of medical education in this country with that of the rest of the world.

It was revealed that while this country had a few medical colleges equal to any in the world, it was nevertheless far behind other nations in standards of both preliminary and medical education. More encouraging was the report of a campaign carried on during the year by the Council to secure the adoption by medical colleges of higher preliminary standards. This report brought out the fact that more than fifty first-class schools in this country had agreed to accept what has been adopted by all the rest of the world, i. e., a five year medical course. This is to be brought about by adding to our present preliminary requirements of a four year high school course, at least one year of physics, chemistry and biology.

This advance requirement has become so general that it will doubtless be adopted by all first-class schools within the next few years and thus place American medical education on a par with that of England, France, Germany, Austria, Canada—in fact, with that of all our neighbors and rivals in progress and civilization.

THE FIFTH CONFERENCE

At the fifth annual conference, held in Chicago, April 5, 1909, the chief feature was the report of a committee on medical curriculum. This committee consisted of one hundred prominent educators representing all the departments and specialties in medicine. It has done a splendid piece of work, which we feel is most important and timely since we are just entering on what we believe will prove to be the greatest reconstructive period in the history of medical education in America. The recommendations of this committee on what constitutes a proper medical course are most interesting and have already attracted much attention.

A 4,100 hour curriculum was agreed to, divided among the various departments as follows:

SUBJECT	HOURS
I. Anatomy, including histology and embryology.....	700
II. Physiology and Physiologic Chemistry, including 80 hours of Organic Chemistry.....	530
III. Pathology and Bacteriology.....	500
IV. Pharmacology, Toxicology and Therapeutics.....	240
V. Medicine, including Pediatrics and Nervous Diseases....	890
VI. Surgery: General and Special.....	650
VII. Obstetrics and Gynecology.....	240
VIII. Diseases of the Eye, Ear, Nose and Throat.....	140
IX. Dermatology and Syphilis.....	90
X. Hygiene, Medical Economics and Medical Jurisprudence	120
Total	4,100

It was the unanimous opinion of the committee that a hard and fast medical curriculum uniform for all colleges was not desirable and not for the best interests of medical education. It was definitely stated, therefore, that the curriculum recommended by this committee was to be regarded as suggestive and educational only, and was not intended for adoption as an absolute and fixed requirement either by medical colleges or by state boards. The curriculum reported does not represent a minimum requirement but one which is sufficiently comprehensive to meet the present demand of medical education.

A second and no less important subject discussed at this conference was the desirability and value of practical state license examinations as the best means of testing the candidate's ability to practice medicine. Statements were made by state board members present suggesting that in addition to the written examination the candidate be required to do some chemical laboratory work, to examine specimens under the microscope, to describe gross pathological and anatomical specimens, to make demonstrations on the obstetric manikin and on the cadaver or to make application of bandages or surgical dressings. Several states have already introduced such practical examinations and others are contemplating doing so. Although there are some difficulties to be overcome, the advantages of these methods are obvious. As is well known, such tests have long been employed in practically all European countries. The members of the Council are unanimous in endorsing this as one of the most important advances to be made. On the whole, much has been accomplished, which will be briefly outlined in the following report, showing the present status of preliminary and medical education in the United States:

PRELIMINARY EDUCATION

Investigation reveals much confusion in standards not only among medical schools, but also in high schools, colleges and all other departments of education. No previous time, however, has seen so many forces at work in the effort to standardize the different departments and to develop system and uniformity.

High Schools.—Many of the states are seriously lacking in good high schools, which observation applies as much to a number of states north of the Mason and Dixon line as to those south of it. In fact, there are very few states which have all their high schools well organized, well equipped and supplied with well qualified, college-trained teachers. This department of education is now being systematically taken up by various organizations, including the General Education Board, and throughout the southern states a high-school inspector with the title of a "Professor of Secondary Education" has been placed with each state university. Public sentiment throughout the south is rapidly being awakened and already vast sums have been appropriated by legislatures to develop high schools. Leading educators in the south state that within four to five years that section will be fairly well provided with four-year high schools.

Colleges and Universities.—Several educational organizations, including the Associations of Universities and the Carnegie Foundation for the Advancement of Teaching, are now at work in an effort to standardize colleges and universities,

many of which, from an educational standpoint, have no right to such titles, since they give courses of little more, or even of less value, than those in some of the better high schools.

PRELIMINARY REQUIREMENTS OF MEDICAL SCHOOLS

Eleven medical colleges already require two or more years of work in a college of liberal arts for admission. These colleges and the years when such requirement began are as follows:

College	Began
Johns Hopkins University Medical Department.....	1893
Harvard Medical School.....	1900
Western Reserve University, Medical Department.....	1901
University of Chicago, Rush Medical College.....	1904
University of California, Medical Department.....	1905
University of Minnesota, Coll. of Med. and Surg.....	1907
University of Minnesota, Homeopathic Department.....	1907
University of North Dakota, College of Medicine.....	1907
University of Wisconsin, College of Medicine.....	1907
Cornell University Medical College.....	1908
Wake Forest College, School of Medicine.....	1908

Eighteen other colleges have definitely announced an increase in their entrance requirements to two or more years in a college of liberal arts. These and the dates when such requirements will become effective are as follows:

College	Begins
Leland Stanford Junior University, Department of Medicine.....	1909
Yale Medical School.....	1909
*Northwestern University Medical School.....	1909
University of Kansas, School of Medicine.....	1909
University of Michigan, College of Medicine.....	1909
*University of Nebraska, College of Medicine.....	1909
University of South Dakota, College of Medicine.....	1909
University of Colorado, School of Medicine.....	1910
†Indiana University School of Medicine.....	1910
†State University of Iowa, College of Medicine.....	1910
Drake University, College of Medicine.....	1910
‡University of Missouri, Department of Medicine.....	1910
John A. Creighton Medical College.....	1910
Dartmouth Medical School.....	1910
Columbia University, College of Physicians and Surgeons....	1910
†Syracuse University, College of Medicine.....	1910
†University of Pennsylvania, Medical Department.....	1910
†University of Utah, Medical Department.....	1910
* One year required for the session of 1908-09.	
† Will require one year for the session of 1909-10.	
‡ One year has been required since 1906.	

The 21 following colleges either already require one year of work in a college of liberal arts in addition to a four-year high school course, or have announced their intention to do so on or before the year given:

College	In Force
Fordham University, School of Medicine.....	1908
University of North Carolina, Medical Department.....	1909
Oakland College of Medicine and Surgery.....	1910
Denver and Gross College of Medicine.....	1910
College of Physicians and Surgeons, Chicago.....	1910
Hahnemann Medical College, Chicago.....	1910
Kansas Medical College.....	1910
Tulane University of Louisiana, Medical Department.....	1910
St. Louis University School of Medicine.....	1910
Washington University, Medical Department.....	1910
University of Cincinnati, Medical Department.....	1910
Starling-Ohio Medical College.....	1910
Cleveland College of Physicians and Surgeons.....	1910
University of Oklahoma School of Medicine.....	1910
University of Oregon, Medical Department.....	1910
Vanderbilt University, Medical Department.....	1910
University of Texas, Medical Department.....	1910
*University of Virginia, Department of Medicine.....	1910
West Virginia University, College of Medicine.....	1910
Marquette University Medical Department.....	1910
Wisconsin College of Physicians and Surgeons.....	1910
* Requires a three year high school course plus one year of college work.	

Several other colleges announced to us that higher requirements had been adopted. Two have since rescinded their action, five have merged into other colleges, and others, on inspection, being found unworthy of recognition, were omitted from the lists. The schools above named, however, have made definite statements in their announcements regarding the increase in their entrance requirements and doubtless mean what they say.

In support of these higher standards, the State Examining Boards of six states have established higher requirements of preliminary education. These states and the years when the requirement will become effective are as follows:

State Examining Board of	No. of years Required	Affects students matriculating	Affects all applicants after
Minnesota	2	1908-09	1912
Connecticut	2	1910-11	1914
North Dakota	2	1907-08	1911
South Dakota	1	1907-08	1911
Colorado	1	1908-09	1912
Kansas	1	1910-11	1914

Several other states are contemplating a similar increase in their requirements of preliminary education. In some of these

the increase would doubtless be welcomed, since their medical colleges have already adopted the increased requirements.

MEDICAL COLLEGE MERGERS

Since our last report there have been five important mergers of medical colleges by which nine medical schools are replaced by four stronger ones. These mergers were as follows:

1. At Louisville, Ky., the Louisville and Hospital Medical College, the Kentucky School of Medicine and the University of Louisville Medical Department united, retaining the name of the University of Louisville Medical Department. This leaves but one regular medical college in Louisville, where there were five colleges two years ago. As a direct result of this merger, the school has received \$25,000 from the city of Louisville, and steps have been taken to build a new city hospital, which is to be largely under the control of the medical school.

2. At Cincinnati the merger between the Medical College of Ohio and the Miami Medical College has been completed, the new school to be the Medical Department of the University of Cincinnati. The building of an enormous new city hospital has already been started near the university campus and a new medical college building will be erected adjoining this hospital. The outlook for this new school is very encouraging.

3. The Keokuk Medical College, College of Physicians and Surgeons, located at Keokuk, Iowa, has turned all its property and good will over to the Drake University, College of Medicine, at Des Moines, Iowa.

4. The University of Southern California, College of Medicine, at Los Angeles, has united with the University of California, whereby it becomes the Los Angeles Medical Department of the State University. The work of the first two years will be at Berkeley, the student being allowed to take his clinical work either at San Francisco or Los Angeles.

5. The Cooper Medical College, beginning this fall, will be the Medical Department of Leland Stanford, Jr., University, located at Palo Alto, Cal. Three years of work in the liberal arts department will be required for admission. The first three semesters of medical work will be given on the University campus at Palo Alto, the last five at San Francisco.

QUALITY VERSUS QUANTITY

Five years ago there were 166 medical colleges in the United States. Since that time 25 others have been organized, but 43 were closed, leaving 148 at the present time. Of those closed, 16 became extinct and the balance merged into others. That the medical colleges themselves realize the need of improvement in standards and equipment is best shown by the fact that in five years mergers took place replacing 34 medical colleges by 12, which were invariably larger, stronger and better equipped.

There are numerous other cities where mergers might be brought about if those interested in general education and those in medical education in each city would work together to secure them. For example, if all the medical colleges of any large city, such as Chicago, Philadelphia, St. Louis or others could be merged into one great university medical school, such as are to be found in Berlin, Paris or Vienna, it would be of the greatest possible advantage to medical education in this country.

NIGHT TEACHING ABANDONED

Information has been received that the teaching of medicine to students attending only at night or after 4 o'clock p. m., has been abandoned by George Washington University and by Howard University, both located at Washington, D. C., and by Temple College Medical School at Philadelphia. This still leaves four medical night schools, three of which are at Chicago and one at St. Louis.

GRANTING OF ADVANCED STANDING

It is a rather deplorable practice, even with some of the supposedly better grade medical colleges, to allow advanced standing with little or no restrictions for work done in some of the medical schools known to be extremely low grade, from night schools and even from schools not generally recognized by law as medical schools. It is quite encouraging, therefore, to note that an increasing number of colleges are limiting advanced standing to credentials from colleges of known merit.

NEEDS AS REVEALED BY THE INVESTIGATION OF MEDICAL COLLEGES

An investigation of medical education in the United States covering a period of five years and which included one or more personal inspections of each individual medical school, has revealed numerous defects in the teaching of medicine, some of which may be briefly stated as follows:

1. There are too many medical colleges in this country. As shown in our report last year, the United States has nearly as many colleges as the rest of the civilized world combined. The majority of them depend on the fees of students to pay their running expenses.

2. This has led to an active competition for students and to a disregard of preliminary requirements which has not only prevented the medical school from obtaining well-trained students, but has also hindered the development of high schools, since students were and are still being admitted with only a grammar school education.

3. The methods of teaching medicine of 15 or 20 years ago are still being followed by a number of our colleges, and the students in many of the schools are not required to have a preliminary training the equivalent of a four-year high school education.

4. The medicine of to-day, however, really demands of the student a more extensive and thorough preliminary training than is possible in the vast majority of our secondary schools. Experience has shown that this additional preliminary training for medicine should consist of at least one year's work in physics, chemistry and biology, and that a reading knowledge of German and French should also be required.

5. The teaching of medicine to-day demands trained teachers. For the fundamental medical sciences there should be instructors who have had special, thorough training in anatomy, histology and embryology, physiology, physiologic chemistry, pharmacology, pathology and bacteriology, and these men should be paid salaries sufficient to permit them to devote their entire time to teaching and research, unhampered by the necessity of keeping up an active practice for a livelihood.

6. In order to properly teach medicine, medical colleges must have hospitals either owned by them or entirely under their control so far as the clinical material is concerned. This is now one of the greatest needs of medical teaching. Our medical students must come into closer contact with patients in hospital wards and dispensaries, where they should be given a systematic, careful training in writing histories and in the methods of the clinical laboratory.

7. If the medical college is of high standard, hospital patients would be benefited by the presence of students. The attending physician will be more careful in his examinations and treatment if he is teaching medical students. The trustees of hospitals should have pointed out to them the importance of the educational function of the hospital and the value of a medical school connection.

8. Medical education is but one of the departments of our general system of education, and should be brought into harmony with all other departments. The interests of all departments of education are mutual. What helps one should help all. Medical schools must depend on the high schools, colleges and universities to furnish the preliminary training for medical students. The medical school might also obtain many valuable suggestions from the liberal arts colleges in regard to supervision, standards of equipment and methods of teaching. On the other hand, if the medical college insists on high standards of preliminary education, it will aid and stimulate the work of the secondary schools, colleges and universities.

9. Owing to the confusion in the standards of secondary schools, it requires expert knowledge to place the proper value on preliminary credentials and to judge of a student's qualifications, which information is not at present available for medical schools. The provision for certificates from county superintendents or high school principals has proved to be very unsatisfactory. A number of eastern colleges and universities have solved the problem by requiring that their examinations be held by the College Entrance Examining Board. It might be possible to have preliminary credentials of medical students pass through the hands of that board.

10. There are a number of medical schools known as medical departments of universities which in point of fact have only nominal connection with such universities. In a few instances there is no real university of the name given, or else the university is made up of schools of medicine, law, dentistry and pharmacy without a liberal arts department. The majority of these are really independent medical schools, the university so called having no control over the standards of teaching, nor furnishing any financial assistance to its "medical department."

11. A medical school would be greatly benefited by becoming the organic medical department of a university which has a strong liberal arts department. By "organic" is meant where the medical school and its finances are controlled by the university trustees and where the educational standards are fixed by the liberal arts department. By such connections,

made within recent years, it has been most interesting to watch the transformation of what might better be termed "medical institutions" into, what are in every sense of the term, "medical colleges."

12. Those medical schools which are honestly striving to teach medicine and which have the right ideals should receive endowment. It has been clearly demonstrated time and again that no medical school can demand the necessary entrance requirements, provide the expert all-time salaried instructors, install the thoroughly equipped laboratories and properly supervise the dispensary and hospital teaching without private endowment or state aid. Additional figures have been received during the past year showing that the cost of teaching a student in each of the freshman and sophomore years in the 25 or 30 leading medical schools ranges from \$250 to \$700 or more per year, while the tuition received from each student ranges only from \$65 to \$250 per year. To meet the necessary expenses of properly teaching medicine from students' fees is therefore clearly out of the question.

13. After all that has been said in the last four or five years regarding the needs of modern medicine in money, salaried instructors, laboratories and hospitals, there are still a considerable number of colleges which, from students' fees, are able to pay all expenses and still have a snug little sum at the end of the year to "divide up" among the members of the faculty. And strange as it may seem, it is from these very colleges that we oftenest hear the plea for "the poor boy who wants to get an education" as an excuse for low preliminary requirements, and the question as to "who will practice at the country cross-roads and the back-woods districts" if a thorough medical training is insisted on.

14. There are several medical schools so called which are little else than quiz classes and which are run only to prepare their students to pass state license examinations. Inspection shows they seriously lack equipment or make little use of what they have. Statistics show that "graduates" of these schools are able to pass state license examinations, as they are now generally conducted. This is an argument for the practical state license examination.

STATE LICENSE LEGISLATION AND REQUIREMENTS

Since a year ago several important changes have been made in medical practice acts or in board rulings governing the requirements for license to practice medicine.

PRACTICAL EXAMINATIONS

1. Two state boards, those of Massachusetts and Ohio, included practical tests in the examination of applicants for license. These tests included the making of urinalyses and the identification under the microscope of histologic, pathologic and bacterial specimens. Two other boards, those of Indiana and Minnesota, have announced that practical tests will hereafter be required.

2. In three states, Alabama, Arkansas and Rhode Island, amendments to the practice acts have been secured requiring that all applicants for license be graduates of reputable medical colleges. This leaves only three states, Massachusetts, Mississippi and Tennessee, which still allow non-graduates to secure licenses other than through reciprocity.

3. Indiana, Iowa and Nebraska have provided for examinations in two parts whereby the fundamental medical branches may be passed off at the end of the sophomore year, this credit to be accepted toward the examination for license after the student has graduated. There are now eight states having this two-part examination, as follows:

Colorado,	Maryland,	New York,
Indiana,	Michigan,	Virginia.
Iowa,	Nebraska.	

4. In only one instance during the past four years has a state retrograded in its standards for medical licensure. This occurred during the last year in Oklahoma. A bill for a strong practice act was introduced, but was so sadly riddled by the time it came through the Oklahoma legislature that it provides lower standards than were formerly enforced in the territory of Oklahoma.

5. In four states during the past year recognition was withdrawn from a number of medical colleges. In Indiana from one college which has been closed, in Illinois from five, to all of which recognition has since been restored, in Missouri from two, to one of which recognition has been restored, and in Texas from two, both of which have been closed. In several other states, while recognition was not withdrawn from colleges, considerable pressure has been exerted by the boards resulting in marked changes for the better.

PROGRESS TOWARD UNIFORMITY IN FIVE YEARS

In the past five years the many changes in practice acts show that the requirements to practice medicine in the various states are approaching uniformity by the process of evolution. These changes are as follows

1. Then only 20 state practice acts made provision for preliminary education; now 36 have such provision. Then no states provided for collegiate education; now six require one or two years of college work as the minimum preliminary requirement. Then only 10 had a 4-year high school requirement; now 22 have that requirement.

2. Then 43 states required an examination of all applicants for license; now all but one state have that requirement. New Mexico still registers graduates from certain medical colleges without the written examination.

3. Then 38 states required that all applicants must be graduates of reputable medical colleges; now all but three have that requirement.

4. Then only about 14 states had full authority to refuse recognition to colleges of low grade; now 29 state boards have full authority and 10 others have limited authority, while only 10 remain without such control.

5. Then all but 13 states had single boards of medical examiners; now only 10 states still have sectarian boards.

6. Then 22 states did not have reciprocal relations with others; now all but 14 states have such reciprocal relations, while two others have legal provision for it.

In the work of bettering medical education in this country, however, there are some other important problems to which attention should be drawn.

CHARTERING OF COLLEGES

In only a few states is there any check on the incorporation or chartering of medical schools. In most states any body of men by paying the required fee can incorporate as a college or university, often with authority to grant any degree under the sun, no question being asked as to the ability to furnish education of the standard generally supplied by the better colleges and universities. And seldom is there any means of control over such institutions, even after they are incorporated.

PSEUDO-MEDICAL COLLEGES

No such unchecked educational institutions are allowed to exist in any other country and, so far as we have been able to learn, in no other country are to be found so many medical sects, or pseudo-medical institutions. There are now some 30 or more nondescript medical fads in a long procession demanding legal recognition, separate boards or representation on examining boards. In some instances the influence has been seriously demoralizing.

SPECIAL LEGISLATION

The chief difficulty in the proper regulation of the practice of medicine in some of the states is the inconsistency of medical legislation. In several instances good, strong medical-practice laws have been enacted providing for fair standards of education but which have been practically annulled by special legislation granting to this or that medical sect special standards, or special boards or representation on examining boards.

THE LOGICAL PROCEDURE

No one should be permitted to practice medicine who is not sufficiently trained to recognize disease, since a proper diagnosis is essential for any treatment regardless of the methods employed. The only logical position to take in the matter is, as has been done in a few states, to fix an educational standard by which all who wish to secure the license to practice medicine must comply. This standard should require a fair amount of preliminary education, which should be at least that of a four-year high school course, and a thorough training of at least four years in a medical school, the first two years of which should be devoted largely to laboratory courses in the fundamental medical sciences, anatomy, physiology, pharmacology, pathology and the like, a knowledge of which is absolutely essential to one who is to differentiate between health and disease. The last two years should be largely spent in the hospital and dispensary, in personal contact with the sick and injured, and should include a thorough training in the clinical laboratory. If this standard is complied with and the examination is passed, then grant a physician's license and let the holder practice as his educated common sense dictates.

RECIPROCITY

Reciprocity, if wisely administered, is a commendable measure and a matter of justice to the old practitioner, who for good reason may be compelled to move to another state. Mis-

understood, however, or poorly administered, it may seriously lower medical standards. It is still quite widely understood, even by some state board members, that if one state has reciprocity with another it means that any doctor licensed by the one state must be accepted by the other, no matter how low the applicant's preliminary training was or from what college he may have graduated. Of course, that idea is entirely wrong, since reciprocity provides that the license from another state may be accepted in lieu only of the written examination. In all other respects the applicant should comply with the standard required by the law of the state in which he is trying to secure license, which standards it is the duty of the licensing board to enforce.

As usually provided in the state practice acts, reciprocity is a discretionary measure, licenses under that measure to be granted only when the board is satisfied that the applicant in every way comes up to the standard fixed by the practice act. It sometimes occurs that an applicant who has failed repeatedly before one board goes elsewhere and passes, then reapplies to the first board for a license through reciprocity. Several boards under such circumstances have very properly refused to issue licenses, and have demanded that such applicants pass their own examinations. Another board, that of Louisiana, has recently published a list of medical colleges which are considered satisfactory, and has barred graduates of all other schools from registration through reciprocity. Such procedure by the boards makes reciprocity in their hands a powerful influence for higher standards.

AGENCIES AT WORK

In the efforts to elevate standards and secure acceptable conditions in medical education many agencies are doing splendid work: The medical colleges themselves, the state examining boards, the associations of medical colleges, the universities and colleges of liberal arts, the confederations of state boards, the medical societies, etc. After all has been said, however, the clear and definite fact remains that the legal power to control and elevate the standards of medical education rests entirely and alone with the state boards. Each organization is doing a work which can not be done by the others. Sometimes the efforts overlap, but should not be allowed to conflict. There is certainly enough work for all, and they are all striving toward the same ideal, namely, the improvement of medical standards in the United States, until they are at least equal to those of our neighbors across the Atlantic.

Respectfully submitted,

COUNCIL ON MEDICAL EDUCATION,
ARTHUR DEAN BEVAN, Chairman,
N. P. COLWELL, Secretary.

The report was referred to the Reference Committee on Medical Education.

The House then adjourned until 2 p. m.

Second Meeting—Monday Afternoon, June 7

The House of Delegates reconvened at 2:30 p. m., and was called to order by the First Vice-President.

DR. H. BERT ELLIS, California. Chairman of the Committee on Credentials, made an additional report for this committee. The Secretary called the roll.

The minutes of the morning session were read and approved.

Report of the Committee on Ophthalmia Neonatorum

DR. F. PARK LEWIS, New York. Chairman, presented the following report of the Committee on Ophthalmia Neonatorum, which was referred to the Reference Committee on Hygiene and Public Health:

To the Members of the House of Delegates of the American Medical Association:

Your committee beg leave to report herewith the work accomplished to the present date, together with associate committees appointed, legislation proposed and enacted in the several states, measures undertaken on the part of medical and lay organizations, investigations conducted, reports from schools for the blind and the conclusions to which all of this work seems to give warrant.

SUMMARY OF RESOLUTIONS, COMMUNICATIONS, REPORTS AND COMMITTEES

June 1906—At the annual meeting of the American Medical Association the following resolutions were adopted:

WHEREAS, Notwithstanding the long-continued efforts of the medical profession to make generally known the infectious character of ophthalmia neonatorum and its dangers to sight, the ranks of the

blind are still largely increased annually by those who have unnecessarily lost their vision as a result of this disease; and

WHEREAS, We possess in the silver salts an almost absolute specific for its prevention and treatment, therefore, be it

Resolved, That this Section recommends that a committee consisting of at least one ophthalmologist, one obstetrician, and one sanitarian, with invited cooperation of a sub-committee, consisting of the president and secretary of each state society, be appointed by the President of the Association to formulate and make effective the details of a plan that may give uniform legislation and definite instruction to the profession and laity concerning the prevention and treatment of this disease.

Resolved, That this Section recommend an ophthalmologist for such committee to be appointed by the incoming Chairman and Executive Committee.

Oct., 1906—President W. J. Mayo appointed F. Park Lewis Chairman of such committee and Clifton Edgar and F. F. Westbrook members.

Feb., 1907—Circular letter to members American Medical Association, each member of Committee addressing colleagues in his special section. Also sent to physicians abroad. Questions asked in regard to silver nitrate—whether favored by profession—its strength—free distribution—mention of its use on birth certificate—should ophthalmia neonatorum be classed as communicable disease—penalty for failure to report cases—appointment of committees by the president of each state association to work with health board for better laws. 202 answers—9/10 in favor of all questions.

May, 1907—Return postcards sent out by Buffalo Health Department to Buffalo physicians, midwives and hospitals. Number of cases of ophthalmia neonatorum with results during year's practice. 236 doctors replied, total number of cases 96 of which all but 6 made complete recovery. No replies from hospitals.

June, 1907—Report made to American Medical Association in which it was recommended that work of committee be continued and detailed plan of procedure decided upon with advice of chairmen of sections on Ophthalmology, Obstetrics, and Hygiene and Sanitary Science. Recommended cooperation of State and Provincial Boards of Health and American Public Health Association by appointment of committees, and cooperation of State Health Officers and President of each State Society.

Oct., 1907. Paper before American Public Health Association. Resolved that committee of three be appointed. Resolution adopted.

Feb., 1908—Circular letter and model return postcard to the president and secretary of state medical societies and state health officers, recommending appointment of state committees on ophthalmia neonatorum and that health department institute inquiries concerning ophthalmia neonatorum. Replies from 31 medical societies and 12 health departments, also National Government in Panama, Philippine Islands and Hawaii favoring organized movement. Five state committees were appointed.

May-June, 1908—Appointment of committee in each state forming national committee to work with special committee on ophthalmia neonatorum, American Medical Association. Obstetricians appointed by Dr. Dorsett, ophthalmologists by Dr. Wilder and third member from State Boards of Health.

June, 1908—Report of American Medical Association. Conclusions, recommendations. National Congress of Prevention of Blindness urged.

Sept.-Oct., 1908—Circular letter to secretaries of eight District Branches, New York State Medical Society asking them to organize County Societies for this work. Through help of Drs. Bull and Boldt of New York State Committee resolutions were adopted, committees appointed or approval of work obtained in each of the eight districts.

Dec., 1908—Circular letter to each member of National Committee with copy of June, '08 report, asking for state organization by the state committees. 39 replies representing 31 states. Work approved and willingness to cooperate expressed.

March, 1908—Circular letter to members of National Committee and special committees requesting information on progress of ophthalmia neonatorum work in each state in regard to laws, requirements—prophylactics—resolutions—lay movements—number of infected children or statistics—suggestions. 53 replies representing 33 states.

Circular letter to superintendents of state schools for the blind asking for total registration—annual per capita cost—percentage blind from ophthalmia neonatorum, etc. 22 replies.

COMMITTEES

Sub-Committee—ophthalmologist, obstetrician and sanitarian in each state forming national committee with American Medical Association committee as head.

State Medical Societies—California; Colorado; Kentucky; Maine; Missouri; Massachusetts; Ohio—advisory committee for Ohio Commission for the Blind; New York—1st and 8th District Branches, Erie County Medical Society, New York County Medical Society. Other state societies expressed intention of appointing committees later.

Special Medical Societies—American Academy of Ophthalmologists and Oto-Laryngologists; American Public Health Association; American Association of Obstetricians and Gynecologists; American Ophthalmological Association; Conference State and Provincial Boards of Health of North America.

Lay Organizations—American Association Workers for the Blind; New York Association for the Blind, Special Committee on Prevention of Blindness.

RESOLUTIONS AND RECOMMENDATIONS

American Association of Obstetricians and Gynecologists.
American Public Health Association.
American Academy of Ophthalmologists and Oto-Laryngologists.
National Congress of Mothers.
Cincinnati Academy of Medicine—resolutions presented, to be approved.

CIRCULAR LETTERS

1. Members of the American Medical Association and physicians in England, France, Germany and Italy.
2. President and Secretary of State Medical Societies and to President of State Boards of Health.
3. Members National and special committees.
4. Secretaries District Branches New York State Medical Society.
5. Members National and special committees.
6. Superintendents State Schools for the Blind.

PROPHYLACTIC

Nitrate of Silver—Sample ampules made by Parke, Davis & Co.; Estimated cost free distribution in New York State—\$3,000; Estimated cost exclusive of New York City—\$1,500; (Estimates by Dr. H. D. Pease, State Hygienic Laboratory).

ADDRESSES

Medical Society State of New York—1907.
American Public Health Association.
American Association of Obstetricians and Gynecologists—1907.
American Association of Workers for the Blind—1907.
National Congress of Mothers—1908.
Conference of State and Provincial Boards of Health of North America—1908.
Ninth Conference Charities and Corrections, Elmira, N. Y.—1909.
American Society of Sanitary and Moral Prophylaxis—1909.

NATIONAL COMMITTEE OF THE AMERICAN MEDICAL ASSOCIATION			
State	Ophthalmologist	Obstetrician	Sanitarian
Alabama	Samuel L. Ledbetter	W. H. Sanders	W. H. Sanders
Arizona	Ancil Martin	W. I. Simpson	Gov. J. K. Kibbey
Arkansas	J. W. Scales	Edw. Pentley	J. P. Runyan
California	H. Bert Ellis	F. T. Andrews	M. Regensberger
Colorado	Edward Jackson	W. A. Jayne	W. H. Davis
Connecticut	H. S. Miles	H. J. Ballard	Jos. H. Townsend
Delaware	J. A. Ellegood	F. Belleville	E. W. Cooper
Dist. Col.	Robert Scott Lamb	J. T. Johnson	W. C. Woodward
Florida	Columbus Drew	E. N. Liell	Joseph Y. Porter
Georgia	H. H. Martin	F. C. Hodgson	H. F. Harris
Idaho	Charles R. Hugel	.....	.....
Illinois	W. H. Wilder	C. S. Bacon	Geo. W. Webster
Indiana	Albert E. Bulson, Jr.	T. B. Eastman	W. A. Evans
Iowa	E. R. Lewis	W. B. LaForee	J. N. Hurty
Kansas	Robert L. Alkire	F. Harper	F. W. Powers
Kentucky	F. Manning Brown	L. S. McMurtry	L. A. Goden
Louisiana	H. Dickson Bruus	S. M. D. Clark	Jos. M. Mathews
Maine	E. E. Holt	Fred W. Mann	C. H. Irion
Maryland	Hiram Wood	W. A. B. Sellman	A. G. Young
Mass.	Myles Standish	D. H. Craig	Wm. H. Welch
Michigan	W. R. Parker	J. H. Carstens	Henry P. Walcot
Minnesota	Frank C. Todd	A. B. Gates	Angus McLean
Mississippi	James B. Bullitt	J. C. Blackstrom	H. M. Bracken
Missouri	P. I. Leonard	T. J. Beattie	B. F. Ward
Montana	John A. Donovan	E. S. Ballard	E. S. Ballard
Nebraska	Harold Gifford	D. Campbell	Wm. Treacy
Nevada	.....	W. O. Henry	W. T. Johnson
N. Hampshire	C. B. Hammond	S. K. Morrison	.....
New Jersey	C. J. Kipp	W. B. Garland	Irving A. Watson
New York	Charles S. Bull	Chas. L. Ill	B. S. Keator
N. Carolina	H. H. Briggs	H. J. Boldt	Eugene H. Porter
N. Dakota	Henry Beaudoux	J. F. Highsmith	Geo. G. Thomas
Ohio	Mark D. Stevenson	F. J. Campbell	J. Crassiek
Oklahoma	J. E. Fowler	C. L. Bonni- field	C. O. Probst
Oregon	J. F. Dickson	.....	B. F. Hamilton
Pennsylvania	G. E. deSchweinitz	W. E. Lewis	E. B. Pickel
Rhode Island	C. W. VanBenschoten	Jos. Price	Samuel C. Dixon
S. Carolina	E. P. Parker	D. F. Gray	A. C. Sprague
S. Dakota	E. O. Miller	E. S. Cathcart	T. Grange Simon
Tennessee	G. C. Savage	.....	H. A. Peabody
Texas	J. C. McReynolds	R. E. Fort	J. A. Albright
Utah	Fred Stauffer	G. E. Cantrell	Wm. M. Brumby
Vermont	F. J. Arnold	F. S. Bascom	F. S. Bascom
Virginia	J. A. White	C. W. Bartlett	C. S. Caverly
Washington	David de Beck	R. S. Kight	R. W. Martin
W. Virginia	T. W. Moore	Wm. M. Hall	J. M. Semple
Wisconsin	Nelson M. Black	J. Caunaday	J. E. Robins
Wyoming	.....	C. H. Mason	C. A. Harper
		.....	Fred Horton

PRESS

Journal of the American Medical Association—Committee report. Ophthalmoscope, England, through Dr. Sydney Stephenson.

Large number of medical journals which can only be mentioned in general have made editorial comment and printed papers on the subject of ophthalmia neonatorum.

Ohio Commission for the Blind has published a large number of popular articles on ophthalmia neonatorum in stereotyped form in county newspapers.

COMMITTEES OF STATE MEDICAL SOCIETIES

California—Dr. Kaspar Pischel, San Francisco; Dr. G. E. Brinkerhoff, Oakland; Dr. Thomas McCoy, Los Angeles.

Colorado—Dr. E. W. Stevens, Denver; Dr. Wm. H. Sharpley, Denver; Dr. Hugh Taylor, Denver.

Kentucky—Dr. S. C. Dabney, Louisville; Dr. J. A. Stucky, Lexington; Dr. L. C. Dunn, Henderson; Dr. T. H. Aud, Middleboro; Dr. Adolph Pfingst, Louisville.

Maine—Dr. H. F. Clough, Bangor; Dr. J. F. Hill, Waterville; Dr. F. Y. Gilbert, Portland.

Massachusetts—Dr. Oliver F. Wadsworth, Boston; Dr. Frederick E. Cheney, Boston; Dr. Francis P. Emerson, Boston; Dr. David Harrower, Jr., Worcester; Dr. John W. Bartol, Boston; Dr. F. M. Spalding, Boston, Mass., Secretary.

Missouri—Dr. P. I. Leonard, St. Joseph; Dr. R. McLemore, Nevada; Dr. J. H. Thompson, Kansas City.

Ohio—Dr. Mark D. Stevenson, Akron; Dr. John W. Murphy, Cincinnati; Dr. Wm. E. Bruner, Cleveland; Dr. Horace Bonner, Dayton; Dr. Walter H. Synder, Toledo. (Advisory committee to Ohio Commission for the Blind.)

COMMITTEES OF SPECIAL MEDICAL SOCIETIES

American Academy of Ophthalmologists and Oto-Laryngologists—Dr. A. A. Hubbell, Buffalo, N. Y.; Dr. A. R. Baker, Cleveland, Ohio; Dr. Edward Jackson, Denver, Colo.

American Public Health Association—Dr. F. Park Lewis, Buffalo, N. Y.; Dr. G. A. Harper, Madison, Wis.; Dr. H. D. Pease, Albany, N. Y.

American Association of Obstetricians and Gynecologists—Dr. R. E. Skeel, Cleveland, Ohio; Dr. Maguus A. Tate, Cincinnati, Ohio; Dr. O. H. Elbrecht, St. Louis, Mo.

American Ophthalmological Association—Dr. Lucien Howe, Buffalo, N. Y.; Dr. Edward Jackson, Denver, Colo.; Dr. P. A. Callan, New York City.

Conference of State and Provincial Boards of Health of North America—Dr. C. H. Irion; Dr. A. C. Moerk.

American Association of Workers for the Blind—Dr. F. Park Lewis, Chairman.

New York Association for the Blind—Hon. P. Tecumseh Sherman, Chairman, New York City; Dr. Eugene H. Porter, Albany, N. Y.; Dr. Thomas Darlington, New York City; Dr. Charles Stedman Bull, New York City; Dr. J. Clifton Edgar, New York City; Mrs. Edward R. Hewitt, New York City; Miss Winifred Holt, New York City; Dr. F. Park Lewis, Buffalo, N. Y.; Dr. John Izard Middleton, New York City; Mr. Thomas M. Mulry, New York City; Mrs. William B. Rice, New York City; Miss Louisa Lee Schuyler, New York City; Miss Lillian Wlad, New York City; Mr. George A. Hubbell, Executive Secretary, New York City.

British Medical Association—Dr. Sydney Stephenson, Chairman; Dr. R. C. Buist, Vice-Chairman; Dr. Cecil Shaw; Dr. Helm; Dr. C. J. Martin, F.R.S.; Mr. Arnold Lawson, representing Ophthalmological Society; Mr. George Carpenter, Section Diseases Children Royal Society of Medicine; Dr. Ed. Sargent, Incorporated Society of Medical Officers of Health. Central Midwives Board has not yet appointed a committee.

France, Committee on the Blind—Includes a medical mau belonging to the Quinze-Vingts, and two belonging to the Syndicat general des Oculists francais, all to be elected by their colleagues. Committee to report on, (1) the prevention of blindness in France; (2) the effect of the law of July 14th 1905, dealing with the obligatory assistance of the indigent blind; and (3) the possibilities of rendering help by means of workshops for the blind.

FROM REPLIES TO CIRCULAR LETTER TO SUPERINTENDENTS OF SCHOOLS FOR THE BLIND

SCHOOL.	1908-9 Total Registration.	Cases of O. N.	No. From Cities Over 10,000.	No. From Villages and Country Districts.	Entirely Dependent Children.	Children of Self-Sup- porting Parents.	Proportion Through Blindness Never Wholly Self- supporting.	Annual Per Capita Cost for Maintenance.
Alabama Academy for the Blind.....	95	19	4	15	0	95	****	\$230.00
Arkansas School for the Blind.....	206	32	6	26	150	56	—	233.00
California Inst. Deaf and Blind.....	72	10	35	37	0	72	—	*290.00
Connecticut Nursery for the Blind.....	40	11	26	14	8	***	no	322.26
Iowa College for the Blind.....	166	*18 %	15 %	85 %	12 %	—	20 %	190.00
Kentucky School for the Blind.....	107	40	20	20	20	20	no	238.73
Maryland School for Blind (white).....	91	17	64	27	5	86	†	327.50
Maryland School for Blind (colored).....	19	3	12	7	**	19	—	250.00 }
Massachusetts Perkins Institute.....	318	83	64	8	4	71	—	1907-8 }
Michigan School for the Blind.....	124	(1)18	14	20	21	22	*½	403.15
Mississippi Institute for the Blind.....	46	6	2	4	1	45	no	283.61
Missouri School for the Blind (2).....	110	26	13	13	—	22	††17	*250.00
Montana School for the Blind.....	19	1	10	9	3	16	*¾	357.42
New Mexico Institute for the Blind.....	38	12	1	9	9	3	1	373.33 ½
North Carolina School for the Blind.....	264	32	45	219	264	55	††½	*275.00
North Dakota School for the Blind (3).....	20	33	2	18	2	18	½	*200.00
Pennsylvania Institute for Blind, Pittsburg.....	129	33	17	16	4	26	* 6	††380.00
South Dakota School for the Blind.....	31	5	0	5	0	5	no	333.00
Ohio State School for the Blind (4).....	261	74	53	21	2	72	no	262.00
Tennessee School for the Blind.....	238	47	70	168	15	223	—	325-350
Washington School for Defective Youth.....	34	19	12	26	**	34	95 %	200.00
Wisconsin School for the Blind.....	100	30	14	16	15	15	¾	250.00

(1) 29 congenital
(2) Of total number enrolled since founding of school (1132) estimated that 20 per cent are blind from ophthalmia neonatorum.
(3) School only open one year
(4) For present year new admissions 48, of which 10 were adults

and 2 not eligible and 7 were blind from ophthalmia neonatorum. Seven out of 36 equals about 20 per cent. blind from this cause.
* About
*** Nearly all.
** None
**** Cannot tell
† Cannot estimate
†† Probably
††† At least

REPORT FROM HOSPITALS IN NEW YORK STATE ON USE OF PROPHYLACTIC IN EYES AT BIRTH
(Obtained through Secretary of the Committee on Prevention of Blindness, New York Association for Blind)

Hospitals.	Prophylactic Used.			Effectiveness.	Degrees of Reaction.	Remarks.
	Sil. Nitrate. Per Cent.	Argyrol. Per Cent.	Other Solutions. Per Cent.			
<i>Albany:</i> Albany Hotel..	1	....	.....	Very successful.....	Quite severe, passes away in 2 or 3 days.	
<i>Buffalo:</i> Women's Hos- pital.	2	....	.....	Excellent.....	Temporary reaction.	Have large obstetrical practice.
Erie County Hospital.	2	....	.....	Effective except 1 instance...	Slight swelling of eyelids; no reaction.	
St. Mary's Ma- ternity.	2	....	.....	
<i>New York City:</i> Lincoln Hospi- tal.	1 and 2	....	.....		Two per cent. reaction irri- tating; all amenable to treatment.	Have used only 1 per cent. solution for past year.
Mt Moriah Hospital.	....	....	.....			Hospital not in operation yet; letter referred to Medical Board.
Metropolitan Hospital.	1 or 2	25	.....	Good results from argyrol. ..		Very few cases of O. N. Had used sil. nitrate 1 to 2 per cent., slight reaction. For past year used argyrol with as good results. Think it safer in nurse's hands.
N. Y. Maternity Hospital.	2	....	.....		Reaction 48 hours.....	Most of the few cases of O. N. may have been due to 2-day infection.
Post-Graduate Med. School and Hospital.	1	....	.....	Effective in vast majority of cases.	Mild in occasional case.	
Sloan Materni- ty Hospital.	....	20	.....			Do not use nit. sil. because of reaction with 2 per cent. Results not as good with 1 per cent. as with 20 per cent. argyrol.
Volunteer St. Gregory Hos- pital.	....	....	.....			Referred inquiry to physicians.
<i>Boroughs Brook- lyn, Queens and Richmond:</i> The Brooklyn Hospital.	....	20	.....	Very beneficial results.		
Cumberland Street Hospi- tal.	....	25	.....	Effective in all cases.....	None.....	Degrees of reaction from sil. nit. (?) none.
Flushing Hos- pital and Dis- pensary.	....	20	.....	Effective in every way.....	Very little reaction.....	No cases of infection.
German Hospi- tal.	2	....	.....	Effective in all cases.....	Positive reaction.	
Kings County Hospital.	1	1	.....		Sil. nit. practically nil.....	As result of treatment rarely have case of O. N.
Long Island College Hos- pital.	1 to 1	10 to 20	.....	Failures: nitrate 2 per cent. almost none; 1 per cent. slightly more frequent; 10 to 20 per cent. argyrol, very rarc.	Two per cent. nitrate, fre- quently some reaction, 1 per cent. less; argyrol none.	Argyrol given preference because less irritating.
Methodist Epis- copal Hospi- tal.	1 and 2	....	.....	Seems very effective.....	Hardly any.	
S. S. Smith In- firmery.	2	....	.....	Very effective.....	Slight; no serious reaction.	
Williamsburg Hospital.	2	....	.....	Perfect.....	None.	
<i>Onondaga:</i> Onondaga County Hos- pital	....	....	Boric Sol.			Never had a case of ophthalmia neonatorum.
<i>Rochester:</i> Rochester Ho- meopathic Hospital.	1	....	.....		Good deal of swelling and discharge from eyes in 3 or 4 cases.	No ophthalmia neonatorum in cases where sil. nit. was used.
Rochester City Hospital.	....	20	.....		Reaction scarcely noticeable.	Almost never case of O. N.
<i>Syracuse:</i> St. Joseph's Hospital.	....	....	Boric acid.	Treatment always effective..		No case of O. N. If doctor wishes 1 per cent. of sil. nit. or argyrol used.
Syracuse Hosp. for Women and Children.	1	....	.....	Always effective except 1 case.	Not any.	
Syracuse Ho- meopathic Hospital.	2	....	.....	Proved effective.....	Reacts slightly; passes away in day or two.	Most cases private; use 2 per cent. sol. when ordered by physician.
<i>Watertown:</i> St. Joseph's Hospital.	2	....	.....			Had case of O. N. where sol. was not used.
<i>Utica:</i> Faxton Hospi- tal.	....	....	.....			Very seldom used by doctor. Both 1 and 2 per cent. have been used.
<i>New York, Bor- ough of Brook- lyn:</i> The Jewish Hospital.	1	25	.....		Slight in about 10 per cent., moderate in 5 per cent. (seropurulent); bacterial examination negative.	One case of O. N. Have used sil. nit. 1 per cent. in the eyes of all infants up till within 2 months. One case O. N. in 316 maternity cases since open- ing of obst. ward, 1906. Recoverd completely. At present use 25 per cent. argyrol freshly made once a week. Think we have the same degree of pre- vention with less reaction.

PROGRESS OF OPHTHALMIA NEONATORUM CAMPAIGN IN
STATES AND TERRITORIES, MAY, 1909

Information gathered from answers to three circular letters sent out February, 1908, December, 1908 and March, 1909.

Alabama.—January, 1908. Fairly good health law requires reporting of contagious and infectious diseases but does not include ophthalmia neonatorum. Would take subject up with State Medical Society April, 1908. No answer to last letter.

Arizona.—Making effort to do something along these lines. No midwifery laws—one now before legislature on registering of vital statistics which requires registry of midwives with local registrars. County Medical Society has passed resolutions to secure law for registry of midwives. Registering of births very poorly complied with.

Arkansas.—Apparently nothing has been done. City of Little Rock requires early registration of births, no regulations relative to ophthalmia neonatorum.

California.—Committee appointed by President State Medical Society in April, 1908. At meeting March 5, 1909, Los Angeles County Medical Association adopted resolutions regarding ophthalmia neonatorum.

Colorado.—Committee appointed in April, 1908, by State Medical Society and State Board of Health expressed willingness to cooperate.

Connecticut.—Law passed in 1895 in regard to reporting ophthalmia neonatorum. Two arrests of midwives for violation of this law—both freed by judge in court.

Delaware.—December, 1908—willing to help. No later reports. District of Columbia.—Law of June 3, 1896, requires examination and registry of midwives. April 3, 1909.—Health officer has had statement regarding prevention of ophthalmia neonatorum printed on covers of books in which birth certificates are bound for distribution.

Florida.—No action except in an advisory way. Subject brought before State Association in April, 1908. No action taken. Change in Health Statute may give Board legal authority to do something. Committee interested and doing what it can.

Georgia.—March 1909—President of County Society in annual address mentioned necessity of action against ophthalmia neonatorum. Birth certificates are required. Subject presented to local county and district societies.

Illinois.—February, 1908—Commissioner of Health says the department will do what it can. Births poorly reported in Chicago—do not go to Health Department but to County Clerk—estimated that about 40 per cent. are reported. Secretary State Medical Society writes that subject was taken up about ten or twelve years ago and as a result law was enacted but no prosecutions resulted. 1909—Member of Commission for Blind hopes for permanent commission and legislative action. Law for prevention of blindness enacted by General Assembly copies of which Board of Health will send to every registered midwife in the state.

Idaho.—Registration of births required. Paper on ophthalmia neonatorum read before State Medical Association and printed in Medical Sentinel.

Indiana.—Article in recent Bulletin of State Board of Health on ophthalmia neonatorum. Birth certificates have question: "Were precautions taken against ophthalmia neonatorum?" Certificates must be filed in 20 days. Two or three County Societies have passed resolutions.

Iowa.—February, 1908—President State Medical Society approves and will incorporate subject in annual address and appoint committee. (No notice of committee appointed.) Members of committee doing active work.

Kansas.—Member of committee glad to aid in work. No recent report.

Kentucky.—February 1908—Committee appointed by President State Medical Society. Circular issued by State Board of Health to Health Officials, physicians and people of Kentucky on prevention of ophthalmia neonatorum. Sent to members of medical profession. March 1909—Six years ago attempt made by State Medical Society to pass law for reporting ophthalmia neonatorum—failed in its enactment. Birth certificates registered in large cities but doubtful about country districts.

Louisiana.—February, 1908—Committee appointed by State Medical Society will render what assistance it can. March 1909—Symposium on ophthalmia neonatorum planned for medical meeting in near future.

Maine.—March, 1908—Committee appointed by State Medical Society. An act (date of enactment not given but evidently not recent) on Prevention of Blindness.

Maryland.—February, 1908—Law enacted by legislature of 1894 requiring nurses, midwives and other persons, not physicians, to report cases of ophthalmia neonatorum. Secretary of Board of Health will aid in getting statistics which he considers most important work. March 1909—Midwives required to register with local health authorities. Births must be registered within 4 days. Commission for Improving Condition of Blind appointed by legislature 1906. Was to report in 1907. New midwife bill will be passed at coming meeting of State Society in May.

Massachusetts.—Massachusetts Association for the Blind and Boston Department of Health each issued circular after the amendment of contagious law in 1905 making ophthalmia neonatorum a reportable disease. The Association for the Blind also has a social worker who has made a special study of cases in the Infirmary and made written report of the investigations. Committee State Medical Society has issued a folder on ophthalmia neonatorum, the preventive treatment, suggestions and treatment of the disease.

Michigan.—Law enacted 1895 requires midwife, nurse or attendant to report ophthalmia neonatorum in writing within 6 hours. Law not in practical operation.

Minnesota.—Law requiring a yearly license fee preceded by an examination or diploma from every midwife in the state. March, 1909—State Board of Health regulations require reporting of diseased eyes among infants, and filing of birth certificate within ten days. Inquiry on birth certificate whether prophylactic was employed.

Mississippi.—February, 1908—Secretary State Medical Association approved and promised help.

Missouri.—March, 1908—Committee State Medical Society.

Montana.—Resolutions introduced at State Medical meeting but no action taken. March, 1909—Bill governing practice of midwifery and one on ophthalmia neonatorum failed to pass the legislature.

Nebraska.—State Medical Association directed member of Na-

tional Legislative Council to have State Board of Health incorporate ophthalmia neonatorum with contagious diseases to be reported to local boards of health within 24 hours after their occurrence. On January 1, 1908, rules and regulations adopted by State Board of Health went into effect. March, 1909—Lay movement in connection with Committee of One Hundred. Subject informally discussed at State Medical meeting.

Nevada.—February, 1908—Secretary State Medical Society will endeavor to get together statistics by communicating with every doctor in state and will bring subject before State Association. Law requiring record of births not being heeded by physicians. No later reports.

New Hampshire.—March, 1909—Bill now before Public Health Committee of New Hampshire legislature. No law or regulations at present in state.

New Jersey.—1884 circular on ophthalmia neonatorum issued by State Board of Health and sent to all physicians and midwives. 1895 law passed for prevention of blindness. Law defective—being revised—will have it passed at present (1909) session of legislature. 1896—Subject discussed before State Medical Society and practitioners frequently urged since to use preventive. Midwives licensed after examination.

New York.—State law for Erie, Niagara and Chautauqua counties requires examination and registration of midwives and New York City Health Department has power to conduct examinations. The New York State Commission to Investigate the Condition of the Blind—1906—devotes a portion of its report to ophthalmia neonatorum and its prevention.

Medical Society, County of Erie—Special committee.

New York State Medical Society—Committees and resolutions.

New York City—Physicians required to report ophthalmia neonatorum to Board of Health. Health rule requires midwives to carry 1 per cent. silver nitrate as a part of her equipment and summon a physician if ophthalmia develops.

State Health Department—Sent circular letter to secretaries of the county medical societies with return postcards, secretaries to mail card to each member of his county society who by signing the card pledged to use a prophylactic against ophthalmia neonatorum. Question to be put on birth certificate "Did you employ a preventive for ophthalmia neonatorum? If not, why not?" Free distribution of containers of nitrate of silver in the near future.

Special Committee on Prevention of Blindness New York Association for the Blind—Has issued three pamphlets on ophthalmia neonatorum 22,810 copies of Nos. 1 and 2 have been distributed in the state and 3,505 outside of the state. No. 3—in all 675 copies. Committee has received \$5,000 appropriation from the Sage fund for the continuance of its work and through the efforts of the committee an item of \$5,000 has been inserted in the Supply Bill now before the Governor and if secured this amount will be at the disposal of the State Board of Health for its work in the prevention of blindness. The committee has also secured the passage of a bill for the notification of births within 36 hours instead of 10 days as before.

North Carolina.—February, 1908—State Medical Society will cooperate. No later report.

North Dakota.—Registration of births required. Several local societies adopted resolutions recommending use of prophylactic. Nothing systematic has been done. Lay movements transitory.

Ohio.—March 1908—Proposed amendment to bill establishing commission for the blind which inserted clause "recommending to next general assembly necessary legislation for prevention of blindness with special reference to the new-born." Law in existence making it a misdemeanor for a midwife or general practitioner to treat a case of purulent ophthalmia in the new-born without notifying an oculist or sending the child to some hospital. Fine is heavy and an imprisonment clause. Law not operative at date of writing—1908. State law passed in 1892 concerning ophthalmia neonatorum and suggested that resolutions be adopted by Eye and Ear Section of Medical Society. Subject also urged with Ohio Commission for the Blind. Through Blind Relief Commission resolutions introduced before Cincinnati Academy of Medicine. Same resolutions will be presented to State Medical Society.

Oklahoma.—1908—President State Medical Association will aid in campaign. No health laws at that time in Oklahoma. No later reports.

Oregon.—Letters of approval from Secretary State Medical Society and from ophthalmologist on state committee. 1909—Births have to be reported.

Pennsylvania.—Proposed resolution for State Medical meeting. Circular issued by State Commissioner of Health, and old law passed in 1895 put into force. Circular letter with copy of law sent to physicians in state and to the secretary of boards of health. At December, 1908, meeting of Kensington Branch Philadelphia County Medical Society had symposium on ophthalmia neonatorum with lantern demonstration.

Rhode Island.—1909—Secretary State Board of Health will make yearly canvass of physicians to ascertain the amount of blindness from ophthalmia neonatorum. With the inquiry will send dropper and proper amount of 1 per cent. silver nitrate and will place extra supplies at diphtheria outfit stations and repeat yearly. May, 1909—This has not been done.

South Carolina.—Ophthalmologist on committee interested and willing to co-operate with committee A. M. A. 1909—Early registration of births in some towns. Effort being made to have physicians report all infectious diseases.

South Dakota.—

Tennessee.—1908—Subject to be presented to State Medical Society and statistics gathered from Tennessee School for the Blind. 1909—Information indefinite; probably something concerning ophthalmia neonatorum embodied in amendments to medical laws.

Texas.—1909—Birth certificates must be sent in within 30 days. Subject of ophthalmia neonatorum considered at 1908 meeting of State Medical Association.

Utah.—Subject of ophthalmia neonatorum to be brought before next meeting (does not say whether State Medical or Health Board meeting). December, 1908. No further report.

Vermont.—Midwives required to make birth reports same as physicians. Certificate registered within 10 days.

Virginia.—

Washington.—In favor of movement. 1908—A bill entitled, "A Law for the Prevention of Infantile Blindness" was to have been introduced at the 1908 session of the legislature. (Not notified whether passed or not.)

West Virginia.—1894—Resolutions adopted and legislation proposed. In December, 1903, Secretary State Medical Association sent letter on ophthalmia neonatorum to County Secretaries.

Wisconsin.—Law requiring registry of midwives with local registrar and registry of birth certificate within 5 days. 1909—Proposed bill regulating practice of midwifery and one for prevention of ophthalmia neonatorum. Active work being done.

Wyoming.—1908—Midwives or unlicensed practitioners not allowed to practice in the state. Births not reported by physicians. No record of cases of ophthalmia neonatorum except in State Hospitals.

Panama.—Circular letter sent out by Col. Gorgas to all physicians in charge of stations and hospitals. Information asked—number of cases of ophthalmia neonatorum during year, results, prophylactic used, strength. Five cases reported, all complete recoveries.

Philippine Islands.—1908—Local laws regulating practice of midwifery but midwives much below the standard. Births supposed to be reported. Bureau of Health to collect statistics. Report that disease is very rare probably due to large infant mortality. No further report.

Hawaii.—February, 1908—Attempted census of blind of Islands resulted in finding 28 adults and 7 children. Circular letter of the Committee on Ophthalmia Neonatorum forwarded for distribution. No further report.

QUESTIONS IN CIRCULAR LETTER MAILED MARCH, 1909

I. LAWS ENACTED OR PROPOSED GOVERNING THE PRACTICE OF MIDWIFERY OR THE REPORTING OF CASES OF OPHTHALMIA NEONATORUM

Affirmative

Arizona—No law at present but modification of the Model Law which requires the registration of midwives with local registrars is now in the legislature.

Connecticut—Through efforts of Connecticut Medical Association, following resolutions by Dr. H. W. Riug, state passed law in 1895: Sec. 1. Should one or both eyes of infant become inflamed, swollen or reddened at any time within 2 weeks after birth, shall be duty of midwife or nurse to report in writing within 6 hours to health officers or legally qualified practitioner of city, town or district where parents reside that such inflammation, etc. exists. Sec. 2. Failure to comply with provisions of this act punished by fine not to exceed \$200 or imprisonment not to exceed 6 months, or both. Two midwives brought to trial for neglect were not convicted because the judges said that any baby was liable to have sore eyes. Affair had wide publicity and many mothers now ask their physicians to use drops.

Dist. of Columbia—Since law of June 3, 1896, no midwife can practice without license or secure license without examination. In April, 1909, Health Officer had following notice printed on book covers in which birth certificates are bound for distribution:

Notice

The Health Officer desires to call attention to the widespread agitation that is now going on with respect to the prevention of such blindness as arises from inflammation of the eyes of new-born children. Aside from the importance of preventing such blindness as a public duty, the fact that the laity is becoming aware that the adoption of proper measures at the time of birth may prevent such a catastrophe renders it peculiarly important that physicians and midwives, in their own interest, adopt in their practice, if they have not already done so, such measures as have the support of the medical profession for the prevention of such loss of eyesight.

Wm. C. Woodward, M.D.,

Health Officer.

Illinois—State Law on the Prevention of Blindness makes punishable by a fine not to exceed \$100 or imprisonment not over 6 months, or both, any neglect of midwife or nurse to report in writing within 6 hours to health officer or practitioner any inflammation or redness in infant's eyes within two weeks after birth.

Kentucky—Six years ago attempt made by State Medical Society to pass law for reporting of ophthalmia. Failed in enactment.

Maine—Fine not to exceed \$100 or imprisonment not to exceed 6 months for failure of midwife, nurse or person having charge of infant to report any redness or inflammation of the eyes occurring within four weeks after birth to legally qualified practitioner of city, town or district.

Maryland—Law 1894 requires midwife to report ophthalmia neonatorum to phy-

Negative

Arkansas.

California.

Florida—Health Officer doubtful about authority of board to make rules and thinks statutory law would not be observed without action being taken in court by parties affected through neglect or ignorance of restrictive measures.

Georgia—No efficient laws on midwifery, none on ophthalmia neonatorum.

Indiana—Health Officer says Board could require by its rules reporting of cases but does not think it will at present because of trouble to get other contagious diseases reported.

Louisiana.

Nebraska—No laws but rule of Board of Health giving instructions for prophylactic instillation of silver in Omaha. Nothing obligatory.

North Carolina.

North Dakota.

South Carolina.

Texas.

Vermont—No laws but midwives required to report births.

Affirmative

sician or health officer and she must not apply remedies herself. Several convictions secured under this law. New Midwife Bill has been drawn up and will be passed on at State Medical meeting in May. Midwives now required to register with local health authorities but without educational qualifications.

Massachusetts—Any nurse, relative or attendant failing to report in writing to Board of Health within 6 hours any discharge, swelling, inflammation or redness in eyes of infant, subject to fine of not more than \$100. Physician shall forfeit not less than \$50 or more than \$200 for refusal or neglect to report case under his care of inflamed, red, swollen or discharging eye in newly-born infant.

Michigan—Failure on part of any midwife, nurse or other person having charge of infant to report in writing within 6 hours any inflammation, redness or formation of pus, occurring in the eyes within 2 weeks after birth, to local health officer or some legally qualified practitioner in city, town or district, shall be punished by a fine not to exceed \$100 or imprisonment not to exceed 6 months, or both, in the discretion of the court. "Law not in practical operation as far as the reporting is concerned and therefore the use of preventive measures is optional on the part of the attending physician."

Minnesota—Regulations State Board of Health. One or both eyes of infant become inflamed, reddened or diseased within 2 months after birth, shall be duty of midwife, nurse, parent or other person having charge of infant to report in writing within 12 hours to local health officer of city, village or township. Health officer on receiving report shall visit child and provide immediate medical treatment unless already under charge of practitioner.

Montana—Bills governing midwifery and reporting of ophthalmia failed to pass Legislature of 1908-09.

New Hampshire—Bill now before the public health committee of the Legislature looking toward the control of ophthalmia neonatorum.

New Jersey—In 1884, on recommendation of Dr. C. J. Kipp, circular giving method of prevention and treatment of ophthalmia neonatorum issued by State Board of Health and sent to all known physicians and midwives. In 1895 law passed for the prevention of blindness. This law found defective and State Attorney General requested to put it in shape and it will be passed by Legislature at this session. Midwives are licensed after examination. In 1896 subject of ophthalmia neonatorum brought before the State Medical Society and preventive measures urged. Number of cases brought to dispensaries much smaller than it was years ago. Act introduced in Senate Feb. 9, 1909, whereby applicant in midwifery is examined in cause and effect of ophthalmia neonatorum. Section 6 revokes license for failure to secure attendance of a reputable physician in case of..... or inflammation or discharge from eyes of new-born infants.

New York—Law for Erie County enacted in 1885 makes punishable by fine from \$50 to \$100 and forfeiture of license any attempt to practice midwifery without having secured certificate through examination by Board of examiners, payment of fee of \$10 and recording of certificate by county clerk. (Similar law in two other counties and one city.) Concerning ophthalmia neonatorum, state law enacted in 1892, modified in 1901, makes it a misdemeanor for midwife, nurse or other person to fail to notify local health officer or practitioner immediately of any redness, swelling, etc. of eyes of infant within two weeks after birth.

Ohio—State law, 1892, requires midwife, nurse or relative to report in writing within 6 hours to physician or local health officer any inflammation, redness, swelling or discharge of eyes of new-born infant, under penalty of fine of \$5 to \$100 or imprisonment from 30 days to 6 months, or both. Law making the treatment of ophthalmia neonatorum by midwife or general practitioner without notifying an oculist or sending child to hospital, a misdemeanor. Fine is heavy and an imprisonment clause. *Not operative.*

Negative

Affirmative

Pennsylvania—Law of 1895 makes it the duty of midwives and nurses to report to health officer or practitioner in writing within 6 hours any indications of ophthalmia neonatorum. Health officer to give instructions regarding treatment. Penalty, fine not to exceed \$200 or 30 days imprisonment, or both. Commissioner of Health will enforce this law and has sent copies of it with circular letters to physicians in the state and to secretaries of all boards of health.

Rhode Island—Law of April 19, 1892, makes punishable by fine not exceeding \$100 or imprisonment not exceeding 6 months, or both, neglect of any midwife, nurse or other person to report in writing within 6 hours to the health officer or practitioner of medicine, inflammation or redness of the eyes of an infant in their care. Every health officer shall furnish a copy of this act to every midwife or nurse in his city or town, secretary of state shall cause sufficient number of copies to be printed and supply same to the health officers.

West Virginia—At State Medical Meeting, 1894, after paper on "Legislation for the Prevention of Blindness" following resolution unanimously adopted and proposed law passed one House but failed in the other.

WHEREAS: The Medical Society of West Virginia recognizes the necessity of legislation for the prevention of blindness by ophthalmia of the new-born, be it

Resolved: That it heartily recommends (through its Committee on Legislation) that the people of the state of West Virginia represented in Senate and Assembly, do enact as follows: Fine not to exceed \$200 or imprisonment not to exceed 6 months, or both, for failure of midwife or nurse to report in writing within 6 hours to legally qualified practitioner any inflammation, swelling or redness occurring in eyes of infant within 2 weeks after birth. At the same meeting it was resolved that the people of the state enact that an examination of the blind, deaf and dumb in the state asylum be made twice a year by a physician expert in such diseases.

Wisconsin—Since October, 1907 every midwife required to register with local registrar and birth certificate must be filed with local registrar within 5 days after date of birth. Feb. 16, 1909, proposed bill regulating practice of midwifery referred to Committee on Public Health and indefinitely postponed and March 4, 1909, second bill on practice of midwifery proposed requiring midwives to be examined by board of examiners, registered, fee of \$10 for examination and \$5 for certificate paid. Good moral and professional character must be sworn to by two reputable physicians or surgeons and one layman, preferably a clergyman. The consent of at least 6 members of the Board necessary to issuance of certificate. Board of Examiners have power to make such rules and regulations governing examinations as may be necessary. Certificate to be filed with registrar of deeds of county or registrar of vital statistics in city. Violation of any provision of this act punishable by fine of not less than \$25 or more than \$100 for each offense or imprisonment not exceeding 6 months, or both. Bill on Prevention of Ophthalmia Neonatorum introduced Feb. 16, 1909, reached Senate, reported for concurrence by Committee on Public Health and is in hands of Committee on Judiciary. State Board of Health authorized to make and enforce such rules and regulations and to publish and distribute such literature to midwives, doctors and nurses or other persons as it considers necessary for the prevention of ophthalmia neonatorum. Requires such prophylactic treatment by physicians, midwives, nurses and other attendant as State Board of Health may determine and the reporting by nurse, parent or attendant to local board of health within 6 hours of any case developing within two weeks after birth. Report to be made in writing. Board of Health to notify physician in attendance or employ competent physician at expense of town to examine and treat case. On receipt of report, no physician being in charge, the health officer shall notify parents of danger to infant's eyes and shall also enclose directions for proper treatment. Fine of not over \$100 for violation of this act.

Negative

II. ARE PHYSICIANS REQUIRED TO REPORT THIS DISEASE?

Affirmative

Massachusetts—Physician shall immediately give notice in writing over own signature of ophthalmia neonatorum to selectmen or Board of Health of the town or forfeit not less than \$50 or more than \$200 for each offense.

New York—A regulation of the New York City Board of Health requires all physicians to report such cases at once to the Board.

Negative

Arizona.
Arkansas.
California.
Connecticut.
District of Columbia.
Florida.
Georgia.
Idaho.
Indiana.
Kentucky.
Maine.
Maryland.
Michigan.
Minnesota.
Montana.
New Hampshire.
New Jersey.
North Carolina.
North Dakota.
Ohio.
Oregon.
South Carolina — Effort being made to have physicians report all contagious diseases.
Wisconsin.

III. ARE PROPHYLACTICS PROVIDED BY THE HEALTH DEPARTMENT FOR GRATUITOUS DISTRIBUTION?

Affirmative

New York—An item of \$5,000 was inserted in the Supply Bill, this sum to be used by the State Department of Health for the Prevention of Blindness—more especially for the suppression of infant ophthalmia. This will enable the State Health Commissioner to supply a free prophylactic (through local Health Officers) to physicians and midwives, to be used for protecting the sight of children at birth.

Rhode Island—State Health Department has sent out a circular letter to physicians with a small box containing an amber vial of 1 per cent. silver nitrate and a dropper for use in the prevention of ophthalmia neonatorum. Duplicate outfits to be obtained, free, from the diphtheria stations. Accompanying the vial and dropper are directions for using with a request to report any objections to the form of the dropper or any bad results from its use. The circular letter also contains a copy of the law in regard to prevention of blindness.

Negative

Arizona.
Arkansas.
California.
Connecticut — Health department never been asked to give prophylactic. Would probably do so.
District of Columbia.
Florida.
Georgia.
Idaho.
Indiana.
Kentucky.
Maine.
Maryland.
Minnesota.
Montana.
New Hampshire.
New Jersey.
North Carolina.
North Dakota.
Ohio.
Oregon.
South Carolina.
Texas.
Vermont.
Wisconsin.

IV. DO THE REGULATIONS PROVIDE FOR THE EARLY REGISTRATION OF BIRTH CERTIFICATES?

Affirmative

District of Columbia — Certificates must be registered not later than the Saturday first ensuing after the expiration of three secular days immediately following the date of birth.

Maine — Early registration. Certificates sent to town or city clerk.

Maryland—Within four days.

Minnesota—Ten days.

Montana—Ten days.

New Hampshire—Six days.

New York—The Legislature has passed a bill requiring all births to be reported within 36 hours after the child is born. Former law ten days.

North Dakota—

Ohio—Ten days.

Vermont—Ten days.

Wisconsin—Within five days with local registrar of vital statistics.

Negative

Arizona—Present system secures only small percentage.

Arkansas — City of Little Rock requires early registration.

California.

Connecticut — Certificates filed on or before 7th day of month next after birth.

Florida — Law providing for registration of birth certificates very irregularly complied with.

Georgia — Required. Time not given.

Idaho—Required. Time not given.

Indiana—Twenty days.

*Affirmative**Negative*

Kentucky — Certificates registered in large cities; not sure about towns.

Massachusetts—On or before 15th of each month.

New Jersey — Thirty days.

North Carolina.

Oregon — Time not given.

South Carolina—Some local boards require early registration.

Texas—Thirty days.

*Affirmative**Negative*

Kentucky—State Medical Society appointed committee to draw up a circular in regard to the dangers and prevention of ophthalmia neonatorum. Circular distributed to members of medical profession in Kentucky.

Maryland—In 1892 the State Medical Society endorsed the movement started by Dr. Woods for a law requiring the reporting of ophthalmia neonatorum and an act was presented to the Legislature by a committee of the society.

Massachusetts—State Medical Society appointed a committee of five in 1908 "To consider what measures should be taken by the Society to prevent the occurrence and secure the prompt and effective treatment of ophthalmia neonatorum." The committee has recently issued a folder on ophthalmia neonatorum: preventive treatment, suggestions, and treatment of the disease, with a copy of the Massachusetts law in regard to ophthalmia neonatorum. In the folder the Committee advises for preventive treatment the instillation of a few drops of 25 per cent. argyrol or 5 per cent. protargol, which should be freshly prepared for each confinement case. Suggests that doctor instruct nurses to report cases to him at once and call their attention to the law; that cases should be put under the care of an oculist when possible or sent to the hospital; that infectious nature of the disease should be impressed on members of the family. Treatment after the disease develops: wash eyes every 40 minutes with 3 per cent. boric acid solution night and day and 25 per cent. argyrol or 5 per cent. protargol freely every 4 hours. Folder to be distributed to members of the State Society and through them to nurses and patients.

Minnesota—Subject has been presented to State Sanitary Association and will be presented to State Medical Society at next meeting.

Montana—At last meeting of the State Society a resolution was introduced referring to this matter but no action was taken. Will be taken up at next meeting.

New Jersey—In 1896 subject of ophthalmia neonatorum brought before State Medical Society and preventive measures urged and many times since prevention has been suggested. No definite action taken.

New York—At State Medical meeting it was resolved, "That this Society appoint a State Committee . . . shall put itself in communication with the State Board of Health and with each County Society to adopt a method to put a stop to ophthalmia neonatorum."

"That it be recommended that the State shall make sufficient appropriation to the State Board of Health to put necessary enactments into force, and to prosecute their violations."

"That a law be passed compelling persons practicing midwifery to use such prophylactic as may be recommended by the State Board of Health. Neglect of this to be prosecuted as a misdemeanor, except the person be a physician who does give a valid reason for the omission, acceptable to the Board of Health or its Committee of the County Society to which he belongs."

"That ophthalmia neonatorum be placed on the list of communicable diseases, by the State Board of Health, and by all the local Boards of Health."

"That every case of ophthalmia neonatorum be reported by any one to whose knowledge it may come, to the Board of Health within 24 hours of the first symptoms of its manifestation. Neglect to be prosecuted as a misdemeanor."

"That energetic, concentrated and well ordered action be urged and taken at once by this State Society, and that it work in harmony with the Central Committee of the American Medical Association and the State Board of Health."

First District Branch—It was moved that the Branch approve of the action of the American Medical Association to bring to the notice of the medical profession the abuses arising from negligence, resulting in ophthalmia neonatorum, and further moved that a committee be appointed to inquire into the plan for the prevention of ophthalmia neonatorum. Carried. A committee was also appointed to cooperate with the State Department of Health in a plan now under consideration by the Division

V. IS AN INQUIRY MADE ON THE BIRTH CERTIFICATE WHETHER A PROPHYLACTIC HAS BEEN EMPLOYED, AND WHAT WAS THE REASON FOR ITS OMISSION WHEN OMITTED?

*Affirmative**Negative*

Indiana—Certificates have on them the question, Were precautions taken against ophthalmia neonatorum?

Minnesota—An inquiry is made on the birth certificate as to whether a prophylactic has been employed, etc.

New York—Inquiry, "Did you employ a preventive for ophthalmia neonatorum? If not, why not?" will be placed on certificate in future.

Wisconsin—Will on new certificate

Arizona.

Arkansas.

California.

Connecticut.

District of Columbia.

Florida.

Georgia.

Kentucky.

Maine.

Maryland.

Montana.

New Hampshire.

New Jersey.

North Carolina.

North Dakota.

Ohio.

Oregon.

South Carolina.

Texas.

Vermont.

VI. HAVE ANY SPECIAL RESOLUTIONS BEEN PROPOSED OR ACTION TAKEN BY THE MEDICAL SOCIETIES FOR THE CONTROL OF THIS DISEASE?

*Affirmative**Negative*

Arizona — Cochise County Medical Society passed resolutions to secure a law for the registration of midwives.

California—At Los Angeles County Medical Society, March 1909, program devoted to ophthalmia neonatorum and at next meeting resolutions adopted "that all members of the Association be urged to spread the knowledge of the great value of the Credé method of silver nitrate instillation as a preventive of ophthalmia neonatorum, and that all practitioners and midwives should use this method in obstetric practice. That this Association request the California State Board of Health to make the prevention of ophthalmia neonatorum a matter of special consideration and action, and that a copy of this resolution be sent to that Board, and copies be sent for publication to the Bulletin of the Association and to the Journal of the Medical Society of the State of California."

Connecticut—Efforts of the Connecticut Medical Association secured passage of law in 1895.

Florida—Subject brought before State Association by its president in April, 1908. No action taken. Official Bulletin, State Board of Health for January, 1909, contains article on the effort to prevent blindness, commending the present campaign and describing method of prevention.

Georgia—At request of Dr. Hodgson, president of county society, in annual address spoke of necessity of action. Dr. Martin secured endorsement of movement in local county and district societies. Subject to be presented in June.

Idaho—Article read by Dr. Hugel of Boise, on ophthalmia neonatorum before State Medical Association and article printed in Medical Sentinel.

Indiana—Two or three County societies passed resolutions, State society has taken no action but will at next annual meeting. State Board has been talking the matter over throughout the state.

Arkansas.

District of Columbia.

Louisiana — Symposium on ophthalmia neonatorum and hope to pass resolutions at state meeting in May.

Maine.

Nebraska — Some time ago resolution passed in medical society, but bill failed in legislature; will make another attempt at coming meeting.

New Hampshire.

North Carolina.

Oregon.

South Carolina.

Texas — Subject presented at 1908 meeting of State Medical Society.

Wisconsin — Secretary of State Medical Society suggests appointing committee for investigation of subject and collection of statistics.

Affirmative

of Communicable Diseases. The president appointed the secretary of each County in the Branch as a member of this committee.

Second District Branch—Secretary was directed to send copies of a communication regarding ophthalmia neonatorum to the delegates of the Medical Societies constituting the 2d District Branch, these delegates to bring this matter before their respective societies for action.

Sixth District Branch—Resolution adopted advocating means for the prevention of blindness due to ophthalmia neonatorum and all members signed cards, as requested by the State Board of Health.

Eighth District Branch—Committee of the president of each County Society of the 8th District Branch appointed to see that the recommendations of the committee of the American Medical Association were brought before each county society and some action taken in the matter.

Third District Branch—Paper read on Ophthalmia Neonatorum.

State Department of Health—Letter to the secretary of each County Medical Society accompanied by ophthalmia neonatorum pledge postcard, which secretary was instructed to send to each member of his Society.

Medical Society, County of New York—Resolutions unanimously adopted regarding ophthalmia neonatorum and favoring a congress for studying ways and means for the prevention of blindness to be held in Washington in 1910.

North Dakota—Resolutions of several of the local societies have been adopted recommending the employment of prophylactics for ophthalmia neonatorum.

Ohio—Considering plans for a symposium on ophthalmia neonatorum and a special report to the State Society with a discussion at each district medical meeting. Also urged subject with members of the Commission for the Blind. Resolutions presented to the Cincinnati Academy of Medicine endorsing the movement against ophthalmia neonatorum of the American Medical Association, pledging themselves to absolute cleanliness in obstetrical practice, recognizing the value of prophylactic treatment, urging the instruction of nurses and midwives, and asking of State Board of Health that ophthalmia neonatorum have the same consideration as any other infectious disease and that the law now on the statute books be enforced. Also that the birth certificate contain clause in reference to preventive treatment, that a report of all cases be required and investigated and recommending the cooperation of medical societies of the state with the State Health Department so that authority and adequate appropriation might be obtained for the successful carrying on of the work.

Pennsylvania—Symposium on ophthalmia neonatorum by the Kensington Branch of the Philadelphia County Medical Society.

West Virginia—In 1894 two resolutions adopted by the State Medical Society. (See under Question 1, affirmative, West Virginia.) Will be presented to State Association in October.

VII. HAVE ANY MEASURES BEEN TAKEN TO DETERMINE HOW LARGE A NUMBER OF NEW-BORN CHILDREN HAVE BEEN INFECTED OR WHO IS RESPONSIBLE FOR THESE INFECTIONS?

Affirmative

Florida—Inquiry made at the State School for the Blind from which reply is received that there are no records of such cases, but that at an early date will incorporate inquiries upon admission blanks.

Louisiana—Unable to obtain any satisfactory data from State School for the Blind. Statistics meager.

Maryland—Had State Commission of Blind which was to secure list of blind persons in state with, among other information, cause and extent of blindness.

Nebraska—Some years ago inmates of School for Blind examined and found not more than seven or eight per cent. of the inmates suffering from effects of this disease.

*Negative**Negative*

Arizona.
Arkansas.
California.
Connecticut.
District of Columbia.
Georgia.
Indiana.
Kentucky.
Maine.
Montana.
New Hampshire.
New Jersey.
North Carolina.
North Dakota.
Oregon.
South Carolina.

Affirmative

Ohio—Census now being taken of the blind, with the causes of blindness.

Wisconsin—In the investigation which has been made by the State Board of Control with assistance of State Board of Health in regard to the number of blind persons in the state reveals the fact that from 25 per cent. to 40 per cent. have become blind as a result of ophthalmia neonatorum.

VIII. LAY MOVEMENTS FOR THE CONTROL OF OPHTHALMIA NEONATORUM WHICH HAVE BEEN INAUGURATED?

Affirmative

Illinois—Commission to Inquire into the Condition of the Blind, appointed by the Illinois State Board of Charities, in its report of December, 1908, suggested a form of law in which the Board of Health be vested with authority to publish and distribute such information and furnish such remedies as it deemed expedient to prevent the development of ophthalmia neonatorum, in public hospitals or institutions in which midwifery is practiced and in connection with the practice of midwifery. Rules, regulations, and ordinances to be enforced at the expense of the state. Any person violating any rule, regulation or ordinance to be guilty of a misdemeanor and punishable by a fine not to exceed \$100 or imprisonment not to exceed 6 months, or both.

Maryland—The Mothers' Relief Society furnishes the services of a skilled woman physician to mothers. Has employed the services of a well qualified woman to look into the midwife question.

Massachusetts—Important work is being accomplished through the efforts of the Massachusetts Association for Promoting the Interests of the Blind in its efforts to prevent blindness resulting from ophthalmia neonatorum. Through the courtesy of the Massachusetts Charity Eye and Ear Infirmary, a physician who was also a social worker was permitted to visit daily the out-patient department of that institution and to use its records in a special inquiry concerning this subject on the basis of social service. The report of the investigations of this committee is of very great value and so supplemented the work of the dispensary physicians that the work accomplished cannot be too highly commended. In addition to a large amount of other valuable work 46 cases of ophthalmia neonatorum were individually investigated. Of these the birth of 31 children had been attended by a physician, 5 by a dispensary physician, 6 births took place in hospitals, 3 were attended by midwives and one was unattended by either physician or professional midwife.

"Of the 31 children whose birth had been attended by a private physician, 20 were referred to the Infirmary by the attending physician, 11 by other advice. Of the 5 attended by the dispensary physician all were referred to the Infirmary by him. Of the 3 attended by midwives, none was referred to the Infirmary by them. The 6 whose births took place in hospitals were all directly referred to the Infirmary. The one unattended by either physician or midwife was later sent to the Infirmary by a dispensary physician."

In a short history of twelve cases only two have been pronounced blind. "In three other cases, however, it is very doubtful if the children can be educated as seeing children, and they will probably be pushed into that already large group of 'border-line' cases of those who are neither blind nor seeing, and are a greater problem socially than the wholly blind."

"To measure fully the unfortunate results from this disease it is necessary to take into account also the very high mortality among the children of this group. Statistics gathered by the State Commission for the Blind for the period 1902-7, inclusive, show only 14 cases of blindness from infant ophthalmia in Massachusetts within that time. These statistics are necessarily incomplete and include only those children made wholly blind who have lived long enough to attract attention. They are in reality no index to the bad results from infant ophthalmia. From a list of 18 cases

*Negative**Negative*

Arizona.
Arkansas.
California.
Connecticut.
District of Columbia.
Florida.
Georgia.
Indiana.
Kentucky.
Louisiana.
Maine.
Minnesota.
Montana.
New Hampshire.
New Jersey.
North Carolina.
North Dakota — Lay movements only transitory.
Oregon.
South Carolina.
Texas.
Vermont.
Wisconsin.
West Virginia.

Affirmative

taken from the records of the Gardner Ward during the period covered by the commission's figures, 1902-7, all of whom were admitted to the hospital totally or partially blind, at ages ranging from ten days to three months. 6 totally blind are known to have died since; 4 not found are totally blind if living; and in the case of the remaining 8 there is a question as to whether the children if living, can be educated as seeing children. This list is exclusive of the figures of the State Commission.

"The records of the Gardner Ward for this period, 1902-7, show that 577 cases of infant ophthalmia have been treated within that time. Of this number the cornea was involved in 117 cases before admission. However, the figures for the successive years show a decided improvement; for, whereas the number of cases in which the cornea was involved on admission in 1902 was more than one-third of the whole number treated, the number of such cases in 1907 was less than one-fifth of the whole. A corresponding improvement is shown in the matter of the age at which the infants are brought to the hospital, while the number treated in a year has doubled in that period."

"Too few cases are covered in this group to form any opinion as to the responsibility of midwives for neglect or ignorance in this disease, but it is generally well known that in Boston at least, so well covered by free dispensary services, the midwife finds comparatively little to do."

Nebraska—Lay movement in connection with the Committee of One Hundred but as yet nothing very definite has been done.

New York—Special Committee on the Prevention of Blindness, New York Association for the Blind. This committee has published three pamphlets of which 27,000 copies have been distributed. The second, a thirty page pamphlet entitled "Children Who Need Not Have Been Blind: Prevention a Public Duty," discusses ophthalmia neonatorum under the following sub-headings: midwives—the medical profession—health officers—the public—committee on the prevention of blindness—recommendations—legislation, and in the Appendix gives "Care that should be given the child at birth to prevent ophthalmia neonatorum" and "What must be done when inflammation of the eyes appears."

The secretary of the committee has delivered several lectures with lantern slides on the subject of ophthalmia neonatorum.

Through an appropriation of \$5,000 from the Sage Fund the committee is enabled to continue its work for the coming year.

Virginia—No replies to any of the circular letters, but the University of Virginia has announced a summer course of six weeks in preventive medicine which should include ophthalmia neonatorum. The course is especially arranged for health officers, medical inspectors and similar public officers. A course of lectures will be given also during the year on selected topics of public health.

IX. HAVE YOU ANY SUGGESTIONS TO OFFER THE COMMITTEE THAT MAY BE HELPFUL IN SECURING CONTROL OF THIS DISEASE?

Connecticut—Dr. H. S. Miles, Bridgeport: "Every year since the passage of the law I have gone before the nurses in our general hospitals, read the law and dwelt upon the importance of it, and it is a suggestion that I would make that this be done in every hospital where possible?"

District of Columbia—Dr. Wm. C. Woodward: "To determine what is the best solution to be instilled into the infant's eyes."

Idaho—Dr. Hugel, Boise: "Would advise the committee to prepare a lucid and concise statement upon the subject and have it printed in the American Medical Association Journal and other leading journals."

Indiana—Dr. J. N. Hurty, Indianapolis: "Persistent and emphatic agitation of the situation in order to secure results in the future."

Kentucky—Dr. S. G. Dabney, Louisville: "Would appear to me that some good could be accomplished by health authorities calling attention to the prevalence and dangers of this disease through public press. Organized effort on the part of various charity organizations and societies devoted to civic improvement." So long as knowledge remains almost confined to medical profession believes that cases will continue to occur not infrequently.

Maryland—M. L. Price, secretary State Board of Health: Frequent circular letters to physicians and midwives, the registration and requirement of proper educational qualifications for the latter,

Negative

extending work of state and municipal laboratories, examination of ocular discharges, and providing prophylactic materials free of cost and placing these with present stations for bacteriological outfits.

Dr. Hiram Woods, Baltimore: Lectures of instruction to poor women who employ midwives; circular letter to every medical school in the country, enough to reach every graduate.

Michigan—Dr. J. H. Carstens, Detroit: "It seems to me that all that is really needed is to stir the boards of health up and make them enforce the law."

Montana—Dr. Donald Campbell, Butte: "I have no suggestion to make that could help the committee, except to urge members of our profession to get interested in politics. One good working doctor in the state legislature is worth twenty at home when it comes to getting bills through the house."

CONCLUSIONS

The report of the work already done for the control of ophthalmia neonatorum is given somewhat in detail in order that it may be shown that the whole country is in hearty accord with the movement and that the organization for its control has been very largely perfected.

Resolutions, however, mean nothing more than that our profession is prepared to begin active work. All that has been done is to make the preliminary arrangements. It is now time for a forward movement.

Your committee has had neither the authority nor the desire to recommend any special form of prophylactic, nor until the subject is more exactly determined upon is it desirable to do so. While a large number of opinions have been obtained from ophthalmologists and obstetricians relative to the comparative value of the several germicides, no one of them is wholly free from objections. It has been shown, however, by the experience of the late Dr. Snell in the Jessop Hospital at Sheffield that great care in asepsis, in other words a careful sanitary toilet, will prevent infection in a large proportion of cases and if this be supplemented by the judicious use of any of the silver salts chosen, and by prompt treatment when infection occurs, the disasters of the disease will be practically reduced to the vanishing point. In each state is a committee of experienced physicians ready to advise with the Department of Public Health as to methodology and therefore it has been deemed wise to urge that in every state the subject be taken officially under consideration with them.

The attention of the committee has been directed to the fact that in a disproportionately large number of cases reinfections have occurred where prophylaxis has been employed. This differs so widely from careful records obtained from large numbers of cases as to lead to the belief that often the solutions are used in a perfunctory or careless way or are not prepared in a proper manner. When any silver salt is used it should be in fresh solution, unless it be prepared in hermetically sealed and light-proof receptacles, and used but once for prophylaxis. The Department of Public Health should make very clear that when the nitrate is employed some reaction follows or the inexperienced may regard the transitory redness and slight gummy secretion as an infection and employ active treatment where none is required, to the detriment of the cornea. If infection occurs its treatment should be immediate and under intelligent medical supervision. Subsequent to prophylaxis the newer and less irritating silver salts are far safer in the hands of the physician who is unused to the treatment of the eyes and it should always be made clear that the treatment of a birth infection of the eyes MUST NEVER BE UNDERTAKEN BY A MIDWIFE OR A NURSE. When inflammation develops a physician should immediately be called. When, too, a prophylactic is freely distributed by a Department of Public Health it should be accompanied by a brief description of the symptoms of the disease and the necessity for prompt treatment and the records of results together with the reactions should be obtained and made a basis for continued protective work on these lines.

To achieve success two things seem to be necessary—publicity and the placing of responsibility. As in the campaign against tuberculosis which is making such wonderful progress the aid of the public is essential. But before the public can be actively interested the conditions must be thoroughly understood. "It goes without saying," said a great public journal, "that if the conditions of living in the United States are to be improved the facts must first be ascertained." It should be the duty of the local committee in each state to secure the facts concerning ophthalmia neonatorum. The public health authorities are willing to take any action that responsible physicians ask them to take. In some instances laws must be enacted giving authority to the department of public health to insist upon proper reports being promptly filed, but in many states the power of this board is already adequate and in no instance is it desirable to have laws put upon the statute books until they are demanded by a public sentiment that will secure their

enforcement. To create this sentiment is a responsibility placed upon each one of us.

When the mystery of birth infections shall have been removed, when mothers know that their babies may become blind unless suitable precautions are taken, when they learn that destruction of an infant's eye is in almost every instance due to the neglect of right measures on the part of the attendant, no midwife or careless doctor will dare for her or his own sake to risk the criticism or more serious penalty which must be paid for such criminal negligence. It should be the duty of our committee therefore to secure by cooperation with the department of health in every community, or such other method as may be desirable, by the issuance of impersonal descriptive leaflets, by public lectures, by practical exhibits and otherwise, a widespread knowledge concerning ophthalmia neonatorum, its methods of infection, its prevention and the necessity of immediate and proper treatment. With such knowledge, the public will readily and heartily join in any rightly directed movement for its control.

Responsibility must be placed. In some of the cases brought too late for successful treatment to the Massachusetts General Hospital the parents were urged to secure treatment for the child not by the doctor or midwife under whose ministrations the infection had occurred, but by other physicians or friends, the attendant in the case leaving the hopeless infant to his fate. When such cases occur, the facts being authenticated, a midwife should be deprived of her license to practice, or if a doctor, he should be required to make adequate explanation to the board of health. Such people are a menace to the public and unworthy of the profession which they misrepresent.

This placing of responsibility can be secured only by recording the notice of the birth with the properly constituted authority when it occurs, and that this may be effective it is necessary that the registration be made soon after the child is born. The recent English law on this subject is most important. In an enactment of parliament of 1907 providing for the early notification of births it requires that "it shall be the duty of the father of the child if he is actually residing in the house at the time the birth occurs, and of any person in attendance upon the mother, at the time of or within six hours after the birth, to give notice in writing of the birth to the medical officer of health of the district in which the child is born." The notice is given by means of a prepaid letter or postcard, provided by the department of health, within thirty-six hours after the birth of the child. "This is in addition to and not in substitution of the usual statistical report of the birth." If upon such a report a statement be required as to whether or not a prophylactic has been employed against ophthalmia neonatorum it serves as a warning and a record and would enable the department to keep in touch with births in the poorer districts in which often the eyes of the child are lost before the authorities know that an infant has been born.

It is therefore earnestly recommended that the committees which have assumed the responsibility of cooperating with the central committee actively begin an organized movement for the control of ophthalmia neonatorum in their several states or territories. The local conditions relating to the practice of midwifery should be studied, the number and character of the midwives, the number of birth infections of infants' eyes with the results, the legal conditions concerning the practice of midwifery, and the reporting of ophthalmia neonatorum, co-operating with the health department in seeing that births are promptly reported and securing the assistance of the lay public in making widely known the dangers which may menace the eyes of any new-born child.

The vast importance of this work seems to grow even greater as its practical attainment becomes more possible. The movement which had for its end the control of ophthalmia neonatorum in the United States has now grown to be one in which the whole civilized world has joined. The committee of the British Medical Association is working with energy and enthusiasm, but by far the most important action was that taken by the Eleventh International Ophthalmological Congress at the session held at Naples on April 3. At that time and place were gathered ophthalmologists representing all of the civilized nations of the globe. Resolutions were adopted recognizing the importance of ophthalmia neonatorum as a cause of blindness and the practicability of its control was admitted by the appointment of a committee charged with the duty of its consideration. To us this gives an added inspiration and doubtless between the states will be a friendly rivalry to determine to which shall belong the honor of being the first to wipe out a pestilence that has existed from time immemorial.

F. PARK LEWIS, Chairman.

J. CLIFTON EDGAR.

F. F. WESBROOK.

Report of the Committee on Organization

DR. J. N. McCORMACK, Kentucky, Chairman, presented the report of the Committee on Organization, which was referred to the Reference Committee on Reports of Officers:

To the Members of the House of Delegates of the American Medical Association:

Following the Chicago meeting, acting with the Committee of One Hundred and other friendly lay interests, an active campaign was begun which secured an endorsement in the platforms of both the leading political parties of the plan for such a consolidation of all the bureaus and divisions performing public health functions at Washington as would lay the foundation for such a National Health Department as would meet the rapidly growing demands of this country. Under your instructions again, and still acting with the lay interests above mentioned, and having the cordial support of President Roosevelt and members of his official family, a conference was arranged at Washington between the heads of departments, bureaus and other organizations you had indicated, looking to the consolidation above mentioned. After full consideration, an amendment prepared by the Walcott Commission at the request of President Roosevelt, having the consolidation in view, was approved with but two dissenting votes. Later this amendment was agreed to by all interests and placed in the hands of the proper official for presentation to Congress, but it never reached that body, and all the work came to naught, at least for that session. Finding that the opposition to our legislation could be neither placated nor overcome, with the approval of your Committee on Legislation, I left Washington and took up my regular work in the field, and ask to be excused from all further duty there.

During the year, I have made comprehensive itineraries in the states of South Dakota, Colorado, Ohio, Virginia, Kansas and Missouri, speaking two, three and often four times daily to medical and lay audiences, state universities, normal and high schools and similar bodies, and before joint sessions of the legislatures in North Carolina, Indiana, Minnesota, Missouri and Kansas. The character, extent and results of this work have been so faithfully reported in your JOURNAL and those of the state associations that it is only necessary for me to tell you here of the growing interest in the subject of organization, lay quite as much as medical, which I have found in every section of the country visited.

I am constantly impressed with the possibilities of this work before educational bodies and schools, and especially in institutions which are engaged in preparing teachers, editors, lawyers, clergymen and other leaders of public opinion for their life work. The popular distrust of the profession, ordinarily passive but ready to become active and to be utilized by the various quack and other antagonistic interests, can scarcely be overestimated, and probably can never be eradicated from the once infected adult mind. The experience of recent years has convinced me that with the aid of the teachers and schools, an aid which will be ours for the asking anywhere, a generation of voters and legislators can soon be so trained that the vast interests represented by preventive medicine will come to be appreciated as among the most important and cheaply and easily conserved of the nation's resources, the unselfish aims and purposes of the profession will be recognized and constructive statesmanship can be submitted for the time-serving political methods which have so long obtained in our public affairs, local, state and national. For these and other reasons which can not be enlarged on here, I would urge such an alliance between physicians and teachers in every section of the country as will make all that is involved in our work matters of common knowledge. In short, the future, as I see it, was never so full of promise, if the people can be frankly taken into our confidence and more sense and greater dignity can be made to obtain in our relations with the public and public affairs.

I have been especially encouraged during the year because new workers have been induced to enter the field and improve on the methods formerly adopted. Dr. Phillip Mills Jones, in addition to the great work that he has done for the people and profession of California, has successfully invaded adjacent jurisdictions, and it is hoped can devote at least a portion of his time in other states. Mrs. Bartlett Crane, a well-known club woman and civic worker of Michigan, has excited much interest in health reform in some of the cities of New England, Pennsylvania and Florida, and is just concluding a strenuous four weeks' itinerary in Kentucky. Mrs. Crane is the wife of one of our excellent members who is present at this meeting. She has had large experience as a civic worker, is tactful, practical and conservative in her methods, is an

orator who has the power to sway audiences at her will, and is such a natural good woman and wife with it all that, if she can devote one-half of each month to organization affairs, untold good will result.

I have had occasion in other reports to refer to the shrewd and insidious methods of the quack "patent-medicine" and low-grade proprietary people in antagonizing the advance work of the profession. In former years, the cities and towns where I had appointments were usually flooded with circulars making personal attacks on me, the trustees or the Association as a trust. Early this year, correspondence accidentally fell into our hands showing that these interests, recognizing that this desultory warfare had failed, were organizing a far-reaching conspiracy, with unlimited means back of it for a final, concentrated attack on their arch enemy, the one man who has done more than all others to expose their nefarious impositions on the profession and people, our friend, Dr. Simmons. They reasoned, wisely and truly, that if they could discredit and break him down no one succeeding him would ever be likely to make such a fight as he has done. With the foundation of this conspiracy, the distribution of literature at my meetings was discontinued and was only taken up again within the past month, when it became evident to all that the attack on Dr. Simmons had only rallied his friends the closer around him, making us like him the better for the class of enemies he has made. By reason of our intimate official and personal relations for eight years, I know this man as no other member can. It is not necessary for me to tell you that he is the greatest of living American editors. You know that. It is not necessary that I tell you that he is true to the core and has never had a thought, sleeping or waking, in all these years which was not full of loyalty to this Association and its vast interests. You know that. That he is worthy of our confidence as an officer and leader. You know all that. But I do ask you, just as he has emerged from an ordeal which has tried his heart, as it would have tried yours or mine, that you and each of you during this meeting give him such assurance of personal esteem as will give him nerve for the battles in which, God sparing his useful life, he is yet to lead us.

Report of the Committee on Scientific Research

The report of the Committee on Scientific Research was called for, and, in the absence of the chairman of that committee, was passed. The report as submitted by the committee follows:

To the Members of the House of Delegates of the American Medical Association:

On behalf of the Committee on Scientific Research, I would report that three grants of \$200 each have been paid during the past year: One to Dr. Isabel Herb of Chicago for a contribution entitled "A Study of the Etiology of Mumps;" a second to Dr. H. T. Ricketts of Chicago for a study entitled "An Investigation of the Identity of the Rocky Mountain Fever of Idaho with that found in Montana;" and a third to Dr. R. M. Pearce of New York for two papers entitled "A Study of the Elimination of Inorganic Salts in a Case of Chronic Universal Edema of Unknown Etiology with Apparent Recovery," and "A Comparative Study of the Physical Changes in the Blood in Relation to Opsonic and Phagocytic Indices and Cell Content Under Normal Conditions."

In addition to these a grant of \$200 was allowed Drs. D. J. McCarthy and M. K. Myers of Philadelphia for "An Experimental Study of Cerebral Thrombosis." A preliminary report of this work was read at the last meeting of the Association, but it has not been completed and the grant is, therefore, continued until final publication is made.

A grant was made to Dr. Carl Voegtlin of Baltimore for a study by himself and Dr. W. G. MacCallum "On the Relation of the Parathyroid to Calcium Metabolism and the Nature of Tetany." By some misunderstanding, this paper was published in the *Journal of Medical Research*, and was not, therefore, according to our rules, entitled to the grant from the Association. This work, however, was done under the impression that a grant would be given, and the committee would recommend that the grant be allowed in this instance. Hereafter, a form will be sent to all those asking for grants, which will clearly specify the rules under which grants are made.

For the year 1909 grants have been allowed as follows: Dr. Isabel Herb of Chicago, \$200; Dr. Holmes C. Jackson of Albany, N. Y., \$100; Dr. George B. Webb of Colorado Springs, \$100; Dr. H. T. Ricketts of Chicago, \$200; Dr. R. M. Pearce of New York, \$200; Dr. Carl Voegtlin of Baltimore, \$200; Dr.

D. J. McCarthy and Dr. M. K. Myers, \$200 (continued). A grant of \$50 was made to Mr. H. T. Glenn of Chicago for a piece of work on "The Comparative Disinfective Power of Chinisol, Carbolic Acid and Mercuric Chlorid." The results of this work have been used by the Council on Pharmacy and Chemistry of the Association.

Your committee has continued in its former policy of making grants to certain individuals and repeating these when the quality of the work has been such that continued support has been desirable. So many requests have been made by individuals worthy of support that it has not been necessary to advertise the existence of these grants as was done in the beginning. The amount allowed by the Association now barely covers the grants that have been made on solicitation of laboratory workers. Any advertisement would probably bring such a number of requests that the resources of the committee would be exhausted without satisfying all those who would make application.

We are fully convinced that the amount expended by the Association for the grants of the Committee on Scientific Research has been usefully employed, and that an increase of the yearly appropriation to \$1,000 would be judicious if this sum can be spared for the purpose.

ALFRED STENGEL, Chairman.

Report of the Board of Public Instruction on Medical Subjects

DR. F. F. SIMPSON, Chairman, presented the report of the Board of Public Instruction on Medical Subjects, which was referred to the Board of Trustees.

To the Members of the House of Delegates of the American Medical Association:

In the inauguration of a plan of work which must ultimately, if successful, become very comprehensive, a primary experimental stage is inevitable. The Board of Public Instruction has passed through such a period during the last year, and several avenues which we hoped to employ for purposes of publicity have proved to be unavailable because of limitations which the Board could not accept. The various members of the Board, particularly the former secretary, Dr. Goepf, have interviewed many of the leading editors and managers of newspapers and popular journals. Very few are willing to accept matter without their editorial revision, which in many instances would tend to impart to the article a character more or less sensational. Again we find that each periodical insists on having the exclusive right of publication. At this stage of the work this is manifestly impossible, for it would require a bureau of a magnitude far beyond the possibilities of an available appropriation to furnish indiscriminately separate articles for the large number of papers that might require them. For the present, therefore, it is the plan of your Board to limit the work to a few subjects which have been carefully chosen. They are as follows: typhoid fever, diphtheria, variola, dysentery and gastroenteritis of infants (cholera infantum), cancer, ophthalmia neonatorum, malaria, meningitis, tetanus, rabies, cholera Asiatica, and yellow fever. These subjects have been chosen chiefly because they belong to the general infectious diseases which are, with one or two exceptions, more or less prevalent throughout the United States. While this series is in preparation, any subject which appears to be of more urgent importance may take precedence. The more pressing matters must have first attention. The limitations of our appropriation render it impossible to make the scope more comprehensive at present. In our initial work a large appropriation has not been essential, and we realize that with the constant demands on your treasury, your Board of Trustees has been very generous. Later, we hope within the present year, a point will be reached when a larger appropriation will be essential if the work is to be properly developed. As our material increases and a sufficient stock is in hand for constant draft by a newspaper agency syndicate, an appropriation sufficient to cover this outlay will be necessary. One of the largest newspaper syndicates has offered to distribute to 1,000 newspapers over the country one column weekly for \$1,800 a year. This appears to be a liberal rate, and we trust that we may be able, through a larger appropriation, to avail ourselves of this means of placing before the public articles of educational value. It is possible to secure an even better contract than this when the character of our work is recognized.

At first it was thought that many of the prominent members of the American Medical Association could be drafted for these popular articles, but the strenuous life of the average physician is such as to make it impossible for him to be an

active contributor. Besides it is difficult for the average medical writer to adapt his style to lay readers. For this reason your Board has adopted the policy of having the literature on each subject revised by an expert in the Surgeon-General's Library, and from this material a popular article is constructed by a writer versed in medical matters and adapted by a special literary training for putting it in a popular and attractive form. The Board feels that it has been particularly fortunate in securing the cooperation of Dr. Pfender in the collection of the literature, and of Mrs. Howard for editorial supervision. The latter has had a long training both in popular and medical writing, and has been until recently assistant editor of a medical weekly, and is, therefore, unusually well adapted for this particular work.

By resolution of the Board of Public Instruction, one representative from each state in the Union has been invited to cooperate with us as an Auxiliary Board. Each member is expected to keep in touch with matters requiring publicity, and to supervise in a general way the inauguration of publicity schemes in his own territory. Each article as completed will be put in pamphlet form and kept in stock in the Bureau of Public Instruction at the American Medical Association buildings in Chicago, and will be subject as necessary to draft by physicians all over the country. For instance, in the event of a local epidemic of typhoid fever or other infectious disease, these pamphlets may be at once dispatched to those districts and placed, through physicians and other channels of distribution, in the hands of the people. It is hoped that the Auxiliary Board may be of material assistance to the central Board of Public Instruction in indicating lines of work especially adapted for each district. This Board consists of the following members:

Drs. W. H. Sanders, Alabama; C. C. Stephenson, Arkansas; Philip Mills Jones, California; Melville Black, Colorado; Joseph H. Townsend, Connecticut; P. W. Tomlinson, Delaware; Charles W. Richardson, District of Columbia; J. Harvey Durkee, Florida; Floyd W. McRae, Georgia; J. M. Taylor, Idaho; Carl E. Black, Illinois; J. N. Hurty, Indiana; E. L. Stevens, Iowa; L. H. Munn, Kansas; George P. Sprague, Kentucky; Oscar Dowling, Louisiana; Louis P. Hamburger, Maryland; Benjamin R. Schenck, Michigan; Arthur Sweeney, Minnesota; P. W. Rowland, Mississippi; Walter B. Dorsett, Missouri; Donald Campbell, Montana; H. W. Orr, Nebraska; Irving A. Watson, New Hampshire; Alex. Marcy, New Jersey; Frank Van Fleet, New York; Albert Anderson, North Carolina; J. H. J. Upham, Ohio; A. K. West, Oklahoma; R. C. Coffey, Oregon; Charles H. Miner, Pennsylvania; T. P. Whaley, South Carolina; R. D. Alway, South Dakota; A. B. Cooke, Tennessee; David E. Fly, Texas; H. D. Niles, Utah; E. G. Williams, Virginia; Park Weed Willis, Washington; W. T. Sarles, Wisconsin.

This list is complete with the exception of a few states.

Cooperation of the state societies will also be essential to the proper execution of the plans of the Board of Public Instruction, for the problems of each state have more or less individual peculiarities which can be met only by these associations. Thus, the lecture courses which are being inaugurated in several states and cities can best be conducted by state and county societies. It is gratifying to note that already committees have been formed in various parts of the United States for this purpose. We anticipate that during the coming year further additions will be made to this list, and that a widespread movement may be inaugurated for the popularization of many subjects suitable for the education of the laity in matters pertaining to general health.

As noted in our previous report, all articles compiled by the Board of Public Instruction will appear as unsigned documents emanating from the authorized body of the American Medical Association.

Your Board is under obligations to Dr. Ferd C. Valentine for his excellent article entitled "The Boy's Venereal Peril," which has been in extensive demand and will now appear as a pamphlet authorized by this Board.

It is our fixed policy to avoid all controversial questions, and to publish matters on which there is a general consensus of opinion among the well-informed members of our profession. All therapeutic questions must be excluded from these articles, for the treatment of the patient belongs to the physician. The function of this Board is to assist the physician, by rendering more intelligible to the layman the general principles underlying the cause and prevention of disease.

In the event of the employment of a newspaper syndicate for distribution purposes, each article will be copyrighted, thus preventing editorial alterations after it leaves the Board of Public Instruction.

Your Board believes that gradually a successful policy may be evolved which will carry out the intent of the House of Delegates, but experience has taught that a scheme which has such a broad scope must be developed slowly if it is to be most successful.

Your Board has sustained during the year a serious loss in the death of Dr. Harrington. His connection with the Massachusetts State Board of Health and his experience in questions of public health rendered him a most valuable member, and we are indebted to him for many suggestions in the organization and lines this work shall take.

Respectfully submitted,

F. F. SIMPSON,
FRANK BILLINGS,
L. S. MCMURTRY,
HOWARD A. KELLY,
GEORGE W. CRILE,
MYLES STANDISH,
JOHN G. CLARK, Chairman.

Report of the Committee on Nomenclature and Classification of Diseases

The report of the Committee on Nomenclature and Classification of Diseases was called for, and, in the absence of the chairman, was passed. The report as submitted by the committee follows:

To the Members of the House of Delegates of the American Medical Association:

Your Committee on Nomenclature and Classification of Diseases have the honor to present the following report of the work done by them, in collaboration with representatives of the cooperating bodies, since the Chicago meeting of the Association, held in the year 1908:

Soon after that meeting it became apparent that an exigency not at first known—that of the change of the time of assemblage of the International Commission for the Revision of the International Classification of Causes of Death, from 1910 to 1909—required that your committee should give early attention to the matter of classification, postponing for the time being that of nomenclature. Accordingly due notice was given of a meeting to be held in Philadelphia, beginning on September 24. At that meeting, which occupied two entire days, there were present two members of your committee (Dr. Dorland and the chairman); Dr. Cressy L. Wilbur of Washington, representing the Bureau of the Census; Dr. J. M. Eager of Washington, representing the Public Health and Marine Hospital Service; Dr. M. Howard Fussell of Philadelphia, representing the Section of Medical and Therapeutics of the American Medical Association; Dr. E. E. Montgomery of Philadelphia, representing the Section of Obstetrics and Diseases of Women of the American Medical Association; Dr. Henry W. Cattell of Philadelphia and Dr. Walter McNab of Columbia, Mo., representing the American Academy of Medicine; Dr. Wilmer R. Batt of Harrisburg, Pa., and Dr. William H. Guilfoyle of New York, representing the American Public Health Association; Dr. Francis D. Donoghue of Boston, representing the American Association of Medical Examiners; Dr. John M. Swan of Philadelphia, representing the American Society of Tropical Medicine, and Dr. Warren Coleman of New York, representing the Committee on Clinical Records of Bellevue and allied hospitals, New York. These gentlemen were very courteously invited by Dr. Batt to take part in the proceedings of a meeting of the committee of the American Public Health Association, of which he was chairman, to be held in Washington during the following week, and several of them did attend that meeting. Among them was the chairman of your committee. The result of the conferences held in Philadelphia and Washington was the preparation (finally put into shape by Dr. Wilbur) of the following:

STATEMENT OF SPECIFIC RECOMMENDATIONS OF THE COMMITTEE ON NOMENCLATURE, ETC., OF THE AMERICAN MEDICAL ASSOCIATION, WITH SPECIAL SECTION COMMITTEES AND ASSOCIATED COMMITTEES, THE COMMITTEE OF THE VITAL STATISTICS SECTION OF THE AMERICAN PUBLIC HEALTH ASSOCIATION AND COOPERATING FEDERAL SERVICES, RELATING TO THE REVISION OF THE INTERNATIONAL CLASSIFICATION OF CAUSES OF DEATH.

TITLE.

I. A. Change "Epidemic Diseases" to Infective Diseases.

9. Change title to Diphtheria (including croup). *Note.*—The word "croup" should be disused; with its disappearance the title should become simply diphtheria.

13. Transfer to 105 and 106.

14. Divide title into amœbic dysentery, bacillary dysentery and dysentery (undefined). Change "Chinese dysentery" to Cochin China diarrhœa and transfer to 105 and 106.

15. Make title Plague and add pestis minor, pneumonic plague and septichæmic plague.

19. Change title to Other Infectious Diseases. Add sleeping sickness, hemoglobinuric fever (blackwater fever), yaws, Malta fever, foot and mouth disease, and Madura foot.

20. Include all septichæmia except puerperal and divide into traumatic and other and undefined.

24. Separate actinomyces and trichinosis.

26. Include under 27.

26-33. The word tuberculous should be restricted to the specific disease tuberculosis, and the word tubercular should be discarded in this connection.

31. Change title to Tuberculous Abscess.

35. Transfer "Lymphatism" to 55. Drop "Scrofula" as a title and compile under 33.

26-35. Proposed rearrangement of tuberculosis:

New Titles.

Include Old Titles.

Total Tuberculosis. Tuberculosis (all forms), "scrof-
ula."

Hæmorrhage of lungs.

Tuberculosis of Lungs. Tuberculosis of lungs (27).
Tuberculosis of larynx (26).
Hæmorrhage of lungs (part of 99).
General tuberculosis (34).

Acute miliary tubereu-
losis

Tuberculous Meningitis. Tuberculosis of meninges (28).

Abdominal Tuberculosis. Abdominal tuberculosis (29).

Pott's disease (30).

Tuberculosis of Joints, Cold abscess, "abscess by conges-
Glands, Skin, Etc. tion" (31).

White swelling (32).

Tuberculosis of other organs (33).

"Scrofula" (35).

39-44. The line of demarcation between a cancer of the face (44) and a cancer of the mouth (39) should be taken as at the junction of the skin and mucous membrane.

39-45. In reporting cancer the point where the growth originated, or the primary site, should be given for purposes of classification.

39-46. Specify, if possible, the variety of neoplasm. All neoplasms, of whatever part of the body, should be placed together (not necessarily under a single title). Proposed rearrangement of neoplasms: New growths (malignant)—Carcinoma, Sarcoma, "Cancer" and malignant diseases not otherwise defined. New growths (nonmalignant or undefined)—Uterine Tumor, Ovarian Tumor, "Tumor" and other nonmalignant new growths not otherwise defined.

50. Transfer diabetes insipidus to 121.

51. Transfer exophthalmic goitre to 89 (new grouping thereunder). Change "Exophthalmia" to exophthalmos and transfer to 75.

52. Transfer title to 89 (new grouping thereunder).

53-54. Combine titles, perhaps as Diseases of the Blood. Include infantile pseudoleuchæmia.

53. Transfer Hodgkin's disease to 84.

55. Add dystrophia geniculis (Rummo's disease).

59. Add lathyrism and tobacco poisoning.

61a. Transfer to General (infective) Diseases. Definition and distinction from other forms (a committee on definitions provided for).

PROPOSED LIST OF UNDESIRABLE TERMS

NOTE.—As a result of the conferences between the General Committee of the American Medical Association and other committees, etc., it was agreed:

"That practical suggestions be framed relative to the reporting of causes of death and of sickness by physicians, and that a list of the most undesirable terms frequently employed be brought to their attention with the recommendation that they be disused."

The following terms are suggested as properly belonging to such a list, and, if approved by the General Committee, they can then be submitted to the other committees interested so that a list of undesirable terms can be distributed to the physicians of the country with the full approval of their national organizations. Other undesirable terms will probably occur.

Undesirable Term	Reason Why Undesirable
Abscess.	The location of the abscess should always be stated, and its nature, if known.
Accident, Injury, violence.	In all deaths resulting from violence the physician or coroner should see that the means of death, e. g., railway collision, gunshot, drowning, poison (name of poi-
(unqualified.)	

Undesirable Term

Atrophy. Debility.
Decline. Inanition.
Weakness, and
other vague terms.

Congestion.

Convulsions.

Croup.

Dropsy.

Heart Disease, Or-
ganic Heart Trou-
ble, etc. (nature
not stated).

Heart Failure, Car-
diac weakness,
etc.

Hæmorrhage, Hemop-
tysis.

Hydrocephalus (un-
qualified).

Marasmus.

Reason Why Undesirable

son), etc., is clearly indicated, and also whether the death was due to accident, suicide, or homicide, if possible to ascertain.

If dependent on a definite cause, the cause should be stated, or if the cause can not be ascertained, the words "cause unknown" should be added so that it will be known that the deaths should not be properly charged to tuberculosis or other disease resulting in debility, etc.

This word is not used in the London Nomenclature except in connection with cho-roid, kidney, lung, optic disc, and spleen. Of these only "congestion of kidneys" and "congestion of lungs" are frequently found on certificates of death. For the first, "656. Congestion [of kidney] (in diseases of heart and lungs)," the disease of the heart or of the lungs to which the congestion of the kidneys was secondary need alone be named; so also for "410. *Congestion [of the lungs]." But in practice "congestion of lungs" is frequently used to designate lobar or bronchopneumonia, acute bronchitis, etc., or it may be equivalent to pulmonary apoplexy. All "congestions," and the old "congestive chills," etc., are undesirable because of their indefinite use. "Congestion of bowels" is a not infrequent return.

"It is hoped [but, apparently, in vain] that this indefinite term will henceforth be restricted to those cases in which the true cause of that symptom cannot be ascertained. At present more than eleven per cent. of the total deaths of infants under one year old are referred to 'convulsions' merely."—Reg.-Gen.

Dropped in third edition (1896) of London Nomenclature. Note in fourth edition (1906) says: "The use of the term 'membranous croup' as a synonym for 'laryngeal diphtheria' should be discontinued." It is even more desirable that the unqualified term "croup" should cease to be so used. Even "spasmodic croup" is no longer given as a synonym of laryngismus stridulus as in the third edition. "Croup" is a most pernicious term from a public health point of view, and should be entirely disused.

"Dropsy should never be returned as the cause of death without particulars as to its probable origin, e. g., in disease of the heart, liver, kidneys, etc."—Reg.-Gen.

Vague statements of "heart disease," "heart trouble," etc., should not be given when the precise nature of the affection can be stated. Returns of valvular heart disease, or more specifically, mitral regurgitation, aortic stenosis, etc., are preferable. Always state congenital malformation of heart so that deaths of children from this cause may be separated from those due to acquired heart disease.

Such indefinite terms implying mere terminal conditions or symptoms should be entirely discarded in making out certificates of cause of death; if actual disease of the heart was present it should be definitely stated.

The cause should be given if known; it is especially important that deaths from tuberculosis of the lungs should not be reported as due merely to "hæmorrhage" or "hæmorrhage of lungs." But if nothing further than "hæmorrhage" can be stated, the organ or part affected should be named.

"It is desirable that deaths from hydrocephalus of tuberculous origin should be definitely assigned in the certificate to 'Tuberculous meningitis,' so as to distinguish them from deaths caused by simple inflammation or other disease of the brain or its membranes. 'Congenital hydrocephalus' should always be returned as such."—Reg.-Gen.

Not in English Nomenclature: "Marasmus, Term no longer used." (Second ed., 1885.) Is compiled under ill-defined by

Undesirable Term.	Reason Why Undesirable	Undesirable Term	Reason Why Undesirable
	International Classification: also by Registrar-General. Is often used to cover deaths from tuberculosis, syphilis, etc. See letter attached and reply.	Typhoid Pneumonia.	"The term 'typhoid pneumonia' should never be employed, as it may mean either enteric fever with pulmonary complications, on the one hand, or pneumonia with so-called typhoid symptoms on the other."—Reg.-Gen.
Meningitis, Cerebral Meningitis, Cerebrospinal Meningitis.	The specific disease known as "epidemic cerebrospinal meningitis" should be reported as epidemic cerebrospinal meningitis or cerebrospinal fever, whether the particular case happens to be among others in an "epidemic" or is merely sporadic; and it should be reported in no other way. Particularly the qualification "epidemic" should never be omitted, if the first form of return is employed, even if only a single case occurs. On the other hand it will be well to qualify all other forms of meningitis as "simple" or "not epidemic," so that the correct statistics of cerebrospinal fever can be obtained. Tuberculous meningitis should always be definitely stated as such. It is not necessary to mention merely symptomatic meningitis at all.	PROPOSED INCLUSIONS.	
Operation, Surgical Operation, Surgical Shock.	The cause for which the operation was undertaken should be given unless the surgeon desires his work to be held primarily responsible for the death.	Cerebrospinal Fever.—Includes epidemic cerebrospinal meningitis, cerebrospinal meningitis, acute cerebrospinal meningitis, cerebrospinal arachnitis, cerebrospinal arachnoiditis, cerebrospinal inflammation and spotted fever.	
Paralysis (unqualified).	The vague use of this word should be avoided, and the precise form stated, as acute ascending paralysis, paralysis agitans, bulbar paralysis etc. Write general paralysis of the insane or general paresis in full, not "general paralysis" or "paresis." Distinguish paraplegia and hemiplegia, and in the latter, when the condition is a symptom or sequel of apoplexy or cerebral hemorrhage, report the death as due to cerebral hemorrhage.	Do not include acute meningitis, arachnitis, cerebral meningitis, leptomeningitis, meningeal inflammation, periencephalitis, septic meningitis, spinal meningitis, spinal fever, suppurative meningitis, eatarrhal meningitis, cerebrocervical meningitis, chronic cerebrospinal meningitis and other chronic forms, congenital meningitis, congestive meningitis, diffuse meningitis, ancephalomeningitis, hydromeningitis, idiopathic meningitis, infantile meningitis, inflammation of meninges, membranous meningitis, meningitis of spinal cord, meningococcal meningitis, metastatic meningitis, posterior meningitis, pneumococcal meningitis, progressive meningitis, purulent meningitis, Rocky Mountain spotted fever, serous meningitis, simple cerebral meningitis, simple cerebrospinal meningitis, subacute meningitis, or plain meningitis (unqualified). Of course, if a death is specified as due to tuberculous meningitis or any other definite form or as traumatic, following typhoid fever, etc., it would not be included either here or under "simple meningitis."	
Peritonitis (unqualified).	"Whenever this condition occurs—either as a consequence of hernia, perforating ulcer of the stomach or bowel, appendicitis, or metritis (puerperal or otherwise) or else as an extension of morbid processes from other organs, the fact should be mentioned in the certificate. At present far less than half of the deaths originally returned as from 'peritonitis' are found on inquiry to be instances of the idiopathic form of that disease."—Reg.-Gen. Traumatic peritonitis should specify nature of violence.	63. Change title to Other Diseases of the Spinal Cord, Pons and Medulla. Change "syringomyelitis" to syringomyelia. Transfer pseudohypertrophic paralysis and fatty degeneration of muscles to 149.	
Pneumonia (unqualified).	Many deaths returned from "pneumonia" are in reality due to bronchopneumonia, a distinct title of the International Classification. Hence it is desirable that deaths should be definitely specified as due to lobar pneumonia or to bronchopneumonia.	64. Change title, "Congestion and Hemorrhage of the Brain," to Cerebral Hemorrhage, Apoplexy.	
Pyemia, Septicemia.	If due to childbirth or abortion always write puerperal pyemia, puerperal septicemia, etc. If traumatic, state means of injury and whether accidental, suicidal, or homicidal.	67. Transfer general alcoholic paralysis to 56. Change title to General Paresis.	
Tabes mesenterica.	Dropped in the second edition, English Nomenclature. "The use of this term to describe tuberculous disease of the peritoneum or intestines should be discontinued, as it is frequently used to denote various other wasting diseases which are not tuberculous. 'Tuberculous peritonitis' is the better term to employ when the condition is due to tubercle."—Registrar-General's "Suggestions to Medical Practitioners respecting Certificates of Cause of Death."	68. Transfer priapism to 126.	
Tuberculosis (unqualified).	The organ or part of the body affected should always be stated, as tuberculosis of lungs, tuberculosis of spine, tuberculous meningitis, etc.	70-71. Transfer these titles to class of Ill-Defined Diseases.	
Tumor, Cancer (unqualified).	The kind of neoplasm, as carcinoma, sarcoma, fibroma, epithelioma, etc., should always be stated if possible and the organ or part of the body affected (first affected, if known). The word "tumor," without further qualification, is less definite than "cancer," and it should always be stated whether it was a malignant "tumor" or a benign "tumor." "Whenever a tumor is known to be due to Malignant Disease, to Tubercle, or to Syphilis, the fact should be stated in the certificate."—Reg.-Gen.	72. Transfer tetanus to General Diseases and distinguish traumatic tetanus.	
		74. Transfer idiosyncrasy and imbecility to 68. Cause of compression of brain should be ascertained; if undefined, transfer to 179. Do not include aural vertigo (76) or neuritis due to alcohol (56). Transfer cretinism to 89. Transfer labioglossolaryngeal and labioglossopharyngeal paralysis to 63.	
		75. Add atrophy of the optic nerve, panophthalmitis and hemorrhage into the eye.	
		78. Transfer infective endocarditis to General (infective) Diseases.	
		80. Transfer eardialgia to 104.	
		81. Add endarteritis, rupture of artery (nontraumatic) and erythromelalgia. Add aortic disease and exclude disease of aortic valves.	
		83. Add aneurysmal varix.	
		85. Discard title. Transfer hemorrhages to organ or part affected or, if entirely indefinite, to 179. Transfer hemophilia and purpura to 55.	
		86. Discard title. Refer to definite forms or to 179.	
		87. Change title to Diseases of the Nasal Passages (including the accessory sinuses).	
		89. Change title, add terms and rearrange as follows: Diseases of the Ductless Glands—(a) Diseases of the thyroid gland and parathyroid bodies. Include goiter, myxedema, cretinism and exophthalmic goiter. (b) Diseases of the thymus gland. Include status thymicus, status lymphaticus and thymic asthma. (c) Diseases of the suprarenal capsule. Include Addison's disease.	
		92-93. Transfer pneumonia to General (infective) Diseases: (a) Bronchopneumonia. (b) Lobar pneumonia. (c) Pneumonia (undefined).	
		96. Transfer foetid bronchitis to 91.	
		99. Transfer "hay fever" to 87. Transfer hemorrhage of lungs to 27.	
		100. Add Chiaie teeth (black teeth). Transfer thrush to General (infective) Diseases.	
		101. Transfer amygdalitis (tonsillitis) to General (infective) Diseases.	
		102. Classify foreign body in oesophagus under 176.	
		104. Classify foreign body in stomach under 176.	
		105-106. Add flagellate diarrhea and psilosis (sprue).	
		108. Divide title into Hernia and Intestinal Obstruction.	
		114. Add stenosis of gall bladder, perihepatitis and perforation of gall bladder.	
		115. Transfer to Diseases of the Ductless Glands.	

117. Distinguish: (a) Acute pancreatitis, (b) chronic pancreatitis and (c) other diseases of the pancreas.

118. Should precede 109.

120. Change title to chronic nephritis: (a) Chronic parenchymatous nephritis, (b) chronic interstitial nephritis and (c) chronic nephritis (undefined).

121. Add albumosuria, lithuria, oxaluria, phosphaturia, cystinuria, melanuria, alkaptonuria, hematuria and lacilluria.

126. Add impotence, abscess of penis and ulcer of penis.

128. Do not include puerperal hæmorrhage or hæmorrhage of pregnancy.

130. Add uterine fistula (not urinary, 124; not fecal, 109). Change "periuterine" to perimetritic. Add atrophy of uterus (nonpuerperal). Do not include pelvic peritonitis (116), subinvolution of uterus (140), or uterine fistula (if urinary, 124); if, fecal, (109).

133. Include diseases of the male breast.

136. Transfer placenta prævia (unavoidable hæmorrhage) and separation of placenta (accidental hæmorrhage) to 135. Change title to Other Complications and Sequelæ of Labor.

137. Transfer title to General Diseases.

140. Abolish title and include terms under 136.

142. Abolish title and transfer terms included to cause or organ or part of body affected. Transfer Raynaud's disease to 81. Transfer dry gangrene to 81. Transfer gangrene of penis to 126.

143. Transfer title to General (infective) Diseases.

144. Transfer suppurative adenitis (bubo) to 84.

145. Transfer elephantiasis to 84. Do not include carbuncle, furunculosis, tropical phagedæna, bedsore, or frostbite (170). Add gangrene of skin.

146. Add chronic hypertrophic pulmonary osteoarthropathy. Transfer to 87: Diseases of accessory sinuses (frontal ethmoidal, sphenoidal, maxillary), sinusitis, empyema of sinuses, nonmalignant new growths of sinuses, parasites of sinuses, and foreign bodies in sinuses. Transfer mastoiditis to 76. Transfer rickets to General Diseases.

149. Add trigger finger, hammer toe and talipes (various forms) not congenital.

150. The word "congenital" should govern assignment to this title regardless of age, provided the death or morbidity was due to congenital malformation. Any malformation acquired after birth should not be included. Malformations acquired during fetal life as a result of antenatal disease should be included under congenital malformations, not under the diseases by which they were caused. Include the entire list of malformations of the London Nomenclature. Add congenital stenosis of aorta, congenital stenosis of intestine and congenital stenosis of pylorus. Add congenital idiocy and congenital imbecility.

152. Add disease of placenta (as affecting infants under three months of age).

153. Abolish title and include under 173.

164-165. Fractures and dislocations should be referred to the cause of injury (in general mortality statistics).

167. Add effects of light, x-rays and radium.

167-169-174. Rearrange.

174. Include all deaths from anæsthetics (gases or vapors) under this title, with subdivisions showing causes for which operations were undertaken. Add poisoning by sewer gas, aniline, cacodyl, sulphurous acid, sulphuretted hydrogen, benzene, carbon disulphide, ether and methyl alcohol fumes (as in shellac vats).

175. Add poisoning by methyl alcohol and ptomain poisoning.

174-175. Include the entire list of poisons, both gases and vapors, of the London Nomenclature (174-175).

176. Deaths from electrical currents (live wires) should be separately stated. Include injuries at birth. Make criminal abortion a separate subdivision of homicide. Make a separate division for wounds in action (battle).

166-176. Combine these titles and rearrange entire class, avoiding cross classification by nature of injury instead of mode of injury.

DRAFT OF PROPOSED ARRANGEMENT OF VIOLENT DEATHS

Class XIII.—Violence

A.—Accidental or undefined.

Conflagration (and injuries resulting therefrom).

Burns and scalds (not from conflagration, railroad accidents, or other classified accidents).

Acute Poisoning (English list)—

Poisonous gases and vapors (not conflagration).

Surgical anæsthetics (details, with cause of operation).

Illuminating gas. Other gas poisoning.

Other poisons (not gaseous, chronic, or occupational).

Food poisons (ptomaines).

Other poisons listed (including corrosive poisons).

Industrial Injuries—

Machinery in factories, etc. (Nature listed).

Elevators.

Building operations.

Mines and quarries (stated separately as needed).

Transportation Agencies—

Steam railroads.

Electric roads (extraurban).

Street railways.

Automobiles.

Aeroplanes, balloons, etc.

Other vehicles, horses.

Electricity (not lightning or otherwise classified).

Falls.

Gunshot.

Drowning.

Suffocation (not including drowning, conflagration, poisonous gases, or mining accidents).

Overlying.

Foreign bodies in air passages, etc.

Injuries at birth.

Weather, Seismic Agencies—

Heat and sunstroke (subdivisions in special tables), heat exhaustion, etc.

Cold, frostbite, freezing.

Lightning.

Cyclone, tornado, earthquake, etc.

Other and Ill Defined Violence—

Starvation, exposure, thirst.

Fractures and dislocations (cause not specified).

Wound, injury, etc. (cause not specified).

Surgical operation (cause not specified), or compile under Class XIV as at present.

Other and ill defined violence.

B.—Homicidal.

Criminal abortion.

Other homicides.

C.—Suicidal. (Subdivisions by means of suicide in special tables.)

D.—Judicial. (To be omitted if not legal executions).

E.—War. (To be omitted except when required. Separate statement of "in action.")

An alternative list should be employed for hospital statistics, in order to present data concerning the nature of the injury. The list given in the London Nomenclature, with the changes hereinafter mentioned, is recommended for the purpose.

As regards the matter of nomenclature proper, which has thus far figured in only an incidental and fragmentary way in this report, the members of your committee understand that the American Medical Association has expected them to deal chiefly with the fourth edition (third revision, published in 1906) of the Nomenclature of Diseases Drawn Up by a Joint Committee Appointed by the Royal College of Physicians of London, which for the sake of convenience is herein referred to as the London Nomenclature. Nevertheless, so far as opportunity has offered, they have studied several other nomenclatures, including the publications of the government medical services and that of the trustees of Bellevue and allied hospitals, of New York.

Though your committee regard the London Nomenclature as in the main an admirable work, they think it has some defects requiring correction, and that certain additions should be made to it. The diseases enumerated in its major list are numbered consecutively from 1 to 1,244. It is evident that such a system of numbering is at once thrown into disorder by any change in the lists, whether by adding or dropping titles or by their transposition; and such changes must be made from time to time in any nomenclature which is to continue to represent medical knowledge and opinion. Some arrangement analogous to the extension system now generally adopted in numbering books in public libraries therefore seems to be desirable. A member of your committee, Dr. Duane, has devised such a scheme, and your committee recommend its adoption so far as may prove practicable—that is, in the case of all diseases the nature of which is known.

According to Dr. Duane's plan all titles would bear a title letter referring to an explanatory list and denoting the general nature of the morbid condition. Thus, a title marked A would always stand for an infective disease; one marked B for a parasitic affection; one marked I for an inflammation, etc. The titles might also bear a species number following the title

letter and indicating the special nature of the morbid condition. Thus, A75 would always denote leprosy, C15 diabetes, D2 lead poisoning, H2 hyperæmia, etc. Titles indicating conditions which, for purpose of either provisional enumeration or permanent classification, are regarded as local would bear a section number preceding the title letter and referring to another explanatory list. Thus, a title beginning with 1 always means a disease of the nerves, one beginning with 10 a disease of the conjunctiva, etc. So also 1A necessarily means an infectious disease of the nerves, and 1A75 leprosy of the nerves. The form 1D means a toxic condition of the nerves and 1D2 lead poisoning of the nerves. The form 10E denotes some diathetic affection of the conjunctiva, 10E26 gout of the conjunctiva, 10I conjunctivitis, 10I1 catarrhal conjunctivitis, etc. Such a scheme is, of course, largely a matter for editorial treatment in the preparation of any publication which the Association may decide to issue with regard to this subject.

Your committee recommend that in all names of diseases involving anatomical terms the nomenclature adopted by the German Anatomical Society, generally known as the *Basel'sche Nomina Anatomica (B N A)*, be adhered to. While we do not assert that that nomenclature is faultless, we believe that it is far superior to anything of the sort that has been proposed before, and we realize that it is sure to be employed extensively in textbooks of anatomy. It involves the retention of all diphthongs in Latin words, though not in form of ligatures. The London Nomenclature gives the diphthongs in separate letters in its Latin list but as ligatures in its English list. We recommend printing them all in separate letters, but in the English list it seems proper to make a concession to those who look on certain Latin words as "Anglicized"—who, for example, write anemia instead of anæmia and diarrhea instead of diarrhœa. In such words we propose to inclose the first letter of the diphthong in parenthesis marks—thus, an(a)emia and diarrh(o)ea. Adherence to the *Basel'sche Nomina Anatomica* requires also the substitution of thyreoid for thyroid, chorioid for choroid, Falloppian for Fallopian, etc. In the interest of uniformity we recommend that such substitution be made. We also recommend certain spellings which, though now uncommon, have received dictionary recognition in the past and are made prominent in the London Nomenclature, such as leuchæmia and septichæmia instead of lucæmia and septicæmia. We believe that no other spelling is defensible.

We recommend that all Latin adjectives, even those derived from proper names, be written with a small initial letter, e. g., cholera asiatica (not Asiatica), also that the circumflex accent (being a mere schoolboy's aid) be omitted from ablatives of the first declension and genitives of the fourth declension.

We recommend that the word inflammatio occurring under a class heading hinging on the name of an organ or part be omitted whenever an equivalent term ending in itis occurs.

We also recommend the following specific changes:

Pp. 2-3.—Transpose febris enterica and febris typhoides, also enteric fever and typhoid fever, making typhoid fever the recognized name and enteric fever a synonym.

P. 4.—Change parotitis to parotiditis.

Pp. 50-51.—Change myosis to meiosis.

P. 68.—Change eniocularis to uniocularis.

Passim.—Change coartatio to coarctatio.

P. 123.—Change Rigg's to Riggs's.

Passim.—Change læsiones to traumata.

Pp. 128-129.—Change tonsillitis to amygdalitis.

P. 148.—Transpose rectoceles and proctoceles.

P. 176.—Change morbus Bright to nephritis.

P. 192.—Change preputii to præputii.

P. 222.—Omit obstantia.

Passim.—Change distensio to distentio. Change perineum to perinaeum.

P. 238.—Change mammillæ to mamillæ.

P. 242.—Change fracture (sic) non solidata to fractura perstans. Change rachitis to rhachitis.

P. 252.—Change trichinosis to trichiniasis.

P. 270.—Change tinea versicolor to pityriasis versicolor and pediculosis to phtheiriæsis.

P. 277.—Change overlaying to overlying.

P. 278.—Change ex tormentorum pilis to scelopeticum.

P. 284.—Omit title 1063.

P. 286.—Change aponeurosim to aponeurosin.

P. 316.—Change ununited to persistent.

P. 320.—Change frænum to frenum.

P. 324.—Change empyemic to empyematous and omit trans-thoracic.

P. 325.—Add appendicostomy.

P. 330.—Under "removal of whole cervix uteri" omit the inaccurate synonym. Add colpocleisis.

P. 332.—Change pregnant to gravid. Add operation for ectopic gestation.

P. 342.—Change renun to renis.

P. 356.—Change perincalis to perinæalis.

P. 358.—Omit "radius ant."

Pp. 360-361.—Change Gärtner to Gartner.

P. 364.—Change cranium . . . redactum to crania . . . redacta. Change medulla spinalis . . . redacta to medullæ spinales . . . redactæ.

P. 374.—Change venosum to venenosum.

P. 376.—Change Hamburyi to Hanburyi.

P. 385.—Change spirochæta to spirochæta.

P. 391.—Change fly Tsetse to Tsetse fly.

The changes thus far recommended are based on a careful study of all the suggestions received from the cooperating bodies, and they were approved of at a meeting held in New York on April 1, 1909, at which meeting there were present Dr. Wilbur, Dr. Batt, Dr. Cattrell, Dr. Meyer, Dr. Coleman, Dr. Guilfooy and the chairman of your committee. At that meeting it was resolved to recommend the following additional titles:

Paratyphoid (pseudotyphoid) fever.

African tick fever.

Tropical bobo.

Hill diarrhœa.

Epidemic gangrenous proctitis.

Japanese river fever (Shima mushi).

Nasha fever.

Acute febrile jaundice (Weil's disease).

Grandular fever.

Mountain fever.

Rocky Mountain tick fever (black fever, spotted fever of the Rocky Mountains).

Coccidioidal granuloma.

Psittacosis.

Milk sickness (trembles, slows).

Polycythæmia.

Cardiac arrhythmia.

Heart block.

Achylia gastrica.

Asthenic bulbar paralysis.

It is realized by your committee that there will doubtless have to be many more additions as our knowledge advances, especially of names of tropical diseases.

The changes thus far recommended are based on a careful consideration of the London Nomenclature and of the suggestions made by the organizations cooperating with your committee so far as they have been received up to the meeting of April 1, 1909, and all those cooperating bodies had had ample notice that all their suggestions must be in the hands of your committee by that time. We did receive certain suggestions, and we acted on them at that meeting. We have since received several proposed rearrangements of the name of diseases and injuries encountered by specialists, but there is not now sufficient time remaining to enable us to digest them and assimilate them with the work previously done. We can do nothing, therefore, but submit them with this report as "exhibits," remarking that they have our general approval. They are as follows:

Psychiatry.—The report of the committee of the American Psychological Association, prepared by Dr. Adolf Meyer, with the collaboration of Dr. Henry M. Mudd and Dr. C. B. Burr—marked Exhibit A.

Stomatology.—The report of the committee of the Section on Stomatology, Dr. George V. I. Brown, chairman—marked Exhibit B.

Laryngology, Otology and Rhinology.—Joint reports of the committees of the Section on Laryngology and Otology, Dr. D. Braden Kyle, chairman, the American Laryngological Association, and the American Triological Society—marked Exhibits C, D and E. In a letter dated April 12, 1909, addressed to the chairman of your committee, Dr. Kyle says: "The report which I submitted to you is the one made by a committee consisting of Dr. James F. McKernon, Dr. A. Coolidge, Jr., and myself as chairman. This committee represents, as I understand it, the Section of Otology and Laryngology of the American Medical Association, the Laryngological Association, and the American Triological Society, as the same committee was appointed by each society. The subdivision of the work was merely made for the convenience of the committee, so that the report as sent to you is the report of the nomenclature of the throat, nose and ear. My committee has to report to the American Laryngological and also the Triological at their annual meeting in June, so we have no right to send that re-

port to you until sanctioned by the council of the society, and therefore this report which you have is really from the Section on Otology and Laryngology of the American Medical Association; but the same report will be made to the other two societies."

Ophthalmology.—A scheme prepared by Dr. Alexander Duane, a member of your committee—marked Exhibit F.

In addition, we submit herewith the revised statistical report employed by the Naval Medical Corps (marked Exhibit G) and galley proofs of the revised Bellevue Hospital Nomenclature of Diseases and Conditions, not yet published in book form (marked Exhibit H).

If the general plan of the London Nomenclature is adhered to, the columns of French and German equivalents being retained, a rather bulky book will have to be published, but it does seem of advantage to retain the Latin and English columns. It will be noticed that the navy list is entirely in Latin, whereas the Bellevue list is almost wholly in English. It seems to us that a book conveniently small and yet comprehensive enough for all ordinary purposes might be made by combining the naval and Bellevue lists, with such modifications as may be found requisite.

To this report will be found appended a proposed list of undesirable terms (sometimes used in death certificates), drawn up by Dr. Wilbur with the approval of the Philadelphia meeting of your committee.

Among the matters with which your committee was charged was that of assisting in making provision for an American delegation to the Paris conference for revising the International Classification of Causes of Death. That matter seems to be in the hands of the United States government, at the invitation of the government of France, and your committee are not aware that any steps have yet been taken by Congress to provide for a delegation.

It will be seen that this second report of your committee is only tentative, for it seems to us that no complete nomenclature and classification of diseases and injuries can properly be prepared until the conclusions arrived at by the Paris conference are published.

The thanks of your committee are due to Dr. Cressy L. Wilbur for continual and most valuable assistance in their work—assistance made all the more efficient by his experience as chief statistician of the Bureau of Census; also to Dr. John M. Swan, of the American Society of Tropical Medicine, for his services as secretary and otherwise at our Philadelphia meeting, and to the Polyclinic Hospital of Philadelphia for providing a room for that meeting.

Respectfully submitted,

FRANK P. FOSTER, Chairman.

DR. ALEXANDER R. CRAIG, Pennsylvania: I move that the reports of the Committee on Scientific Research and the Committee on Nomenclature and Classification of Diseases be accepted as printed, but that the report of the Committee on Scientific Research be referred to the Board of Trustees, inasmuch as it involves the appropriation of money.

Seconded and carried.

Report of the Committee on Patents and Trade-Marks

DR. CHARLES S. BACON, Illinois, Chairman, read the report of the Committee on Patents and Trade-Marks, which was referred to the Reference Committee on Legislation and Political Action.

To the Members of the House of Delegates of the American Medical Association:

Your committee was created at the Chicago meeting by the action of the House of Delegates in adopting the following resolution:—

WHEREAS, The object of the patent laws is to promote progress in science and useful arts; and

WHEREAS, The application of the United States patent law to materia medica inventions and discoveries is a hindrance to progress in therapeutics, because patents on products are allowed, thus creating monopoly and preventing progress and improvement in the art; and

WHEREAS, Foreign countries, including Germany, France, Austria-Hungary, Italy, Japan, Argentina, etc., prohibit the patenting of materia medica products; and

WHEREAS, A patent on a product creates a monopoly not only on the product itself, but on all subsequent improvements in processes for making the same, thereby destroying the stimulus for improvement and discovery through research; and

WHEREAS, The registration of the name of medicines as trade-marks creates and fosters monopolies, protects secrecy and fraud, causes confusion in pharmaceutical nomenclature, and enables the manufacturers of nostrums to build up a dishonest commercial business in drugs by misleading advertisements, to the injury of the public health; therefore, be it

Resolved, That a committee of five appointed by the House of Delegates to work with the Council on Pharmacy and Chemistry and committees of other societies created for a like purpose to study

the whole question and cooperate with the Committee on Medical Legislation in preparing and securing the enactment of a bill which shall secure such modification of the patent and trade-mark laws as will correct the abuses stated in these resolutions.

The committee has made a study of the work previously done in this line by the American Pharmaceutical Association. It has also investigated the patent and trade-mark laws of the United States and foreign countries and conferred with about fifty of the leading drug manufacturers of this country in regard to the effect of the proposed changes in the laws.

While some manufacturers contest the proposition that a patent on materia medica products is a hindrance to progress, others admit its truth. The chief objection to the proposed limitation of patents to processes of manufacture does not so much involve the patent laws as the general system of jurisprudence. In foreign countries which have only process patents, an alleged infringer is required to prove that he is not using a patented process. The opposite rule of procedure, throwing the burden of proof on the plaintiff, is at the basis of legal practice in this country, and a change in our system is out of the question.

In the event that patents on products, as distinguished from patents on the process by which the products are manufactured, were done away with the difficulties under our system of law of proving affirmatively the use by the alleged infringer of the patented process are so great that the value of process patents would be practically destroyed. The presumption obtains generally under our system that proof of guilt or of the infringement must always be made by the person alleging it, rather than that the accused must first establish his innocence. It is comparatively a simple matter to prove infringement of a mechanical patent, because a machine can be seen, described and its mechanical functions easily understood; but in the case of chemical processes practically the only way of proving the use of any patented process is by the evidence of a man who has actually performed it. The result is that to prove an infringement of a process patent it is usually necessary for the plaintiff either to subsidize some of the alleged infringer's employes, or to put confederates in his factory, neither of which courses is commendable. The result of doing away with product patents would undoubtedly be that manufacturers would preserve their formulas as trade secrets and would not disclose them. This would result in a monopoly not limited by any particular period of time, but which would exist as long as the formula remained undisclosed, and this, of course, would result in all of the disadvantages and dangers consequent upon secret formulas.

We therefore conclude that such a change in the patent laws as suggested in the resolution is impracticable. We believe, however, that it may be possible to improve the situation by certain changes, perhaps such as would be in line with those recently adopted in England, restricting patents to articles manufactured solely or chiefly in the country. We learn that changes in the patent laws in other directions are being considered by other organizations, for example, by the American Bar Association, and we would recommend that the association continue a committee to keep track of legislation on this subject and to cooperate with bodies interested in the improvement of medicine and drug patents.

In regard to the evils arising from the registration of names as trade-marks we have come to the conclusion that these evils are to be remedied by the courts rather than by the enactment of new laws. It is a fundamental proposition that the registration of a trade-mark or name creates no new rights. The property right in a mark, which simply denotes origin, exists just as well when there is no registration of the mark as after such registration is made. Certain rules regarding the registration of names of medicines are definitely established by the courts and by the Commissioner of Patents. The name of a medicine which is the subject of a patent can not be registered as a trade-mark, and neither can a name which is descriptive of the article, its qualities or purposes, or which is false.

Other questions are in a state of great confusion. For example, it is a question whether a manufacturer can be protected on trade-mark principles in the use of a number of names each used to indicate a particular product. Another question that has recently arisen and is most important to us is the right of a manufacturer to give a chemical name to a medicine as the patent or descriptive name and use another more catchy name as a trade-mark. It is very doubtful if this evasion will be upheld by the courts.

In view of the great importance of obtaining judicial opinions on these and other questions arising in the practice of registering trade names of medicines, we recommend that the Committee on Patents and Trade-marks consider the advisa-

bility of trying to secure such opinions, and in the event that such action seems desirable it shall be empowered to proceed by and with the advice and consent of the Trustees.

Respectfully submitted,
CHARLES S. BACON, Chairman.
OLIVER T. OSBORNE.
A. BENNETT COOKE.
PHILIP MILLS JONES.
HORATIO C. WOOD, JR.

Report of the Committee on Drug Reform

The report of the Committee on Drug Reform was called for and passed, in the absence of the Chairman, DR. LEWIS S. McMurtry, Kentucky.

Report of the Committee on Davis Memorial

DR. HENRY O. MARCY, Massachusetts, Chairman, presented the report of the Committee on Davis Memorial as follows, which was referred to the Reference Committee on Miscellaneous Business:

To the Members of the House of Delegates of the American Medical Association:

This is not a report of progress. When your committee was appointed it was believed by your chairman that it would not be difficult to secure the requisite funds for a suitable memorial to Dr. Nathan S. Davis, the founder of this association. Owing, however, to the disaster at San Francisco it was deemed best to defer temporarily the active solicitation of funds, as everyone so far as possible felt it a duty to alleviate the results of that national calamity. Then soon after came the general financial depression, in which our profession had more than its full share.

Nevertheless, notwithstanding these adverse conditions, your committee has not been inactive. They decided that a minimum sum of twenty-five thousand dollars should be raised, and the representatives of the different states accepted that which seemed to them a just apportionment. It was thought the better way that the state societies under the advice of the state representative of this committee should cooperate, and thus every member of the profession be privileged to contribute in a small way toward this fund.

Through the personal effort of your chairman Massachusetts exceeded her apportionment nearly a half, although until recently for almost a generation the great body of the profession in that state was not in affiliation with the Association. In 1907 the Association was asked to appropriate from its funds five thousand dollars toward this memorial. This was recommended, but owing to legislative delays has not yet come to final consideration. The State of Illinois, and especially the City of Chicago, have promised generous assistance to this memorial in honor of one of her first citizens, whose public service in sanitation and hygiene should be kept in undying remembrance.

Upon the presentation of his last report your chairman regretfully stated that the Memorial Committee refused further active cooperation on the part of the states until the Association itself should give encouragement and support by contributing to the fund. The committee urge that this be done at this meeting, and believe that this is essential for the success of the movement. If such appropriation is made by the Association the representatives of the different states who constitute the committee promise their hearty and active cooperation.

The profession of America owes it to itself that the completion of this memorial be not longer delayed, since for many things it is indebted to Dr. Davis more than to any other member of the medical profession for its present state of advancement, affiliation and good will.

HENRY O. MARCY.

Report of the Committee on the Uniform Regulation of Membership

DR. THOMAS McDAVITT, Minnesota, Chairman, read the report of the Committee on Uniform Regulation of Membership, which was referred to the Reference Committee on Constitution and By-Laws.

To the Members of the House of Delegates of the American Medical Association:

This committee was appointed at the Chicago Session in 1908 in accordance with a recommendation contained in the report of the General Secretary. After discussing the lack of uniformity in regulation of membership in county and state societies and emphasizing its importance, the General Secretary said: I therefore recommend that this entire

matter be referred to a committee of three with instructions to secure data regarding the present provisions in the constitution and by-laws of the various state associations on this point as well as the procedure followed by county and state societies and to report its findings and recommendations to the House of Delegates at the next annual session."

REGULATION OF MEMBERSHIP

On August 7, a letter was sent to the secretary of each state association, asking for information regarding the rules observed by each state association. Reports have been received from the secretaries of all the state associations except Georgia. A tabulation of the questions and answers is appended herewith.

(A) FISCAL YEAR

(1) What is the fiscal year of your state society?

Jan. 1 to Dec. 31.—California, Idaho, Illinois, Indiana, Kansas, Kentucky, Maryland, Michigan, Mississippi, Missouri, Nebraska, New York, Nevada, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Utah, Washington, West Virginia, Wyoming.....	22
Feb. 1 to Jan. 31.....	0
March 1 to Feb. 28:—Rhode Island.....	1
April 1 to March 31:—Alabama, Florida, Tennessee, Minnesota	4
April 15 to April 15:—Massachusetts, Dist. of Columbia	2
May 1 to April 30:—Arkansas, Iowa, Louisiana, Montana, New Hampshire, Texas.....	6
June 1 to May 31:—Connecticut, Maine, New Jersey.....	3
Sept. 1 to Aug. 31:—New Mexico, Pennsylvania.....	2
Oct. 1 to Sept. 30:—Delaware, Vermont.....	2
Dec. 1 to Nov. 30:—North Carolina.....	1
Annual Session to annual session:—Arizona, Colorado, Oregon, Virginia, Wisconsin.....	5
No report, Georgia.....	1

In the great majority of cases in which the state association does not have the fiscal year coinciding with the calendar year, the beginning of the fiscal year is purely accidental, running from the approximate date of the annual meeting or from the first of the month immediately preceding or following it. Under the form of organization which previously existed in many states in which the state society existed only at the time of the annual meeting, there was some reason for such a plan. Under the present organization, with the state society always in existence in the form of county societies, there seems to be no reason why the purely accidental occurrence of the annual session at a certain period of the year should have any bearing or influence on the society's finances. If the fiscal year is changed in all cases to coincide with the calendar year, then the reports of the secretaries, treasurers, boards of trustees, etc., will be for the entire fiscal year immediately preceding the annual session at which the report is made. For instance, if the annual session of the state association is held in April, the reports for the fiscal year will be from January 1 to December 31 for the preceding year, while the three months of the new year will be covered in the report at the next session. The advantages of having the fiscal year and the calendar year coincide are obvious. The natural time to pay dues is the beginning of the new year. Any other time is accidental and artificial. If the fiscal year coincides with the calendar year, membership can be held for the entire calendar year and a certificate of membership issued for the calendar year. In this way, a certificate issued for 1908, for instance, will only be good during that year and will naturally expire with the beginning of 1909. A receipt for 1908 dues will be of no value after January 1, 1909. A member credited with dues for 1909 will be a member in good standing throughout the year and there will never be any doubt regarding the exact duration and expiration of dues, membership, etc.

If the county, state, and American Medical Associations, all adopted the calendar year as the fiscal year, membership would expire simultaneously and there would be no overlapping. As it is, in a society having a fiscal year from May 1 to April 30, its members are eligible to membership in the American Medical Association from January 1 to April 30, but ineligible from May 1 to December 31, unless they pay their dues for the balance of the year. As shown by the table above, there being no uniformity in the different states, memberships are expiring at all times during the year and consequently it is necessary to keep up a continual correspondence regarding this matter. If all memberships expired on December 31, the entire record could be revised as soon after January 1 as possible and this revision would then be good for the year, with the exception of the additions, new members, etc. The ad-

vantages of having the fiscal year coincide with the calendar year are apparent.

(2) Do all your county societies have the same fiscal year?

If so, what is it?

States in which the fiscal year of county societies runs from Jan. 1 to Dec. 31:—Alabama, Arizona, Colorado, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Mississippi, Missouri, Nebraska, New Mexico, New York, Nevada, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Washington, West Virginia, Wisconsin.....27

States in which the fiscal year in county societies runs from April 1 to March 31:—Connecticut.....1

States in which the fiscal year in county societies runs from April 15 to April 14:—Massachusetts....1

States in which the fiscal year for county societies runs from June 1 to May 31:—Delaware.....1

States in which the fiscal year for county societies runs from Dec. 1 to Nov. 30:—North Carolina.....1

States in which the fiscal year for county societies runs from session to session of the state association: Michigan1

No report:—Georgia1

No county societies:—Dist. of Columbia, Virginia...2

Not known:—Montana1

No uniformity in County Societies:—Arkansas, California, Louisiana, Maine, Minnesota, New Hampshire, New Jersey, North Dakota, Oregon, Rhode Island, Tennessee, Vermont, Wyoming.....13

It hardly seems necessary to present any argument for all the county societies in the same state having a uniform fiscal year. In fact, it is difficult to see how membership matters can be regulated without such uniformity. The advantages of uniformity between the county and state societies on this point are equally obvious. As membership in the state society depends on membership in the county society, it is evident that a member is entitled to membership in the state society for exactly the same period of time that he has paid dues and is recognized as a member in good standing in the county society. Here the simplest plan, i. e., coincidence of the fiscal year with the calendar year, is plainly the best.

(3) Do your by-laws contain any provisions regarding the fiscal year of county societies?

In the following eleven state societies, the duration of the fiscal year of county societies is prescribed by the By-laws of the State Association:—Alabama, Colorado, Idaho, Kentucky, Massachusetts, Missouri, Nebraska, New York, North Carolina, South Dakota, Washington11

In the following thirty-five states there are no provisions on this point:—Arizona, Arkansas, California, Connecticut, Delaware, Florida, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Montana, New Hampshire, New Jersey, New Mexico, Nevada, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, West Virginia, Wisconsin, Wyoming.....35

No report:—Georgia1

No county societies:—Dist. of Columbia, Virginia...2

(4) Do you think the fiscal year of county and state societies should correspond?

This question was answered in the affirmative by the secretaries of the following twenty-six state associations:—Arkansas, California, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Nebraska, New Hampshire, New York, Nevada, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, Texas, Utah, Vermont, Washington, West Virginia, Wyoming.....26

The question was answered in the negative by the following nineteen states:—Alabama, Arizona, Colorado, Connecticut, Delaware, Florida, Idaho, Maine, Michigan, Minnesota, Montana, New Jersey, New Mexico, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Wisconsin.....19

No expression:—Massachusetts1

No report:—Georgia1

No county societies:—Dist. of Columbia, Virginia..2

(5) What do you consider the best arrangement for the fiscal year so far as the county societies and the state association are concerned?

The replies received on this point were practically unanimous, each secretary stating that he considered the plan followed in his own state to be the best.

(b) DUES

(1) At what time do your by-laws call for the payment of county society dues?

No provision in the by-laws:—California, Illinois, Iowa, Louisiana, Maryland, New Hampshire, North Dakota, Pennsylvania, Rhode Island, Vermont.....10

On Jan. 1:—Arizona, Colorado, Idaho, Indiana, Kansas, Kentucky, Missouri, New Mexico, New York, Nevada, Texas, Wisconsin, Wyoming.....13

April 1:—Maryland, Minnesota, North Carolina, Oklahoma4

April 15:—Massachusetts, New Jersey.....2

April 30:—Oregon1

Dec. 1:—Michigan, Washington.....2

Thirty days before annual session:—Arkansas, Maine, Montana, Nebraska, Ohio, South Carolina, South Dakota, Tennessee, Utah.....9

Before annual session:—Delaware, Florida.....2

Before close of annual session:—Alabama.....1

Quarterly:—Connecticut1

No answer:—West Virginia.....1

No report:—Georgia1

No county societies:—Dist. of Columbia, Virginia..2

(2) When does the county secretary remit to the state secretary the amount of the state per capita assessment?

January 1:—California, Indiana, Kansas, Kentucky, Maryland, Washington, Wyoming.....7

May 1:—Minnesota, Nebraska, Oklahoma, Texas, West Virginia5

May 15:—Connecticut, New Jersey.....2

July 1:—Colorado1

August 1:—Idaho1

September 1:—Nevada, Pennsylvania.....2

December 31:—Michigan, Missouri.....2

Thirty days before annual session:—Arizona, Iowa, Louisiana, Maine, North Dakota, South Dakota, Tennessee, Utah8

Before annual session:—Arkansas, Delaware, New Mexico, North Carolina, Oregon, Wisconsin.....6

During annual session:—Alabama.....1

"When they get ready":—Florida, Montana.....2

No report:—Georgia1

No county societies:—Dist. of Columbia, Virginia..2

In addition, the following replies, impossible to classify, have been received from eight state secretaries.

Illinois:—"County secretaries must remit prior to April 15, next, but the vast majority remit before November 15 of the current year."

Massachusetts:—"The district treasurer remits to the treasurer of the state society." (Massachusetts is organized on the district and not on the county plan.)

New Hampshire:—"Our county societies do not become component societies until May 1, 1909." (New Hampshire has recently established component county societies.)

New York:—"The secretary has nothing to do with dues."

Ohio:—"At his own sweet will. Sometimes, as collected, in groups, or as a whole just before the annual meeting, with scattering returns throughout the rest of the year."

Rhode Island:—"The state society collects from each individual member and not through the county society."

(3) Does the secretary of each county society remit for the entire society or for each individual member as he pays his dues?

For the entire society:—Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Idaho, Illinois, Iowa, Kansas, Kentucky, Louisiana, Mississippi, Montana, New Mexico, Nevada, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Vermont, Wisconsin30

For individual names as received:—Maryland, Michigan, Minnesota, Missouri, Nebraska, Rhode Island, South Carolina, Washington, Wyoming.....9

No rule on this point:—Massachusetts, New Hampshire2

Both:—New Jersey, West Virginia.....2

No report:—Georgia1

No county societies:—Dist. of Columbia, Virginia..2

(4) Do you, as the secretary of the state association, accept payments of the per capita assessment from individual members, or must they come through the county society?

In forty states, the per capita assessment is only accepted through the county society. Those in which this is not the case are:—

From the county treasurer to the state treasurer; New York, Pennsylvania, South Carolina.....3
From each member; Rhode Island.....1
Not yet determined; New Hampshire, Oklahoma.....2

- (5) Do you enroll a member when reported by the county secretary regardless of whether or not the per capita assessment is paid for him or do you wait until the individual assessment is paid before enrolling the member?

Members enrolled when reported by county secretary:—Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Idaho, Louisiana, Montana, Oregon, Pennsylvania, Wyoming.....12

Members enrolled only when per capita assessment is paid:—Alabama, Florida, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, Nevada, North Carolina, North Dakota, Ohio, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Washington, West Virginia, Wisconsin.....31

No report:—Georgia.....1

No county societies:—Dist. of Columbia, Virginia..2

No provisions on this point:—Maine, New Hampshire, Oklahoma.....3

[Further questions and answers, regarding manner of paying assessments, etc., are omitted, owing to the amount of space required to tabulate the replies.]

SUSPENDED MEMBERS

It is difficult to analyze the answers under this head on account of the confusion existing in the use of the word "suspended." In some state associations, a member delinquent after a certain time is suspended and is no longer considered in good standing or entitled to the privileges of membership, yet he is still regarded as a member and is not dropped or entirely separated from the organization until the expiration of a probationary period. In other state societies there are no provisions for suspension, a member being dropped as soon as he becomes delinquent or as soon as the year for which his dues are paid has expired. In some states suspension simply means arrears in dues, while in others it is equivalent to being dropped from the society. These facts should be kept in mind in the interpretation of the following answers:

- (1) Are delinquent members suspended for non-payment of dues, and if so, how far in arrears must they be before being suspended?

State Associations not providing for suspension:—Alabama, Minnesota, Mississippi.....3

Suspension on Jan. 1:—Washington, Missouri.....2

Suspension at the end of two months:—Indiana.....1

Suspension at the end of three months (April 1):—Arizona, Kentucky, Oklahoma, Oregon, South Dakota, Texas, Utah, Wyoming.....8

Suspension at the end of four months (May 1):—Illinois, New York, West Virginia.....3

Suspension at the end of five months (June 1):—Kansas, New Jersey.....2

Suspension at the end of six months (July 1):—Colorado.....1

Suspension at the end of ten months (November 1):—Michigan, Nevada.....2

Suspension at the end of one year:—Arkansas, Connecticut, Delaware, Idaho, Louisiana, Maryland, New Mexico, Nebraska, North Carolina, South Carolina, Tennessee, Vermont.....12

Suspension at the end of two years:—Rhode Island:—1

Suspension at the end of three years:—Massachusetts, New Hampshire.....2

Suspension after state meeting:—Ohio.....1

Suspension as soon as reported delinquent:—California, Iowa.....2

Suspension regulated by county societies:—Florida, North Dakota, Pennsylvania.....3

No county societies:—District of Columbia, Maine, Virginia.....3

No report:—Georgia.....1

- (2) Is the roll of the state association made up complete each year from the reports of the county secretaries, or is a member once entered carried as such until specifically reported as died, suspended, resigned, dropped, etc?

In thirty-six states the roll is made up each year from the reports received from the county secretaries....36

In the District of Columbia, New Hampshire and Vir-

ginia there are no county societies (organization now taking place in New Hampshire).....3

No report:—Georgia.....1

Reports from 8 societies are as follows:—

Illinois: A member once entered is carried until specifically reported on, and if no report is made by the 15th of April next following he automatically stands suspended.

Massachusetts: The roll is made up each year from the report of the secretary of the state society.

New Mexico: Names once reported are carried until reported as dropped, dead, etc.

Oregon: Members are carried until they are dropped by the secretary of the county society.

Pennsylvania: We ask for changes in membership as they occur, but we do not always get what we ask for. We publish a list of the officers and members each March. We get a revised list again in August.

Rhode Island: A member once entered is carried.

Washington: A member once entered is carried until some change is reported, as above.

Wyoming: A member is carried after once reported until reported as dead, etc.

- (3) Are all members "not in good standing" regarded as "suspended?"

No provision for suspension:—Alabama, Minnesota, Mississippi, Massachusetts, Washington.....5

The following states answer the above question in the affirmative:—Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Idaho, Illinois, Indiana, Iowa, Kentucky, Missouri, Nebraska, New Hampshire, New Jersey, New York, Nevada, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Vermont, West Virginia, Wisconsin, Wyoming.....32

The following states answer the above question in the negative:—Louisiana, New Mexico, Rhode Island, Utah.....4

The report from Kansas says: Suspended in the county society. Report from Maryland: Suspended at the end of one year. Report from Michigan: Suspended on October 1.....3

No county societies:—District of Columbia, Maine, Virginia.....3

No report:—Georgia.....1

- (8) Are members notified when dropped?

Yes. California, Connecticut, Delaware, Idaho, Kansas, Kentucky, Louisiana, Maryland, Michigan, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, Nevada, Ohio, Rhode Island, Texas, Vermont, Wyoming.....21

No. Arizona, Arkansas, Colorado, Illinois, Missouri, North Carolina, Oklahoma, South Dakota, Tennessee, Utah, West Virginia, Wisconsin.....12

Notified by county secretary:—Indiana, Iowa, South Carolina.....3

By publication in the state journal:—Pennsylvania..1

Depends on the county secretary:—Florida, Oregon..2

No suspended members:—Minnesota, Mississippi....2

No county societies:—District of Columbia, Maine, Virginia.....3

No report:—Georgia.....1

The following replies could not be tabulated:—

Massachusetts: "Members dropped after three years delinquency."

North Dakota: "I suspect that a good secretary uses that lever in trying to collect from a slow or delinquent member."

Washington: "County secretary is notified."

(D) BEST METHOD OF HANDLING MEMBERSHIP MATTERS

This question was intended to call forth suggestions from the state secretaries regarding the best method of regulating memberships as far as the relation between county and state societies, reports of secretaries, forms and blanks used, etc., were concerned. The following answers are selected from the replies received—

Connecticut: Members should be enrolled each year from the reports of the county secretary. If in arrears for more than one year, they should be dropped and admission secured only by re-election.

Michigan: Card system. Never destroy a card. July 1, send county secretary list of all unpaid members for him to check up errors. Request him to push collections, September 1, individual letter to delinquents, urging them to keep up membership and pay through the county secretary. November 1, second individual letter, saying that dues have not been re-

ceived and member will be dropped with notice to the American Medical Association to that effect if his dues are not received by November 30.

Minnesota: Have the fiscal year of all county societies the same. Membership only good until the end of the fiscal year. The same with the state organization. There should be no elasticity in this matter. It is this acceptance of the procrastinating methods of many doctors that has made the financial ends so hard to manage.

New York: It would seem that the carelessness of members in the conduct of their private business affairs has been carried into the conduct of the medical society, both county and state. The sooner a return is made to business principles the better. The quicker the custom of unbusinesslike methods in the conduct of medical societies is abandoned the better it will be for all concerned. The action of the by-laws should be automatic. It should not be left to an individual or to a committee to say to this or that member "You are suspended," or to wink at the fact that a member has not paid his dues. The card index system is certainly the best. In this office only one list is kept. Three boxes, or one box divided into three parts for a small society, can be used. Make a list of all members on cards, putting on each card the data necessary. When a member is suspended take his card out of the membership box and put it in the suspended box. When dropped transfer it to the delinquent box. If he at any time pays his dues, and is reinstated, the card can then be transferred to the active list. If he dies the card can be put in the dead box or destroyed, although it is not a good plan to destroy any society records.

Oregon: A fiscal year from January 1 to January 1 in county societies. The state association as at present. (The fiscal year in Oregon is from annual session to annual session, generally July 1 to July 1.) Dues to be paid to the end of each year. Suspension of members not paying before the meeting of the state association. Automatic reinstatement if dues are paid up before the following January. Newly elected officers to take office January 1, no matter when the annual meeting occurs.

Pennsylvania: Members should be suspended automatically when six months in arrears. Never "carry" a member under any circumstances. If he is not able to pay his dues, pay them for him by resolution. The state society should have nothing to do with the collection. [In a personal letter, Dr. Stevens, the state secretary, outlines the history of the present methods in Pennsylvania, at length.]

Washington: Monthly reports from county societies. Use of card index by county and state secretaries. Cards to show all information regarding each member, and also carry any account of dues paid.

A careful examination of the above tabulation will show that the greatest difficulties in the way of uniform regulation of membership are:

- (1) Lack of uniformity regarding fiscal year and termination of membership.

- (2) Lack of definite specific regulations regarding time when dues must be paid and when members are suspended for non-payment.

- (3) Lack of sufficiently comprehensive system adaptable to conditions in different parts of the country by which county secretaries can report changes in membership to state secretaries easily and accurately, thus keeping the state secretaries informed regarding the status of membership in each county.

It is evident that if the by-laws of this Association are to be enforced, and if the membership in the American Medical Association is only to be held by members in good standing of county and state societies, a simple, easily operated and effective system for the transmission of such official information regarding membership must be established. The present lack of uniformity and system in the regulation of membership is costing the organized profession of the country thousands of dollars each year in the form of postage, clerk hire, stenographers' salaries, etc., necessary to carry on an enormous amount of correspondence regarding details which should not be necessary were an automatic system put in operation. In addition to the unnecessary expense, there is also a much larger loss on account of members who are dropped or suspended, or who relinquish their membership owing to misunderstanding regarding the provisions regarding dues, good standing, etc. If a general system were adopted to which all state and county societies, as well as the American Medical Association could conform, an enormous amount of time and labor could be saved each year and a large number of members retained who are now lost.

In a recent number of the *Outlook* appeared an article on the business methods of one of the leading railroad mag-

nates of the United States, in which, as one of the reasons for his success, emphasis was laid on his careful attention to details and his ability to save money and labor by systematic management. Describing the reorganization of the Union Pacific Railroad, the writer said that when Mr. E. J. Harriman took charge of the road there were twenty-two divisions, each one of which had its own system of blanks, forms, reports, etc., and that one of the first acts of the new president was to call for copies of every blank used in every division of the road. When these were all received they filled a large room, showing an enormous number of different blanks of all different sizes and varieties, many of them designed for the same purpose. By unifying and standardizing the stationary and forms used in the twenty-two different divisions, by having all printed matter made in "stock size" (that is, sizes which could be cut from the commercial sizes of paper, cardboard, etc., without waste), and by systematizing the manner of sending in and tabulating reports, it was found that the saving effected was more than sufficient to meet the entire expenses of the stationary department. If the adoption of standard and uniform blanks, forms and methods by the Union Pacific Railroad with twenty-two divisions was of sufficient importance to merit the personal attention of the president, surely the uniform and mechanical administration of membership matters on the part of the American Medical Association, with 50 constituent associations and 1,996 component county societies, comprising 70,000 members, is of sufficient importance to merit the most careful consideration of its executive officers. We must either continue in the present unsystematic, unbusinesslike, wasteful method of regulating and recording membership matters in county, state and national organizations or we must devise a satisfactory plan which will be capable of general adoption by all the county and state societies, and by which membership matters can be handled quickly, mechanically and accurately.

The printing plant of the American Medical Association can produce all blanks and forms necessary for county and state societies at a much lower cost than the work can possibly be done for elsewhere. The printed matter can be made in uniform and standard sizes so that it can be cut without waste, and the expense thereby diminished. Forms and blanks, once agreed upon, can be stereotyped and printed in large quantities at a very low cost. Report blanks, membership certificates, notification cards, etc., can be put up in sets for county societies of different sizes and for state associations, and can be supplied regularly. All supplies needed for all county and state societies can be supplied from a central bureau at a minimum expense. The work of county and state secretaries can be greatly facilitated and the value of these officers to their respective organizations greatly increased, not only without increased work on their part, but with a decided reduction of the amount of work required.

Your committee therefore makes the following recommendations:—

- (1) That all state associations be requested to make their fiscal year conform to the calendar year and to request their component county societies to adopt the same rule.

- (2) Your committee further recommends that this committee be continued, that it be increased by the addition of four state secretaries and that it be instructed to draft uniform by-laws for the regulation of membership for state and county societies, as well as to devise a system of necessary blanks, forms, etc., which will be applicable for general use and which can be recommended to the House of Delegates to state societies for adoption.

MEMBERSHIP QUALIFICATIONS

In addition to the question of the mechanical regulation of membership, which the committee considered the main question submitted to it, it has also been suggested that this committee take up the question of the requirements for membership so far as personal qualifications are concerned. It is evident that a lack of harmony on this subject as well exists among the various county and state organizations. No effort has been made to secure data on this point other than to tabulate the constitutional provisions of the various state associations as shown by the last copy of the constitution and by-laws on file at the General Secretary's office. A summary of the provisions in the various states follows:—

AMERICAN MEDICAL ASSOCIATION: Requirements for membership in the American Medical Association are: (1) Membership in good standing of the constituent association of the state in which the applicant resides. (2) Written application for membership on the prescribed form. (3) Payment of the annual dues.

ALABAMA: Graduates of reputable medical colleges, holders of certificates of qualification granted by the State Board of Examiners or by a county board of examiners are eligible to membership in county medical societies.

ARIZONA: Requirements those of the standard constitution and by-laws for state societies.

ARKANSAS: Every reputable physician, a graduate of a regular medical college, recognized by the Federation of Medical Colleges.

CALIFORNIA: Standard constitution and by-laws.

COLORADO: Standard constitution and by-laws.

CONNECTICUT: Members of county medical societies are members of the state association. Provision regarding membership in county societies are those of the standard constitution and by-laws.

DELAWARE:

DISTRICT OF COLUMBIA: Legally qualified, regular practitioners of medicine residing in the District and engaged in no other occupation.

FLORIDA: Every reputable, white, legally registered physician practicing non-sectarian medicine is entitled to membership.

GEORGIA: Every reputable and legally registered white physician who does not practice or claim to practice nor lend his support to any exclusive system of medicine shall be eligible to membership.

HAWAII: Regular practitioners in good standing who hold a license to practice medicine under the laws of the territory.

IDAHO: Standard constitution and by-laws.

ILLINOIS: Standard constitution and by-laws.

INDIANA: Standard constitution and by-laws.

IOWA: Standard constitution and by-laws.

KANSAS: Standard constitution and by-laws.

KENTUCKY: Standard constitution and by-laws.

LOUISIANA: Standard constitution and by-laws.

MAINE:

MARYLAND:

MASSACHUSETTS: Applicants must be over 21, of sound mind and good moral character, must possess a good English education, hold a diploma from a medical school recognized by the council, satisfy the censors that they do not practice any exclusive system of medicine and that they possess such other qualifications as the society shall deem advisable.

MICHIGAN: Every reputable and legally registered physician who is practicing or who will agree in writing over his own signature to practice non-sectarian medicine only and who will sever all connection with sectarian colleges, societies, institutions, etc., shall be eligible to membership.

MINNESOTA: Standard constitution and by-laws.

MISSISSIPPI: Standard constitution and by-laws.

MISSOURI: Standard constitution and by-laws.

MONTANA: Standard constitution and by-laws.

NEBRASKA: Every reputable and legally registered physician, a graduate of a college which at the time of his graduation was considered in good standing, etc., provided that licentiates admitted under the laws of 1881 and registered as regular physicians and who have continuously practiced regular medicine in Nebraska may be admitted to membership.

NEVADA: Graduates of a recognized medical college in good moral and professional standing proposed in writing at a regular meeting and elected by a three-fourths vote on recommendation of the board of censors.

NEW JERSEY: Standard constitution and by-laws.

NEW HAMPSHIRE: Standard constitution and by-laws.

NEW MEXICO: Standard constitution and by-laws.

NEW YORK: Membership in the state society includes all members of all chartered county societies. The only provisions found in the by-laws of the state association regarding membership in county societies is Sec. 2, Chap. 9, which provides that full and ample opportunity shall be given every reputable physician to become a member of the society in the county in which he resides, and Sec. 8 of the same chapter, which provides that each county society may adopt a constitution and by-laws for the regulation of its affairs, provided the same shall first be approved by the council of the state society.

NORTH CAROLINA: Standard constitution and by-laws.

OHIO: Standard, with the addition, "Who is not affiliated with any organization which aims to foster any exclusive dogma in therapeutics."

OKLAHOMA:

OREGON: Standard, with the substitution of the clause, "Who is practicing in accordance with the Code of Ethics of the American Medical Association," in place of the clause, "Who does not practice or claim to practice or support sectarian medicine."

PENNSYLVANIA: Standard constitution and by-laws.

RHODE ISLAND: Standard constitution and by-laws.

SOUTH CAROLINA: Every reputable and legally registered white physician who does not practice or claim to practice sectarian medicine.

SOUTH DAKOTA: Standard constitution and by-laws.

TENNESSEE: Standard constitution and by-laws.

TEXAS: Every reputable and legally registered white physician, etc.

UTAH: Standard constitution and by-laws.

VERMONT: Membership in the state association consists of all members of all county societies and all others who were active members of the society at the time the amended constitution was adopted.

VIRGINIA:

WASHINGTON: Each county society shall judge of the qualifications of its own members. School of graduation shall be no bar to membership provided the applicant does not claim to practice any exclusive system of medicine.

WEST VIRGINIA: Standard constitution and by-laws.

WISCONSIN: Standard constitution and by-laws.

WYOMING: Standard constitution and by-laws.

The committee has not taken this matter up but would recommend that this question be referred to the enlarged committee for further consideration.

PROCEDURE IN CASES OF DISCIPLINE

Another matter which has been suggested as coming under the jurisdiction of the committee is that of the provisions of the by-laws of county and state societies and the American Medical Association relating to the method of procedure in disciplining members. Cases for discipline occasionally arise, in which it is necessary to put a member on trial under charges of unprofessional conduct, etc. Much confusion exists in the provisions found in the constitutions of the different parts of the organization on this point. The by-laws of the American Medical Association provide (Sec. 4, Chap. 10, Book 3, page 19) for a Judicial Council, to which "shall be referred all questions, complaints, protests and matters of an ethical nature. When such complaints, protests, etc., concern an individual's relations with his local society they shall be considered by this council only after the same shall have been referred to the constituent association concerned or of an appeal from such constituent association. Its decision shall be subject to appeal to the House of Delegates."

There is no provision in this by-law as to how an appeal from the constituent association shall be made; as to whether an appeal can be made by either the constituent association or the individual involved, or whether an appeal can be made by a member other than the member on trial. Neither is there any provision as to the length of time after a decision in which an appeal must be made. There is consequently nothing to prevent an appeal to the Judicial Council being made on any question which has ever been before a constituent association. Obviously there should be some provisions regarding the form and manner of an appeal, as well as a limit to the length of time within which an appeal can be filed.

The provisions of the state constitutions and by-laws are equally vague. The standard constitution for state associations prepared by the Organization Committee (Sec. 3, Chap. 7, page 18), provides that "the Council shall be the Board of Censors of the state associations. It shall consider all questions regarding the right and standing of members, whether in relation to other societies, component societies or the state association." There is no clear provision regarding the manner of appeal from the decision of the county society, either to the councilor for the district or to the Judicial Council of the state society. If appeal is made to the councilor of the district, how soon after the decision of the county society in the case should the appeal be made? In what form should it be presented? Has either party the right of appeal or only the defendant? Should the appeal contain an abstract of the testimony as shown by the records of the society or simply an *ex parte* statement from the party appealing? How soon after the case is appealed to the individual councilor should he render a decision? There is at present nothing to prevent the councilor from putting the papers in the case in his pocket and declining to render a decision. If the case is appealed to the Judicial Council, does this body have a right to reopen the case and hear new evidence, to pass on the truthfulness of the evidence submitted and to decide the case on its merits, or would the council be authorized simply to review the evidence as presented at the first trial without going back of the record? Can the council of the state society have original jurisdiction in any case, or can it only hear cases on the appeal from the individual councilor or from the decision of the county soci-

eties? The standard constitution and by-laws provide that all questions involving the rights and standing of members, no matter of what nature, shall be referred to the council without discussion, that the council shall decide, and that its decision shall be final. This evidently puts a bar on any appeal to the House of Delegates of the state association. Does it also act as a bar to an appeal to the Judicial Council of the American Medical Association? No provision is made in the standard constitution and by-laws for such an appeal, nor is the manner in which an appeal can be made specified.

The same lack of clearness exists in the standard constitution and by-laws for county societies. Sec. 2, chap. 4, page 12, provides, "that the Board of Censors shall investigate charges preferred against a member and report its conclusions and recommendations to the society." Sec. 7, chap. 1, provides for the filing of such charges against a member, but does not specify how such charges shall be heard by the Board of Censors. Such questions as the following are frequently referred to the General Secretary by secretaries of county societies, members of boards of censors or members under accusation of unprofessional conduct: Is the accused entitled to be represented before the board by another member or by a non-member (attorney, for instance), or must he defend himself? Has the Board of Censors the right or authority to examine witnesses from among members of the society? Can members not members of the society testify before the Board of Censors? Has the accused the right to present witnesses who are not members? Can charges be brought against a member of the county society by a non-member? How should charges brought against a member by a layman be disposed of? Has the accused member the right to cross-examine witnesses introduced by the complainant? Has the accused member the right to introduce affidavits or signed statements in case he is not able to secure the presence of witnesses necessary to prove essential facts, etc?

Inasmuch as the difficulties and misunderstanding growing out of such cases are largely due to lack of specific provisions regarding these details, the importance of definitely outlining the method of procedure so as to leave no doubt on any point and yet so fully as to safeguard the rights of all concerned is evident.

As this matter has been presented to your committee for consideration, we would recommend that it be referred either to this committee, to the Committee on Organization or to the Judicial Council for careful consideration and for the formulation of specific provisions for the by-laws of the American Medical Association and for the standard constitution and by-laws for county societies, as well as for recommendation to the state societies.

Respectfully submitted,

THOMAS McDAVITT, Chairman.
WALTER STEINER,
FREDERICK R. GREEN.

Committee on Triennial Reapportionment

THE FIRST VICE-PRESIDENT: I wish to announce the Committee on Triennial Reapportionment, namely: Dr. J. F. Percy, Illinois, chairman; Dr. E. J. Goodwin, Missouri, and Dr. O. J. Brown, Massachusetts.

Name of Section on Cutaneous Medicine and Surgery

The General Secretary read the following communication, addressed to Dr. R. R. Campbell, delegate of the Section on Cutaneous Medicine and Surgery, from the secretary of the Section:

At the 1907 Session of the Section on Cutaneous Medicine and Surgery at Atlantic City, it was moved that a committee consisting of the incoming officers of the Section and the members of the Executive Committee should obtain an expression of opinion as to what name they considered most advisable for the Section, inasmuch as a great deal of dissatisfaction had been expressed with the present name of the Section, which was changed some years ago from that of the Section on Dermatology to that of the Section on Cutaneous Medicine and Surgery.

The Secretary, in accordance with the above instructions, mailed 222 reply postal cards to the various members who had registered in the Section during the past four years in accordance with the list of the 1907 transactions. One hundred and twenty-two responses were received; two cards were returned from the Dead Letter Office with the present address unknown. Of this number, 80 members expressed themselves in favor of changing the name to Section on Dermatology; 19 favored retaining the present name, Section on Cutaneous Medicine and Surgery; 7 favored Section on Diseases of the Skin; 5, Section on Dermatology and Syphilology; 4, Section on

Cutaneous Diseases; 1, Section on Dermatology and Malignant Growths; 1, Section on Skin Diseases, Nutrition and Elimination; 1, Section on Cutaneous Medicine and Radiotherapy; 1, Section on Eruptive Diseases; while 3 were indifferent to the situation. Analysis of the result showed that 100 out of 119 members expressed themselves as dissatisfied with the present name of the Section. The name, Section on Dermatology, received four times as many votes as the present name of the Section, which was the next highest on the list, and received almost twice as many votes as all the other names combined.

This report, which was submitted and signed by the committee, was accepted by the Section, to be transmitted to the House of Delegates with the recommendation of the Section that its name be changed to Section on Dermatology.

I therefore ask you kindly to bring this matter before the House of Delegates and to use your kind offices in effecting this desired change for the Section.

This communication was referred to the Reference Committee on Sections and Section Work.

The Use of the Red Cross Emblem

MAJOR M. W. IRELAND, United States Army, presented the following resolutions adopted by the Executive Committee of the American National Red Cross, Oct. 18, 1907:

WHEREAS, By international agreement in the Treaty of Geneva, 1864, and the Revised Treaty of Geneva, 1906, "the emblem of the Red Cross on a white ground and the words Red Cross or Geneva Cross" were adopted to designate the personnel protected by this convention, and

WHEREAS, The treaty further provides (Art. 23) that "the emblem of the Red Cross on a white ground and the words Red Cross or Geneva Cross can only be used whether in time of peace or war, to protect or designate sanitary formations and establishments, the personnel and material protected by this convention," and

WHEREAS, The American National Red Cross comes under the regulations of this treaty according to Article 10, "volunteer aid societies, duly recognized and authorized by their respective governments," such recognition and authority having been conferred upon the American National Red Cross in the charter granted by Congress, Jan. 5, 1905, Sec. 2. The corporation hereby created is designated as the organization which is authorized to act in matters of relief under said treaty," and, furthermore,

WHEREAS, In the Revised Treaty of Geneva, 1906, in Article 27, it is provided that "the signatory powers whose legislation should not now be adequate, engaged to take or recommend to their legislatures such measures as may be necessary to prevent the use by private persons or by societies other than those upon which this convention confers the right thereto of the emblem or name of the Red Cross or Geneva Cross," be it

Resolved: That the executive committee of the American National Red Cross requests that all hospitals, health departments and like institutions kindly desist from the use of the Red Cross created for the special purpose mentioned above, and suggests that for it should be substituted some other insignia, such as a green St. Andrew's cross on a white ground, to be named the "Hospital Cross," and used to designate all hospitals (save such as are under the Medical Department of the Army and Navy and the volunteer aid society of the government), all health departments and like institutions, and, further, be it

Resolved: That the Executive Committee of the American National Red Cross likewise requests that all individuals, associations, or business firms and corporations who employ the Geneva Red Cross for business purposes, kindly desist from such use, gradually withdrawing its employment and substituting some other distinguishing mark.

After submitting the above preambles and resolutions from the American National Red Cross, Major Ireland introduced the following resolutions, which were referred to the Reference Committee on Legislation and Political Action:

WHEREAS, By the terms of the Treaty of Geneva, 1864, and the Revised Treaty of Geneva, 1906, the emblem of the Greek Red Cross on a white ground, and the words "Red Cross" or "Geneva Cross," were adopted to designate the personnel and material of the medical departments of the military and naval forces and of the recognized volunteer aid societies in time of war, for the humane purpose of rendering them immune from attack and capture, and

WHEREAS, The United States, as well as all other civilized powers, is a signatory to said territory, and

WHEREAS, The use of the Red Cross by medical associations and individuals of the medical profession must seriously impair the usefulness of the emblem for the purposes for which it was created and adopted, be it therefore

Resolved: That it is the sense of the American Medical Association that the use of the Geneva Cross by associations or individuals, other than those of the Army, Navy and Red Cross Society should be discontinued and, if desirable, some other insignia adopted, and be it further

Resolved: That the adoption of this resolution be given as wide publicity as possible in the medical journals of the country.

DR. SAMUEL WOLFE, Pennsylvania, supplemented the resolutions presented by Major Ireland by introducing the following preambles and resolution, which were also referred to the Reference Committee on Legislation and Political Action:

WHEREAS, It is held that the Red Cross, which now constitutes the main character in the official badge of the American Medical Association is eminently distinctive of certain broader fields of philanthropy, rather than of medicine in particular, and

WHEREAS, The traditions of medicine would be fully satisfied by the adoption of a design as herewith submitted and described as follows:

A shield on which is emblazoned the American Eagle holding in its talons a laurel wreath within which is the knotty rod and entwined serpent and the letters A. M. A. Therefore, be it
Resolved: That the American Medical Association adopt as its official insignia or badge this design.

Resolutions Regarding Creation of New Section

DR. EUGENE C. HAY, Arkansas, presented the following:

WHEREAS, It is a fact that not sufficient attention is paid by the general profession to the study of syphilis and its treatment, and likewise genitourinary diseases, this condition I believe is caused by the neglect of these important branches by our national Association. I consider the time is ripe for the creation of a new section in the American Medical Association, and

WHEREAS, All the recent progress and development in the pathology of syphilis has been made in Europe, the pathology treatment and armamentarium in modern genitourinary work all comes from the other side, hence I think we should keep abreast of our European brothers in this rich and prolific field of labor. Any one presenting a paper on syphilis before the American Medical Association is referred to the Section on Cutaneous Diseases and Surgery. One presenting a paper on a genitourinary subject is referred to the Section on Surgery and Anatomy. As most syphilographers are genitourinary men and very few dermatologists are syphilographers, the two diseases, syphilis and gonorrhea, are generally associated together in the minds of the laity, it is perfectly natural that any member of the profession who makes a specialty of either, naturally becomes a specialist in both, resulting from the class of patients who consult him. Therefore, be it

Resolved: By the House of Delegates now assembled that the American Medical Association pass a resolution for the creation of a new section to be called the Section of Venereal and Genitourinary Diseases.

The resolution was referred to the Reference Committee on Sections and Section Work.

On motion, the House of Delegates then adjourned until 2 p. m. Tuesday.

Third Meeting—Tuesday, June 8, 1909

The House of Delegates met at 2 p. m., and was called to order by the President, DR. WILLIAM C. GORGAS, U. S. Army.

The Secretary called the roll, and eighty-one members responded.

DR. H. BERT ELLIS, California, Chairman, presented an additional report for the Committee on Credentials.

The minutes of the previous meeting were read and adopted.

Grant for Scientific Research

DR. WILLIAM H. WELCH, Maryland, Chairman of the Board of Trustees, presented the following report of the Board of Trustees in regard to the report of the Committee on Scientific Research:

Supplementary Report of the Board of Trustees

The Board of Trustees approves the recommendation of the Committee on Scientific Research, that the grant of \$200 to Dr. Carl Voegtlin and Dr. W. G. MacCallum be allowed, and would urge the advisability of sending to all recipients of grants a statement of the rules governing such appropriations.

The Board at the February meeting anticipated the recommendation of the Committee by increasing the annual appropriation to \$1,000.

The Board desires to commend the work of the Committee on Scientific Research. The results obtained by the grants in the promotion of scientific research fully justify the relatively modest expenditure of the funds appropriated for this purpose by the Association.

On motion of DR. G. L. TANNEYHILL, Maryland, the report was accepted and adopted.

Report of the Reference Committee on Medical Education

DR. GEORGE DOCK, Section on Practice of Medicine, Chairman, presented the following report of the Reference Committee on Medical Education:

To the House of Delegates of the American Medical Association:

The Reference Committee on Medical Education endorses the report of the Council on Medical Education and recommends the report to the careful attention of the Association, as well as to medical educators.

The Reference Committee believes that the work of the Council is one of the most important undertakings of the Association, and believes the Council should receive the most thorough financial and moral support of the Association. It recommends that the Council be continued and that provision be made for carrying on its work.

It wishes to go beyond the report and to recommend especially the valuable compilations and analyses of the results of examinations by state boards for medical licensure as published annually in THE JOURNAL.

It also recommends the compilation of laws regulating the study and practice of medicine.

It hopes that the recommendations in regard to practical examinations before state boards will receive the careful attention of those boards. It suggests that the questions in the examinations be as practical as possible, and that efforts be made to provide practical clinical and laboratory examinations as soon as the laws and regulations can be made to permit.

The Committee also recommends that state boards of medical examiners endeavor to make the examinations uniform regarding preliminary and professional training, believing that uniformity in examination will tend to bring about a solution of the problem of reciprocity and remove one of the most serious objections to the present working of state board examinations.

It endorses the method and results of the investigations and reports on medical schools, as carried out by the Council, and calls attention to the section in the report showing the progress and consolidation of medical colleges.

It commends the work of the Council in the effort to establish a uniform curriculum, believing that even if the course submitted can not be adopted at once, it must be of great value as a standard of comparison, and a guide to future changes.

GEORGE DOCK, Chairman.

H. D. ARNOLD.

A. VANDER VEER.

VICTOR H. STICKNEY.

W. W. RICHMOND.

On motion of DR. L. F. BARKER, Maryland, seconded by DR. S. S. CROCKETT, Tennessee, the report was adopted as read.

Report on the Scientific Exhibit

DR. FRANK B. WYNN, Indiana, Chairman, read the following report on the Scientific Exhibit:

To the House of Delegates of the American Medical Association:

It is of passing interest to note that ten years ago in this city was presented the first scientific exhibit. The project was experimental, and those who undertook the work did so with trepidation, but with a strong feeling of hope and confidence in its practicability and usefulness. The passing years have justified the faith. The Scientific Exhibit has become as much a part of the permanent work of the Association as the work of the Sections.

The exhibit submitted at this time emphasizes the effort of the Committee to classify and systematize the work. The features made more or less prominent in this exhibit are:

(a) Specimen groups, gross and microscopic, illuminating special phases of pathology, diagnosis, etc.

(b) Research exhibits.

(c) Those relating to hygiene and sanitary science.

I wish to express my deep appreciation of the cordial co-operation, the untiring and efficient service of my colleagues on the Committee, Dr. W. M. L. Coplin and Dr. Ross McPherson; also to tender thanks to Dr. John M. Swan of the local committee in Philadelphia, and to Dr. I. E. Leonard of the local committee in Atlantic City, and to the many exhibitors whose names appear below. It is only through the devotion of such unselfish men, cherishing the higher ideals in medicine, that the scientific exhibit becomes possible.

So far as definitely ascertained at this date, the exhibitors are given below; others will unquestionably be added to this list:

John M. Swan, Polyclinic Hospital, Philadelphia, the pathology of malaria.

Howard T. Karsner, University of Pennsylvania, tumors of the gastrointestinal tract.

W. M. L. Coplin and John Funk, Jefferson Medical College, a series illustrating the morbid anatomy of renal disease.

Herbert Fox, Pennsylvania State Department of Health, tumors from animals at the zoological garden.

J. N. Busch, Henry Phipps Institute, Philadelphia, cultures of microorganisms from tuberculous lungs.

J. A. Kelley, Polyclinic Hospital, Philadelphia, series of gynecologic specimens.

Randle C. Rosenberger, Philadelphia General Hospital, specimens illustrating diseases of the heart.

Leo Loeb, University of Pennsylvania, specimens showing experimental decidualis.

Edward M. L'Engle, Medico-Chirurgical College, Philadelphia, gastrointestinal series.

D. P. Pfeiffer, German Hospital, Philadelphia.

J. A. Moore, St. Mary's Hospital, Philadelphia.

Philadelphia Roentgen Society, under the direction of Dr. Charles Lester Leonard, an exhibit relating to the diagnosis of thoracic, abdominal and bone lesions.

The following will show plates:

M. K. Kassabian, C. L. Leonard, S. L. Feldstein, S. M. McCollin, W. S. Newcomet, W. F. Manges, H. K. Pancoast and G. E. Pfahler.

J. M. Swain, C. B. Longenecker, American Oncologic Hospital.

Edward A. Schumann, Gynecological Hospital, series of extrauterine pregnancies.

E. M. Meter, Reading, Pa., radiograms.

Ross McPherson and J. E. Welch, New York Lying-in Hospital; William S. Bainbridge, Skin and Cancer Hospital; Simon Flexner, Rockefeller Institute; James Swing, Cornell University Medical School; New York Board of Health; Dr. R. M. Pearce, Bellevue Medical School; New York Post-Graduate Medical School; Charities Association, Tuberculosis Exhibit.

Dr. Emil C. Beck, Chicago, stereoscopic radiographs of the chest. Dr. Jose L. Hirsch, Baltimore, specimens in the name of the University of Maryland.

A. W. Crane, Kalamazoo, x-ray plates illustrating cancer of the stomach.

Louis B. Wilson, Rochester, Minn., photographs showing relation of gastric ulcer and cancer, from laboratories of William and Charles Mayo.

TUBERCULOSIS EXHIBITS: New York Charities Association; New York State Department of Health, by A. N. Seymour; Connecticut State Department of Health, by Gardner T. Swartz; Maryland State Department of Health, by Marshall Langton Price; Indianapolis Medical Society.

It is recommended that a committee of three be appointed by the President to pass on awards for medals and certificates of honor.

It is recommended that the usual appropriation be made for maintenance and for medals and certificates of honor.

Appeal to the human eye in the commercial world has always been the chief means of attracting those who have money to spend. Artistic arrangement of articles in shop windows and show cases always acts suggestively to a prospective purchaser. This really is the exhibit idea. It has been elaborated in modern times in expositions, fairs, and the like. The modern commercial world likewise appeals with extraordinary effect to the public through advertising. Inartistic but striking advertisements stare us in the face as we travel, glare at us in the street car, and distract our attention from readable matter in the daily paper, so that, whether we will or not, we become familiar with peruna, quaker oats, and bull durham tobacco.

It seems strange, indeed, that this principle should not have been more generally applied in the dissemination of educational knowledge among the people. To be sure, in the modern methods of higher education the museum and laboratory have played a conspicuous part. Growing out of this phase of educational work have arisen scientific exhibits, in the inauguration of which this organization has done pioneer service.

In the further evolution of this tendency, health boards and various public-health organizations have instituted exhibits for the enlightenment of the people on sanitary and public-health questions.

Tuberculosis has received widest attention. While excellent, most exhibits have been spasmodic and sporadic. They have been expensive and cumbersome to manage. Maintained for only a few days, but a small proportion of people ever see them. The need is for some means of constantly keeping before the eyes of laymen the tuberculosis problem in all its aspects: to make plain, as Dr. Osler has recently emphasized, that it is a people's problem. Of course, the issuance of propaganda by health authorities, societies and popular lectures relating to the question have greatly enlightened the public mind. But again there is the lack of continuity in the work, and the failure to reach the great mass of the people.

To your Committee it has seemed that there is a demand for a compact but complete tuberculosis exhibit, housed in a substantial case, and suited to permanent installation in public libraries, postoffices, railway stations, etc. A year ago the committee offered a medal, with the hope of developing a model exhibit adapted to this end. No exhibit was presented which was considered sufficiently meritorious to receive the award. The same offer has been repeated this year.

The exhibit idea is capable of great elaboration and practical application in teaching the people the lessons of hygiene and sanitary science. It is a phase of original practical work, to which your Committee has given earnest thought, and which it is hoped to supplement by fruitful results. Public-health exhibits are certain to play an important rôle in the march of preventive medicine. They are a type of advertising in the interest of the public weal.

The Committee, in seeking to stimulate their development, is exceedingly anxious that they should be along sane and judicious lines. On the one hand, they should be attractive, if they are to catch the eye of the public; but on the other hand, they should be dignified, else they will not command the respect of the intelligent and prudent. They should make very plain the great truths it is desired to bring home to the people; they should contain sufficient science to convince the lay mind of the truths which it is sought to inculcate, but not enough to eloy the enthusiasm or direct attention from the great practical lessons.

Your Committee feels that in the field of preventive medicine this Association has a great opportunity—in fact, a duty—to properly poise and direct the evolution of exhibits designed for the enlightenment of the public on sanitary and hygienic questions. Toward the attainment of these ends your aid and cooperation are asked.

FRANK B. WYNN, Chairman.

On motion of DR. W. L. ESTES, Pennsylvania, seconded by DR. J. W. PETTIT, Illinois, the report was accepted and the recommendations adopted.

The President appointed as Committee on Awards Drs. L. F. Barker, William J. Mayo, and H. A. Christian.

Report of Subcommittee on Carroll Fund

MAJOR IRELAND presented a supplementary report from the Committee on Medical Legislation, in the form of a report of a sub-committee on the Carroll Fund, to the Legislative Committee of the American Medical Association.

To the Legislative Committee, American Medical Association:

The following resolution was passed by the National Legislative Council of the American Medical Association during its meeting at Washington, Jan. 18-20, 1909:

Resolved: That a committee composed of one member of the Army Medical Department, one of the Navy Medical Department, one of the Public Health and Marine-Hospital Service, one member of the District of Columbia Medical Society, and one member to represent the profession at large, members of the Council, be named by the Chairman, and instructed to present to the different medical services of the government, the District of Columbia, and the profession at large the conditions of distress under which the widow of our hero brother, Major James Carroll, is placed, and suggest or help to devise such plan and action as may speedily bring relief.

A. S. VON MANSFELDE, Chairman.
J. E. McDONALD,
JAMES T. GREELEY.

It was moved and seconded that the report be adopted.

The Chair appointed as a committee Dr. A. S. von Mansfelde of Nebraska; Maj. M. W. Ireland, U. S. Army; Surgeon W. H. Bell, U. S. Army; Surgeon John F. Anderson, Public Health and Marine-Hospital Service; Dr. John D. Thomas, District of Columbia.

As soon as the official notification was received from the Secretary of the Committee of the action taken by the Legislative Council the members proceeded in what they considered the best way to raise the necessary funds to save the home of the widow of the late Major Carroll.

The Public Service members of the Committee sent a circular letter to the members of their respective corps, inviting attention to the resolution passed by the Legislative Council, stating the financial distress of Mrs. Carroll and asking for assistance. Dr. John D. Thomas of the District of Columbia had a personal interview with a great many members of the profession in the District of Columbia, and also brought the subject to the attention of the profession through the different societies in the city. Letters appealing to the profession at large were published in THE JOURNAL of the American Medical Association, and an editorial was prepared and published in THE JOURNAL. The subscription list was kept before the profession at large by inserting in the weekly issue of THE JOURNAL the list of those who had subscribed during the preceding week. Through the courtesy of the assistant secretary,

Dr. Green, circular letters were sent to various state societies which were to hold their annual meetings during the months of April and May. A notice in the New York press attracted the attention of several philanthropic people, with the result of one liberal subscription.

The result of the appeal to the profession has been extremely gratifying, and your Committee feels certain that the agencies now at work will secure a sufficient amount of money to raise the indebtedness on the Carroll property during the coming year.

It was found necessary to make certain expenditures from this fund to pay the notes that are falling due on the third of each month; to pay the interest on the \$5,000.00 mortgage on the property, and to pay the taxes to save the property from being sold at public auction. The Chairman of the Committee took the responsibility of meeting these obligations and of making the necessary expenditures to carry on the work of the committee. The total of these expenditures was \$567.02.

The indebtedness on this property to-day is as follows:

Forty-three \$50.00 notes.....	\$2,150.00
One mortgage.....	5,000.00
	<hr/>
	\$7,150.00

The amount of money on hand to-day to pay this indebtedness is \$5,700.82, leaving \$1,449.18 to be raised.

The semi-annual interest of \$125.00 on the \$5,000.00 falls due on June 15. Respectfully submitted,

WILLIAM HEMPHILL BELL.

JOHN F. ANDERSON.

JOHN D. THOMAS.

M. W. IRELAND, Chairman.

The report was referred to the Reference Committee on Legislation and Political Action.

Report of Reference Committee on Reports of Officers

DR. ALEXANDER R. CRAIG, Pennsylvania, Chairman, read the report of the Reference Committee on Reports of Officers, as follows:

To the House of Delegates of the American Medical Association:

The Reference Committee on the Reports of Officers begs leave to report that it has had under consideration "The President's Address" of Dr. Herbert L. Burrell, the "Report of General Secretary" and the "Report of the Board of Trustees."

These have all been carefully reviewed and the Committee recommends the following action by the House of Delegates:

I

In order that they may become conversant with the policies formulated by the Board of Trustees, it is suggested to the Board of Trustees that the President and the President-Elect of the Association be invited to be present at the formal meetings of the Board when it meets in the interim between the annual sessions.

II

In order that the Association may become more closely knit together and its various energies be co-ordinated, it is advised that all committees, whether constituted by the House of Delegates or by any of the Sections, be required to act with the advice and under the direction of the Board of Trustees in the intervals between the sessions of the House of Delegates and that the defined policies of all committees and of the sections of the Association shall be approved by the Board of Trustees before being issued to the public as in the name of or under the auspices of the Association. In order that this action may become a part of the law of the Association, the Committee offers the following amendments to the Constitution and By-laws:

PAGE 16.—CHAPTER IX, SECTION I: Add to the section the words "during the intervals between the sessions of the House of Delegates, the Board of Trustees shall supervise the action of committees constituted by action of the House."

PAGE 18.—CHAPTER X, SECTION I: Add to the section the words "any of these committees, acting during the intervals between the sessions of the House of Delegates shall be subject to the Board of Trustees."

III

As the Board of Trustees makes annually appropriations for the expenses incurred by the various standing committees, no action is deemed necessary by your Reference Committee.

IV

As the Board of Trustees now has full authority to consider and act on the advisability of having different individuals elected to the offices of Editor and General Manager of THE JOURNAL and of Secretary of the Association, this Committee recommends that no action be taken in this matter by the House.

V

A special committee has offered a report on the "Regulation of Membership." This report is worthy of serious consideration by this House, but the Reference Committee on Reports of Officers makes no recommendations under this heading, preferring to await the report of the Committee to which the findings of this special committee have been submitted.

VI

This House and the Association at large are to be congratulated that the Board of Trustees are privileged to make so satisfactory a report, and this Committee recommends that a vote of thanks carrying the approbation and commendation of this House be passed in honor not only of the Board of Trustees, but also of the members serving on the various committees, special note being made of the Council on Pharmacy and Chemistry, Dr. McCormack, the staff compiling the American Medical Directory, those responsible for the success of THE JOURNAL, and the editors of the *Archives of Internal Medicine*.

This Committee is advised that with regard to the project of erecting a new building the conditions are as follows:

The money is on hand for the enterprise in the shape of bonds, certificates of deposit in banks drawing interest and cash on hand. The building can be erected without incurring indebtedness and without curtailing the present work of the Association or its committees. The old building can be let for manufacturing purposes, returning a good interest on the money invested.

The building will enable the Association to conduct its business more economically than at present on account of the present necessity of much "overtime" work with double pay, due to the lack of sufficient room. It will provide sufficient space in which to instal the working headquarters of the various councils and standing committees, which is essentially the accomplishment of results. The Association already owns the land on which the building is to be erected.

It is, therefore, recommended that the Trustees be given full authority to proceed in the matter of erecting the proposed building.

On motion of Dr. C. E. Cantrell of Texas, seconded by several delegates, the report was adopted.

Report of the Reference Committee on Miscellaneous Business

DR. T. A. WOODRUFF, Section on Ophthalmology, Chairman, presented the following report of the Reference Committee on Miscellaneous Business:

To the House of Delegates of the American Medical Association:

In view of the fact that Dr. N. S. Davis was the founder of the American Medical Association and as such should be entitled to especial honorable consideration at the hands of this body, your Committee recommends that the American Medical Association appropriate the sum of five thousand dollars (\$5,000) for the purpose of erecting a suitable memorial to his memory, provided that the additional sum of twenty thousand dollars (\$20,000) be collected for this purpose.

This appropriation of five thousand dollars (\$5,000) shall not become available until the twenty thousand dollars (\$20,000) is paid into the committee.

T. A. WOODRUFF, Chairman.

J. H. PIERPONT.

A. M. HUME.

J. D. GRIFFITH.

JOHN CHAMPLIN.

DR. ARTHUR T. McCORMACK, Kentucky, moved that the report be referred to the Board of Trustees, as it involves the appropriation of money (seconded).

DR. R. R. CAMPBELL, Illinois, moved as an amendment that the report be referred to the Board of Trustees, with the recommendation that a three-year limit be imposed for the collection of this \$20,000.

The amendment was seconded and accepted.

DR. H. C. SHARP, Indiana: It seems to me the proper way is for this report to be referred to the Board of Trustees carrying with it the recommendation of favorable action by the House of Delegates as a guide for the action of the Board of Trustees.

DR. C. E. CANTRELL, Texas: This report should naturally take the course of being referred to the Board of Trustees, as it has emanated from a Reference Committee of this House, this committee recommending to the Board that a certain thing be done.

Report of the Council on Defense of Medical Research

To the Members of the House of Delegates of the American Medical Association:

The Council on the Defense of Medical Research was established by vote of the House of Delegates at the Chicago meeting of the American Medical Association in June, 1908. The Council was organized at a meeting in Philadelphia November 7, 1908, with Dr. W. B. Cannon, Boston, as Chairman, and Doctors J. A. Capps, Chicago; Harvey Cushing, Baltimore; D. L. Edsall, Philadelphia; Simon Flexner, New York; Reid Hunt, Washington, and H. C. Moffitt, San Francisco, as members.

The work of the Council during the past year may be classified under three headings—first, investigating the conditions of animal experimentation and the opposition to it; second, taking precautions against abuse of animal experimentation and against misconceptions of the conditions and purposes of medical research; third, diffusing information regarding laboratory procedures and the results of laboratory study of disease.

THE INVESTIGATION OF THE CONDITIONS OF ANIMAL EXPERIMENTATION AND THE OPPOSITION TO IT

In order to obtain information regarding the conditions of medical research in the United States circulars were sent to 111 of the most prominent schools. Reports have come in from 80 of these schools. Among those from which no reply has been received are a number of homeopathic colleges and other institutions in which animals are probably not used. It is likely that in not more than four of the schools that have not reported are animals used for experimental purposes. The information that has been accumulated is, therefore, quite complete.

In the circular questions were asked as to the approximate number of different kinds of animals used per year; the methods of securing these animals; the number of dogs and cats killed in the city merely to get rid of the excess; the care of animals in the medical school, including the ventilation, warmth, cleanliness and lighting of their rooms; whether operations likely to involve pain were always performed with anesthetics; whether students were permitted to carry on independent animal experimentation or were cautioned against it; whether experimental work was conducted under rules, and whether any public hostility to animal experimentation existed in the community.

These questions have been fully answered and the answers will be published in a paper to appear in a series of papers later to be described in this report.

In order to understand the nature of the opposition to medical research the Council has collected antivivisection literature from all the societies in the United States and has subscribed to antivivisection journals. It has, likewise, obtained from a clipping bureau the statements for and against vivisection, which have appeared in newspapers and other periodicals throughout the country. An analysis of this literature will be presented, likewise, in a later publication of the Council.

PRECAUTIONS AGAINST ABUSE OF ANIMAL EXPERIMENTATION AND AGAINST MISCONCEPTIONS OF ITS CONDITIONS AND PURPOSES

As much of the "evidence" cited by hostile agitators is taken from articles in journals devoted to the medical

sciences, the Council sent a circular letter to the editors of medical and scientific journals urging careful examination of submitted articles with the purpose of eliminating words likely to cause misapprehension regarding the experience of animals used for research, and especially requesting that authors be asked to make sure that when anesthesia is a condition of the investigation the fact be made prominent. This letter met with cordial response.

Hostile agitators have also declared that irresponsible and untrained medical students operate on animals in private places outside of proper supervision. The evidence for this suggestion has not yet been forthcoming. The Council sought, however, to remove even the slight suspicion thus cast on animal experimentation by advocating that teachers of the medical sciences speak to students concerning the importance of the experimental method in medical research, the suspicion of laymen that animals are not treated humanely in laboratories, the resulting agitation for hostile legislation, the injury to medical science that must result from checking animal experimentation, the desirability that every care be taken to obviate discomfort and pain in using animals for research and instruction, and the urgent necessity that students avoid any act or word that would tend to rouse a feeling against the humane use of animals for educational and research purposes.

This letter revealed the fact that already in a very large number of medical schools such advice had been regularly given to students, and that there was no evidence that students failed to realize the great importance of what was said or that they did not obey to the letter the caution which was given them.

The Council learned that in the larger medical laboratories rules had been posted stating the conditions and expressing the spirit in which animal experimentation was to be conducted.

The Council collected these rules, summarized and revised them, and sent them to all laboratories which had reported that animal experimentation was carried on within their walls.

These rules are as follows:

RULES REGARDING ANIMALS

I. Vagrant dogs and cats brought to this Laboratory and purchased here shall be held at least as long as at the city pound, and shall be returned to their owners if claimed and identified.

II. Animals in the Laboratory shall receive every consideration for their bodily comfort; they shall be kindly treated, properly fed, and their surroundings kept in the best possible sanitary condition.

III. No operations on animals shall be made except with the sanction of the Director of the Laboratory, who holds himself responsible for the importance of the problems studied and for the propriety of the procedures used in the solution of these problems.

IV. In any operation likely to cause greater discomfort than that attending anesthetization the animal shall first be rendered incapable of perceiving pain and shall be maintained in that condition until the operation is ended.

Exceptions to this rule will be made by the Director alone and then only when anesthesia would defeat the object of the experiment. In such cases an anesthetic shall be used so far as possible and may be discontinued only so long as is absolutely essential for the necessary observations.

V. At the conclusion of the experiment the animal shall be killed painlessly.

Exceptions to this rule will be made only when continuance of the animal's life is necessary to determine the result of the experiment. In that case, the same aseptic precautions shall be observed during the operation and so far as possible the same care shall be taken to minimize discomforts during the convalescence as in a hospital for human beings.

DIRECTOR OF THE LABORATORY.

These rules have been adopted in a number of new places and the Council hopes that they will be made the regulations for research in all medical laboratories in the United States. Although they probably do not change in any respect the already good conditions under which animal experimentation is conducted, they indicate to newcomers in the laboratories and to interested and intelligent people the intent of the investigators and the precautions which they take against suffering.

THE DIFFUSION OF INFORMATION REGARDING ANIMAL EXPERIMENTATION

The information which the Council has secured has been utilized in enlightening the editors of certain lay publications regarding the conditions of medical research, and also regarding the character of the opposition to it, both in this country and abroad.

The Council has also cooperated with the local research defense societies, especially those of Massachusetts, New York, Pennsylvania and Wisconsin, and also with that of

England, in an interchange of information with resulting mutual helpfulness.

In order to forestall the possibility of hostile legislation the Council sent out during the sessions of the legislatures in the various states a circular letter to the deans of medical schools and to the members of the National Auxiliary Committee on Medical Legislation, stating the specific and general objections to such legislation. This letter revealed an alert body of men scattered through the country who were ready to perform their part in securing to the communities they served the benefits of medical research.

The Council has planned a series of papers, by experts, on the importance of animals in the development of various phases of medical science and practice, to be published primarily in *The Journal* of the American Medical Association, with the hope that thus a body of evidence will be secured which physicians can refer to in case agitation arises in their communities.

It is probable that these papers will be reprinted in book form, or as pamphlets, and either placed on sale or distributed in regions where agitation is active.

The series includes the principles of serum therapy, diphtheria and tetanus, meningitis, rabies, smallpox, dysentery and cholera and typhoid fever, plague, tuberculosis, syphilis, tropical protozoan diseases, diseases caused by metazoan parasites, disturbances of internal secretions, the physiology of the circulation, pharmacology, venoms and antivenins, two papers on experimental surgery—surgical technique and aseptic surgery, cancer research, hygiene and sanitary science, including the diagnosis and control of contagious diseases, the economic importance of diseases which have been lessened by animal experimentation, the use of animals in cattle bureaus, the experience of animals in laboratories, the ethics of animal experimentation, the educational value of operations on animals, and the more complex inter-relations of research and practice.

The first paper of the series will be published in an early number of *THE JOURNAL*.

W. B. CANNON, Chairman.
SIMON FLEXNER.
DAVID L. EDSALL.
HARVEY CUSHING.
REID HUNT.
JOSEPH A. CAPPS.

DR. WALTER B. CANNON, Chairman, requested that the report be accepted as printed.

On motion, the request was granted, and the report was referred to the Reference Committee on Miscellaneous Business.

Resolution Endorsing the Plan of the George Washington Memorial Association

DR. WILLIAM H. WELCH, Maryland, introduced the following resolution, which was endorsed by DR. JOHN A. WYETH, New York:

Resolved: That the American Medical Association, assembled in annual session, gives its hearty approval to the plan of the George Washington Memorial Association to raise a fund for the erection in the city of Washington of a memorial building to our first president, which shall furnish a suitable home and meeting place for national and international patriotic, scientific, medical, educational and similar organizations.

The need of such a building is recognized as urgent, as was demonstrated especially by the experience of the recent International Congress on Tuberculosis.

At present the larger national and international societies can meet in Washington, if at all, only under most unsatisfactory conditions.

The nation's tribute to George Washington could find no more useful and appropriate form of expression than in a building in the capital of the nation dedicated to the service which is contemplated in the plans of the George Washington Memorial Association.

The resolution was referred to the Reference Committee on Miscellaneous Business.

Proposed Draft of Model Law to Regulate the Practice of Medicine

DR. G. WYETH COOK, District of Columbia, offered the following, which was referred to the Reference Committee on Legislation and Political Action:

Resolved: That the Committee on Medical Legislation be and hereby is instructed to prepare and submit immediately to each state and territorial organization forming a part of this Association, and to each state and territorial medical licensing board, the draft of a model law for the regulation of the practice of medicine, and to obtain from said organizations and boards all possible criticisms, suggestions and advice with respect thereto and with respect to the laws now regulating the practice of medicine in the several

states and territories to which said organizations and boards are related.

That said committee be and hereby is further directed to report to the Association at its meeting in 1910 the draft of a model law for the regulation of the practice of medicine, which can be adopted or used as the basis of such legislation by the several states and territories, with a brief in support of the bill which is so reported.

That said committee be and hereby is empowered to employ counsel at a cost to be fixed by the boards of trustees, to aid it in effecting the bill which it is especially required to report.

Formation of Physicians' Mutual Aid Society

DR. G. MCGOWAN, California, offered the following preamble and resolution:

WHEREAS, The House of Delegates of the Medical Society of the State of California has instructed its delegates to this body to recommend to the American Medical Association the consideration of the formation of a Physicians' Mutual Aid Society, patterned after that of the British Medical Association; therefore we, the aforesaid delegates of the Medical Society of the State of California, do present the following:

Resolved: That the Trustees of the American Medical Association be requested to consider the aforesaid undertaking and report on the same to the House of Delegates.

H. BERT ELLIS,
O. D. HAMLIN,
G. MACGOWAN.

This resolution was referred to the Board of Trustees.

Resolution of Thanks to Dr. Rupert Blue

DR. G. MACGOWAN, California, likewise presented the following with reference to the bubonic plague:

WHEREAS, At a very recent date the United States was threatened with a general invasion of that terrible disease, destructive both to life and to commerce, the bubonic plague, by its having obtained apparently a permanent foothold in California, but more particularly in the city and county of San Francisco, and

WHEREAS, By his diplomatic efforts in obtaining the good will and active assistance of the legislative and commercial bodies and the general public of the State of California, and by effective organization and skillful and tireless application of scientific measures for the discovery and isolation of all cases and the destruction of or suppression of its common methods of dissemination, Surgeon Rupert Blue, of the Public Health and Marine-Hospital Service, has deserved and received at the hands of the Medical Society of the State of California a resolution of appreciation of the said valuable services, its house of delegates has instructed its delegates to the American Medical Association to present to the House of Delegates of the American Medical Association a request for the passage of a similar resolution of thanks and commendation to the said Rupert Blue, surgeon of the Marine-Hospital Service.

H. BERT ELLIS,
GRANVILLE MACGOWAN,
O. D. HAMLIN.

This resolution was referred to the Reference Committee on Miscellaneous Business.

Communication on Various Matters from the Section on Surgery and Anatomy

DR. JOHN T. BOTTOMLEY, Section on Surgery and Anatomy, presented the following matters, which were, on motion of Dr. Cantrell, referred to the Reference Committee on Sections and Section Work:

Commission on Anesthesia

It is suggested by the Section on Surgery and Anatomy, which I have the honor of representing in this body, that I call to your attention the importance of continuing the work of the Commission on Anesthesia and the need of an appropriation for the continuance of this work.

This is a matter in which the whole profession has a very personal interest, a matter to which we have, perhaps, given less attention in a purely scientific way than our brothers across the Atlantic.

The recent report made to the German Surgical Congress was a splendid piece of work.

The work of the British Commission on this subject is equally well known.

We should do our proportionate and fitting share in this country which offers such a tremendous amount of valuable material.

(a) Scientific examination in the way of original research work should be carried on by properly trained men.

(b) Statistics should be gathered and tabulated.

(c) The reported fatal cases should be thoroughly investigated.

(d) Many sub-committees at various centers should be appointed.

This is a work worthy of such an organization as the American Medical Association and the question of granting an appropriation for the continuance is respectfully presented for your consideration.

Name of Section on Surgery and Anatomy

It is suggested by the Section on Surgery and Anatomy that, if it is the pleasure and will of the House of Delegates, the words "and Anatomy" be dropped from the present official title for the following reasons:

(a) The anatomists of the country have a very live organization, composed almost entirely of teaching anatomists and almost all their work is reported to that body. Practically no anatomic communications are made to our Section.

(b) The combination of practicing surgeon and teaching anatomist can be truly said to exist no longer. This was not the fact in the days when the Section was established. The teaching anatomist of today gives his whole attention to his work and has naught to do with practice.

(c) The present title for the above reasons is a misnomer. It is an injustice to the anatomists.

(d) More papers are now offered to the Surgical Section than it can accept. If anatomic communications were offered and accepted, time would be demanded where there is really none to be given.

Vice-Chairmen and Honorary Secretaries

The Section on Surgery and Anatomy presents for your consideration the question of increasing by two the number of Vice-Chairmen and of appointing two honorary secretaries of the larger sections (600 or more members—such as Practice of Medicine, Obstetrics and Diseases of Women, and Surgery and Anatomy).

These Sections are constantly growing. Many men from all sections of the country deserve and should receive some recognition of their zeal and ability. There are not enough active officerships to go around.

The suggested plan would permit the recognition of all parts of the country in the appointment of section officers and we believe would stimulate and increase interest in the work of the sections.

The Patenting of Surgical Instruments

DR. EUGENE C. HAY, Arkansas, offered the following, which was referred to the Reference Committee on Constitution and By-laws:

Resolved: That the clause of the Principles of Ethics, Chapter 11, Article I, Section 8, relating to the prohibition of patenting of surgical instruments by members of the medical profession, be changed, omitting surgical instruments from such prohibition.

Name of Section on Cutaneous Medicine and Surgery

The following resolution was read and referred to the Reference Committee on Sections and Section Work:

To the House of Delegates of the American Medical Association:

The following resolution was presented and unanimously carried in the Section on Cutaneous Medicine and Surgery:

Resolved: That it is the sense of this Section on Cutaneous Medicine and Surgery that in the event a Section on Urology is established, it should not specifically include syphilis:

That, while syphilis more nearly belongs to dermatology than to any other specialty, it is a constitutional disease, which is an important part of many specialties, it certainly does not belong peculiarly to urology.

The General Secretary read a communication inviting the Association to hold its next annual Session in St. Louis.

Dr. G. MacGowan, California, extended an invitation to the House for the Association to hold its next annual Session in Los Angeles.

Those invitations were referred to the Committee on Transportation and Place of Session.

Report of Reference Committee on Hygiene and Public Health

The Committee on Hygiene and Public Health, to which was referred the report of the Special Committee on Ophthalmia Neonatorum, recommends approval of the organized efforts suggested for the prevention and control of ophthalmia neonatorum and regards the excellent and exhaustive work shown in the report as worthy of especial commendation.

Improvement of Status of Personnel of U. S. Public Health and Marine-Hospital Service

The General Secretary read the following, which was referred to the Reference Committee on Legislation and Political Action:

Resolved, That the Association respectfully recommends to the United States Senate and House of Representatives the enactment of legislation for the improvement of the status of the personnel of the Public Health and Marine-Hospital Service, so that it will be put on a parity as to compensation, with the other medical services of the government.

On motion of Dr. R. R. Campbell, Section on Cutaneous Medicine and Surgery, the House then adjourned until 2 p. m., Wednesday.

Fourth Meeting, Wednesday, June 9

The House of Delegates met at 2 p. m., and was called to order by the President.

On motion of Dr. Cantrell, the roll-call was dispensed with.

The minutes were read, amended and then approved.

THE PRESIDENT: The Chair yesterday overlooked putting the motion to refer the Report of the Reference Committee on Miscellaneous Business in regard to the Davis Memorial to the Board of Trustees. We will now take this matter up.

It was moved, seconded and carried that this matter be reconsidered.

It was then moved and seconded that the Report of the Reference Committee on Miscellaneous Business, regarding the Davis Memorial, be referred to the Board of Trustees, with the recommendation that a three-year limit be imposed for the collection of this \$20,000. Carried.

DR. H. BERT ELLIS, California, Chairman, presented an additional Report from the Committee on Credentials.

Report of Committee on Sections and Section Work

DR. J. HENRY CARSTENS, Section on Obstetrics and Diseases of Women, presented the following Report of the Reference Committee on Sections and Section Work:

Your committee begs leave to report that the request of the Section on Surgery and Anatomy to strike out the latter part of the name be granted, and that hereafter it be known as "Section on Surgery."

It was moved, seconded and carried that this be adopted.

That the name of the Section of Cutaneous Medicine and Surgery be changed to "Section on Dermatology."

It was moved by Dr. Carstens, and seconded by Dr. Cantrell, that this be adopted. Carried.

Your committee, furthermore, reports in reference to the question of anesthesia, we recommend that the President of this Association appoint a special committee on anesthesia to be composed as follows: One member of the Section on Surgery, one member of the Section on Obstetrics and Gynecology, one member of the Section on the Practice of Medicine; one member of the Section on Ophthalmology; and one member of the Section on Pharmacology and Therapeutics.

That this report be referred to the Board of Trustees with the request that funds be appropriated to carry on the necessary original investigations.

It was moved, seconded and carried that this be adopted.

Your committee further reports that a Section on Urology and Venereal Diseases be created when one hundred members of the Association petition for the same.

All of which is respectfully submitted.

J. H. CARSTENS, Chairman.

On motion this report was adopted.

Report of the Reference Committee on Legislation and Political Action

DR. WALTER B. DORSETT, Missouri, Chairman, presented the Report of the Reference Committee on Legislation and Political Action, which was adopted section by section:

The Report of the Committee on Legislation, which was referred to this committee, contains the report of progress in the various fields of their activity and shows a most commendable work and deserves the hearty support and cooperation of the House of Delegates and the entire membership of the Association.

The following recommendations, in our opinion, should be emphasized and endorsed by the House of Delegates.

NATIONAL PUBLIC HEALTH DEPARTMENT

Resolved, That the American Medical Association re-affirms its previously and repeatedly declared attitude in favor of the organization of all existing national public health agencies, into a single national public health bureau, and that it hails with satisfaction the assurance of President Taft, that he will recommend legislation, looking to that end.

AMENDMENTS TO THE NATIONAL FOOD AND DRUGS ACT

Resolved, That the American Medical Association respectfully urges on the Congress the necessity of amending the National Food and Drugs act, in the following particulars, viz.,

1. To prohibit, absolutely and unqualified, the use of benzoate of soda and similar preservatives in the preparation and preservation of foods destined for interstate commerce.
2. To provide for a system of federal inspection of all establishments engaged in the preparation of foods destined for interstate commerce, such inspection having for its special object (a) the enforcement of sanitary cleanliness in such establishments; (b) the prevention of employment in them of persons afflicted with contagious or infectious diseases; (c) the prohibition of the use of preservatives such as the benzoate of soda; and (d) the prevention of the admission into interstate commerce of unclean and offensive waste products which now, by the use of such preservatives are branded as food stuffs and sold as such to the people.

Resolved, That the Association respectfully recommends to the United States Congress the enactment of legislation for the improvement of the status of the personnel of the public health and Marine-Hospital Service as set forth in Senate Bill 1968.

NAVY DEPARTMENT BILLS

Resolved, That the American Medical Association cordially approves and urges the prompt enactment into law of measures relating to the Navy Department as follows:

1. The Bill "To reorganize and increase efficiency of the Hospital Corps of the United States Navy." (Senate 1017; House 6184; Sixtieth Congress.)
2. The Bill "Authorizing the appointment of Dental Surgeons in the Navy." (Senate 1015; House 6741; Sixtieth Congress.)
3. A Measure to provide for a Medical Reserve Corps of the Navy in accordance with the clause relating to that subject in the Navy Appropriation Bill for 1908.
4. A Measure to provide for two Hospital Ships for the Navy at a cost not to exceed \$3,000,000.

CONFERENCE ON UNIFORM STATE MEDICAL PRACTICE LAW

Resolved, That the American Medical Association cordially approves the proposition advanced by the Committee on Medical Legislation to call a general conference to be devoted to the discussion of the essentials of a uniform medical practice act of the States, such conference to consist of,

- (a) The Committee on medical legislation,
- (b) The national legislative council,
- (c) The Council on Medical Education of the American Medical Association,
- (d) All officers and members of State examining boards,
- (e) All members of State committees on medical legislation,
- (f) Representatives of all Medical Colleges, and
- (g) and such other persons as the Committee may see fit to invite.

This recommendation covers the suggestion in the resolution offered by Dr. George W. Cook of District of Columbia.

The effort of the Legislative Committee to raise funds for the relief of the families of those who have died in the medical service of the country is hereby indorsed and all members of the American Medical Association are urged to contribute.

This committee approves the action, already taken, of the Committee on Medical Legislation for the relief of Mrs. Carroll.

It recommends the efforts of the committee in the direction of uniform food and drug legislation, and urge continuance until all states adopt practically the same laws. It also endorses the efforts of the Bureau on Medical Legislation toward the adoption of uniform state laws on vital statistics.

Report of the Committee on Patents and Trademarks

This committee has done a large amount of work and gathered much useful information on this complicated subject, yet wisely refrains from any recommendation of specific action by the House of Delegates at this time, but suggests that further investigation be made to ascertain if anything can be done to correct existing abuses.

The committee recommends that the present committee be continued for another year. It also recommends that the resolutions by Dr. Ireland concerning the use of the Geneva Red Cross as our insignia and the resolution of Dr. Samuel Wolfe, of Pennsylvania, concerning the selection of a suitable one for this association be referred to a special committee of five to be appointed by the President, who shall report at the next annual meeting.

While fully appreciating the magnitude of the work done in San Francisco and the skill with which it was executed, your committee considers that it is not desirable to single out any one officer for special mention, no matter how distinguished his service may have been.

On motion, the report was adopted as a whole.

Report of Reference Committee on Hygiene and Public Health

The following report was presented by Dr. G. B. Young, U. S. P. H. and M.-H. S., a member of the Reference Committee on Hygiene and Public Health:

The Committee on Hygiene and Public Health, to which was referred the Report of the Special Committee on Ophthalmia Neonatorum, recommends approval of the report and of the organized efforts suggested for the prevention and control of Ophthalmia Neonatorum, and regards the excellent and exhaustive work shown in the report as worthy of especial commendation.

It also recommends cooperation on the part of state and municipal boards of health and other authorities in securing the widest dissemination of the facts and recommendations presented by the committee by publication and otherwise.

It further recommends that the committee be continued.

WILLIAM N. WISHARD, Chairman.

O. J. BROWN.

G. B. YOUNG.

On motion of Dr. G. L. Taucyhill, Maryland, seconded by Dr. Charles S. Bacon, Illinois, the report was adopted.

Report of Reference Committee on Amendments to Constitution and By-Laws

DR. H. WORK, Colorado, Chairman, presented the following report of the Reference Committee on Amendments to the Constitution and By-Laws:

To the House of Delegates of the American Medical Association:

The Reference Committee on Amendments to the Constitution and By-Laws, begs leave to recommend that on page 16, Chapter IX, Section 1, the following amendments be made:

Add to the section the words, "during the intervals between the sessions of the House of Delegates, the Board of Trustees shall supervise the action of committees constituted by action of the House."

On page 18, Chapter X, Section 1, add to the section the words, "any of these committees, acting during the intervals between the sessions of the House of Delegates, shall be subject to the Board of Trustees."

It also recommends the continuance of the Committee on Uniform Regulation of Membership, consisting of Thomas McDavitt, Walter Steiner, and Frederick R. Green, and that the personnel of this committee be increased to seven by the appointment of four additional members who are secretaries of state medical societies.

That this committee be instructed to formulate and report back recommendations relating to matters of discipline in county and state societies at the next annual meeting.

Your committee would also urge that this House of Delegates recommend to its constituent county and state societies that the fiscal society year be made to correspond with the calendar year for the purpose of securing uniformity and simplifying the keeping of accounts of the Association.

Respectfully submitted,

J. SHELTON HORSLEY.

F. PASCHAL.

FLOYD M. CRANDALL.

GEORGE W. GUTHRIE.

HUBERT WORK, Chairman.

On motion, the report was adopted.

Report of Reference Committee on Miscellaneous Business

DR. THOMAS A. WOODRUFF, Section on Ophthalmology, Chairman, read the report of the Reference Committee on Miscellaneous Business. The report was considered section by section and adopted:

PHYSICIANS' MUTUAL AID ASSOCIATION

Your committee respectfully recommends that the House of Delegates refer back to the California State Medical Association the resolution relative to the Physicians' Mutual Aid Society for more definite plans of purpose as the committee has no data on which to formulate an intelligent report.

REPORT ON THE REPORT OF THE COMMITTEE ON SCIENTIFIC RESEARCH

Your committee, recognizing the valuable work done by the Committee on Scientific Research and the results already accomplished, recommends that their request for a yearly appropriation of \$1,000 be granted.

GEORGE WASHINGTON MEMORIAL ASSOCIATION

With reference to the resolution endorsing the plan of the George Washington Memorial Association, your committee recommends that said resolution be approved.

COMMITTEE ON NOMENCLATURE AND CLASSIFICATION OF DISEASES

The Committee on Nomenclature and Classification of Diseases is to be congratulated on the excellence of the work contained in their report. The report indicates that a careful study has been made of all the proposed changes, and it is recommended that the suggestions offered be concurred in, and that the committee be continued, and that the Board of Trustees be asked to appropriate the necessary funds for the continuance of the work of the committee.

THOMAS A. WOODRUFF,

ARTHUR M. HUME,

J. H. PIERPONT,

J. D. GRIFFITH,

J. CHAMPLIN.

Report of Reference Committee on Reports of Officers

DR. ALEXANDER R. CRAIG, Pennsylvania, presented the report of the Reference Committee on Reports of Officers, as follows:
To the House of Delegates of the American Medical Association:

The report of the Committee on Organization and the address of the President have been referred to the Reference Committee on Reports of Officers and have been considered by that committee. The Reference Committee now reports to the House that the report made by the Committee on Organization is, in their judgment, so clear and comprehensive as to leave nothing for this House to do other than to approve the report.

In the address of the President there is but one suggestion to the House, and that is the matter of the erection in the National Capitol of a memorial to medical officers who gave up their lives during the War of the Rebellion.

The Reference Committee recommends that this movement be endorsed by the House and that there be appointed by the President of the Association a central committee of five members; that this committee be empowered to appoint a general committee, adding to their number of five one from each state and territory and the District of Columbia, and one from the regular army, one from the navy and one from the Public Health and Marine-Hospital Service; and, in addition, two honorary chairmen are to be appointed by the President of this Association.

It is recommended that the Board of Trustees be requested to appropriate to the use of this committee a sum not to exceed one hundred dollars, which sum or such part thereof as shall have been used by the committee, shall be returned to the Association when the subscriptions obtained by the committee shall amount to five hundred dollars.

On motion the report was adopted.

Report of the Director of Postgraduate Study

The report of the Director of Postgraduate Study was then presented as follows:

To the Members of the House of Delegates of the American Medical Association:

I have the honor to submit the following report of the progress of the work of the course of postgraduate study during the past year.

As stated in the report of one year ago, the outline of study for the second year was issued in one pamphlet instead of two, and consisted of ten months rather than twelve, as the first year. This provides for a vacation of two months each year, which is desired by most societies. The first edition of the outline, 5,000 in number, was printed in blank form, making an 80-page pamphlet. Most societies used this by filling in the time and dates of meetings and the names of teachers for the different topics; however, several societies desiring a large number of outlines, had them printed by *The Journal*. There was distributed with this blank outline a pamphlet describing the plans and details of the course and giving suggestions as to the use of the outline in the society or as a reading course of home study.

The plan for the second year, to begin the first of September, was carried out by beginning the distribution of the outlines the middle of August, and printing in *The Journal* each week the elaboration of the topics for the weekly meeting two or three weeks hence.

The first edition of 5,000 was completely exhausted in five months, requiring a new edition by the first of February, 1909. In this new edition the descriptive pamphlet mentioned above was printed with the outline, making one pamphlet rather than issuing them separately as was done before. This edition consisted of 4,000 outlines in blank form and 1,000 of the regular Warren County, Kentucky, program for the second year. It was found as a practical matter the first year that those not familiar with the course of study could understand it much more readily by having a complete program at hand, so this year the Warren County programs are regularly distributed with the blank outlines.

It is gratifying to report the interest that has been shown in the course, the number of societies that have taken it up this year, 200, being double that of last year. We note that about 85 per cent. of the societies which followed the course last year have taken it up again this year, showing that they feel that the time and study expended have been worth while. Many secretaries have written to attest the social, scientific and financial benefits to be derived from a closer personal association in the meetings.

As to the new societies interested in the work, several of them mention the fact that it has been brought to their attention by the outlines appearing in *The Journal*, or in one

of the State journals, but by far the greater number of requests have come directly from the societies visited by Dr. J. N. McCormack, showing that one familiar with the work and its possibilities is best able to arouse an interest and enthusiasm in it. It may be mentioned further that many Councilors, particularly those visited by Dr. McCormack, have been able to inaugurate the work in quite a number of societies.

The adaptability of the course to the needs of the large society as well as the small one is shown by the fact that many societies in the larger towns and cities, even in some of the medical teaching centers, have been using the outline in the regular society work, following the weekly and monthly programs.

It is worthy of note that those states doing the most work last year, viz., Pennsylvania, Indiana, West Virginia and Kentucky, are again showing the greatest increase in the number of societies following the course. It may also be mentioned that the requests for the literature have not been confined to the states but have come from Panama, Canada, and China as well. Quite a number of individuals have been using the outline as a guide in a reading course of study when on account of distance and for other reasons they were unable to attend the regular meetings.

The outline for the third year is now in preparation and will soon be ready for the printer, so that it may be distributed by the first of August, thus allowing societies to take up the third year of the cycle by the first of September.

The progress of the work during the year indicates that the course of study is in many societies meeting the needs fully, bringing the members of the profession together in a way that will lead, by mutual understanding and cooperation, to the greatest benefits possible. If this particular line of work is to be a real factor in the organization and education of the graduate physician of the country as is desired by the Department of Organization, and if a suggestion on the part of the director is permissible, it would be that men experienced in this course of study be requested to visit other societies and aid in the inauguration of the work, as was mentioned in the report of last year. Very respectfully,

JNO. H. BLACKBURN, Director.

On motion, the report was accepted as printed.

Supplementary Report of the Committee on Organization

DR. J. N. McCORMACK, Kentucky, read a supplementary report of the Committee on Organization, as follows:

To the House of Delegates:

Your committee, to which was referred the preamble and resolution of Dr. W. H. Sanders [presented at the Chicago session, 1908, see reprint page 34], looking to the creation of a committee to revise the constitution and the forms of by-laws of this association, the state associations and the county societies, for the purpose of securing a more uniform, complete and coherent organization of the entire profession, has carefully considered the same in connection with the report made yesterday by the Committee on the Uniform Regulation of Membership, and respectfully recommends that this entire subject be referred to this committee to which shall be added five members, four of whom shall be secretaries of state associations, to be selected by the President, and that this enlarged committee be charged with the work of revision indicated by Dr. Sanders and suggested by the committee above mentioned.

On motion of Dr. Arnold the report was adopted.

Report of the Committee on Triennial Reapportionment

DR. J. F. PERCY, Illinois, chairman, read the report of the Committee on Triennial Reapportionment, as follows:

The membership of the American Medical Association in 1906 was 58,859. The membership in 1909 was 67,332. A gain, up to May 1, 1909, of 8,473.

The Constitution provides for a maximum membership in this House of Delegates of 150. On a basis of 650 the constituent state societies are given 133 delegates, divided as follows:

	Delegates.		Delegates.		Changes.
	1906.	1909.	1906.	1909.	
Alabama	1,370	3	1,650	3	3
Arizona	104	1	120	1	1
Arkansas	766	2	910	2	2
California	1,783	3	1,861	4	3
Colorado	716	2	739	2	2
Connecticut	780	2	872	2	2
Delaware	104	1	103	1	1
Dist. of Columbia..	484	1	540	1	1
Florida	281	1	285	1	1
Georgia	1,020	2	1,200	2	2
Idaho	75	1	97	1	1
Illinois	4,087	7	5,265	9	9
Hawaii	63	1	63	1	1
Indiana	2,109	4	2,587	5	4

Iowa	1,719	3	1,850	4	3	
Kansas	1,202	3	995	2	2	—1
Kentucky	1,620	3	2,231	4	4	+1
Louisiana	746	2	1,069	2	2	
Maine	486	1	613	2	1	
Maryland	929	2	1,051	2	2	
Massachusetts	3,044	6	3,292	6	6	
Michigan	1,966	4	1,892	4	3	—1
Minnesota	1,105	2	1,214	3	2	
Mississippi	930	2	966	2	2	
Missouri	2,235	4	2,851	5	5	+1
Montana	175	1	165	1	1	
Nebraska	714	2	863	2	2	
Nevada	53	1	92	1	1	
New Hampshire	403	1	520	1	1	
New Jersey	1,228	3	1,400	3	3	
New Mexico	123	1	188	1	1	
New York	6,378	11	6,665	12	11	
North Carolina	1,242	3	1,046	2	2	—1
North Dakota	207	1	301	1	1	
Ohio	3,482	6	3,962	7	7	+1
Oklahoma	676	2	937	2	2	
Oregon	332	1	370	1	1	
Pennsylvania	4,574	8	5,218	9	9	+1
Philippine Islands		1	94	1	1	
Rhode Island	322	1	381	1	1	
South Carolina	659	2	731	2	2	
South Dakota	245	1	275	1	1	
Tennessee	1,055	2	1,377	3	3	+1
Texas	2,690	5	3,100	6	5	
Utah	130	1	188	1	1	
Vermont	416	1	395	1	1	
Virginia	1,413	3	1,555	3	3	
Washington	507	1	763	2	2	+1
West Virginia	597	1	795	2	2	+1
Wisconsin	1,359	3	1,500	3	3	
Wyoming	62	1	135	1	1	
	58,859	127	67,332	141	133	

To the above are to be added the delegates from Sections, twelve in number, and three from the government Medical Service, making a total of 148.

Your committee has verified the official reports from the secretaries of the constituent state societies.

SUMMARY	
No changes in apportionment in forty states.	
Increase:	
Illinois, 7 to 9.....	2
Kentucky, 3 to 4.....	1
Missouri, 4 to 5.....	1
Ohio, 6 to 7.....	1
Pennsylvania, 8 to 9.....	1
Tennessee, 2 to 3.....	1
Washington, 1 to 2.....	1
West Virginia, 1 to 2.....	1
	9
Decrease:	
Kansas, 3 to 2.....	1
Michigan, 4 to 3.....	1
North Carolina, 3 to 2.....	1
	3
Net gain over 1906.....	6
MEMBERSHIP OF HOUSE OF DELEGATES FOR 1910-11-12	
Constituent State Associations.....	133
Sections, A. M. A.....	12
Government Medical Services.....	3
Respectfully submitted,	148

J. F. PERCY, Chairman,
E. J. GOODWIN,
O. J. BROWN,
G. H. SIMMONS.

On motion, the report was adopted.

Report of the Board of Trustees to the House of Delegates on the Report of the Board of Public Instruction on Medical Subjects

DR. WILLIAM H. WELCH, Maryland, Chairman, presented the following report of the Board of Trustees on the report of the Board of Public Instruction on Medical Subjects:

We desire to express our appreciation of the value of the work thus far undertaken by the Board of Public Instruction on Medical Subjects, as outlined in its report, and of the importance of the field covered by this board. We recognize that unusual difficulties attend the complete development of a satisfactory plan to instruct the public in fundamental matters relating to individual and public health, but the object to be attained is worthy of the best efforts of the profession. The general plan of procedure contemplated by the board, so far as it has been developed, seems to be commendable. We believe that the establishment of the Auxiliary Board and the efforts to secure the cooperation of State and County Societies give promise of increased usefulness to the activities of the Board. We commend especially the plan to render available to these societies, as well as to appropriate committees and individuals, suitable pamphlets and literature which will be of service for distribution for the preparation of courses of popular lectures, and similar purposes. It is the desire of the Trustees to en-

courage and support the work of the Board of Public Instruction in the future, as we have done in the past. At the February meeting of the Board of Trustees the amount then asked for by the Board of Public Instruction, namely, \$2,000, was granted.

WILLIAM H. WELCH, Chairman.

It was moved, seconded and carried that the report be adopted.

The Report of the Committee on Awards in the Scientific Exhibit

Your committee recommends that the following awards be made:

1. Diplomas of Honor for exhibits of superior merit.
 - (a) American Pharmaceutical Association.
 - (b) Dr. Emil Beck.
 - (c) Jefferson Medical College.
 - (d) Laboratory of St. Mary's Hospital, Rochester, Minn
 - (e) Philadelphia Roentgen Ray Society.
 - (f) University of Maryland.
 - (g) University of Pennsylvania.
 - (h) Philadelphia Polyclinic.
 - (i) Hartford Association for Prevention of Tuberculosis.
 - (j) New York Charity Organization Society.
 2. Gold Medal for best exhibit of research work.
 - (a) New York Lying-in Hospital.
 3. Gold Medal for best tuberculosis exhibit according to specifications.
 - (a) Indianapolis Medical Society.
- Honorable mention is made of the excellent exhibit of the New York State Department of Health.

Respectfully submitted,
Committee, LEWELLYS F. BARKER, Chairman,
WILLIAM J. MAYO,
HENRY A. CHRISTIAN.

On motion, the report was adopted.

Amendment to the By-Laws

The following amendment to the by-laws was introduced by Dr. C. L. Wheaton, Section on Hygiene and Sanitary Science:

The Council on Public Health shall consist of five members. One member shall be elected to serve for one year, one for two years, one for three years, one for four years and one for five years. Thereafter, one member shall be elected each year to serve five years. The Council shall organize, shall elect a Chairman and Secretary and shall adopt such regulations for the government of its actions as it deems expedient. It shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees.

- The functions of the Council on Public Health shall be:
1. To make such original investigation pertaining to public health subjects as it may deem advisable.
 2. To supervise the publication of information relative to sanitary science and public health.
 3. To act in an advisory capacity and to cooperate with the public health department in the United States, national, state and municipal, when requested to do so by the proper officers.
- On motion these amendments were referred to the Reference Committee on Legislation and Political Action.

Permanent Council on Sanitary Science Requested

The following resolution was introduced by Dr. C. L. Wheaton, Section on Hygiene and Sanitary Science, and was referred to the Reference Committee on Hygiene and Sanitary Science:

- Resolved*, That the representatives of the Section on Hygiene and Sanitary Science, in the House of Delegates, be instructed to ask that a permanent Council on Sanitary Science be appointed by the American Medical Association; and that a special department on Sanitary Science be regularly maintained in the Journal of the Association, under the supervision of this Council.
- Resolved*, That the Association be requested to appropriate a suitable sum of money for the use of this Council.

In introducing the above resolutions, Dr. Wheaton stated that they were formulated by a committee of the Section on Hygiene and Sanitary Science, composed of Dr. H. B. Hemmenway, Dr. J. N. McCormack, Dr. H. M. Bracken and Dr. W. A. Evans.

Name of Section on Hygiene and Sanitary Science

The following resolution was introduced by Dr. C. L. Wheaton, Section of Hygiene and Sanitary Science:

DR. WHEATON: The following resolution proposed by Dr. E. A. Knopf of New York, and seconded by Dr. Marshall L. Price, of Maryland, was adopted by the Section on Hygiene and Sanitary Science, and I was instructed to present it to the House of Delegates of the American Medical Association:

Resolved, By the Section on Hygiene and Sanitary Science, that it is the sense of the Section that its name—Section on Hygiene and Sanitary Science—should be changed to that of Section on Preventive Medicine and Public Health.

On motion this resolution was referred to the Reference Committee on Sections and Section Work.

Tuberculous Physicians in Oklahoma

The following resolutions, introduced by Dr. C. L. Wheaton, Section on Hygiene and Sanitary Science, were proposed by Dr. S. A. Knopf and adopted by the Section on Hygiene and Sanitary Science of the American Medical Association.

On motion these resolutions were referred to the Reference Committee on Hygiene and Sanitary Science.

WHEREAS, The Section on Hygiene and Sanitary Science of the American Medical Association has learned with profound regret that the Board of Medical Examiners of the State of Oklahoma have decided no longer to grant licenses to practice to physicians afflicted with tuberculosis, and

WHEREAS, It has been sufficiently demonstrated that the clean, conscientious and trained consumptive is not a menace to his fellowmen, and

WHEREAS, It is well known that the scientific knowledge of tuberculosis has been vastly increased by physicians of the past and present who have been afflicted with tuberculosis, and

WHEREAS, The experience in this country and abroad has furthermore demonstrated that tuberculous physicians, more than any other class, have advanced the best methods of cure of tuberculosis and have been most active in the tuberculosis propaganda, be it

Resolved, That the Section on Hygiene and Sanitary Science of the American Medical Association deeply deplores the action of the Oklahoma State Board of Medical Examiners whereby tuberculous physicians desiring to practice in Oklahoma are deprived of this privilege because of their illness. Be it further

Resolved, That this Section expresses the profound wish that the State Board of Medical Examiners of Oklahoma will withdraw this restriction and again open its hospitable state to all honorable physicians well qualified to practice though they may be afflicted with tuberculosis.

Amendment to Constitution

DR. ARTHUR T. McCORMACK, Kentucky, offered the following:

Amend Article 4 of the Constitution by adding at the end of said Article, the words, "The House of Delegates, on application, may arrange for the recognition of constituent associations outside of, but adjacent to, the United States.

(To lie over until next year.)

Amendments to the By-Laws, Proposed to the House of Delegates, on June 9, 1909, by the Board of Trustees

DR. WILLIAM H. WELCH, Maryland, presented the following for the Board of Trustees:

A. Repeal Section I of Chapter I, Book I, entitled "Membership—How Obtained," and substitute the following:

"Section 1. Membership—How Obtained.—A member in good standing of the constituent association of the state in which he resides may become a member of the American Medical Association, by presenting to the General Secretary: (1) Satisfactory evidence of the above qualifications; (2) written application for membership on the prescribed form; (3) the payment of the annual assessment and the subscription to THE JOURNAL of the American Medical Association. Commissioned medical officers of the United States Army, United States Navy and United States Public Health and Marine-Hospital Service shall be *ex officio* members; they shall not be required to pay the annual assessment, nor shall they receive THE JOURNAL of the American Medical Association unless on personal subscription."

B. Repeal Section 4 of Chapter I, Book I, entitled "Delinquency—Dues Must Be Paid" and substitute the following:

"Section 4. Delinquency.—Any member who shall fail to pay his annual assessment and subscription to THE JOURNAL for one year, unless absent from the country, shall be dropped from the roll of members, provided that due notice shall be previously given to the member by the General Secretary. Any member who has been suspended for non-payment shall be restored only when all his indebtedness has been paid."

C. In the last line of Section 1, Registration, of Chapter II, Book I, substitute for the word "dues" the following: "Assessment and subscription to THE JOURNAL."

D. Immediately following the Section and Chapters of Book IV, insert the following new book and chapter:

"Book V. Assessment and Subscription to THE JOURNAL.—Chapter XIV. The annual assessment for membership shall be one dollar; and the price of subscription to THE JOURNAL of the American Medical Association shall be four dollars for members and five dollars for non-members a year."

WILLIAM H. WELCH, Chairman.

On motion of Dr. E. J. Goodwin, Missouri, the amendments were referred to the Reference Committee on Constitution and By-Laws.

Care of Indigent Members

DR. EDWARD JACKSON, Colorado, presented the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, The physician disabled by sickness for the practice of his profession, is peculiarly dependent on the savings of earlier years of the assistance of others; yet can not have recourse to the ordinary agencies of charity, be it

Resolved, That the President of the American Medical Association appoint a committee of five members, who shall inquire into the

desirability and practicability of the establishing under the auspices of the American Medical Association of a fund for the assistance of physicians disabled by sickness, and of a sanatorium for the treatment of such members of the association as may be afflicted with tuberculosis or similar diseases; such committee to report to the House of Delegates at the next annual meeting.

Enlightenment of the Public on Hygiene and Public Health

DR. WALTER B. DORSETT, Missouri, introduced the following resolutions, which were referred to the Reference Committee on Hygiene and Public Health:

As it is conceded that the profession generally needs enlightenment on the subjects pertaining to public health and quarantine matters, therefore, be it

Resolved, That it is suggested to the State Societies the advisability of occasionally including in their progress, papers concerning this subject by an officer of the United States Public Health and Marine-Hospital Service; and

Resolved, That the Surgeon-General of the United States Public Health and Marine-Hospital Service be urged to cooperate in this matter by detailing an officer of officers to present papers on the subject to such State Societies as may call on him for such co-operation.

Reorganization of the Judicial Council Proposed

DR. D. C. BROWN, Connecticut, presented the following resolution, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

Two years ago the House of Delegates decided that it was unwise to make the ex-Presidents of the American Medical Association *ex officio* members of the House of Delegates.

Year after year this House elects for the American Medical Association a man of national mark, strong professionally, experienced in the conduct of association affairs, and places him in the one unique position in the Association where he may have a comprehensive grasp of all of its affairs, and just when he has had time to observe the workings of the various branches of organic work and before he has had time and an untrammelled opportunity to utilize the judgments formed by such observation, his term as President expires and the Association is deprived of his services when they are ripest and freed from sectionalism.

In order that this may, to some extent, be obviated without disturbing the representation as at present existing in the House, the following resolution is presented: Be it

Resolved, That the Committee on Amendments to Constitution and By-Laws and the Judicial Council be made one Committee, known as the Judicial Advisory Committee, with its duties as defined in the By-Laws Book 3, Chapter 10, Sections 4 and 11, d. 6; and with the added function, that on request of the House it shall act in joint session with any other Reference Committee, on matters that seem to require it. This Committee to be composed of the five last retiring Presidents of the Association, each year the senior ex-president to be retired and the retiring President added to the Committee. This Committee to be in session or available for session when the House of Delegates is in session, to receive all matters that may be referred to it, to have the privilege accorded to other committees, of the floor of the House during the discussion of any matter presented by them but shall not be entitled to a vote in the House, and shall not be entitled to a seat at any time but as above specified.

Associate Members

DR. H. A. CHRISTIAN, delegate from the Section on Pathology and Physiology, presented a list of men recommended for associate membership, and on motion the recommendation was concurred in.

At a meeting of the Section on Pathology and Physiology, held June 8, 1909, it was moved that the following names be recommended to the House of Delegates for associate membership in the American Medical Association, as investigators in the field of medicine, who are not engaged in the practice of medicine: Simon Flexner, Rockefeller Institute, New York; Yandell Henderson, Yale University; George T. Kemp, Campaign, Ill.

Advance Reports of Officers

DR. JULIUS C. BIERWITH, New York, offered the following resolution:

Resolved, That the General Secretary be requested to send annual reports to officers and committees and the reports of special committees to the officers and members of the House of Delegates and Trustees at least two weeks before the annual meeting.

On motion this was referred to the Board of Trustees.

Payment of Annuities

DR. WILLIAM L. ESTES, Pennsylvania, offered the following preamble and resolution, which were referred to the Reference Committee on Miscellaneous Business:

WHEREAS, It is of great importance to the American Medical Association to safeguard the expenditure of its funds and carefully scrutinize any movement toward the establishment of any precedent for the payment of pensions or annuities; therefore, be it

Resolved, That no proposition or resolution advocating the payment of a pension or annuity to any member or former member of the Association be established by the House of Delegates without the previous consent and endorsement of the delegation of the State Society to which the proposed beneficiary is or was a member.

On motion, the House adjourned until Thursday, 2 p. m.

Fifth Meeting—Thursday Afternoon, June 10

The House met at 2:30 p. m. and was called to order by the President.

The roll was called.

The minutes were read.

DR. FRANK BILLINGS, Illinois, was granted permission to insert in the minutes in reference to the Davis Memorial Fund, the amount that is now, June 8, 1909, in the hands of the Davis Memorial Treasurer, \$2,463.11.

DR. CHARLES S. BACON, Illinois, at the request of the Chairman of the Reference Committee on Legislation and Political Action, asked permission to incorporate Senate Bill 1968, instead of the bill of the Sixtieth Congress, which was specifically named in the report.

On motion, this request was granted.

The minutes, as amended, were then approved.

Election of Officers

The election of officers being in order, the President appointed as tellers Major Ireland, U. S. A., H. D. Arnold, Massachusetts, and J. H. J. Upham, Ohio.

The following officers were nominated, balloted for and duly elected:

President—DR. WILLIAM H. WELCH, Baltimore, Md.

First Vice-President—DR. ROBERT WILSON, Charleston, S. C.

Second Vice-President—DR. CHARLES J. KIPP, Newark, N. J.

Third Vice-President—DR. ALEXANDER LAMBERT, New York City.

Fourth Vice-President—DR. STANLEY P. BLACK, Pasadena, Cal.

General Secretary—DR. GEORGE H. SIMMONS, Chicago, Ill.

Treasurer—DR. FRANK BILLINGS, Chicago, Ill.

Trustees—DR. C. E. CANTRELL, Texas (one year, to fill vacancy caused by death of DR. HAPPEL); DR. M. L. HARRIS, Chicago, Ill.; DR. C. A. DAUGHERTY, South Bend, Ind.; DR. WILLIAM T. COUNCILMAN, Boston, Mass.

At this juncture the President-elect was escorted to the platform by Drs. Arthur T. McCormack and W. W. Grant.

DR. W. H. WELCH, the President-elect, was received with great applause. He said: I do not wish to interrupt the proceedings. I am glad of the opportunity of thanking you for the great honor you have done to me. It is not an honor which I sought, but it is an honor which I can assure you I appreciate very much. There is no higher honor in the gift of the profession of this country. There is no higher honor that can come to any member of our profession in this country, and I prize it especially on account of the opportunity to continue to serve the Association. I shall eventually enter on my duties as Acting President with no little experience of the needs of this Association, and I need not assure you of the devotion and loyalty which I have for the Association. I consider that this Association has possibilities of development worthy of the highest endeavor of every member of our profession. I know of no nobler work in which any member of our profession can engage than that of furthering the interests of this Association. I thank you with all my heart. (Applause.)

Report of the Committee on Transportation and Place of Session

DR. M. L. HARRIS, Chicago, Chairman, stated that the committee had received three invitations for the next meeting. One from Niagara Falls, N. Y.; one from St. Louis, and one from Los Angeles, Cal. The one from Niagara Falls was simply a communication from a commercial club, and was not backed up by the profession in any way, and therefore had not received any special attention. The invitation from St. Louis comes from the local medical society, the Missouri State Medical Society, the commercial club, etc., accompanied by reports from hotels as to accommodations, halls for places of meeting, exhibits, etc. The invitation from Los Angeles likewise comes from the local profession, from the State Medical Society of California, and accompanied by reports of hotel accommodations, meeting places, etc.

The committee does not feel that it should assume the responsibility of deciding between these two places, St. Louis and Los Angeles, and that, therefore, the House should decide the matter.

The House of Delegates then took a vote in regard to the selection of place of meeting, with the result that St. Louis was chosen as the place for holding the next annual session.

Standing Committees, Etc.

THE PRESIDENT: Our By-laws provide that the President shall nominate, and the House confirm, members of standing committees.

The Chair would nominate Dr. Charles A. L. Reed to succeed himself on the Committee on Medical Legislation.

On motion of Dr. J. D. Griffith, Missouri, the nomination was confirmed.

THE PRESIDENT: The Chair nominates for the Council on Medical Education, Dr. A. D. Bevan, Chicago, to succeed himself.

On motion of Dr. G. B. Young, U. S. P. H. and M.-H. S., the nomination was confirmed.

THE PRESIDENT: The Chair nominates for the two vacancies on the Board of Public Instruction on Medical Subjects, caused by the expiration of the respective terms of Drs. Howard A. Kelly and L. S. McMurtry, Dr. T. D. Coleman, Augusta, Ga, and Dr. James Ewing, Cornell Medical College, New York.

On motion, the nominations were confirmed.

ASSOCIATE MEMBERS

The following nominations for associate membership were read: From the Section on Hygiene and Sanitary Science, Dr. H. W. Hill, Minneapolis, Minn.; from the Section on Mental and Nervous Diseases, Dr. William A. White, Washington, D. C.

The following dental members were nominated:

Dr. William B. Dunning, New York City.

Dr. Frederick Lester Stanton, New York City.

Dr. Theodore D. Castro, Philadelphia, Pa.

Dr. George N. West, Chicago.

Dr. William C. Fisher, New York City.

Dr. Robert H. Strang, Bridgeport, Conn.

Dr. John E. Nyman, Chicago.

Dr. W. L. Van Buskirk, Scranton, Pa.

Dr. Arthur Zentler, New York City.

On motion of Dr. J. D. Griffith, Missouri, the nominees were elected.

COMMITTEE ON REVISION OF CONSTITUTION AND BY-LAWS

THE PRESIDENT: There are five members to be added to the Committee on Revision of the Constitution and By-Laws. The Chair nominates Dr. W. H. Sanders, Alabama; Dr. J. H. J. Upham, Ohio; Dr. I. C. Chase, Texas; Dr. A. W. McAllester, Jr., Missouri; Dr. B. R. Schenck, Michigan.

On motion, the nominations were confirmed.

COMMITTEE ON ANESTHESIA

THE PRESIDENT: The Chair appoints on the Committee on Anesthesia Dr. James G. Mumford, Dr. W. D. Haggard, Dr. Alexander Lambert, Dr. H. Gifford and Dr. H. C. Wood, Jr.

Report of Reference Committee on Sections and Section Work

DR. HENRY J. CARSTENS, Section on Obstetrics and Diseases of Women, read the following report of the Reference Committee on Sections and Section Work:

Your committee begs leave to report that the request of the Section on Hygiene and Sanitary Science be granted, and that the name of the Section be changed to "Section on Preventive Medicine and Public Health."

The request of the Section on Surgery, that the Vice-Chairmen be increased by two for each section be granted; hence, hereafter each section is to elect, besides the Chairman, a First Vice-Chairman, Second Vice-Chairman and Third Vice-Chairman.

On motion of Dr. Arthur T. McCormack, Kentucky, the report was adopted.

Membership in the Association for Medical Employés of the Government

DR. L. M. HALSEY, New Jersey, introduced the following preambles and resolution, which was referred to the Committee on Constitution and By-Laws:

WHEREAS, The District of Columbia Medical Association refuses to admit to its membership medical employés of the United States Government, and

WHEREAS, Many deserving physicians and scientists are, thereby, excluded from entering the American Medical Association by the ordinary channels, and

WHEREAS, The American Medical Association has received officers of the United States Army, Navy, and Public Health and Marine-Hospital Service directly, without passing through the District Medical Association; be it

Resolved, That the Section on Pharmacology and Therapeutics requests the House of Delegates, for the sake of justice and fair play to extend the same opportunities to join the American Medical Association to medical men engaged in scientific work for the United States Government but not in the active practice of medicine as are extended to the commissioned officers of the Army, Navy and Public Health and Marine-Hospital Service.

Supplementary Report of the Reference Committee on Legislation and Political Action

DR. WALTER B. DORSETT, Missouri, Chairman, presented the following report of the Reference Committee on Legislation and Political Action:

To the House of Delegates of the American Medical Association:

There was referred to your committee the request from the Section on Hygiene and Sanitary Science "that a permanent Council on Sanitary Science be appointed by the American Medical Association; and that a special department on Sanitary Science be regularly maintained in THE JOURNAL of the Association under the supervision of this Council; and that the Association be requested to appropriate a suitable sum of money for the use of this Council."

There appeared before us a committee from the Section on Hygiene and Sanitary Science, the chairman of the Organization Committee and the secretary of the Bureau of Legislation. After a prolonged discussion, it became evident that the subject was very important and somewhat complicated. Your committee is in hearty accord with the desire of the Section on Hygiene and Sanitary Science to increase its influence and activities by providing a permanent body to carry on continuous investigations and assist the boards of health of various states and municipalities in meeting the numerous and important problems of sanitation which are continually arising. On the other hand, it is worthy of careful consideration whether these functions may not be imposed advantageously on some already existing Council or Bureau. Our attention was called to the fact that legislation involves, generally, a long course of preliminary popular education, and hence the functions of the Bureau of Legislation and those of the Committee on Public Instruction are closely allied. Moreover, the duties of the Committee on Organization have become largely those of popular education. Since the duties of the proposed Council on Hygiene and Sanitary Science would be, in part, those of publicity and legislation, it is possible that they might be performed in conjunction with the duties of the other committee, just named, by a Council on Public Health, Publicity and Legislation.

This whole subject should be carefully studied by all committees interested, and your Reference Committee, therefore, has decided to recommend that a committee of five, composed of the chairmen of the standing committees on Medical Legislation, on Public Instruction and on Organization and of two representatives from the Section on Hygiene and Sanitary Science, be appointed to consider the advisability of combining the functions of legislation, public instruction, organization and public sanitation and intrusting them to a permanent Council to be known, perhaps, as the Council on Public Health, Publicity and Legislation, and report to the House of Delegates next year.

On the representations of the committee from the Section on Hygiene and Sanitary Science that there is urgent need that certain work should be undertaken this year, it was agreed to recommend that the Committee on Legislation, through its Bureau, be instructed to cooperate for one year with a committee of three from the Section on Hygiene and Sanitary Science to carry on such work as may be necessary; and further, that the Trustees be requested to appropriate such reasonable sums as may be found necessary to carry on such work; and further, that the report of this work be made at the annual session of 1910.

It is recommended that all questions of policy and procedure relative to legislation not specifically covered by resolutions passed at the present session of the American Medical Association shall be left to the discretion of the Committee on Medical Legislation.

WALTER B. DORSETT,

Chairman Reference Committee on Legislation and Political Action.

On motion, the report was adopted.

Report of Committee on Amendments to Constitution and By-Laws

DR. H. WORK, Colorado, read the report of the Reference Committee on Amendments to the Constitution and By-Laws, as follows:

To the House of Delegates of the American Medical Association:

Your committee begs leave to report the following amendments to the by-laws of the Association:

(a) Repeal Section 1 of Chapter I, Book I, entitled, "Membership—How Obtained," and substituting the following:

Section 1. Membership—how obtained. A member in good standing of the constituent association of the state in which he resides may become a member of the American Medical Association by presenting to the General Secretary: (1) Satisfactory evidence of the above qualification; (2) written application for membership on the prescribed form; (3) the payment of the annual assessment and the subscription to THE JOURNAL of the American Medical Association. Com-

missioned medical officers of the United States Army, United States Navy and United States Public Health and Marine-Hospital Service shall be members. They shall not be required to pay the annual assessment, nor shall they receive THE JOURNAL of the American Medical Association unless on personal subscription.

(b) Repeal Section 4 of Chapter I, Book I, entitled, "Delinquency—Dues Must be Paid," and substitute the following:

Section 4. Delinquency. Any member who shall fail to pay his annual assessment and subscription to THE JOURNAL for one year, unless absent from the country, shall be dropped from the roll of members, provided that due notice shall be previously given to the member by the General Secretary. Any member who has been suspended for non-payment shall be restored only when all his indebtedness has been paid.

(c) In the last line of Section 1, Registration, of Chapter II, Book I, substitute for the word "dues" the following: "Assessment and subscription to THE JOURNAL."

(d) Immediately following the sections and chapters of Book IV, insert the following new book and chapter:

Book V. Assessment and Subscription to THE JOURNAL.

Chapter XIV. The annual assessment for membership shall be one dollar; and the price of subscription to THE JOURNAL of the American Medical Association shall be four dollars for members and five dollars for non-members a year.

Book V, entitled "Amendments," shall now become Book VI, and Chapter XIV shall become Chapter XV, and Chapter XV shall become Chapter XVI of Book VI, entitled "Amendments."

In Book IV, Chapter XII, Section 2, entitled "Scientific Work," add to the first sentence the words "and such other officers as the Section shall deem advisable," making it to read: "The officers of each Section shall consist of a Chairman, a Vice-Chairman, a Secretary, and such other officers as the Section shall deem advisable."

The resolution submitted to this committee providing:

"That the Committee on Amendments to Constitution and By-Laws and the Judicial Council be made one committee, known as the Judicial Advisory Committee, with its duties as defined in the By-Laws, Book III, Chapter X, Sections 4 and 11, d. 6, and with the added function, that on request of the House it shall act in joint session with any other reference committees on matters that seem to require it.

This committee to be composed of the five last retiring Presidents of the Association, each year the senior ex-President to be retired and the retiring President added to the committee. This committee to be in session, or available for session, when the House of Delegates is in session, to receive all matters that may be referred to it. To have the privileges accorded to other committees, of the floor of the House during the discussion of any matter presented by them, but shall not be entitled to a vote in the House, and shall not be entitled to a seat there at any time, but as above specified.

This resolution attempts to transfer certain duties of two important existing committees to a new committee to be created, vested with similar and additional powers. The membership of this committee is determined years in advance regardless of whether or not the members of this committee may be present at the meetings of the Association or House of Delegates prepared to act. And your committee recommends that it be not adopted.

The resolution also which seeks to create a Council on Public Health and which runs as follows:

The Council on Public Health shall consist of five members. One member shall be elected to serve for one year, one for two years, one for three years, one for four years and one for five years. Thereafter, one member shall be elected each year to serve five years. The Council shall organize, shall elect a Chairman and Secretary, and shall adopt such regulations for the government of its actions as it deems expedient. It shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees.

The functions of the Council on Public Health shall be:

1. To make such original investigations pertaining to public health subjects, as it may deem advisable.

2. To supervise the publication of information relative to sanitary science and public health.

3. To act in an advisory capacity and to cooperate with the public health department in the United States, national, state municipal, when requested to do so by the proper officers.

Inasmuch as the Reference Committee on Legislation and Political Action has had referred to it identical matter, a report on which they have made to this House of Delegates, we return this proposed amendment to the House without action.

The following resolution that the clause of the Principles of Ethics, Chapter II, Article I, Section 8, relating to the prohibition of patenting of surgical instruments by members of the medical profession be changed, omitting surgical instruments from such prohibition, is respectfully returned with the recommendation that it be recommitted by the House of Delegates to the Judicial Council.

The resolution seeking to amend Article IV of the Constitution by adding at the end of said Article the words: "The House of Delegates, on application, may arrange for the recognition of constituent associations outside of, but adjacent to, the United States." The Constitution requires that this resolution lie over for consideration at the next annual meeting.

By action of this House, some changes have been made in the titles of certain sections of the by-laws, and we therefore recommend that the resolutions already passed be considered as carrying with them presentation of the changes in the by-laws that will be necessary to change the titles in the by-laws, and that the General Secretary be empowered to make such changes in verbiage, and such changes only as will make the by-laws accord with the titles of sections as agreed on by this House at this session. Respectfully submitted.

FLOYD M. CRANDALL.

F. PASCHAL.

J. SHELTON HORSLEY.

G. W. GUTHRIE.

HUBERT WORK, Chairman.

On motion of Dr. Alexander R. Craig, Pennsylvania, seconded by Major M. W. Ireland, U. S. A., the report was adopted.

Supplementary Report of the Reference Committee on Reports of Officers

DR. ALEXANDER R. CRAIG, Pennsylvania, Chairman, presented the following supplementary report of the Reference Committee on Reports of Officers:

The Reference Committee on the Reports of Officers asks permission to supplement its report on the "Board of Trustees" by recommending that the following minute, in memory of Dr. T. J. Happel, a member of that board at the time of his death, be spread on the records of this House. The Reference Committee wishes to acknowledge its indebtedness to Dr. Jere L. Crook, who attended Dr. Happel in his last illness, for the tribute which it desires the House to adopt.

The friendship of Dr. Happel is the most cherished possession of those who knew him, the recollection of which will ever be a bright and hallowed spot in their memory. His life was spent in a little town, but his influence was felt throughout the state and country. His attendance at the meetings of this Association was constant. He never missed a meeting of the state association, of which body he was, many years ago, president. In these and other medical organizations with which he was connected his interest and attendance did not wane when his term of office closed. He never failed to contribute to the success of the meetings, and could always be relied on to take an active part in every phase of the meeting.

In Trenton no one would dare question the statement that Dr. Happel was pre-eminently its leading and most valued citizen. For thirty years he served the municipality as alderman, and his influence was constantly exerted for civic righteousness, municipal improvements and for every measure that tended toward the betterment of the community from a sanitary, economic and esthetic standpoint. The little city rests under the shade of row after row of pretty trees, planted by him, has fine water, good lights, beautiful homes, embowered in roses and surrounded with pretty lawns, and its people are refined, cultured, generous, well educated and patriotic.

It was in this environment that Dr. Happel lived his life of self-sacrifice and devotion to his people, who never called to him in vain. Small wonder is it that he was their idol, their exemplar, their ideal of all that a good physician and a cultured Christian gentleman should be.

Dr. Crook bears this personal tribute, the sentiment of which this House indorses: "It was my sad privilege to visit him a number of times during his last illness and to attend his funeral. For two months his friends and former patients took their turn in watching every night at his bedside, and he was nursed tenderly, devotedly and efficiently by his daughter and sons with a constancy and faithfulness beautiful to behold. On that sad day when his body was laid away beneath the flowers he loved so well, the grief of the entire community found expression at the church and cemetery, practically every one attended, business being suspended and every store closed."

Long will his influence be felt in Tennessee and the country. He was an ideal physician, a noble gentleman, a faithful

friend. He embodied in his life and character the highest aims of our profession. His life was a blessing, his memory a benediction.

For and by order of the Committee.

ALEXANDER R. CRAIG, Chairman.

DR. CHARLES S. BACON, Illinois, moved that a standing vote be taken in connection with this report referring to Dr. Happel. Seconded.

DR. W. W. GRANT, Colorado, said he desired to say a few words in regard to his late colleague, Dr. Happel, who served so well on the Board of Trustees. It had been his pleasure to serve with Dr. Happel continuously from the beginning of the reorganization at St. Paul, nine years ago. He thought he voiced the sentiments of the Board and of the members present who were familiar with Dr. Happel's work, that they did not have a more faithful, more honorable, more upright and zealous worker in behalf of the Board and of the Association than their deceased colleague. He died with the uniform respect of the Board of Trustees, with admiration for his work and a loving regard for his memory.

DR. G. W. GUTHRIE, Pennsylvania, moved as an amendment that a certified copy of the report regarding Dr. Happel be sent to his family.

The amendment was seconded and accepted, and carried by a rising vote.

Report of the Board of Trustees of the Printing and Distribution of the Annual Reports of Officers and Committees

DR. W. W. GRANT, Colorado, a member of the Board of Trustees, presented the following:

RESOLUTION OF DR. J. C. BIERWITH OF NEW YORK

The Board of Trustees recommends the adoption of the resolution requesting the General Secretary to send the annual reports of officers and committees and reports of special committees to officers, members of the House of Delegates and Trustees at least two weeks before each annual session of the Association.

WILLIAM H. WELCH, Chairman.

On motion of Dr. Charles S. Bacon, Illinois, the recommendation of the Board of Trustees was concurred in.

Report of the Board of Trustees of the Report Regarding the N. S. Davis Memorial

The Board of Trustees approve the recommendation of the Reference Committee on Miscellaneous Business as amended in the House of Delegates, to the effect that the American Medical Association appropriate the sum of \$5,000 for the purpose of creating a suitable memorial to Dr. N. S. Davis, the founder of the Association, provided that within three years from this date (June 10, 1909) an additional sum of \$20,000 be collected for this purpose, and provided that the form of the memorial be approved by the House of Delegates of this Association.

WILLIAM H. WELCH, Chairman.

On motion, the report of the Board of Trustees was adopted.

Report of the Board of Trustees on the Proposal to Consider the Formation of a Physicians' Mutual Aid Society

RESOLUTION OF THE DELEGATES OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

The Board of Trustees desires further information concerning the plan of organization and operation of the suggested Physicians' Mutual Aid Society before expressing a definite opinion concerning this proposal.

With its present information, the Board is of the opinion that the formation and conduct of such societies are a matter of state and local concern rather than an affair of the National Association.

WILLIAM H. WELCH, Chairman.

On motion of Dr. Charles S. Bacon, the report of the Board of Trustees was adopted.

Report of Committee on Miscellaneous Business

DR. THOMAS A. WOODRUFF, Section on Ophthalmology, Chairman, presented the following report of the Committee on Miscellaneous Business:

To the House of Delegates of the American Medical Association:

Regarding the resolution to safeguard the expenditure of funds for pensions, annuities, etc., your Committee recommends that no action be taken in this matter at the present time by the House of Delegates.

The Committee recommends that the President of this Association appoint a committee of five members to inquire into the desirability and practicability of the establishing under the auspices of the American Medical Association of a fund for

the assistance of physicians disabled by sickness, and of a sanatorium for the treatment of such members of the Association as may be afflicted with tuberculosis or similar diseases, such committee to report to the House of Delegates at the next annual meeting of the Association.

On motion of Dr. R. S. Cathcart, South Carolina, seconded by several, the report was adopted.

Education of the Public in Preventive Medicine

On motion of Dr. Arthur T. McCormack, Kentucky, the unanimous consent of the House was obtained in order that Dr. Charles A. L. Reed might introduce the following preambles and resolutions, coming from the Section on Hygiene and Sanitary Science:

WHEREAS, The American Medical Association, not only as one of its declared purposes, but by numerous lines of activity, many of them connected with the Section on Hygiene and Sanitary Science, stands committed to the education of the public with respect to the nature and prevention of disease, and

WHEREAS, The demand for such popular education with respect to tuberculosis, cancer, typhoid fever and other decimating diseases has become urgent; therefore, be it

Resolved, That all county, district and other local medical societies be and they are hereby requested to hold annually one or more open meetings to which the public shall be invited and which shall be devoted to a discussion of the nature and prevention of disease and to the general hygienic welfare of the people.

Resolved, That the women physician members of the American Medical Association, be and they are hereby requested to take the initiative individually in their respective associations in the organization of educational committees to act through women's clubs, mothers' associations and other similar bodies, for the dissemination of accurate information touching these subjects among the people and that they be requested to submit to the House of Delegates a yearly report of such work, and elect from among their number a committee to take charge of the same.

It was moved by Dr. Reed that the resolutions be adopted. Seconded and carried unanimously.

Message of Sympathy to Dr. Burrell and Dr. E. Marvel

Dr. Arthur T. McCormack, Kentucky, moved that the Secretary and President send a telegram to the retiring President, Dr. Burrell, regretting his inability to attend this meeting on account of illness, and expressing the hope that he would soon be restored to general good health.

The motion was seconded by Dr. Cantrell, Texas, and carried.

DR. L. M. HALSEY, New Jersey, moved that the Secretary be instructed to send a letter of sympathy to Dr. Emery Marvel, Chairman of the Entertainment Committee, with hopes for a speedy recovery.

Seconded and carried.

On motion of Dr. Alexander R. Craig, Pennsylvania, the work of the Committee on Organization was commended and the Committee continued.

New Business

By unanimous consent of the House of Delegates the following new business was introduced:

RESOLUTION OF THE SECTION ON HYGIENE AND SANITARY SCIENCE PRESENTED BY DR. C. L. WHEATON.

WHEREAS, The largest undertakings of medicine are in the field of prevention and the status of medicine in public esteem depends mainly on the performance of medical men in this field, and

WHEREAS, The essential numerical data of preventive medicine are wanting for the largest part of the United States, in respect to both area and population, and

WHEREAS, The want of vital statistics is on one hand regularly denounced by men of other sciences as the chief reproach of public medicine; and on the other hand regularly offered by medical men in apology for poor performance, and

WHEREAS, The relations of the Government of the United States with other civilized nations, include both general implication and overt profession that the Government of the United States is both desirous and able to receive and to give official accounts of births, deaths and communicable diseases, and

WHEREAS, The Kingdom of Italy has twice addressed notes to the Government of the United States, alleging that the United States has failed to comply with the stipulations of Article XVI of the Consular Convention of May, 1878, in which the Government of the United States and the Kingdom of Italy agreed, each to furnish the other official records of deaths, and

WHEREAS, The Government of the United States was unable in 1878, and in 1909, still remains unable to fulfill any such international obligations whether express obligations, as in the case of Italy, or implied obligations, as in every case when our foreign relations are with civilized peoples, and

WHEREAS, the duty of systematic registration of births and deaths belongs to the Sovereign States, and not to the Federal Government, and

WHEREAS, The non-performance of this duty has led to definite allegations affecting the honor of the country in foreign relations, is a major delinquency in state government, and is an affectual barrier against progress in state medicine; therefore, be it

Resolved, That the Executive Officers of the American Medical Association, be and are hereby requested to take such steps as are necessary: First, to inform the Government of the United States and the Governors of the several states, concerning the great importance of that delinquency which is partly exposed by the allegations of the Kingdom of Italy concerning the non-performance of the stipulations of Article XVI of the Consular Convention of

May, 1878; second, to cooperate with the Bureau of the Census, with the official bodies of the several states, and with the various unofficial bodies having interests in this subject, to the end that the practice of registration of Vital Statistics may be extended with all speed to cover the whole area of the United States.

Moved by JOHN S. FULTON.
Seconded by MARSHALL L. PRICE.

On motion, the preambles and resolutions were referred to the Committee on Medical Legislation.

WHEREAS, The Section on Hygiene and Sanitary Science has passed a resolution calling on the American Medical Association to take whatever steps are necessary to make the registration of vital statistics complete, for the whole area and population of the United States, which resolution being hereto attached, is hereby made a part of the preamble to this resolution; therefore, be it

Resolved, By the House of Delegates of the American Medical Association, that this request of the Section on Hygiene and Sanitary Science, shall be complied with.

On motion of Dr. Craig, the resolutions were referred to the Committee on Medical Legislation.

Time Devoted to Sanitary Science in Medical Colleges

DR. CHARLES A. WHEATON, Section on Hygiene and Sanitary Science, offered the following resolution, which was referred to the Council on Medical Education:

Resolved, That it is the opinion of the Section on Hygiene and Sanitary Science, that in the schedule of hours recommended by the Council on Medical Education of the American Medical Association, far too little time and attention has been given to the subject of sanitary science.

Teaching of Sanitation and Preventive Medicine in Public Schools

DR. CHARLES A. WHEATON, Section on Hygiene and Sanitary Science, offered the following resolution from the Section on Hygiene and Sanitary Science, which was referred to the Board of Public Instruction on Medical Subjects:

Resolved, That this Section recommends to the Association the full appreciation of the seriousness of infections of all kinds, whether acute or chronic, as a permanent drain on the life capital of the individual which can never be restored;

Resolved, That the supervision of the Health of school children by medical inspection, and the prompt treatment of all children of disease and the correction bodily infirmities and defects be declared by the association as essential to the welfare of the Nation, and

Resolved, That the Association use its effort to have education in sanitation and preventive medicine made a part of the curriculum of all public schools, and that teaching on such subjects be under the recommendation of and subject to the approval of the health authorities of the state or other jurisdiction in which it is given.

The Postoffice and Fraud Orders

DR. OSCAR DOWLING, Louisiana, offered the following resolutions:

Resolved, That the American Medical Association approves the policy of the United States Postoffice Department in the issuance of fraud orders against disreputable purveyors of nostrum and equally disreputable pretenders in medicine who are robbing while pretending to cure the sick, and

Resolved, That the present declared policy of Hon. F. H. Hitchcock, Postmaster General, to continue this crusade and the firm attitude of Hon. R. P. Goodwin, United States District Judge in enforcing the postal laws against this class of offenders entitles both of them to the grateful appreciation of the American people.

On motion, the resolutions were adopted.

Resolution of Thanks

DR. ARTHUR MCCORMACK, Kentucky, offered the following resolution of thanks:

Resolved, That the thanks of this Association be and are hereby tendered to the people and profession of Atlantic City and of New Jersey for the hospitality so generously extended to its members, to the Committee of Arrangements for its faithful and successful efforts in our behalf, and to all others who have in any way assisted in making one of the most pleasant and profitable meetings in the history of the Association. Also our thanks to Dr. T. J. Murray, retiring Acting President, and to our President, Dr. W. C. Gorgas, for the able, impartial and courteous manner in which they have discharged their duties.

On motion, seconded by several, the resolution was adopted unanimously by a rising vote.

On motion of Dr. Alexander R. Craig, Pennsylvania, the House of Delegates then adjourned *sine die*.

Members of the House of Delegates in Attendance

(The figure following the name of the state shows the number of delegates to which the state is entitled.)

ALABAMA—3

William H. Sanders.....Montgomery
Mack Rodgers.....Birmingham

ARIZONA—1

Edward Godfrey, Jr.....Tucson

ARKANSAS—2

Eugene C. Hay.....Hot Springs

CALIFORNIA—3		NEW MEXICO—1	
O. D. Hamlin.....	Oakland	P. G. Cornish.....	Albuquerque
H. Bert Ellis.....	Los Angeles	NEW YORK—11	
G. McGowan.....	Los Angeles	Wesley T. Mulligan.....	Rochester
COLORADO—2		J. C. Bierwirth.....	Brooklyn
Hubert Work.....	Pueblo	D. C. Moriarta.....	Saratoga Springs
Edward Jackson.....	Denver	F. M. Crandall.....	New York City
CONNECTICUT—2		A. Vander Veer.....	Albany
Everett J. McKnight.....	Hartford	A. T. Bristow.....	Brooklyn
D. Chester Brown.....	Danbury	C. Jewett.....	Brooklyn
DELAWARE—1		William S. Ely.....	Rochester
J. H. Wilson.....	Dover	E. H. Bartley.....	Brooklyn
DISTRICT OF COLUMBIA—1		H. L. Elsner.....	Syracuse
G. Wyeth Cook.....	Washington	J. E. Sadlier.....	Poughkeepsie
FLORIDA—1		NORTH CAROLINA—3	
J. H. Pierpont.....	Pensacola	A. J. Crowell.....	Charlotte
GEORGIA—2		J. F. Highsmith.....	Fayette
George R. White.....	Savannah	NORTH DAKOTA—1	
HAWAII—1		Victor H. Stickney.....	Dickinson
A. G. Hodgkins.....	Honolulu	OHIO—6	
IDAHO—1		J. H. J. Upham.....	Columbus
ILLINOIS—7		J. W. Clemmer.....	Columbus
C. S. Stremmel.....	Macomb	William E. Lower.....	Cleveland
J. F. Percy.....	Galesburg	R. B. Hall.....	Cincinnati
L. H. A. Nickerson.....	Quincy	D. O. Weeks.....	Marion
E. W. Weis.....	Ottawa	A. F. House.....	Cleveland
Frank Billings.....	Chicago	OKLAHOMA—2	
C. S. Bacon.....	Chicago	L. A. Hahn.....	Guthrie
James W. Pettit.....	Ottawa	John B. McAlister.....	Harrisburg
INDIANA—4		OREGON—1	
W. N. Wishard.....	Indianapolis	Andrew C. Smith.....	Portland
Edwin Walker.....	Evansville	PENNSYLVANIA—8	
G. W. Thompson.....	Winamic	Alexander R. Craig.....	Philadelphia
Harry C. Sharp.....	Indianapolis	Philip Y. Eisenberg.....	Norristown
IOWA—3		George W. Guthrie.....	Wilkes-Barre
G. E. Crawford.....	Cedar Rapids	Thomas D. Davis.....	Pittsburg
D. S. Fairchild.....	Clinton	William L. Estes.....	South Bethlehem
Arthur L. Wright.....	Carroll	F. W. Frankhauser.....	Reading
KANSAS—3		Samuel Wolf.....	Philadelphia
J. W. May.....	Kansas City	PHILIPPINE ISLANDS—1	
C. C. Goddard.....	Leavenworth	RHODE ISLAND—1	
L. L. Uhls.....	Ossawotomie	John Champlin.....	Westerly
KENTUCKY—3		SOUTH CAROLINA—2	
A. D. Price.....	Harrisburg	Walter Cheyne.....	Sumter
M. E. Alderson.....	Russellville	R. S. Cathcart.....	Charleston
A. T. McCormack.....	Bowling Green	SOUTH DAKOTA—1	
LOUISIANA—2		R. D. Alway.....	Aberdeen
Oscar Dowling.....	Shreveport	TENNESSEE—2	
E. D. Martin.....	New Orleans	S. S. Crockett.....	Nashville
MAINE—1		L. A. Yarbrough.....	Covington
Eugene E. Holt.....	Portland	TEXAS—5	
MARYLAND—2		C. E. Cantrell.....	Greenville
G. L. Taneyhill.....	Baltimore	William Brumby.....	Austin
L. F. Barker.....	Baltimore	E. H. Cary.....	Dallas
MASSACHUSETTS—6		Frank Paschal.....	San Antonio
H. D. Arnold.....	Boston	UTAH—1	
O. J. Brown.....	North Adams	VERMONT—1	
Charles F. Canady.....	Greenfield	C. H. Beecher.....	Burlington
R. P. M. Ames.....	Springfield	VIRGINIA—3	
MICHIGAN—4		T. C. Firebaugh.....	Harrisburg
A. M. Hume.....	Detroit	William E. Anderson.....	Farmville
S. C. Graves.....	Grand Rapids	J. Shelton Horsley.....	Richmond
T. A. Felch.....	Ishpeming	WASHINGTON—1	
F. W. Robbins.....	Detroit	G. S. Peterkin.....	Seattle
MINNESOTA—2		WEST VIRGINIA—1	
C. J. McComb.....	Duluth	O. F. Covert.....	Moundsville
Thomas McDavitt.....	St. Paul	WISCONSIN—3	
MISSISSIPPI—2		Charles S. Sheldon.....	Madison
J. B. Bullitt.....	University	C. A. Richards.....	Rheinlander
MISSOURI—4		D. J. Hayes.....	Milwaukee
J. D. Griffith.....	Kansas City	WYOMING—1	
Walter Dorsett.....	St. Louis	J. J. Monahan, Encampment—	seated without vote
E. J. Goodwin.....	St. Louis	UNITED STATES ARMY—1	
MONTANA—1		Maj. M. W. Ireland.....	Washington, D. C.
Donald Campbell.....	Butte	UNITED STATES NAVY—1	
NEBRASKA—2		Surgeon Manley F. Gates.....	Philadelphia
H. Gifford.....	Omaha	UNITED STATES PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE—1	
T. P. Livingston.....	Plattsmouth	Surgeon G. B. Young.....	Chicago
NEW HAMPSHIRE—1		Delegates from the Sections	
William T. Smith.....	Hanover	PRACTICE OF MEDICINE—1	
NEVADA—1		George Dock.....	New Orleans
NEW JERSEY—3		OBSTETRICS AND DISEASES OF WOMEN—1	
C. R. P. Fischer.....	Bound Brook	J. H. Carstens.....	Detroit
Alexander McAllister.....	Camden		
Luther M. Halsey.....	Williamstown		

SURGERY AND ANATOMY—1	
J. T. Bottomley.....	Boston
OPHTHALMOLOGY—1	
T. A. Woodruff.....	Chicago
LARYNGOLOGY AND OTOTOLOGY—1	
H. W. Loeb.....	St. Louis, Mo.
NERVOUS AND MENTAL DISEASES—1	
D'Orsay Hecht.....	Chicago
STOMATOLOGY—1	
G. V. I. Brown.....	Milwaukee

CUTANEOUS MEDICINE AND SURGERY—1	
R. R. Campbell.....	Chicago
DISEASES OF CHILDREN—1	
R. B. Gilbert.....	Louisville
HYGIENE AND SANITARY SCIENCE—1	
Clarence L. Wheaton.....	Chicago
PHARMACOLOGY AND THERAPEUTICS—1	
M. H. Fussell.....	Philadelphia
PATHOLOGY AND PHYSIOLOGY—1	
H. A. Christian.....	Boston

OPENING GENERAL MEETING

TUESDAY, JUNE 8, 10:30 A. M.

The general opening meeting was held in the Auditorium of Young's New Pier, Tuesday, June 8, at 10:30 a. m.

In the absence of President Herbert L. Burrell, Boston, the meeting was called to order by the First Vice-President, Dr. T. J. Murray, Butte, Mont.

Prayer was offered by the Rev. Newton Cadwell, D.D., Atlantic City.

On the platform were ex-presidents, members of the Board of Trustees, the General Secretary, the Treasurer, and distinguished foreigners.

Address of Welcome

The Hon. Franklin P. Stoy, Mayor of Atlantic City, was introduced and delivered the address of welcome:

Mr. President, Ladies and Gentlemen, and Members of the American Medical Association:

I have been apprised of the fact that those who speak this morning must be brief, and I assure you that I will not detain you long.

I am pleased to see before me again this great bunch of intellect. I spoke at your meetings on two or three previous occasions, and you may think it strange that I should do so so many times, but as one of the city officials, I am pleased to be here this morning to welcome you to our city. You come from all parts of this country, and I question whether there is a body assembled in convention to-day anywhere in these United States which represents so many states and territories as you do. Let me say to you, in behalf of the people who live in our blessed city, that we are grateful to you for holding your convention here, and I am delegated to welcome you, not only as a body, but as individuals. I extend to you the freedom of the city. I do not understand all of the paraphernalia that you have brought with you. I see something here that represents perhaps a part of your armamentarium (pointing to a lion's cage belonging to a show). It looks to me as though it is unnecessary to offer or extend to you the courtesies of the Department of Public Safety. In having to take care of so large a delegation and of so many delegations as there are here to-day, it will be necessary for me to divide my honors, and therefore I am going to take pleasure in selecting from among your bunch a doctor who will act as nightmare (night mayor). The word seems very familiar to a great many of you, and perhaps the doctor's name I am about to mention will be just as familiar to you. I want to say that in selecting this gentleman, his name comes very nearly being "Mayor." I refer to Dr. Mayo of Minnesota. I shall leave with the doctor his credentials, and I shall certainly be glad to be relieved at 6 o'clock to-night in order that the doctor may have full sway of all he sees.

I thank you for this opportunity of greeting you, both individually and collectively, and I hope that when you are selecting a place for your next meeting you will not forget the name of Atlantic City.

Address of Welcome on Behalf of the Medical Profession of Atlantic City

DR. E. H. HARVEY: Gentlemen of the American Medical Association, the local medical profession greets you with best wishes for a most successful meeting. Nine years ago, when you first came here, you saw the sight of mud on our avenues, blocking your progress; but to-day that is all changed. Now there are miles of paved and macadam streets, magnificent hotels, apartment houses, business buildings and cottages, and still we are marching on. Our boardwalk has been widened and lengthened, so that now we have five miles of the great boardwalk. Our population here has increased to such an

extent that it has been nearly doubled in ten years. Compare your first visit here with your present one. The day is not far distant when we will have 100,000 resident population here and half a million visitors. Our boardwalk will be lengthened so that it will extend across the length of our island. A mammoth convention hall will greet you some day. Our city fathers have in embryo a "City Beautiful." We have faith in their ideas and feel and know they will mature. Come often and with us watch us grow.

Of water we have three kinds: Purest spring water, pumped into every household on the island, and used by all of us; a more than bountiful supply of salt water, which we use for bathing purposes; an ample supply of fire water, which medical men never use.

Here on our island, on our boardwalk, on the beach, in the surf, on the sea, give yourselves, your families, your wives, your sweethearts and your friends a good time. Our town is yours. Our doors are open. The beach, the sea, the surf, are yours. Our homes are yours. Our local medical profession bids you a thousand welcomes.

Address of Welcome on Behalf of the Medical Society of New Jersey

DR. DAVID ST. JOHN, Hackensack, N. J., President of the Medical Society of New Jersey, delivered the following address:

In coming to our ocean city again, we feel truly honored, for your coming is like that of a valued friend, the welcome of whose visit is intensified with each return.

The Medical Society of New Jersey (the oldest in the United States) bids you a hearty welcome. To the wives, the mothers, the friends of this distinguished body, to the older members of the profession, who have been prominent in advancing and holding high the standard of medical thought and work in this country, we extend a welcome. To the distinguished representatives of other countries, whose names by their works are world wide, we give a cordial greeting. To the younger men of the profession, who have more recently joined your ranks and upon whom the work and promise of the future depends, we bid welcome.

Medicine, as well as surgery, is rapidly becoming an exact science. In recent years great have been the accomplishments in both, and the future is indeed rich in promise.

The advances made by research work in the various fields of medicine, together with the brilliant results in the surgery of the heart, joints, arteries, veins, etc., made possible by animal experimentation, is hardly less than marvelous, and what forceful answers they offer to the empty arguments of the shouting opponents of vivisection.

The various cults which are assuming a "brief hour on the stage," and which a few may view with apprehension, will only serve to stimulate you to greater and higher achievements. Your profession was never so capable of rendering skilful scientific care to the sick as it is to-day, and should command as its well earned right the respect and confidence of the people, the state and nation, as never before.

Your part in the work of advancement in every field of medicine and surgery has been great and notable, and under the leadership of your President, the brilliant Colonel Gorgas, we bespeak for you an epoch-making year in your history.

Again, to one and all, we extend a glad welcome.

Introduction of Foreign Guests

At this juncture the First Vice-President introduced the foreign guests: Professor Friedrich of Marburg, Germany; Mr. W. Arbuthnot Lane of Guy's Hospital, London, England; Dr. Max Nonne of Hamburg, Germany.

Changes in Meeting Places, Etc.

Dr. Philip Marvel, Atlantic City, presented a report of the Trustees' Committee of Arrangements, as Chairman. He called attention to the changes in places of meetings of Sections on account of a storm, and referred to the arrangements that had been made for the members and their guests.

Dr. J. A. Joy, Chairman of the Local Committee of Arrangements and Entertainments, said that this Committee, in conjunction with the Trustees' Committee of Arrangements, has provided a series of entertainments which would prove enjoyable and attractive, and called attention to the program of entertainments and other matters of interest, as set forth in the official program.

Installation of the President

The President-Elect, Col. William C. Gorgas, Ancon, Panama, was then introduced and delivered his presidential address, his subject being "Sanitary Work at Panama as it Bears on Malaria," which appears in full in *THE JOURNAL*, p. 1967. Adjourned.

Officers of Sections

The minutes of the various Sections of the American Medical Association will be published in *THE JOURNAL* later, probably in the first issue of July, since next week's number contains the semi-annual index. The next officers of the Sections are given below. It will be noted that the names of the Sections are given in accordance with the changes authorized by the House of Delegates at Atlantic City.

SECTION ON PRACTICE OF MEDICINE

Chairman—George Blumer, New Haven.
Secretary—Wilder Tileston, Boston.
Delegate—Joseph A. Capps, Chicago.
Alternate Delegate—Alexander Lambert, New York.
Orator—Richard Cabot, Boston.
Executive Committee—Thomas D. Coleman, Augusta, Ga.; C. F. Hoover, Cleveland; Joseph L. Miller, Chicago.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN

Chairman—John G. Clark, Philadelphia.
Vice-Chairman—C. C. Frederick, Buffalo.
Secretary—C. Jeff Miller, New Orleans.
Delegate—Horace G. Wetherill, Denver.
Alternate—I. S. Stone, Washington, D. C.
Executive Committee—J. Wesley Bovée, Washington, D. C.; W. B. Dorsett, St. Louis; Walter P. Manton, Detroit.

SECTION ON SURGERY

Chairman—Charles H. Mayo, Rochester, Minn.
Vice-Chairman—Thomas Huntington, San Francisco.
Secretary—W. D. Haggard, Nashville.
Orator on Surgery—Robert Abbe, New York.
Delegate—Edward H. Ochsner, Chicago.
Alternate—J. W. D. Maury, New York.
Executive Committee—Arthur D. Bevan, Chicago; Rudolph Matas, New Orleans; John C. Munro, Boston.

SECTION ON OPHTHALMOLOGY

Chairman—W. C. Posey, Philadelphia.
Vice-Chairman—Hiram Woods, Baltimore.
Secretary—A. E. Bulson, Jr., Ft. Wayne.
Delegate—T. A. Woodruff, Chicago.
Executive Committee—G. C. Savage, Nashville, Tenn.; William H. Wilder, Chicago; Alvin A. Hubbell, Buffalo.

SECTION ON LARYNGOLOGY AND OTOTOLOGY

Chairman—Chevalier Jackson, Pittsburg.
Vice-Chairman—George F. Cott, Buffalo.
Secretary—George E. Shambaugh, Chicago.
Delegate—D. Braden Kyle, Philadelphia.
Executive Committee—S. MacCuen Smith, Philadelphia; H. W. Loeb, St. Louis; W. Sohler Bryant, New York.

SECTION ON NERVOUS AND MENTAL DISEASES

Chairman—Theodore Diller, Pittsburg.
Secretary—William A. Jones, Minneapolis.
Delegate—M. Allen Starr, New York.
Executive Committee—Morton Prince, Boston; T. H. Weisenburg, Philadelphia; M. Allen Starr, New York.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

Chairman—J. N. Hurty, Indianapolis.
Vice-Chairman—C. F. Williams, Columbia, S. C.
Secretary—M. Langdon Price, Baltimore.
Delegate—J. H. White, New Orleans.

Alternate—C. L. Wheaton, Chicago.

Orator—Seneca Egbert, Philadelphia.

Executive Committee—Prince A. Morrow, New York; W. C. Gorgas, Ancon, Canal Zone; J. H. White, New Orleans.

SECTION ON STOMATOLOGY

Chairman—Thomas L. Gilmer, Chicago.
Vice-Chairman—James Graham Sharp, San Francisco.
Secretary—Eugene S. Talbot, Chicago.
Delegate—G. V. I. Brown, Milwaukee.
Alternate—Stewart L. McCurdy, Pittsburg, Pa.
Executive Committee—M. I. Schamberg, New York; E. A. Bogue, New York; Edward C. Briggs, Boston.

SECTION ON DERMATOLOGY

Chairman—Grover W. Wende, Buffalo.
Vice-Chairman—M. L. Heidingsfeld, Cincinnati.
Secretary—H. R. Varney, Detroit.
Delegate—William Allen Pusey, Chicago.
Alternate Delegate—D. W. Montgomery, San Francisco.
Executive Committee—R. R. Campbell, Chicago; M. B. Hartzell, Philadelphia; William Allen Pusey, Chicago.

SECTION ON PATHOLOGY AND PHYSIOLOGY

President—H. Gideon Wells, Chicago.
Secretary—Yandell Henderson, New Haven.
Member of the Executive Council—M. J. Rosenau, Washington.
Delegate—W. B. Cannon, Boston.
Executive Committee—Walter L. Bierring, Iowa City, Iowa; Walter B. Cannon, Boston; M. J. Rosenau, Washington.

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SECTION ON DISEASES OF CHILDREN

Chairman—William J. Butler, Chicago.
Secretary—Joseph F. Bicak, New York.
Delegate—Charles Douglas, Detroit.
Executive Committee—J. Ross Snyder, Birmingham, Ala.; E. E. Graham, Philadelphia; Thomas S. Southworth, New York.

The New York Museum of Safety and Sanitation.—In Europe much attention is given to the prevention of industrial accidents. Manufacturers advertise for safety devices to lessen the risks in their shops. There are ten transatlantic museums of safety and sanitation, where employers go to learn how to avoid accidents by seeing what devices will safeguard them against heavy expenditures for damages and secure the protection of the workmen in their employ. The need of prevention of industrial accidents (if for no other motive, to avoid wasting money in litigation or spending it in taxes or charity to support the victims of carelessness) is becoming every year more apparent in the United States. In the whole country from all causes in 1908 there were 500,000 such accidents. The money loss in wage-earning efficiency is at least \$250,000,000, yet 50 per cent. of these casualties are preventable in the opinion of the engineering profession. Then, too, much has been said about the needless loss in war due to preventable disease. In all the wars in which the United States has engaged disease has been responsible for more than 70 per cent. of the mortality, more than one-half of which could have easily been prevented through organization and preparedness. If on the occasion of another war we are not to experience a similar loss from want of preparation, steps must be taken toward diffusion of knowledge of how to prevent these diseases in time of war. A Museum of Safety and Sanitation has been established in New York to show how such losses may be avoided. Models, photographs and diagrams of safety devices that will prevent half of the present loss will be kept on view, so that the American manufacturer can secure the same advantage by preventive measures as his European competitor, and the American people may have the benefit of the most advanced devices of sanitation.

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Addresses

EDUCATIONAL IDEALS IN MEDICINE *

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In the fifty-four years since I entered my own alma mater—Brown University—as a freshman (pray, do not think me an antediluvian; 1855, I assure you, followed the memorable catastrophe of the flood at quite a long interval!) it has been my privilege to know among my fellow alumni a number of its distinguished sons. In public life there were Richard Olney, John Hay, fellow students, though not fellow classmates (how little did I realize what distinguished careers were before them), Charles E. Hughes, already thane of Glamis and of Cawdor, and I hope king hereafter, and Everett Colby, whose fine record is known of all men. In academic life, besides others of lesser note, there were four eminent college presidents, Angell of Michigan, Wheeler of California, Faunce of Brown, and, last but by no means least, my warm friend for nearly two-score years, President Andrews of Brown—Chancellor Andrews of Nebraska.

When, therefore, Dr. Andrews invited me to deliver this address, I was glad to oblige him and glad to make your acquaintance. My only regret is that he, your beloved leader, is absent; and I regret it the more because ill health is the reason. Another beckoning influence was my desire to spy out the land, for, even when I graduated, Nebraska was a wilderness without a railroad and without a city, not to speak of a university. Then Omaha had a population of only about 1,800 and the whole state only 25,000, while the university was not founded till 1869.

I was much impressed lately by an address before the American Association for the Advancement of Science by Professor Royce of Harvard. He said: "The center of gravity of our future American academic life can not always—can not. I think, very long—remain east of the Alleghenies. Through a perfectly natural and inevitable evolution the state universities of the middle west and of the far west, supported as they are, and will be, by the vast resources of their own communities, and guided by constantly improving educational ideals, will, within a generation or two, occupy a very nearly central place in the academic life of our country."

When I look at the splendid appropriations for their state universities by the legislatures of Nebraska, Minnesota, Michigan, Wisconsin, Illinois, and other western states, when I see the superb work done at these great institutions, and when I find that your own state

has the lowest percentage of illiteracy of any of our many states, I am persuaded that the center of gravity is moving westward even more swiftly than Professor Royce intimated.

I am here, therefore, at your call and thank you for the great honor you have done me.

Professor Royce's mention of "Educational Ideals" has suggested my subject—"Educational Ideals in Medicine." By education, however, I do not mean solely that of the school and the college. The home gives us our first and most important and lasting education. If its atmosphere is low and sordid, sordid and low will we surely grow up. The marts of trade, the social life we live, the books we read, the newspapers we scan, the sermons and lectures we hear, the friends we talk with all educate us, no less than the formal training of the school, the university, and the professional school.

The following are some of the educational ideals in medicine:

I. THE IDEAL IN ACQUISITION

This may and ought to consist to a proper extent in the acquisition of money, and if we have the ideals I shall name later the more money we acquire the better for ourselves and for the community. A due reward for our labor and skill is both right and desirable. We must provide for ourselves and our families, and must lay up a store against old age or the "rainy day" of sickness or accident. If opportunity comes, we should strive to acquire still more, but never as the miser who merely adds bond to bond, mine to mine, million to million, and from time to time gloats with glee over his growing hoard, but as the fountain which gathers from every passing cloud the showers that filter through the soil away down below the surface of many broad acres and then distils it in limpid purified streams of water to the gladdening of the parched land and the joy of the thirsty traveler.

But remember the warning of our Lord—recorded, be it observed, by the medical evangelist Luke—"Take heed and beware of covetousness; for a man's life consisteth not in the abundance of the things which he possesseth." A man's *living* may depend on these carnal things, but his *life* depends on far better and more important things.

Besides money, we must acquire knowledge, not only in college and in the medical school, but all through our lives. Here let me urge you earnestly to lay broad and deep the foundations. The superstructure can never be imposing unless the foundations are solid. To a common school and a high school education, add, even if you have to work your finger-nails off, a college training in both the ancient and the modern languages, in mathematics, history, literature, rhetoric, and logic before you tackle the "ologies" in the professional schools.

* The Address at the commencement of the Medical Department, University of Nebraska, Omaha, May 20, 1909.

The other day I read an otherwise excellent medical paper by a promising young man, when suddenly the cold chills ran down my back as I ran across the words "in conjunction with a clinical data." One might as well say "a handsome women." Only by high achievement can he remove the blight cast on him in my mind by that single phrase. It shows that his education has been defective, just as chewing gum or feeding one's self with a knife shows that home training in good manners was lacking. Great geniuses will get to the top of the ladder in spite of such defects, but to the average, or even to the strong man, these fundamental educational defects will always be a handicap.

Moreover, when your time is absorbed in a successful practice it is difficult and sometimes almost impossible to cultivate the humanities and the "literature of power" which add so much grace and charm to the sturdy strength of the "literature of knowledge."

When you have laid a good foundation in a liberal education, then begin your professional studies and work as if your life depended on it. Four years of constant labor are too few to master the great "corpus" of medical knowledge. Your faculty, able as they are, can not give you more than a mere smattering of knowledge, only the A B Cs of what you must later learn for yourselves. But they can do two great things for you. They can teach you the methods by which they have gained, and you can gain, a thorough knowledge of medicine. I would rather teach a man how to study and teach him ten facts than a thousand facts and no method. In the long run the first man will reach the goal, while you won't be able to find the second man with a spy-glass.

Second, they can inoculate you with the virus of enthusiasm, when you will be immune from fatigue, from laziness, from indifference. Like your teachers, you, too, will be idealists, who, all aflame with zeal, will scale the heights of faith and drag the rest of the world up after you.

If you have learned how to study and the bacillus of enthusiasm has developed its intoxication in your system, then, after your graduation, you will begin your long years of real study which will make you an educated physician. Any one of you who fails to study, and study hard, for the next forty years will be left high and dry. To change the metaphor, if you are determined to climb high up on the ladder of knowledge the community will be glad to help you; if you are content to stand at its foot, you are not worth helping!

II. THE IDEAL IN ACHIEVEMENT

This foreshadows the second ideal for which the new century holds its laurel crown—the ideal in achievement.

You must not be content with only acquiring existing knowledge; for what is present knowledge but the accumulated discoveries and inventions of our forbears? If we act only as sluiceways to pass on this fund of knowledge to our successors, we fail of one of our highest duties—to add to existing knowledge by our own researches.

You may not, it is true, be a Jenner, a Pasteur, a Lister, or a Koch, for they are volcanic forces in the world of science that create continents or lift up mountain ranges. Yet, when these very giants sat on the hard benches of the medical school as young fellows, what one of their teachers ever dreamed of the great work they were to do? At sixteen Charles Darwin was

considered "a very ordinary boy, rather below the common standard in intellect," and even at twenty-two he seemed destined to be nothing more than "an idle sporting man."

But you can all add something to the sum of knowledge. The joy of the discovery of a new truth, a new means of diagnosis, a better method of operating, a new serum for treatment which may save hundreds and even thousands of human lives sets the nerves a-tingling with joy and fills the soul with satisfaction as naught else can do. You can have this joy if you will. One of my own Jefferson boys, now Professor Rosenberger, has just accomplished such a feat by discovering a method by which the tubercle bacillus can be discovered in the blood long before it appears in the sputum. By its means he has diagnosticated, for instance, a brain tumor, and a tumor in the neck to be tuberculous and not a sarcoma, and made many other similar diagnoses which operation or necropsy has proved correct. I regard it as the most important and most far-reaching discovery as to tuberculosis since Koch's own discovery of the bacillus itself twenty-seven years ago.

Why, then, should not you go and do likewise?

III. THE IDEAL OF SERVICE

The third ideal for you to realize is the ideal of service. Your very bill-heads will remind you constantly of this, for will they not read "Mr. John Smith, to John Jones, M.D., Dr. For Professional Services" so much?

It is a clumsy way of reckoning, however, for who can reckon in coin of the realm the service rendered by the saving of a precious life to kindred and to the community? Who can transmute into paltry dollars the care and skill and learning that shut the door on death? Moreover, to whom shall Flexner and Jobling or Rosenberger render a bill for "professional services to mankind" by the discovery of the antiserum for cerebrospinal meningitis or by the discovery anent the tubercle bacillus? Who will pay it? No one! Remember that "only the lower things of life are sold; the higher things are always given."

The service you will render will always be a personal service, often at the expense of sleep, of comfort, of home joys, of recreation; but, believe me, it pays, as personal service always does. Remember that yours is not a trade, but a profession. "The object of a trade is to make money; the object of a profession is to bless mankind." This ideal of personal service can never be fully realized by others, or, indeed, rendered by others, but only by those of our own guild.

But, ladies and gentlemen of the audience, let me for a moment address you instead of the graduating class. To you of this audience, this city, and this state it is given to assist in this great work, not by your personal labor, but by your appreciation, your encouragement, and your financial aid. Among these young men there are not a few who, like many of my boys at the Jefferson, are longing to devote their lives to research, to discover means by which disease shall be defeated, epidemics lessened or abolished, homes made happy and mankind be blessed. Look at what I have seen accomplished in my own not overlong life; anesthesia, antiseptics and asepsis, the greatest gifts to mankind since the days of Jenner; yellow fever abolished; malaria put in leash; the *x*-rays discovered; the trichina discovered and its life-history and the easy method of destroying it ascertained—and what that means to Omaha, I need not explain to you; the mortality of cerebrospinal men-

ingitis reduced from 75 per cent. and more to 25 per cent. or less; the tubercle bacillus discovered; and now an early diagnosis in the curable stage made possible; ovariectomy and nearly all other abdominal operations made so safe that the time seems not far off when the well will almost envy the sick the fame acquired by having undergone a big operation! But, seriously, if these and many more similar discoveries have been made in the last sixty years, why may not one—or more—of this very class now graduating thus honor himself and this university and all Nebraska if you give him the opportunity?

The expense of a thorough medical education has grown enormously within the last twenty-five years. Instead of teaching large classes by lectures and a few diagrams we now need large and expensive laboratories, expensive to equip and more expensive to maintain, and the number of teachers must approximate the number of students, for instruction is now largely to individual units rather than *en masse* or even to small classes.

If from among its graduates in medicine the University of Nebraska should send forth one Pasteur, one Lister, one Virchow, or one Koch, or even one lesser light, would not it justify its entire existence and make the whole world its debtor?

I plead with you, therefore, for the erection and endowment of laboratories of research right here in Omaha amid its teeming thousands and its busy industries—one spot where the idea of gain shall be excluded and the idea of service shall be all-absorbing and all-dominating.

You are very practical men, you Nebraskans, and will naturally ask how much it will cost. Not less than a million—one-quarter for buildings and an endowment of three-quarters for salaries and running expenses. A half million will do for a starter, but the other half must be had to make a success. But you may object that "that is an enormous sum for us to give." True, but I have never known the West to refuse a "dare," especially from an Eastern "tenderfoot." Moreover, let me tell you that this sum is small compared with what your research fellows and professors will give in dollars, to say nothing of their enthusiasm, their unselfish lives, and the gifts they will give to mankind. One million dollars, if safely invested, can not bring in an income of more than \$50,000 at the very outside. Yet I know one research worker, a man without substantial means, who, if he entered the arena of surgical practice would easily receive \$50,000 or more a year, but who deliberately rejects this splendid income and is working for the modest salary of \$3,000 a year for the joy and the reward of this work in the discovery of new truths which he has freely given to the whole world. He is giving, mark you, out of his poverty to the community the income of a million of dollars or more. Until you match that by equally liberal gifts you must doff your hats to this devotee of science as more generous than yourselves.

IV. THE IDEAL OF CHARACTER

The fourth ideal which the twentieth century demands of you is the ideal of character. You may win fame, fortune, and power, but, unless you win also a pure and lofty character, the rest will be but apples of Sodom turning to ashes at the slightest touch. "If you want to know what people love most," says the *Outlook*, "do not go into their shops and factories; find out who their heroes are; for the hero always embodies, more or less perfectly, the real aspirations and the fundamental

desires of a people. Who are the heroes loved by Americans? Washington, Jefferson, Franklin, Lincoln, Grant, Lee, Stonewall Jackson, Emerson, Beecher and Brooks. Now it is significant that not one of these men was a great material organizer in the acquisition of wealth. All the American heroes have stood for devotion to principle, for love of liberty, for consecration to the interests of humanity, for apostolic fervor in preaching the religion of Christ, for a noble idealism in interpreting America in terms of spiritual opportunity and achievement."

"To prepare ourselves for sudden deeds by the reiterated choice between good and evil, gradually determines character," says the author of "Romola." Tested by this scale, how high is the honor of your chosen profession! Whenever you close your office door on a woman patient you give your reputation freely into her hands and she her honor into yours! How rarely is this high trust abused by either the one or the other! In my opinion our profession stands preeminently for this ideal of character.

Here, then, my last word to you. Up and be doing, you new graduates of a splendid foster-mother! Take part in the fray! Don't be merely an onlooker, a fossil of 1909, but throw yourselves with all your magnificent western vigor and vitality into the very midst of the fighting. Stand on "the firing-line of scientific advance" and win renown for yourselves and for your university by the greatest possible additions to science and the largest possible service to humanity.

1729 Chestnut Street.

OPHTHALMOLOGIC QUALIFICATIONS WHICH SHOULD BE DEMANDED OF THE GEN- ERAL PRACTITIONER AND OF THE SPECIALIST, RESPECTIVELY

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON OPHTHAL-
MOLOGY AT THE SIXTIETH ANNUAL SESSION OF
THE AMERICAN MEDICAL ASSOCIATION, 1909

ALVIN A. HUBBELL, M.D.
BUFFALO, N. Y.

INTRODUCTORY REMARKS

Permit me in opening the proceedings of the Section of Ophthalmology of the American Medical Association for 1909, first, to thank you cordially for the great honor which you have bestowed on me and to express to you my appreciation of the confidence which your suffrages have signified.

The example of my predecessors in this office and the scientific expectations of yourselves have demanded of your officers a meritorious program. Our earnest efforts have been made to satisfy you, and we trust that our labors will not have been in vain. For such success as we may have attained, we are indebted to the members of the Section for their cordial assistance and cooperation and for which we are most grateful. As for myself, I am under the deepest obligations to our Secretary for his self-sacrificing, untiring and efficient services.

In submitting to you for your consideration and discussion the preliminary contributions to the program, you will observe that they are made entirely by members of the Association. Professor Fuchs of Vienna was invited to participate in our deliberations and to lend us the prestige of his great name, and through the kind offices of his pupil, Dr. E. V. L. Brown, of Chicago,

who was studying with him during the past year, we had good grounds for hoping that he would accept it, particularly as he had at different times expressed a great desire to visit the United States. But he did not accept, as circumstances were such that he could not leave his university work at this time, to be absent from it so long. No invitation was extended to any other foreign colleague. I trust, however, the character of our program is such that it will not only commend itself to you, but will again indicate the high scientific position which American ophthalmology occupies.

It will be further noticed that the number of papers has been considerably lessened. This has been done in accordance with the judgment of your officers, and also with the approval of the officers of the Association and of many members of the Section. The attempt was made to restrict the number to twenty-five, but this limit has been slightly exceeded. We believe that a program is sufficiently long with twenty-five papers and the discussions; by limiting it to this number the sessions will be shorter, and more time may be given to social intercourse and recreation, which are essential factors in making our meetings attractive.

Another innovation that will be noticed is the adoption of the recommendation of our chairman last year, Dr. W. H. Wilder, who said:

We make a plea for the application of the principles of scientific research to clinical ophthalmology; a plea for organized effort of ophthalmologists in this country to work out certain questions that can be answered only by the accumulated experience of many men.

Many questions and problems in ophthalmology remain unanswered and unsolved. Some of them may not be answerable. Others are of such a character that they can be answered only inductively and after the accumulation of a vast amount of evidence and data. No one man can make observations enough to solve some problems, but a number of men working along previously determined lines may accomplish a great deal.

To this end special committees consisting of a variable number of members, which could be increased as desired should be formed to consider certain subjects.

Such committees should, of course, be selected with care and should be composed of men particularly interested in the subject and peculiarly qualified or fitted to conduct or carry on investigations and direct others in similar work. These committees would carefully outline a plan for the study of certain problems, so that all who were solicited to cooperate or who desired to make observations under the direction of the committee might work along the same line. The committee might increase its number, if desired, so that for some subjects the number of collaborators might be unlimited, but all should work according to a preconcerted plan.

In inaugurating the movement to collectively investigate various problems and questions in ophthalmology as suggested by Dr. Wilder, three committees have been appointed, each in charge of a permanent chairman with power to select his associates and to direct the work, and each to be continued as long as it seems profitable or desirable to do so. Each committee is to report to this Section at its annual meetings. One committee has been appointed on ocular tuberculosis, with Dr. William H. Wilder, of Chicago, chairman; one on questions concerning the ocular muscles, with Dr. Lucien Howe, of Buffalo, chairman, and one on operative treatment of papilledema dependent on increased intracranial tension, with Dr. G. E. de Schweinitz, of Philadelphia, chairman. There is no doubt that the work of these committees will be so productive of good results and will so materially concentrate and advance our

knowledge of the subjects studied that other committees will be organized from time to time in the future.

One other committee has been appointed from this Section with Dr. Casey A. Wood, of Chicago, chairman, which has for its purpose the cooperation with a general committee in the important task of revising the United States Pharmacopeia. The reports of the first three of these committees constitute a part of this meeting's program.

Another feature of the program presented to-day is that it is not only American, but the subjects of the papers, excepting those of the committees, are entirely voluntary, and are chosen by the contributors from among their most special experiences and studies. It is believed that such a program has a variety, freshness and value that will make it as welcome to you, for once at least, as one made up, more or less largely, of papers on assigned subjects. It gives ample proof, also, that this organization possesses resources which, when properly conserved and utilized, add most substantially to the growth and advancement of ophthalmologic knowledge.

In conformity with the rules of this Section, I should, perhaps, recall the essential advances that have been made in ophthalmology during the past year; but this has been so well and fully done by the ophthalmologic year-books of Jackson and of Wood, and by the English and American ophthalmologic periodicals, and especially in the summaries given by Mr. Sidney Stephenson, of London, in the *Ophthalmoscope*, that I regard such an undertaking as superfluous, and shall therefore omit it. There is a subject, however, which it seems to me is of pressing importance, and which I take the liberty of briefly discussing here to-day, viz., the ophthalmologic qualifications which should be demanded of the general practitioner and of the specialist, respectively.

A most humiliating fact in medicine to-day is that ophthalmology, one of its most important branches, is regarded too indifferently by many medical faculties, is a voluntary subject of study by students, and is inefficiently practiced by the physician. Specialism, also, is too often entered on with insufficient preparation.

INSUFFICIENT OPHTHALMOLOGY IN GENERAL PRACTICE

In general practice, how often do we find the physician self-condemned by his own words, "I do not pretend to know much about the eye," and also by his failures even in the ordinary affections of the eye. Ocular diseases are therefore unrelieved, distress and suffering are prolonged, defective vision is acquired, blindness is produced and eyes are lost, all of which might have been largely prevented had even a moderate amount of knowledge of diseases of the eye been applied to diagnosis and treatment, or had the physician obtained competent and seasonable counsel in difficult or obscure cases, or referred them to a specialist for treatment.

In cases of refractive errors and muscular imbalances of the eye with their manifold reflexes, the physician is more at sea than in ocular diseases, and is unable to do anything for them. Such patients voluntarily or by the advice of the physician consult the ophthalmologist, or more frequently the optician, whom he often recommends as competent and trustworthy. The physician's attitude, therefore, is favorable to the optician and leaves almost an open field to this aggressive layman, who appropriates to himself the practice of an important and far-reaching branch of medicine. You know what deception, pretense, charlatanism and harm

attends his practices. You know, too, what success has been attained by the so-called reformers among his kind in hoodwinking numerous legislatures into bringing into legal existence a misnamed "profession" called optometry, and how this, supposed to be safeguarded by a so-called board of examiners, of which physicians and ophthalmologists, I am sorry to say, are sometimes members, has been used to cloak a perilous ignorance of ocular physiology, pathology and optics. In the meantime, no check has been put on the fraudulent work of the various optical colleges, correspondence and other "schools," as exhibited in their courses of instruction, in the graduation of their candidates, and the issuing of their diplomas. The whole business, from beginning to end, is a prostitution of a part of medical science to those low commercial ideals of trade which are made manifest by the character of the advertisements, periodical literature and work of these men.

For this encroachment on legitimate medicine and the unfortunate results to the public which follow, the profession itself is largely responsible through the physician's own lack of knowledge of a subject which he should understand, and through his fostering and propagating the sentiment that the optician can properly and without danger perform this work.

THE UNQUALIFIED OPHTHALMOLOGIST

As to the professed ophthalmologist, there is also reason to complain. He too often enters into specialism with the preparation afforded only by an undergraduate course of study, and a supplemental postgraduate course of a few weeks. He begins his work; therefore, with inadequate knowledge and personal experience, he is often but little more than a refractionist, has only a superficial knowledge, or none at all, of the pathology of the eye, and has no training for operative work on it, and he assumes the same position before the public and the profession and asks for the same recognition as does his neighbor ophthalmologist who is well trained and skilful. That he must often make most glaring and harmful mistakes in diagnosis and treatment with consequent ill results, is inevitable. In a way he thus becomes more or less a menace to public welfare.

Having before us, therefore, the existing conditions of more or less inadequate ophthalmologic knowledge among both general and special practitioners, with all the consequent undesirable and baneful results, is it not apparent to all that there is need of further effort to improve them? Although the American Medical College Association, the American Medical Association through its Council on Medical Education and other channels, and certain high-grade medical schools have done much to elevate medical standards and to advance medical teaching, yet there is still room for much to be done.

There are two dominant factors in the profession today which are largely responsible for the evils of which I am complaining. One is the excessive zeal for specialization, resulting in the effort to sever the relations of certain medical subjects from general medicine and practice, and to set them apart by themselves with an isolation and exclusiveness that is inherently unjustifiable. This is especially observable in ophthalmology, and one of the consequences is that the subject is either neglected entirely or treated indifferently by the student, and is more or less disregarded or ignored by the general practitioner.

The other factor that is responsible for much injustice and inefficiency in ophthalmology as a specialty is

that no standard of legal qualification is required for the practice of it, except that of any legal practitioner. It is to help change each of these conditions that we have a duty to perform.

WHAT MAY BE DONE

First, we can strive to disabuse the public, the profession at large, and medical school authorities of the idea that ophthalmology is so suited to exclusive study and practice, so separate from other departments of medicine, so technical and difficult to understand and apply, as to require special preliminary preparation and a peculiar fitness on the part of the student and physician, that it may, and even should be separated from general medicine, and made only a voluntary subject of study and practice. The fact is, ophthalmology can not in justice to general medicine, as well as to itself, be thus made an exclusive and isolated field because of the manifold relations of the eye to other parts of the body. The subject, instead of being difficult to comprehend and apply, is quite the opposite. The eye is readily accessible to observation; preliminary qualifications different from those which should be required in any other branch of medical study are not needed; its anatomy, functions, pathology and relations are easily understood; the diagnosis and treatment of its diseases and abnormalities need no more skill than those of other organs; when earnestly pursued, no proportionately longer time is required than by any other important subject; the subject may be studied with equal facility; and it offers a field of unusual attractiveness and interest. It should, therefore, continue to be regarded as an essential part of general medicine, and to hold its proper place in study and in general practice. If the physician shall have failed to qualify himself to treat all ordinary diseases of the body, including those of the eye, he renders himself one-sided in his intellectual equipment for practice, his medical judgment is distorted, and his usefulness is abbreviated.

Again, of all diseases and abnormalities, those of the eye are the last to be excluded from the physician's practice, and for several reasons. They are of frequent occurrence, and they are found everywhere. People afflicted with them are entitled to the same attention from the family physician as they receive in other diseases and he should be prepared to give it. Such patients may also be far distant from an ophthalmologist, may not be able to pay either his fees or the expenses of travel, and they should not be put to unnecessary trouble, inconvenience and expense. Again, with ordinary knowledge of ophthalmology the physician will be able to give timely aid in these diseases, to administer preventive, as well as curative treatment, to make diagnoses that will determine benign from severe affections, and to judge properly when his efforts should be reinforced by consultation with a specialist, and when the specialist should have full charge. The physician will also be prepared to detect errors of refraction and to correct, at least, their simpler forms—not so difficult a task as is believed. Such services, moreover, are much more trustworthy than those of the optician or optometrist with his medical ignorance, for many cases of poor vision are not due to errors of refraction, but to ocular disease which the physician would recognize and the optician would not. Finally, in giving his ophthalmologic services to his patients, he may not, and perhaps should not, be remunerated by specialists' fees, but he will reap the same rewards and emoluments that come from other departments of his practice. In the meantime, he will

add to the clientele of the ophthalmologist by the difficult and obscure cases which he refers to him. In this regard, the physician will be a help to the ophthalmologist, whereas the optician (optometrist) is a drawback. Furthermore, the physician will be a powerful factor in stamping out the insidious growth and dangerous charlatanism of the "eyesight specialist" or the optician, and in the end the whole medical profession, including ophthalmologists, will be honored and dignified, and the public will be enlightened and benefited.

Accompanying a change of public and professional sentiment in favor of improving ophthalmology in general practice, there should be a corresponding change in teaching by which the undergraduate medical student is required to acquire an amount of ophthalmologic knowledge sufficient to meet his future needs as a general practitioner.

I assume that the school which he attends has no other function than to teach young men and women to be general practitioners, disregarding all thought of specialism of any kind. In such an institution ophthalmology should occupy a position in its curriculum corresponding to its importance in medical practice, and it should be taught and studied with the same motive and fidelity as other leading branches. This, or any other important subject should never be made voluntary, for such volition, in the majority of cases, leads to indifference or to entire neglect. On the other hand, it should be made obligatory. Having completed the required course, a successful examination in the same should be made one of the essentials to graduation. How much of ophthalmology should be included in an undergraduate course is a debatable question, and should be left to an authorized committee to decide. It should be sufficient, however, to qualify the physician to treat all ordinary and infectious diseases of the eye, to distinguish between mild and severe ones, to treat injuries of the eye which are superficial and uncomplicated, and to examine for refractive errors and correct at least the simpler forms.

While such study may be pursued with sufficient thoroughness to insure the desired qualification, yet I would add a supplementary examination by the several state boards of medical examiners, covering the same ground, the successful passing of which should be one of the conditions for license to practice. This requirement of the state licensing boards is advisable, as it puts a check to any neglect of the subject on the part of medical schools, and its influence over the average student is more potent in maintaining proper standards than almost all others.

While urging that a reasonable amount of ophthalmology should constitute a part of general medicine and practice, I still urge as emphatically that ophthalmology as a specialty is also most commendable and is to be upheld and cultivated.

It is unfortunate, however, that no qualifications for practice have heretofore been required of the ophthalmologist other than those of the general practitioner, but his sense of justice, his pride, and his taste for the subject have stimulated him, in a large proportion of cases, to prepare himself creditably for his work. The absence of these and the presence of a dominant spirit of commercialism have, on the other hand, caused him to make too much haste to begin his practice, limiting his study to an undergraduate course, with perhaps a few weeks in postgraduate work. He neglects taking the necessary time for study, disregards

important subjects, fails to acquire personal clinical experience—in short, he is an unprepared, unqualified specialist—an ophthalmologist only in part. Ophthalmologists are rapidly increasing in number, and the unqualified ones are also becoming correspondingly too numerous. The ophthalmologist, of course, like other specialists, should possess knowledge of his subject much more extended and complete than the general practitioner, and by wider observation and larger experience he should be far more proficient and skilful. Indeed, he should be an expert in this department of medicine. When, therefore, one lacks the necessary qualifications for such a position, he should not be allowed to assume it, both because of the harm he may do to patients and because of the injustice he inflicts on the rights of his neighbor ophthalmologist, who has qualified at much sacrifice of time, energy and money.

In order that protection may be secured against unqualified ophthalmologists, I suggest that the course and subjects of study which the ophthalmologist shall pursue be regulated by law, and that a special board of examiners shall be appointed to act alone, or in association with general boards as now constituted, to determine his fitness, and, if found qualified, to authorize a license to practice to be issued to him.

I will not inflict on you the details of measures which seem to me would secure an adequate amount of ophthalmologic knowledge both in general medicine and in specialism. These can be carefully worked out in the future, if deemed advisable. The one thing, however, more imperative than any other is a proper and trustworthy examination by authorized boards of examiners, the successful passing of which is made the requirement for a license to practice.

In concluding, allow me to recall the question implied in the title of this paper, and to summarize its answer by repeating that the qualifications which should be demanded of the general practitioner are those which would enable him to understand and to treat properly ordinary diseases of the eye, and to examine the eye for refractive errors and to correct its simpler forms. As an assurance of such qualifications, the undergraduate course of study of ophthalmology should be made obligatory, the passing of an examination in it before the medical faculty should be made one of the conditions of graduation, and a subsequent examination in it before the state licensing board, one of the conditions of license to practice.

The qualifications which should be demanded of the specialist are an extended and thorough postgraduate study of every subject essentially bearing on ophthalmology, personal experimental study in the laboratory and personal clinical work in the hospital or in a preceptor's private office. To insure the proper qualifications, legally appointed boards of expert ophthalmologists should examine applicants in such subjects as should be required by law, the result of which should determine whether or not a license should be granted.

I offer these imperfectly expressed suggestions for the consideration of this Section with the hope that they may be accepted. If so, two committees should be appointed to study the subject and to report the details of measures that might be adopted to bring about the results desired; one to make reasonably certain the acquirement of a proper amount of ophthalmologic knowledge by the general practitioner; and another to secure the necessary training and qualifications of the ophthalmologist.

Original Articles

A PRAGMATIC VIEW OF CHRISTIAN SCIENCE *

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It has been more than once asserted in recent discussions of Christian Science and kindred forms of occult therapy that their therapeutic success is in no way dependent on the theological or metaphysical doctrines on which these systems purport to be based; that these theoretical elements are, in fact, from the point of view of success in healing, irrelevant and unessential. Drugless healing, for example, it is said, is successfully practiced by persons and sects whose religious and metaphysical dogmas have little or nothing in common with those of Christian Science, and, what is still more significant, by scientists who, many of them, do not espouse any religious system whatever, or, if they do, do not connect in any way their therapeutic practice with their religious beliefs.

The facts referred to are, as facts, sufficiently authentic, and I have no intention to controvert them; but the conclusion drawn from them is, it seems to me, too sweeping and even misleading on a fundamental point in our understanding of the very striking phenomenon of mental healing. To make my objection clear, however, will necessitate some preliminary exposition of a theory of drugless healing of critical importance, the theory of mental suggestion; a theory which is not in any sense a special theory, but which may, in its broad features, at least, be assumed to be the common possession of all technical students of applied psychology.

The salient features of this view are not difficult to outline. It is a mere commonplace to-day, and perhaps always has been, that one's mental state, especially on its emotional side, has much to do with one's physical condition; that, in particular, emotional states, such as anxiety, grief and fear, depress and interfere with certain bodily functions, like heart action, respiration and digestion, on which bodily well-being is so intimately dependent, while opposite states, like cheer and mental tranquillity, have a tonic effect on these important functions. The production, therefore, in the patient, of an attitude of hopefulness and confidence may, especially in the lighter forms of neurosis, brought on, perhaps, by worry or mental depression, be an important factor in restoring the patient to a more normal condition, and may, in crucial cases, in which life is hanging in the balance and every condition becomes important, be decisive in causing the patient to rally and survive. These truths have in their essential phases become a part of the proverbial wisdom of the race, and they doubtless need, on account of their great practical importance, to be systematically re-emphasized. They have latterly, indeed, been exploited *ad nauseam*, and their importance has, by a sort of mental epidemic, been exaggerated to a point of caricature. But they have been practiced by every competent physician in every community since the beginning of time, and have been claimed as the precocious discoveries and the exclusive possession of certain propagandists simply because they

have proclaimed these commonplaces from the housetop, and, as is usual with such performances, to a large hearing and devoted following. The results of these important "discoveries" are forthwith carefully conserved and industrially propagated by Christian healing circles, classes in psychotherapy, temples of health and other unprofitable aberrations.

The condition of hopefulness may operate in two ways in restoring the patient to health: first, directly, by the tranquilizing effect on the nervous system, and, second, by causing him to resort to the usual means of restoring health, such as exercise, change of scene, dieting, the use of medicine, etc. On this point it is, however, important to observe that the effect of overconfidence may be the precise opposite to that suggested, and may, especially where intellectual bias against the use of physical means is operative, cause the patient to neglect these means, and thus, in spite of some gain from a hopeful state of mind, deteriorate from what should be plainly diagnosed as wilful and criminal neglect. The fact that individuals responsible for such cases can, by hiding behind the ramparts of religious tolerance, escape social censure and legal prosecution furnishes a striking comment on a brand of idealism which America can surely spare without substantial loss to an otherwise sane and hardy civilization.

Disregarding, however, the occasional danger from overconfidence, let us say that the cases of healing by Christian Science, when they are genuine, are directly due to a hopeful mental condition induced by mental suggestion to the effect that the patient's disease is nonexistent, or that its effects will, in any case, be rendered nugatory. Now what I wish to urge in this pragmatic brief for Christian Science is that the manner of inducing this hopeful mental condition can be considered optional only when the question is considered in the abstract, but will, in the concrete case of a given patient, be pretty definitely determined by the character and previous education of the person in whom the expectant belief in health is to be induced. The belief in the result must be made plausible in a way best adapted to the patient. In the hypnotic condition this is not necessary. The hypnotic trance is a favorable condition for implanting suggestion, for the reason that the suggestion is in little danger of being rendered ineffective by spontaneous reflection, the associative mechanism being temporarily inoperative, and reflection being, therefore, in abeyance. But if the belief is to be induced in the waking state it can be done only by making the object of the belief appear possible or probable. How this is to be done must be decided separately in each special case, and the appropriate manner will accordingly be as various and versatile as human nature. One will believe on the mere assertion of another person who is supposed to possess special knowledge or power; another will base his faith on a theory of magnetic fluid or the efficacy of sacred relics or shrines; another will rely on the merit of saints or the special intervention of a prayer-answering divinity; another on a physiologic theory of the effects of exercise or the action of drugs; while still another will base his belief on a high-sounding and mystical system of metaphysics according to which there is "no pain in Truth and no truth in pain; no nerve in Mind and no mind in nerve," and according to which "Life, God, Omnipotent Good, deny death, evil, sin, disease." Now when you combine, as in the last instance, a pretentious and mystical system of metaphysics with theological conceptions which a long and cumula-

* The term Christian Science is here used as a merely conventional designation, and the use of it does not of course in any way commit one to the highly fantastic dogmas for which the cult stands. The term Eddyism, were it domesticated, would be much preferable to the egregious misnomer in current use.

tive social tradition has invested with peculiar sanctity and force, you have an instrument the suggestive value of which for a certain type of minds (their name is legion), whose native mystical bent has not been corrected by systematic education in the methods and results of modern science, is well-nigh incalculable. Of course, what is one man's meat is another's poison, and whether meat or poison will depend entirely on the particular individual's character and intellectual bias gained through circumstance, deliberate self-discipline and the educational activities of the group of which he has been a member. But if a given individual is so constituted that no violence is done to his total experience by the metaphysics of Christian Science, then this system is perhaps the most effective and conceivably the only means to secure, in this individual, the state of mind requisite for health and happiness. And that Christian Science offers, in a large number of cases, just the aid which the imagination requires, the present great popularity of Christian Science and kindred phenomena abundantly attests.

Considered from the point of view of orthodox science or of consistent thought the value of Christian Science is *nil*; this much, at least, must be as plain as paint. But if it makes as little sense to ask whether a theory is true as to ask whether it is blue (a piece of pragmatic facetiousness) and if the truth of a view is measured by the measure of its success in life and practice, then Christian Science is, on its metaphysical side, a highly respectable candidate for philosophic honors. It is one of those views, many more of which could be named, whose logical value is either negligible or non-existent, but which, nevertheless, seem to serve an important practical purpose, and which, therefore, appear to be justified in cases where the practical demand is more urgent than the theoretical one of making life a rational and orderly whole. Pragmatically considered, Christian Science frequently appears to be right; scientifically it is wrong from beginning to end. And this may be used as an argument for Christian Science or against pragmatism as suits the taste.

My own view (if the reader should care for it) is, to use the striking words of Bradley, that no man ever went about to break logic but in the end logic broke him; and how the inevitable logic of Nature which we call natural law, and which we sometimes affect to despise, sometimes revenges itself on us and breaks us has been already suggested in a painful reference from the further elaboration of which I must be excused. The reader will doubtless be able to supply concrete illustrations from his own experience if he wishes to do so. It is powerfully illustrated by that mute but mighty army of men and women who, though not believing in death and disease, have not been able to resist the universal conquerer, and who have often fallen a ready prey to his power because heedless of the manner of his operations, and failing to fight him with his own weapons: those laws of Nature, namely, whose universal and consistent sway proclaims them divine.

Gonorrheal Nephritis.—Stoyantehoff, in the *American Journal of Urology*, May, states that the treatment of gonorrheal nephritis differs little from that of any case of acute nephritis. The diet should consist exclusively of milk; diuretic and alkaline drinks may be added. As a urinary antiseptic he advises salol—2 grams daily. If the pain is great and the albuminuria is moderate, opiates may be given without fear of aggravating the renal lesion.

WHOOPIING COUGH FROM THE POINT OF VIEW OF PUBLIC HEALTH *

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Whooping cough has so long been treated by the laity and also by some physicians as a joke that I would hesitate to bring the subject to your attention, if I did not feel that it is high time for the medical profession to put aside this erroneous idea and give serious thought to checking this large source of infant mortality. That there is some excuse for the popular impression that whooping cough is not a serious disease is shown by the following quotation from one of the older editions of Strumpell's "Text-Book of Medicine":

The prognosis is favorable with the majority of children, if they are previously strong and healthy. Very young children are in more danger than older ones. There is danger if secondary pneumonia develops and if the general nutrition and strength of the child suffer.

This is the teaching I received in college, and it is certainly enough to give the student the impression that whooping cough is a disease not to be greatly feared. The feeling that whooping cough is a trifling affair seems to be due in the main to two reasons. The first is that in children over five it is seldom fatal, 96 per cent. of those who died from this disease in 1906 having been under that age. The second is that the patients usually die from some terminal complication, most often from bronchopneumonia, which, according to Holt, is responsible for two-thirds of the deaths from whooping cough and is often put down as the cause of the death without reference to the previous disease. But this, of course, is not the proper classification of the death, for the bronchopneumonia would not have occurred without the whooping cough and is entirely secondary to it. This is likewise true of the diarrheal diseases, the convulsions, and the marasmus which frequently come at the end to carry off the whooping-cough patients. On account of this erroneous classification, our mortality from whooping cough, which, as I shall show, is now far too large, seems smaller than it is, though how much smaller it is, of course, impossible to say.

To prove to you that whooping cough is really a very serious matter, I think it will be advisable, before going farther, to give a few statistics in regard to the mortality from this disease, though this varies greatly in different cities and in different years, for, to quote the census reports for 1907, "whooping cough, like scarlet fever and measles, seldom shows an unbroken high prevalence from year to year in a given city, but fluctuates with high rates for a year or two and then abruptly declines." It nevertheless nearly always causes more deaths in the registration area than measles or scarlet fever, and in 1907 caused sixty-five times as many deaths as smallpox. In 1906 there were 6,324 deaths attributed to whooping cough as against 4,856 deaths in 1907, and in both years typhoid and diphtheria, alone of the epidemic diseases, gave a greater mortality. "Yet the United States occupies a somewhat favorable position among the nations with respect to its death rate from this disease," the rate in some of the European countries being many times that in this country. It is interesting to note that in ten years in New York City whooping cough killed 3,200, while in the same period only 3,430 deaths were attributed to typhoid. To come

* Read before the Richmond (Va.) Academy of Medicine and Surgery, May 25, 1909.

nearer home, we find that the highest death rate in 1907 was in Lynchburg, while Dr. E. C. Levy, in his "Annual Report of the Health Department of Richmond," says:

It is not generally recognized, either by the people or by the medical profession, that measles and whooping-cough are the two children's diseases that are especially fatal in this part of the country, far exceeding, as shown by our own statistics, scarlet fever, which is ordinarily regarded as much more to be dreaded, and also exceeding diphtheria since the general use of antitoxin and proper quarantine regulations, based on bacteriologic methods.

Let us now take a general view of the situation and see what seems to be the cause of this large death rate and what is being done to reduce it. I think the first reason is the general impression that whooping cough is a comparatively mild disease which all children must have, and that the sooner it is over with the better it is for all concerned. On account of this belief, there is often no attempt made to protect children from infection, and people whose children have whooping cough see no reason why they should be inconvenienced in order to save the children of their neighbors. For this state of affairs I believe the medical profession is primarily to blame, for we have not warned the public sufficiently of the danger to young children and very often have told the parents to keep children with whooping cough out of doors or to send them to the park; while we have failed to warn them not to let these patients come in contact with other children. As a result we not only find children with whooping cough in the streets and parks, but they are taken without compunction on the street cars, trains and steamboats, and are even sent to visit other children in their homes. When we consider that over 95 per cent. of the deaths from whooping cough occur before the fifth year, and that consequently we could save almost all the children who die of it, if we could merely keep them away from direct infection till they were beyond that age, we can appreciate how criminal our present carelessness is. There are, however, various things that make the segregation of whooping-cough cases very difficult. The older children do not feel very sick and want to run and play as usual, though they can spread the infection at any time during the six or twelve weeks that the disease lasts. Besides it is very necessary for these patients to get outdoor air, and in getting this great care must be exercised to keep them away from other children. Furthermore, the infectiousness begins with the very onset of the disease, so that other children are frequently infected long before the diagnosis of whooping cough is made in the first patient. Consequently the problem of lessening whooping-cough mortality presents many difficulties which so far have not, to my knowledge, been aggressively attacked by any health department, for, as Dr. Chapin, of Providence, says, "no one has suggested any efficient method of combating whooping cough." The patients themselves are excluded from the schools when the disease is fully developed, but their brothers and sisters are allowed to continue their studies through the possibly most infectious catarrhal stage, during which period they are almost sure to infect schoolmates with infant brothers and sisters at home. Further than this exclusion from the schools I know of no public measures for hindering the spread of whooping cough.

In regard to prevention, Forchheimer very pointedly remarks: "In few diseases can so much be done by prophylaxis; in few is so little done"; for from a practical standpoint whooping cough seems to be only directly infectious, though a few cases are on record

which seem to have been carried by a third person. Therefore, though it may sound presumptuous for me to make suggestions in regard to controlling a disease, for which "no one has yet suggested an efficient method of combating," I nevertheless think it is time for some one to present plans which can at least call forth criticism, if they are not capable of standing the rigid test of actual use. I would base my plan of attack on the propositions that over 95 per cent. of the deaths from whooping cough occur before the fifth year, that after this age the disease is comparatively mild, and that in consequence we can reduce the mortality to a relatively unimportant figure by merely protecting the children under five years from direct exposure. The first step in this direction is to teach the people that for young children, and more especially for infants, whooping cough is one of the most fatal diseases, but that their children will be comparatively safe if they can only ward it off for a few years by keeping them away from children with the disease. It is, therefore, a campaign of education that we must carry on, though not nearly so difficult a one as that which is now being waged against consumption. And, by the way, we should be able to use some of the well-organized forces engaged against tuberculosis, for whooping cough is an undoubted predisposing cause of tuberculosis in children. The health departments should then begin this work of education, and they should begin by seeking the advice and hearty cooperation of the physicians of their respective communities, for without this the work will be vastly more difficult. Having done this through the medical societies or by letter, let the people be warned of the danger to young children from whooping cough, not only at the beginning of the campaign, but every time the disease starts up in a city or in any fresh section of it. Having told the people that whooping cough is more fatal than scarlet fever and smallpox, let the health departments prove that they believe it themselves by treating whooping cough in much the same way that we treat other contagious diseases. Of course, it will be impracticable as well as unnecessary to quarantine a whooping-cough patient in one room, as we do scarlet fever, diphtheria and smallpox, but a modified quarantine should be instituted in all cases.

The first actual step to be taken with the individual cases is to see that they are reported as promptly as possible to the health department. The house should be placarded, as much to make the parents feel that the case is serious as to warn friends and neighbors of the presence of the disease. A medical inspector should then go to the house, give the people instructions as to the seriousness of the disease with young children, as to how to prevent its spread, the probable time the contagion will last. He should also have printed instructions to supplement what he has said. The instructions as to quarantine will, however, have to be modified to suit the cases and the circumstances of the family. Thus children that live in houses with yards and porches, ample enough to provide the very necessary fresh air, should not be allowed to leave the premises. Less fortunate children might be allowed in the streets and parks, if they wore conspicuous ribbons bearing the word "whooping cough," but this privilege should be withdrawn if they were found to be purposely mixing with other children. A still better place for these children is a special hospital outside of town, where they could get plenty of fresh air and good food, for this is the only sure way of saving the babies of the tenements from infection. All large cities should have these whooping-cough hospitals,

and it speaks very badly for America that we have no place to put these children, who frequently must be kept at home to infect the others in the family. Not only should a medical inspector have the right to send to this hospital all patients that he does not think can be cared for at home, but also any patient who breaks the quarantine rules established by him should be sent to the hospital, no matter what the financial circumstances of the family. Not only should the whooping-cough patient be withdrawn from school, as seems to be the universal custom, but the other children in the family should be excluded for two weeks after being separated from the patient, and this exclusion should be continued, if they have even the slightest coughs. Any pupil who has been exposed to contagion and who has a cough should be immediately sent home by the teacher, who should also notify the health department. In this way one of the greatest sources of infection, the patients who have not yet "whooped," will be nearly eliminated from the schools.¹

It is frequently easier and better for people with the necessary means to send their young children away from the house, which contains a case of whooping cough, but these children must be watched and kept away from other children as soon as any suspicious cough appears.

The placard and the quarantine should not be removed from the house, if we follow the rule laid down by Forchheimer, "unless six weeks from the onset have elapsed, until the true whoop shall have disappeared entirely and until expectoration shall have practically ceased." The room occupied by the patient should then be disinfected as much for educational purposes and for justifying the placarding and quarantine as for the removal of contagion left in the room.

Another most important prophylactic measure lies. I am afraid, in the main, beyond the reach of the health departments; I mean the early diagnosis and the consequent prevention of infection from cases in the catarrhal stage, for until we are certain of the bacterial cause of the disease and can diagnose it as we do diphtheria, we shall have to depend on the individual observations of the family physicians, but the health authorities can help them by warning them of the presence of whooping cough in the city as soon as the disease is reported. Thus warned we should not wait for the "whoop" before telling the parents that the disease may be whooping cough and that they consequently must be careful not to spread it. In such cases a dry cough with practically no chest signs, little or no rise of temperature and a lymphocytosis is enough to make a diagnosis; and this early diagnosis may be enough to stop a considerable epidemic. Nothing is more important than this early diagnosis and early warning from the doctor who is called in to look at the child; and the health authorities, I am sure, can count on this cooperation on the part of the physicians, for without this early diagnosis the disease can spread to a considerable number of children before actual public health precautions can be taken.

Of course, I do not claim any originality in the methods I am suggesting, for they are being used in various other diseases. What I do maintain is that they should even *now* be applied in a rational way to a disease, which is one of the largest sources of infant mortality and which at present we are absolutely neglecting. The

public is educated to demand protection from smallpox, but absolutely uneducated as to the possibility of preventing almost all the deaths from a disease which is now killing sixty-five times as many people as smallpox. It is up to us physicians, but more especially up to the health departments, to open the eyes of the people in regard to whooping cough and teach them to prevent what under the circumstances seems a very shocking mortality.
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SOME THOUGHTS CONCERNING SLEEP AND DIGESTION

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Let me have men about me that are fat,
Sleek-headed men, and such as sleep o' nights.—*Shakespeare*.

The devout psalmist sang, "He giveth His beloved sleep"; old Homer exclaimed, "Sleep is the gift of God"; the poet Young wrote of it in his "Night Thoughts" as "Tired Nature's sweet restorer," and also:

Man's rich restorative, his balmy bath
That supplies, lubricates and keeps in play
The various movements of this nice machine.

Depew calls it "the solvent of longevity, health and work"; while Henry Clews, the financier, said recently, "Sleep means everything to a man—good health, good looks, will-power, and self-confidence." Wise men from Socrates to Russell Sage have advocated spending one-third of the twenty-four hours in bed. All this shows a deep appreciation of this restful attribute among all ages and conditions of human thought.

Sleep, as a "balm to hurt minds," has been thoroughly considered by the neurologists, and, as a desideratum in all acute and continued diseases, will be found mentioned frequently in the various works devoted to therapeutics.

As to the actual influence of sleep on digestion, however, there is some conflict of opinion, and I shall endeavor briefly to cover the subject in a manner helpful to those interested in practical dietetics.

It is a well-known physiologic fact that the elimination of carbon dioxide and absorption of oxygen are diminished during sleep, mainly because the muscles are less active.

Tigerstedt places the ratio of metabolism between the sleeping and waking state as 100 to 145, but asserts it to be dependent on cessation of voluntary movements; "for it may reach just as low a level in the waking condition, if the muscles be completely relaxed and every voluntary motion suppressed."

While other secretions are diminished during sleep, this does not apply to those of the digestive apparatus. "It is sometimes stated that the digestive secretions are diminished during sleep, but the statement does not rest on satisfactory observations, and may be doubted" (Howell). "Sleep does not exercise the least influence on the secretory work of the gastric glands" (Winfield Hall).

No one would deny that a baby thrives best, and puts on weight most rapidly, when he can sleep soundly after each full meal from the maternal fount. It is a frequent custom among those who perform arduous physical labor to take a sound nap during the noon hour immediately after eating; and some of the finest specimens of muscular development that I have observed have been those who went to bed promptly after eating a hearty supper, and just as promptly went to sleep.

1. Attention has recently been called to the number of cases of measles and whooping cough contracted in the kindergartens. So it is questionable from a public health standpoint whether these schools should be allowed to take pupils under five years of age.

As to the movements of the stomach and intestines during sleep, those movements are to all intents and purposes as active as during the waking hours, less the stimulation of extraneous impressions produced by muscular exercise or the play of emotions. Some physiologists claim that gastric and intestinal mechanisms are abrogated during sleep, but Dr. W. B. Cannon, in reporting some of his investigations on animals, writes: "It is worthy of note that nearly all the animals curled up and slept during the time between observations; nevertheless, the progress of food through the intestines continued. The statement is also made that at night, even without sleep, the intestines are almost entirely at rest; that this is their normal time for repose. I have seen both large and small intestines actively at work, however, from half past nine until half past ten at night." These statements I have several times personally verified.

One qualification should in fairness be allowed, and that is the lessened influence of the reflexes during sleep, especially deep sleep. The following from Landois, while not entirely in accord with some of the conclusions drawn, calls attention to the diminution of reflex action, affording a basis for a practical deduction later on: "During sleep there is a reduction in the activity of gastric and intestinal movements and in the secretions which indicates a lessening in the activities of the respective nerve centers; and the diminished reflexes indicate a lessening in the activity of the spinal cord." With the last statement I am in accord, but the preponderance of proof would permit us to assume that during sleep the gastric and intestinal secretions are poured out with unabated freedom, and that the mechanics of digestion progress in an orderly manner. We must not, however, lose sight of the decided psychic influence for good or ill exercised during the waking hours. That pleasureable sensations may augment the flow of gastric juice, even when no food reaches the stomach; or that disgust may check its secretion has been amply proved by Pawlow and others. The fragrant cigar after a savory meal, coupled with peace of mind and pleasant society, lends a psychic aid to digestion which is entirely absent when the reflexes are dulled by sleep. Again, that fear may cause peristalsis is only too well attested by many soldiers who feelingly remember their "hurry calls" on the eve of their first battle.

Another point to consider is the motor power of the stomach. I have found that in four out of seven duration tests, whereas the stomach would barely empty itself in three and a half waking hours, it was not quite empty if the subject observed had been asleep part of the time. This number is too small to be conclusive, but it is strongly suggestive of the rôle the waking senses may unconsciously play in assisting this viscus to perform the mechanical part of its task.

When the brain is alert, the reflexes on guard, and the voluntary muscles at work, each department of the human economy is calling for its quota of innervation and blood; these different departments are exacting their tribute from the constructive forces, and turning over to the excretory organs the products of combustion and waste. During this period the digestive department can draw only a "working interest," not being permitted to put away any appreciable surplus, until the day's activities are ended, sleep stills the voluntary movements, decreases the carbon dioxid output, and makes the least demand on the involuntary vital mechanism. It is then that Nature, our industrious handmaiden, begins her constructive housekeeping. "She

does it in an orderly cooperative way, following a regular method of work in repairing waste, actively forming new tissue, and giving just the proper amount of care and nourishment required of all parts, both mental and physical, in regular sequence.

When Shakespeare wrote of "fat men who sleep o' nights," he recognized a principle patent to every one; for those who sleep much, thereby allowing the plentiful recuperation of both body and nerves, are generally rotund and cheerful. Dickens' fat boy, so characteristically portrayed in *Pickwick papers*, might be cited as a "near-classic" illustration that there may be as much truth in the injunction, "Sleep and grow fat," as the old saw, "Laugh and grow fat."

It must not be understood that I advocate heavy meals at night, or articles of food calculated to tax the propulsive power of the digestive canal. In the young and vigorous, in whom the muscle fibers are elastic, and the nervous system unimpaired, little fear need be entertained but that a meal will be cared for at any hour, though habitual overindulgence in eating at unseasonable times, like any other abuse of the bodily functions, will exact its toll of punishment sooner or later. In the aged, however, or those with sluggish motor force, or hyperesthetic nerves, it is best not to place too much work on the stomach and intestines during the hours allotted to sleep.

A certain amount of food in the stomach, the digestion of which, in drawing from the brain a portion of its blood, keeps busy the nerve centers concerned, indirectly quiets other nerve centers which otherwise might exert a wakeful influence. Many sufferers from insomnia well know the happy effect produced by taking hot milk or cocoa, or a light repast just before retiring.

The following are some general suggestions as to dietetic recommendations in relation to sleep:

The young infant can not get too much sleep, and this is best attained by filling his stomach at stated intervals. Vigorous, growing children and those engaged in manual labor thrive on a full breakfast and dinner, these two meals containing most of the daily quota of proteids. The supper may be plentiful in quantity, but should consist of such articles as bread, milk, cereals, eggs, fruits, etc., which do not unduly stimulate the nerve centers by their metabolic products. Soups, rich extractives and solid proteids also cause the bladder to be filled with urine rich in waste products and very acid, this being a factor worth considering.

Those who labor with their brains, or skilled artisans whose crafts demand mental tension and but little muscular effort, will find their efficiency best subserved by a light breakfast, a slightly more plentiful lunch, and at the close of the day's work a generous meal, provided that after it three to five waking hours are allowed, so that the psychic reflexes may have an opportunity to contribute their share to the processes of digestion.

For the leisure class or those who keep late hours and often burn the candle at both ends, it is advisable to take a light repast in bed at 10 a. m. to 12 noon, a hearty dinner at 5 to 8 p. m., and a moderate supper, with not too stimulating or alcohol-containing beverages at 11 or 12 p. m.

The foregoing suggestions are intended to be elastic, requiring such changes as may suit individual habits or environment, and the thoughts herein are offered as a small contribution to an interesting subject and one not too well understood.

409 Candler Building.

THE RESPONSIBILITY OF THE PHYSICIAN IN CASES WHICH ARE A MENACE TO PUBLIC SAFETY *

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In a paper by Dr. Philip Coombs Knapp entitled "General Paralysis as a Menace to Public Safety in Transportation," which appeared over a year ago,¹ it was stated:

There can be little doubt that if men in responsible positions on our railroads were subjected to thorough examination by competent neurologists at regular intervals many of these cases of general paralysis and other brain diseases would be detected and the dangers attendant upon them be averted. Many railroads demand a careful examination of all applicants for employment; but when this examination is once passed, the man is not examined again unless some striking disturbance is noted. The average railway surgeon, however, will inevitably overlook the slight but significant symptoms that reveal grave brain disease to the neurologist, and, even if he were capable of detecting them, it is only by examinations repeated at regular and rather frequent intervals that the onset of these diseases can be detected and the danger averted. These affections are not responsible for all the cases of negligence that cause railway accidents, but they form one factor which can be eliminated. The state requires that certain railway employes shall pass examinations to prove that they can tell red from green. Is it too much to require them to pass periodical examinations to prove that they can instantly understand the different meanings of red and green and act promptly on that knowledge?

In the same journal there also appeared an editorial on the same subject, in which it was stated that a committee composed of Drs. Knapp, C. G. Dewey and G. A. Waterman had been appointed by the Boston Society of Psychiatry and Neurology to confer with the Railroad Commissioners of Massachusetts and to take such action as they might consider necessary to guard against this danger.²

After reading the above I felt that as a civic duty I ought to do what I could to extend the influence of the above movement and as a first step I contributed a note which appeared with additions by the editor, Dr. Edward N. Brush, in the January number of the *American Journal of Insanity*.³

I then called on a friend who occupied an important position in one of the railroads of Maryland to urge on him the importance of instituting such neurologic examination of engineers, and others directly responsible for the lives of passengers, as would indicate the early symptoms of organic nervous diseases, such as paresis, that would in their development impair the judgment of the subject and so render him an uncertain quantity so far as safety is concerned. The matter had never been brought to my friend's attention before and it aroused his interest; but I was necessarily passed on to the official whose duty it is to supervise such matters, namely, the chief physician of the road. In the latter's opinion such a procedure is unnecessary for several reasons. The chief of these are:

1. The men would not submit to such an examination.

2. A candidate's rejection for some neurologic symptom not plainly apparent to the subject would bring a

strong protest from him which it would be difficult to answer to his satisfaction.

3. Following the candidate's objection there would immediately follow a much stronger one from the labor organization to which he belonged.

The last appeared to be the most important reason to the physician. Probably most of us who are rather unfamiliar with the methods of some labor organizations will fail to appreciate why this last reason should appeal to him so strongly. The same objection appeared to be the chief one to the surgeons of two roads. I feel that perhaps the most important duty we have in connection with this question is the moral education of the men themselves so that they will put aside any selfish considerations and consider the greatest good of the greatest number.

I felt that part of my civic duty was the investigation of the methods of examination used by the various railroad surgeons in order to satisfy myself that such an examination would detect any fairly marked neurologic symptoms, though I could easily understand that the ordinary medical examination could not include a thorough neurologic one.

I regret to say that in none of the three forms of the examination blank submitted to me was there any question concerning the conditions of the pupils, tendon reflexes, station or coordination, all of which seem to me to be important and taken together to give a maximum of information for a minimum of effort.

One blank asked if there was facial paralysis, and if there was serious defect in speech. The surgeon of one of the railroads also assured me that their usual examination included more than was set down, but there was certainly no space on the blank for recording any additional points brought out by the examination, and my experience with men who habitually follow a printed examination blank is that they are not apt to go beyond it.

I suggested to each of the surgeons interviewed that they add to their examination blank some question regarding the pupils, the knee-jerks, station and coordination, but was met with objections similar to those noted above.

None of the surgeons was indifferent to the importance of the recognition of organic nervous disease, but all seemed to think that its recognition would be easy in any dangerous case and that routine examination was, therefore, unnecessary, but the labor organization seemed to be the chief objection.

The results of my investigation of the methods of examination in use by the three railroads may be very briefly summed up as follows:

1. The medical examination is inadequate for the detection of any organic nervous disease.

2. Those in charge of such work are handicapped by the attitude of labor organizations and by the attitude of the ordinary working man.

It may be interesting to describe two cases recently seen, which will serve as illustrations for a number of points which have already been mentioned and for others which are to follow.

CASE 1.—*Patient*.—John T. A. S., a white man, aged 43, married, was admitted to the Johns Hopkins Hospital Dispensary Aug. 22, 1908, complaining of his mind being affected. His father died at 64 from the "third stroke," having had the first eight years before. His mother was living and well, aged 76.

History.—The patient is the third of six children. Consanguinity between his parents, or any case of mental or nervous disease in the family was denied. According to the

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

1. Boston Med. and Surg. Jour., Feb. 6, 1908, clviii, 187.

2. As additional testimony to this danger I would refer to the London letter of THE JOURNAL A. M. A., Sept. 12, 1908, ii, 928.

3. 1909, lxx, 545.

patient, he had gonorrhea three times before his marriage, which occurred when he was 29. Lues was denied; he had two healthy children. His first illness was an attack of typhoid fever at 35, during which he was treated at home and in which he was delirious at times. He had been a moderate user of alcohol, but had used tobacco very freely, probably chewing to excess. He stated he had been moderate in his sexual indulgences. History was negative as to religion and social disposition. From 21 until 42, or until ten months before admission, he was an engine man for the Baltimore and Ohio, being discharged for causing a wreck by falling asleep at his post. An effort was made to ascertain the amount of damage caused, but this was found to entail more search of records than the subject was worth. It was found, however, that the wreck was a "side-swipe" and probably not very serious and that the patient had been given relief until his discharge two months later. Following his discharge he invested in a small confectionery establishment, but he now thought that he would lose his money. The loss of his position worried him and he stated that he had been irritable for some time. He denied loss of consciousness, but admitted that there had been times when he had not known that he had done things, and forgot what he had gone for when he reached his storeroom. He thought that perhaps he might have been in "a study" at the time of the accident and not asleep, but from a feeling of shame told the railroad officials that he was asleep. From the patient's wife it was learned that since a wreck on June 22, 1903, when he was pinned under his engine for twenty-seven minutes, he had been absent-minded and she would have to see that he took his watch, switch-key and lunch basket when he went to work and that he wound his watch. She also spoke of his changed disposition, saying that he had become irritable, and that at times he did not appear to understand what was said to him and would ask the speaker to repeat what had been said. At times he had "an unnatural look;" "he looks wild and his eyelids look red and swollen." The patient said that occasionally he found that he had done something without having any recollection of having done it.

Examination.—Physically the patient was a well nourished man with a florid complexion. Tongue was protruded straight, was clean and showed slight tremor and slight tongue tie. Speech was negative. Reflexes were slightly below normal. Pupillary reflexes were apparently normal. Romberg's sign not present. Examination in the ophthalmologic department showed a hypermetropia and chronic conjunctivitis, for which he was given glasses and an eyewash. He also complained of tinnitus and was referred to the otologic department, where a chronic catarrhal otitis media was diagnosed and treated.

The man was seen but three times and he probably moved to Pennsylvania, where he expected to receive financial assistance from relatives.

Diagnosis.—From the above history and my personal observation of the patient I am inclined to make a diagnosis of psychic epilepsy, probably of traumatic origin, though I should liked to have had a further period of observation in order to have been quite positive as to the diagnosis.

I cite the case to illustrate three points: first, a nervous disease in an engine man probably caused the railroad two wrecks, and it is probable that chance determined that they were not greater; second, the tests which have been suggested above would not have been sufficient to cause the detection of the disease and, therefore, even were they carried out as a routine, a number of men unfitted to hold responsible positions would continue to hold them; third, it partly shows the mental attitude of the man toward the officials and his mates, he preferring to state falsely that he had been asleep rather than to confess having periods of unconsciousness which he could not explain, and preferring not to seek advice through fear, possibly, of losing his position.

CASE 2.—Patient.—Walter J., a white man, aged 48, married, and a captain of a coast steamship, was admitted to the Johns Hopkins Hospital Dispensary Oct. 30, 1908, complaining of nervousness. His family history was negative.

History.—The patient had had three attacks of gonorrhea, had suffered from rheumatism for years, and at one time was alcoholic to a mild degree. He had been operated on for appendicitis ten years previously. He had five children, all of whom were living and well. The patient said that he had been feeling bad for a month and a half, having a poor appetite and being unable to sleep. He denied any attacks of unconsciousness.

Examination.—The patient was a well-nourished and thick-set man with a ruddy complexion; looked a little below his age. He showed a marked speech defect, stumbling over the usual test words. Pupils were regular in outline and reacted rather sluggishly to light. Tongue deviated to the right and was tremulous. There was a marked tremor of the extended hands. Writing also showed a coarse tremor. Gait was rather unsteady and there was some swaying. The right knee-jerk was somewhat more brisk than the left. Later all tendon reflexes were exaggerated.

It is this case which serves as a text for the many questions which may be suggested by the title of this paper.

I did not see the patient at his first visit to the dispensary and when it was found that he was able and willing to pay he was referred to a colleague of mine under whose care he has since been. I have examined him twice at intervals of several months and while at the second examination he showed a considerable improvement, I am nevertheless of the opinion that his is a case of paresis of a slow course. As captain of a steamer he was responsible for a crew of about forty and passengers from 4 to 80. Here was clearly a case in which our moral duty demanded that something should be done to prevent his longer continuing in so responsible a position and he was accordingly advised to take a vacation, which he did; but after several weeks, during which his improvement had taken place, he became impatient of idleness and returned to his position. On account of the libel law of Maryland, which is an extremely delicate affair, none of us felt like saying to the patient that he positively had paresis, nor did we wish to go to the man's employers and warn them. Finally, however, this step was taken and one of us who personally knew the head of the steamship company told him of the case and suggested that the patient be ordered to have a medical examination. Unfortunately this was not done with the finesse that it might have and the patient came back at us for an explanation. Matters were easily arranged, however, and my colleague and another went to the patient's house to make a lumbar puncture. On the result of this, all of us who were interested in the case put considerable faith, and it is therefore extremely unfortunate it should have resulted in a dry tap, due principally to the fact that the patient, who is a large man, was unable to bend his spine and allow the needle to enter.

At the present time the patient is back at his work in a responsible position, but it seems to me that the danger of this course is very slight as he is seen between each trip and has himself been warned to be careful and to turn the boat over to his mate should certain symptoms occur.

I must confess that the pleasure of a trip on his boat would be considerably marred to me by my anxiety lest he make some of those defects of judgment to which paretics are so prone, but the man must make his living and there seems to be no other course to follow.

It seems to me that the simplest thing which railroads might do in order to minimize the danger of using a man who is nervously unfit to run their trains would be to institute tests of reaction time, repeated quarterly perhaps, the stimulus being the display of a red and a green light, the patient to make different movements, which should be recorded by a chronoscope. The same device could be used for steamship captains and pilots, while for those accustomed to follow auditory signals auditory stimuli could be used.

Should an individual show a slowing of reaction a neurologic examination might be made and the cause of such slowing learned if possible. Such procedure probably would be more satisfactory than the recording of the few tests which I have suggested and which would

necessarily be conducted by a number of men who are probably unskilled in the employment of such tests.

The second case history which I have detailed brings up several questions concerning which a great deal might be said. Our action in notifying the man's employers that he was probably suffering from paresis and was, therefore, an unsafe employé may be viewed by many as a violation of professional secrecy. By such action one of us at least made himself liable to a criminal prosecution and to damages. On the other hand, it would seem that by every moral law such action was justifiable.

Considerable time might be spent in discussing the subject of professional secrecy and this paper might be expanded far beyond its present size merely by giving a summary of some of the papers which have appeared on the subject in the past ten years, but unfortunately such a summary would not bring us much nearer to a solution of the question.

By the Hippocratic oath the physician binds himself to secrecy. "My tongue shall be silent as to the secrets which are confided to me and I will not use my profession to corrupt manners or aid crime." The last clause, "to prevent crime," in many instances will serve as an excuse or reason for violating professional secrecy; but in the present case it seems to me doubtful if we can consider that a crime is about to be committed and our only excuse was "the greatest good to the greatest number," and possibly the Golden Rule. I am not quite sure whether even the last will serve us, for while I would feel grateful to any one who would save me from any act by which I might work harm to others, yet I probably would resent such interference if it meant the loss of my position and the impairment of the livelihood of myself and family. So that without spending considerable time in arguing the question, we are reduced to the single excuse of the "greatest good to the greatest number." This must be the excuse for violation of professional secrecy in many cases, but no rule can be given and each case that we meet with must be decided of itself.

Perhaps enough has been said of the moral and ethical side of the question, but considerable more might be added.

On the purely legal side, it must be remembered that in this country each state has different laws in regard to the professional relations which a physician bears to his patient. Before taking any step which entails a violation of professional secrecy it would be well to look up the state law with its definitions and penalties, and thus learn of the risks that will be incurred. It takes but slight study of the literature or but a few moments' talk with a lawyer to learn that each case must be decided of itself and that no hard and fast rules can be laid down.

Becker,⁴ in considering the question in quite a narrow sense, concludes with the observation: "In all statutory enactments in a free country the test of the law must be whether it works the greatest good to the greatest number."

"Apply that test to the statutes under consideration in this paper for yourselves, and no doubt you will reach such a conclusion as will be eminently satisfactory to the dictates of professional etiquette, and to the

duty that you owe to yourselves, your employers and to the public sentiment."

Tait⁵ gives a number of instances which illustrate some of the difficulties which beset the question. His paper is well worth reading.

Nichols,⁶ Benedict⁷ and McKee⁸ give illustrative cases with brief discussions which furnish considerable food for thought and probably will be of greater value to those who desire to look up the matter than the papers previously cited.

Morrow,⁹ while dealing with the question in a limited sphere, has written an excellent paper and in the beginning lays down some broad principles which will be helpful to all.

I have not quoted any foreign papers, as the laws of Great Britain and France are quite different from those of this country.

As conclusion to the present paper I would say that if a physician has as a patient a person unfit to hold a responsible position and a menace to public safety he should endeavor to have the patient voluntarily give up such a position, or if circumstances are such that there is no immediate danger the patient may continue in it under observation. If the last is impracticable and if the patient refuses to be guided by medical advice, some steps should be taken to have the patient removed from this position. We physicians should also endeavor to have transportation companies institute such tests as will insure against the employment of those likely to be a menace to public safety.

The Treatment of Cholera.—At the session of the Royal Society of England, Jan. 28, 1909 (*Nature*, February 25), Prof. L. Rogers offered a communication on the composition and pressure of the blood in cholera and the use of hypertonic solutions in its treatment, based on experience in India. The blood of Bengalis has been found by Captain Mackay to contain a higher proportion of salts and a smaller proportion of erythrocytes than that of Europeans, and Rogers has found that their blood pressure is lower. In cholera the enormous secretion of fluid into the bowel drains away the fluid part of the blood and there is a very definite relationship between the amount of fluid thus lost and the severity and mortality of the disease. Injections of normal salt solution (0.65 per cent. of sodium chlorid) into the veins has an almost miraculous effect, but this is only transitory and in the course of a few hours the symptoms recur. It occurred to Rogers that if he were to inject the hypertonic solution of 1.35 per cent. there would be less likelihood of the diarrhea recurring. This treatment simply revolutionized the results and instead of being a rarity the recovery of collapsed patients is a rule. In severe cases the proportion of chlorids in the blood falls below normal in spite of the concentration from loss of water, and he therefore sometimes uses a saline solution of 1.65, but usually 1.35 is sufficient. In bad cases the coagulability of the blood is greatly reduced and he now generally adds three grains of calcium chlorid to a pint of saline solution. Uremia is likely to occur in the reaction stage of cholera and is associated with a comparatively low blood pressure; and the hypodermic administration of adrenalin and digitalis is indicated for the prevention of this serious complication.

5. Tait, W. C.: Professional Secrecy; Its Legal Aspects, *THE JOURNAL A. M. A.*, 1899, xxxiii, 458.

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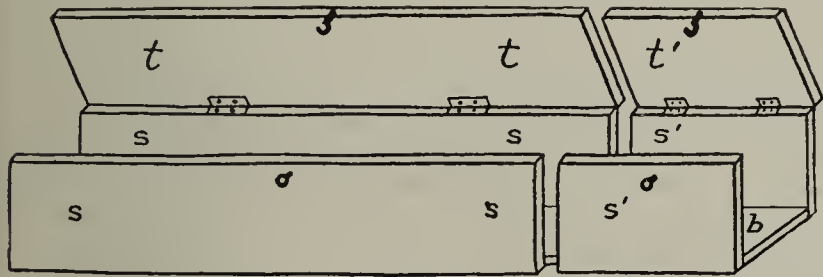
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Clinical Notes**FLANNEL BANDAGES FOR CLINIC USE**

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Expense of material is frequently an important factor in providing generously for use in a clinic. Conditions requiring the application of a firm even bandage, for which the usual cotton roller is not best suited and for which the flannel bandage (strictly speaking) is too heavy, warm and expensive for constant use, can be provided for by bandages prepared from medium-weight shaker flannel. A bolt is usually 50 to 56 yards in length and 24 to 26 inches in width. My custom has been to buy a "Berlin domet" shaker flannel, which is 26 inches wide and costs $4\frac{1}{2}$ cents a yard. The bolt of goods is cut into seven strips, each eight yards long, which are then rolled compactly. The length of each roll, 26 inches, is equal to the width of the goods, which will allow the selvages to be trimmed off and leave sufficient to cut into 8 three-inch sections. Each roll is placed in the device shown in the illustration and cut with any long carving-knife, the edge of which is kept roughly sharpened with an emery stick. The strip of goods in each section is then put on a bandage roller and forms a compact bandage 8 yards long and 3 inches



Device used in cutting rolls of flannel for bandages. It is made out of half-inch lumber and consists of the following parts, the measurements being in inches: One bottom piece (b) $12\frac{1}{4}$ by $3\frac{3}{4}$; two side pieces (s) each 9 by $2\frac{1}{2}$; two short side pieces (s') each 3 by $2\frac{1}{2}$; one top piece (t) 9 by $4\frac{3}{4}$ and short top piece (t') 3 by $4\frac{3}{4}$.

wide. This quality of material may be laundered very nicely and can be used many times. The expense is \$2.52 for one bolt of shaker flannel 56 yards long. This supplies 7 eight-yard lengths; 8 bandages from each length makes 56 bandages, each costing $4\frac{1}{2}$ cents. If it is necessary for the patients to purchase their own supplies, it gives excellent material much cheaper than it can be otherwise obtained.

The device for cutting the roll into sections is simple, of economic construction and of practical application.

409 Marlboro Street.

A NEW HEMORRHOIDAL CLAMP AND SPECULUM

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This instrument was devised for a clamp and suture operation described by me in the *Naval Medical Bulletin*, October, 1908. It has the following advantages, in all hemorrhoid operations, over the clamps now in general use:

1. The clamp and speculum are combined.
2. The natal curve of handles gives access to operative field.

3. The slender jaws produce less extensive area of crushed tissue.

4. The angle of jaw and curve of handles prevent dragging on the tumor by weight of instrument, as the instrument in position rests on the buttocks and sacrum.

5. The closed end of speculum prevents soiling of the operative field from possible contents of the upper rectum.

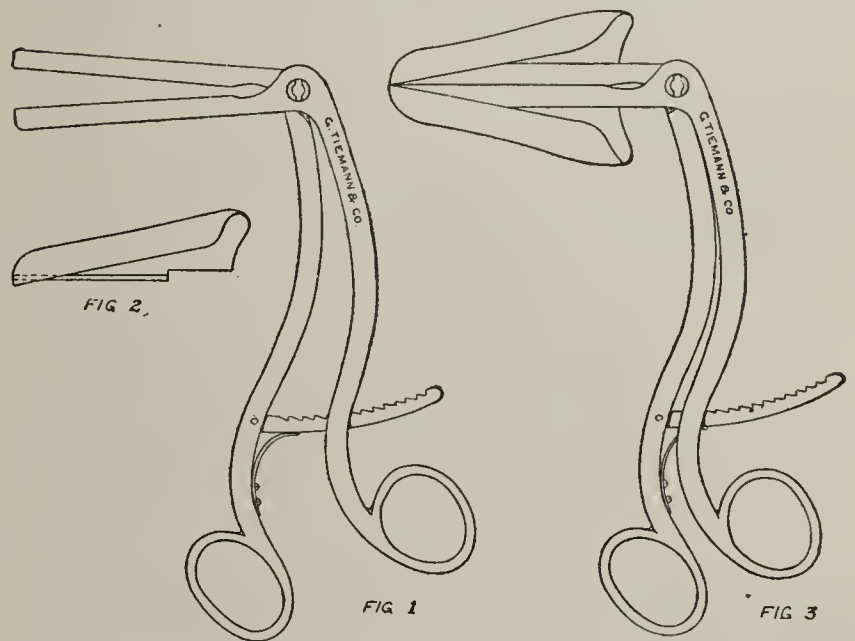
6. The speculum obviates the necessity for drawing the hemorrhoid down with forceps, as high tumors can be treated through speculum.

7. The speculum protects the rectal tissues while cautery is in use.

8. The instrument can be introduced, applied, and removed with one hand.

The instrument is fitted with two steel reversible and detachable blades, so that a serviceable speculum can be attached to the jaws of the clamp for either side of the rectum.

The clamp is introduced into the rectum closed, with the speculum directed to the opposite side from that



A new hemorrhoidal clamp and speculum.

on which the pile to be clamped is located. The jaws are slowly opened and the hemorrhoid allowed to slip between them to the extent desired, or the process may be aided by a pair of dressing forceps. The hemorrhoid is clamped by approximating the handles of the instrument, which are fitted with a ratchet catch. The hemorrhoid can then be treated through the speculum, and the jaws released by drawing down the ratchet guide.

In the clamp and suture operation the advantages of the instrument lie in the special curve of the handles which facilitates the suturing, and the slender jaws which permit manipulation with needle and holder behind them.

As the use of the cautery is not necessary in the suture operation, the speculum is removed, and the instrument is more easily turned to permit entrance of the needle on the upper and lower surface of the pedicle, respectively, during the progress of suturing.

The use of a long-bladed hemostat as a needle holder and of a short, curved needle will facilitate the suturing.

The instrument with speculum attached weighs seven ounces. The center of gravity passes through the joint, so that the instrument in position hangs in the rectum and requires no other support.

Each blade of the speculum is fitted with a steel pin at the base, which slides into a canal at the bottom of a

groove in the jaw. This pin secures the blade in position.

The crushing surface of the jaws measures $2\frac{5}{8}$ inches in length and $\frac{3}{16}$ of an inch in width. The instrument measures $6\frac{7}{8}$ inches from joint to handle tip.

U. S. S. Glacier.

TWO CASES SUGGESTIVE OF SPECIFIC GENERAL AND FOCAL REACTIONS AFTER VON PIRQUET'S CUTANEOUS TEST

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The discovery by von Pirquet of the cutaneous reaction, by Calmette and Wolff-Eisner of the ophthalmic, and by Moro of the percutaneous, have been hailed with joy and satisfaction. In reporting on them, men of wide experience and learning have been careful to observe that the usefulness of the tests is not fully established, but almost every one has expressed great satisfaction that they give no alarming general symptoms and that they are perfectly harmless.

Together with others, I have been enthusiastic over them and applied them in several cases, before resorting to the old method of injecting T. O., and I had the opportunity to observe two specific reactions after the application of the von Pirquet test. In both cases there was also the specific reaction in the foci of the disease. I, therefore, call them "focal reactions." Following is the history of the two cases:

CASE 1.—November, 1908. *Patient*.—F., Irish-American; aged 27; bookkeeper; brother died of tuberculosis; sister was suffering from it; mother died young, cause unknown; father living, aged 64; healthy; two brothers living and healthy. The patient had a few night sweats during August; felt weak, but noticed no other symptom. He feared tuberculosis and was examined by several doctors; results were negative. Sputum was examined several times, by myself among others, with negative results. There was loss of one or two pounds of flesh during long intermissions, but rapid return to original weight.

Present State.—Pulse, 84. Temperature, 98.2 to 98.6, taken for three days. Chest expansion, $3\frac{1}{4}$ inches. Respiration, 19. Height, 5 feet $5\frac{1}{4}$ inches. Weight, 152 pounds. Body well nourished; appetite and digestion good; no cough and no expectoration except on rare occasions in the morning. Physical examination revealed nothing of significance.

Von Pirquet Test.—November 12, about noon, the von Pirquet test was applied in the usual manner, care being taken that there should be no extravasation of blood by the scarification. In the evening the patient complained of an uncomfortable feeling in the chest; coughed; temperature 100.4; pulse, 96. There was no evidence of a cutaneous reaction. I examined his chest, but noted no other signs outside of harsh breathing in the right apex. The fever left the patient about nineteen hours after the application of the test. He had a good night's rest, but felt somewhat tired in the morning. After having a good breakfast, however, he felt as well as ever. Cutaneous reaction was looked for, but not found. Before resorting to the T. O. diagnosis, another specimen of patient's sputum was examined and revealed the presence of tubercle bacilli to the number of one to three in every third or fourth field. About thirty fields were examined. The sputum was centrifuged and washed. The fever, the harsh breathing in right apex, the oppressive feeling in chest and other phenomena were therefore due to the action of tuberculin absorbed through the skin.

CASE 2.—March 29, 1909. *Patient*.—Mrs. M. B., American; aged 35; married; was engaged in light housekeeping; husband healthy; father died at 48; mother at 42; both of some lung disease; deaths about two years apart. One brother died

recently of laryngeal tuberculosis. No other members of the family living. The patient's voice became husky some three or four months previous to examination. There was also some pain on deglutition, mostly a burning and lump sensation in the throat. The patient had night sweats for one week; lost some flesh, but regained it quickly; became hoarse for a day or two every ten or fourteen days; did not think she had had fever at any time.

Present State.—Pulse, 108. Temperature for three days, 98, a. m., 98.6, p. m. Respiration, 20. Chest expansion, $2\frac{1}{4}$ inches. Height, 5 feet $3\frac{1}{2}$ inches. Weight 128 $\frac{1}{2}$ pounds. The patient complained of no pain; coughed sometimes in the morning; expectoration was scanty; appetite and digestion fair; microscopic examination of sputum revealed numerous streptococci and staphylococci, but no tubercle bacilli. Sputum was centrifuged and washed as usual. Physical examination of chest revealed nothing; laryngoscope showed just a slight pallor of tissues.

Von Pirquet Test.—This was administered in the usual manner. Eight hours after the test I found the patient in bed. Her face was very much flushed with a cyanotic hue; she felt sick and vomited; her voice was hoarse; she complained of oppressive feeling in the chest, especially on the right side; had pain in her throat, even on drinking water; could not take food; coughed and expectorated thick "chunks." Pulse 140. Temperature, 102.6. Respiration, 28. Physical examination revealed moist râles in right apex. Laryngoscopic examination, made early next morning, about eighteen hours after inoculation, revealed hyperemic patches over epiglottis and the right rima glottidis; magnifying mirror was used and the hyperemic spots gave the appearance of papilla or small dots closely resembling the strawberry tongue in scarlet fever, but they had a bluish tint. Temperature went up to 104 within twenty-four hours, but declined rapidly. Within six hours (thirty hours after inoculation) it came down to 99.8. The decline afterward was more slow and in twelve hours it came down to normal (forty-two hours after the inoculation), and in fifty-six hours after the inoculation the patient felt well. This was certainly a specific reaction due to the tuberculin, the severity probably being increased by the mixed infection.

After observing these two reactions, I concluded that they were due to the specific reaction of the tuberculin applied according to von Pirquet's method.

When we analyze clearly what we administer in the von Pirquet test we need not be surprised at this reaction. One drop of a 25 per cent. solution of T. O. is usually employed. This represents 15 mg. of tuberculin, if all of it should be absorbed by the skin. One-half of the tuberculin, let us suppose, is left on the applicator, which is used to rub in the tuberculin; let us further allow that one-half of the remainder goes also to waste; still there is left 3.75 mg. to be absorbed by the skin, if the skin absorbs it at all. If the skin does absorb it, an initial dose of 3.75 mg. is certainly too high. But observers have so far seen no ill effects from the cutaneous reaction. I have also employed it in several cases with no bad results. The question that I wish to raise is: What is really the effect of the tuberculin on the skin? Has the reddened surface around the inoculated spot anything in common with the specific tuberculin reaction, or does it act only as an ordinary irritant on the skin that may possess more or less sensibility to its irritation? If so, we should get the cutaneous phenomena in positively non-tuberculous individuals, whose skin is sensitive to tuberculin.

Bandelier and Roepke seem to hold that view. In their "Lehrbuch der spezifischen Diagnostik und Therapie der Tuberkulose" they make the following statement while discussing the von Pirquet test, though with another object than mine:

Von nicht tuberkulösen Kindern 16 per cent. typische Hautreaktion zeigten; nicht tuberkulöse Erwachsene und grössere Kinder reagiren sehr leicht bezw. ohne Ausnahme.

I do not deny that there is some significance in the cutaneous reaction, but its significance when the reaction is only cutaneous is possibly non-specific, and when the reaction through some peculiarity of the skin of the tested individual becomes specific it may be violent and, therefore, dangerous, as the dose is too high and can not be graded. Whatever was said in reference to the cutaneous reaction, relates also, though not to the same extent, to the ophthalmic. In the ophthalmic test we use two minims ordinarily of 1 per cent. solution of pure tuberculin, or 1.2 of pure tuberculin. If we should suppose that half of it was wasted, and this is hardly the case, as we use no applicator with it, but drop it directly into the conjunctival sac, hold it for a few seconds until it spreads all over—then we instil into the conjunctiva, a membrane of great absorbent powers, 0.6 mg., a dose which is too high for the initial dose. If it gives no general or focal specific reaction the fault is not ours, but in all probability that the tuberculin acts in the conjunctiva only as an irritant, and the more sensitive and prone to irritation the conjunctiva is the more or less pronounced will be the conjunctivitis, irrespective of the circumstances, whether the subject tested is tuberculous or not.

Whatever was said about the cutaneous and ophthalmic reactions relates also to the Moro test.

84 Academy street.

A CASE OF BILATERAL RENAL CALCULI

DANIEL N. EISENDRATH, A.B., M.D.
CHICAGO

The following case illustrates the necessity of taking skiagraphs of both kidneys in every case of suspected renal calculi. It is a generally accepted fact that the simultaneous presence of calculi in both kidneys is not so rare as was formerly thought. It has been estimated to occur in from 15 to 20 per cent. of cases of nephrolithiasis. It is of the utmost importance to ascertain the bilateral presence of calculi, owing to the frequency with which anuria may occur, with obstruction of the ureter of one side and reflex inhibition of the functional activity of the opposite kidney or cessation of the secretory functions of the latter as the result of blocking of its ureter by a calculus. It is beyond the province of this brief clinical report to discuss the advisability of operating on one or both kidneys at the same sitting. At present I am inclined to believe that the method pursued in this case of operating at an interval of four to six weeks is the safer one. The history of my case is as follows:

History.—E. H., aged 20, was referred by Dr. Mortimer Frank of Chicago. In 1903 (five years prior to my first examination) the patient began to have pains alternately over the right and left lumbar regions. Up to one year before my examination the pain had been chiefly in the right side, but during the year preceding my examination the pain had been confined to the left side. The pain was of an aching character, lasting several hours, and localized over the left kidney. The urine had been cloudy for past four years. Neither blood nor calculi were ever passed until July, 1908, when he had severe pain over the left kidney for three days, accompanied by chills, fever and the passage of a few small calculi and some blood, the last-named symptom persisting for one day. Since this attack pain occurred only on the left side. Skiagraphs, taken separately of the right and left kidneys, revealed the presence of undoubted stone shadows in both. Functional tests with

indigo-carmin and phloridzin showed both kidneys of about equal functional capacity.

First Operation.—The calculi were removed from the left kidney on Oct. 30, 1908. The kidney was converted into a number of hydronephrotic cavities, with only a narrow rim of parenchyma. After splitting the kidney in the median line of its convexity, thirteen calculi were found. One of these almost completely blocked the pelvic orifice of the ureter. The remainder of the calculi were found in the greatly dilated calices of the hydronephrotic kidney. On account of the presence of a fair amount of good parenchyma at the upper and lower poles, it was deemed best not to remove the kidney.

The patient recovered very rapidly from this operation and left the hospital on Nov. 26, 1908.

Second Operation.—He re-entered the Michael Reese Hospital on Feb. 3, 1909, to have the calculi removed from the right kidney. Nephrotomy on this side was performed in the usual manner, and six calculi, varying in size from a pea to a lima bean, were removed. One of these calculi incompletely blocked the pelvic orifice of the ureter, as in the other kidney. This right kidney showed even more advanced changes than the left. It was greatly sacculated, so that the calculi could be readily palpated through its thin walls. The parenchyma was apparently destroyed in the upper half, the only functioning portion being in the lower half. One stone, the size of a hazel-nut, was in the lower pole near the cortex; a second, the size of a hickory-nut, lay in the pelvis, and a third large stone was in the upper pole. The other three calculi lay in the sacs near the cortex.

The patient also made an uneventful recovery from this second nephrotomy and returned to work four weeks later. The wound was healed six weeks after the operation. He has gained greatly in weight and color.

103 State street.

TRYPSIN IN POSTOPERATIVE TREATMENT OF CARCINOMA OF BREAST

JOSEPH JEROME CRONIN, M.D.
ROXBURY, MASS.

History.—On Sept. 17, 1907, I was called to see Mrs. S., aged 62, who had a growth in the left breast and considerable pain. She said it had been growing for more than a year, but she had never consulted a physician about it. On examination I found the breast very large with skin adherent for some distance around the nipple area, and several thickened carcinomatous patches in the skin. The glands in the neck and axilla were much enlarged. I advised immediate operation, but the patient was opposed to this. I saw her again on Sept. 28, 1907. The pain had increased a great deal and the patient had considerable vomiting, complained of chills and had an unquenchable thirst. She had the typical cachectic color. The skin showed more thickening and discoloration. I removed the breast by the usual radical operation on October 3, removing all the glands in the axilla and a large area of skin. I obtained primary union in the usual time, but the patient had failed a great deal since the operation. A general toxemia, probably due to the cancer, had been present since before the operation. The patient had a temperature of 100 to 101 and always a rapid pulse, with persistent vomiting and thirst. She failed rapidly in weight and strength. Examination of urine, stools and stomach contents, from time to time, showed nothing abnormal.

Use of Trypsin.—On Feb. 3, 1908, I began the use of trypsin and amylopsin. The patient stood the treatment very well; had no local reaction or abscesses. After a few months, vomiting ceased except at intervals, when an injection of amylopsin would seem to control it for another period. The patient has now had no treatment since Nov. 11, 1908; is down stairs every day and assists occasionally in light housework. Her appetite is much improved. She is in better condition since the operation and the treatment has certainly helped her.

It is certainly well worth a trial, and I am now using it in two more cases, but it is too early as yet to make any deduction in these cases.

MUCOUS COLITIS: APPENDICOSTOMY

REPORT OF CASE

JOHN M. LITTLE, JR., M.D.

ST. ANTHONY, NORTH NEWFOUNDLAND

I have read with interest the preliminary report¹ by Dr. Reed of the case of mucous colitis treated by bacterial injections through the appendix. Mr. Dawson² gives a very full account of appendicostomy and the surgical aspect of colitis, and mentions also the treatment of mucous colitis based on the well-known work of Metchnikoff. It is to be hoped that a larger experience may lead to a better understanding and treatment of this condition. Meanwhile appendicostomy, judged by the few cases reported, offers promise of success. There are too few cases as yet on record, or followed for a long enough time, to point to definite conclusions.

For this reason the following is reported. The improvement, which, following the operation, has been marked and steady, is independent of bacterial therapy, unless the mechanical factors have brought about conditions under which the normal intestinal fauna and flora have reinstated themselves.

Patient.—G. B. (Hospital Record No. 303), aged 40, a well-to-do skipper, fisherman, with unimportant family history, had had the best of everything in his living, had always been well and strong, and considered himself exceptionally hearty till his present illness. His average weight was 220 pounds.

Present Illness.—Ten months before coming to the hospital he began to have vague pains in his abdomen and back and to feel weak and unable to work. About the same time he began to have constipation for four or five days at a time, alternating with diarrhea, with loss of appetite and indigestion. He was treated by his family physician, but received no benefit. In June, 1908, he went as skipper of his own vessel, but felt miserable all the time. By the last of June he felt he must "give up." He saw Dr. Hare at Harrington Hospital, who sent him home, put him on a diet and rectal injections, and told him he must go to a hospital. He followed instructions, but without benefit. He had been passing masses of peculiar appearance, something like "squids." He had lost steadily during the six months before coming to the hospital, the falling-off in weight amounting to forty pounds. He had never been nervous and was not then, but was willing to do anything to get well, as he wanted to resume work. He entered St. Anthony's Hospital Oct. 27, 1908.

Examination.—The patient was a well-developed and well-nourished, very strong, hearty-looking man. One would not imagine that anything could be wrong with him. Temperature, pulse and respiration were normal. The chest was normal; the abdomen, aside from a little tenderness on the right side on deep pressure, was normal. The rectum was empty and collapsed. The urine was acid; specific gravity, 1.018; no albumin and sugar.

Course of Disease.—The patient was put to bed and given a light diet and cathartic. On October 29 he passed voluminous stools with much shiny mucus in lumps and shreds, and on October 31 a very tenacious mucous cast a foot long. The patient was weak. An alum enema was given daily as high as possible. On November 9 the patient was sent home with instructions as to treatment and directions to return in two weeks for operation if no benefit was felt. His weight on admission was 184 pounds; on return home, 179 pounds. On November 24 he was readmitted weighing 174 pounds. He felt about the same; complained of swelling of the bowels and lameness along the course of the descending colon, where he had slight tenderness on deep pressure. His bowels had been more regular, but he had passed "squid-like" stools. His appetite was poor and he had a bad taste in his mouth.

Operation.—On November 26, under ether, a gridiron incision was made at McBurney's point, the abdominal cavity thoroughly explored and everything found normal. The appendix, which was normal, was pulled up into the lower angle of the wound. The mesoappendix was very fat and was therefore tied off down to a point just within the tendons of the external oblique muscle (1 inch). It was stitched in place by two silk sutures through the muscular layer of the appendix and skin. The wound was then sutured in layers, care being taken to have the cecum close against the abdominal wall, where it came easily, and no tension or constriction of the appendix. The tip of the appendix, in which the circulation seemed good, was wrapped in gutta-percha tissue. Dry dressing was applied and the patient put to bed in good condition. He made a good recovery from the ether with very little nausea. On November 30 the end of the appendix, which was looking dark, was cut off level with the skin and a soft rubber catheter inserted. The patient felt no sensation as the appendix was cut and dilated. A small amount of gas escaped through the catheter.

Postoperative Treatment and History.—On December 1 soapy water was passed into the cecum through the catheter. After a quart had been run in slowly there was discomfort and the patient vomited twice; the flow was then stopped. In five minutes the patient had a voluminous movement into the bedpan of hard fecal masses, mucus, soft feces and soapy water, experiencing immediate relief. The irrigation was continued, the patient being comfortable and expelling the feces and fluid at short intervals until the water came away almost as clean as it went in. About eight quarts were used. On December 4 the patient was up and dressed. The irrigations had been continued twice daily without trouble or discomfort. On December 10 the patient was up and about, feeling better. He performed the irrigation daily himself, sitting on the closet, and using five to six quarts of water, followed every third day by ten ounces of 0.5 per cent. solution of silver nitrate. The end of the stump of the appendix sloughed off, but there was no trouble in passing the catheter. From now on, with the exception of a small stitch abscess which soon cleared up, the convalescence was uninterrupted. By January 8 the patient was leading a fairly active life, began to feel better and had a good appetite. His weight had steadily increased from 174 to 186 pounds. There was no leakage of feces or gas from the opening; the catheter was passed with ease. There was still considerable slimy mucus in the stools, but not in lumps and masses. The patient decided to go home, to return in the spring for examination and closure of the fistula if he was well enough. He would prefer to have a fistula permanently, since it was no trouble to him, rather than be as he was before. He thought that he would be able to go "sealing" in March if he kept on improving as he had in the last two weeks.

Last Report (made on correcting proof, June 4, 1909.)—I have to-day examined the patient. He seems well in every way and weighs 217 pounds. He has worn a catheter in the appendix up to date, as he did not wish the hole to close. He is leading an active life. He notices nothing abnormal about his stool. He has been advised to give up the catheter and allow the appendicostomy opening to contract. He will report at intervals and return for treatment on any recurrence of his former trouble.

Pin (Supposed to Have Been Swallowed) Found in Bladder.

Dr. C. S. Austin, of Carrollton, Missouri, reports the case of a 14-year-old boy, previously healthy, who suddenly developed symptoms of cystitis. The patient was treated by several physicians for almost a year without benefit, and had become weak and anemic. Dr. Austin, on examination, discovered a foreign body in the bladder, and at length was able to remove a large pin, the point and head exposed and rusty, and the shaft covered with a rough, uneven calcareous deposit to the thickness of a lead pencil. The patient then recalled that he had swallowed a pin about a year previous to the first appearance of the symptoms, or about two years previous to the operation. With the extraction of the pin, all unpleasant symptoms ceased and the patient soon regained his health.

1. Reed, Charles A. L.: Direct Bacterial Treatment of the Colon through the Vermiform Appendix, THE JOURNAL A. M. A., Feb. 20, 1909, III, 636.

2. Brit. Med. Jour., Jan. 9, 1909.

Therapeutics

TINEA CRURIS: RINGWORM OF THE LEG

This is a disease that has lately attacked in epidemic form the students of universities and preparatory schools. It occurs on the inner side of the thighs near the body, often spreading to the scrotum, to the abdomen, to the perineum, and to the buttocks. The hairs do not fall out, thus differing from the ringworm that attacks the scalp and other parts of the body. There is slight itching and burning, but the disease may go on for weeks and even months without very much disturbance to the patient. It does not tend to recovery, and will persist until properly treated. In fact, the treatments outlined by most of the books on skin diseases are tediously ineffectual, and the statement is often made that a cure of the disease requires weeks and even months of treatment. Consequently, ordinary treatments of this disease are so unsatisfactory as to be considered of no value.

The following treatment is one that is always effectual and always curative in a short space of time. In the first place, it must be impressed on the patient that reinfection readily and almost persistently occurs unless the greatest cleanliness of the underclothing and even trousers is inaugurated. Also, it is evidently transmitted from patient to patient from the closet seats. Dirty jock straps and suspensory bandages used in athletics are persistent transmitters of the disease. Therefore, clean clothing must be worn after all the washable clothing has been boiled and the trousers have been properly cleaned and properly ironed. Closets must be rendered aseptic by frequent corrosive sublimate baths.

The patient should then be instructed to come to the office, bringing clean drawers and a clean shirt, so that after the antiseptic treatment he can put on clothing that is not infected. The different steps in the antiseptic process are:

1. The parts are all thoroughly cleansed with a soft brush or cotton, and liquid soap, and the skin for four or five inches distance from the infected areas should also be cleansed with this soap. The scrubbing should not be very severe, as the skin must not be broken and the epidermis not too severely removed.

2. The infected area should then be wiped over thoroughly with a 2.5 per cent. phenol solution. This will slightly anesthetize the parts to which the stronger antiseptic is to be applied.

3. A cotton swab is now wet with the official formaldehyd solution. This is then lightly swabbed over all the infected parts, which are kept wet for three minutes, provided the patient can stand the burning pain for this length of time. If there is an area that is especially red and inflamed and sensitive, this part may be swabbed with the next solution mentioned before the three minutes have elapsed.

4. The whole area to which the formaldehyd solution has been applied is now thoroughly washed with the 2.5 per cent. phenol solution. This quickly relieves the pain caused by the formalin application.

5. After the burning pain has ceased, the skin is gently dried and talcum powder is dusted over it. The patient then dresses in his clean clothing and takes care that he does not come in contact with any infected garments, beds or closets.

6. After twenty-four hours the patient should report for observation. If severe irritation has been caused by the formaldehyd solution, a 2 per cent. phenol ointment

should be applied. If there is not severe irritation or inflammation, the simple talcum dusting powder is to be freely used.

7. At the end of a week the patient is again examined, and if there are any recurrent small areas, which may happen at the margins of the affected region, these are again touched with the formaldehyd solution.

By the above treatment a cure may be expected immediately and certainly within two weeks. The success of the antiseptic treatment is certainly far in advance of the ordinary treatments of this inveterate disease.

The preparations advised are as follows:

R.		c.c.		
Phenolis liquefacti	.....	2|50	or	m. xlv
Aquæ, ad	.....	100|		ad, fl. 3iv
M. et Sig.:	2.5 per cent. carbolic acid solution.			
R.		c.c.		
Liquoris formaldehydi	.....	100|	or	fl. 3iii
Sig.:	Official formaldehyd solution.			
R.		gm. or c.c.		
Phenolis liquefacti	.....	50	or	m. x
Petrolati	.....	25|		3i
M. et Sig.:	Apply externally as directed.			

In an article on this subject in the *British Medical Journal*, May 8, 1909, Dr. J. O. Symes describes his treatment of this disease. He first removes the superficial epidermis with antiseptics, and uses "a solution of 40 grains of iodine with 20 grains of potassium iodide in an ounce of methylated spirit. Two applications are generally sufficient." The parts are then treated, morning and evening, with the following ointment:

R.		gm.		
Sulphuris precipitati	.....	2|		
Hydargyri ammoniati	.....	2|	or	āā, 3ss
Adipis lanæ hydrosi	.....	30|		3i
M. et Sig.:	Use externally.			

Sometimes the affected parts were painted every other day with a camel-hair brush soaked in oil of turpentine, and the following ointment rubbed in every night:

R.		gm.		
Sulphuris precipitati	.....	2|		
Hydargyri ammoniati	.....	2|		āā, 3ss
Acidi salicyli	.....	60	or	gr. x
Adipis lanæ hydrosi	.....	15|		
Petrolati	.....	15|		āā, 3ss
M. et Sig.:	Use externally.			

The smarting caused by the applications of turpentine are relieved with petrolatum. The average duration of the treatment for a cure is three weeks.

Symes says that, while the tinea cruris resembles the tinea circinata, they are probably two distinct parasites, for, as distinct from the latter, "the tinea cruris germs do not attack the hairs, and the parasite of the tinea cruris shows a larger spore and a freer growth of mycelium than tinea megalosporon."

TINEA TONSURANS

Dr. R. L. Sutton, Kansas City, Mo. (*American Journal of the Medical Sciences*, March, 1909), describes the treatment of this obstinate and stubborn disease, especially of the scalp and bearded portions of the body. While the x-ray is now used frequently to cause the falling out of the hairs, which is so essential to the proper treatment and cure of the disease, Sutton does not advise it, as it is difficult to gauge the intensity of the action of the x-ray, and it many times requires more exposure than is advisable. Such treatment should, therefore, not be undertaken without a good deal of experience with x-ray activities. The action of the x-ray is only of advantage in removing the hairs; it does not seem to kill the fungi, although it may stimulate a

healthy inflammatory process that aids in ridding the skin of the organisms. Whether the hair is removed by *x*-ray action or otherwise, Sutton advises the following treatment:

The diseased surface is mopped with tincture of iodine. This is followed in a few minutes by the application of a 2 per cent. aqueous solution of corrosive sublimate (mercuric chlorid). Sutton says: "The powerful effect secured is due not to the individual action of either alone, but to a third, mercuric iodid, an extremely active and powerful, but relatively unstable salt which is formed at the points of contact." He has never seen any unpleasant symptoms occur from this treatment, but he is careful to treat only a small portion of the diseased surface at one time.

Whatever other medicaments are used, he finds that "goose grease is the best skin penetrant."

THE USE OF CHRYSAROBIN IN PSORIASIS

In the local treatment of psoriasis it should be remembered that the advantages to be gained are brought about by a stimulation of the diseased area. Reddening of the surrounding skin is no help; it is the affected areas themselves that must become hyperemic. Sometimes chrysarobin acts better in combination with other drugs, and the following combination is attributed to Drew by Walker (*Scottish Medical and Surgical Journal*, April, 1908):

R.	gm.	
Chrysarobini	20	
Olei rusci	20	āā, 3v
Acidi salicyli	10	or 3iiss
Saponis mollis	25	
Petrolati	25	āā, 3vi

M. et Sig.: Use externally on affected spots.

Walker says that this ointment will cause the healthy erythema desired in the psoriatic spots in about ten days. It is advisable for the patient to wear his ointment-soiled underclothing for another day or two; then after thoroughly bathing the disease should be found eradicated. If the disease returns, the treatment may be again instituted for a few days.

FAVUS

Favus is now often treated by causing the hair to fall out by the use of *x*-ray, and then the application of an antiseptic, either sulphur, ammoniated mercury, resorcin, or copper ointments.

Ignored Mumps.—It is generally supposed that no one could have mumps without knowing it, but Haury, a French army surgeon, writes to *Hygiène Générale et Appliquée*, May, to tell of an epidemic of mumps in a certain garrison in which only 4 of the men were actually conscious of having the mumps, but in 81 others more or less tumefaction of the parotid gland was evident when it was sought for, although there were no other signs of the disease. These men with ignored mumps were discovered scattered through the troop of a thousand zouaves, and were amazed at being ordered to the hospital. Examination of 380 men in a neighboring troop also revealed 24 cases of ignored mumps and 3 very mild cases with only one case in which a soldier was aware of being sick and had spontaneously applied for treatment. These abortive cases of mumps and similar diseases explain the inter-epidemic lulls and the persistence of infection, and they confirm the necessity for seeking out and isolating the only slightly affected infection carriers as the most effective prophylactic measure. In the experiences related above, the long duration of the glandular involvement was a surprise; in 58 of the men it lasted from 8 to 10 days; in 10 from 12 to 20; in 7 from 20 to 30, and in 6 from 30 to 40 days. The decided mumps lasted two months in one of the 4 acknowledged cases, but there were no general symptoms in any case.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1909," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(Continued from page 1929)

ACETYLSALICYLIC ACID—*Acidum Acetylsalicylicum*.—*Acidum Acetylosalicylicum* (Pharm. Helvetica, edit. 4; Pharm. Danica, 1907; Pharm. Svecica, edit. 9)—*Acidum Acetylsalicylicum* (Pharm. Française, 1908)—Acetylsalicylic acid, $C_6H_4(OCH_3CO).COOH$, 1:2 = $C_9H_8O_4$, is the acetyl derivative of salicylic acid.

Acetylsalicylic acid is prepared by the prolonged heating of 50 parts of salicylic acid and 75 parts of acetic anhydride at about 150° C. (302° F.) under a reflux condenser, and subsequent purification, by recrystallization from chloroform (U. S. patent No. 644,077).

Acetylsalicylic acid occurs in the form of small, colorless crystalline needles, with a weak acidulous taste and, at most, a slight odor of acetic acid. It is readily soluble in alcohol, ether, chloroform, hot benzol and caustic alkalies (Pharm. Helvetica). It melts at 135° C. (275° F.) and is soluble in 125 parts of cold water (Pharm. Française). It is soluble in 100 parts of water at 37° C. (98.6° F.) (Farbenfabriken).

0.5 Gm. acetylsalicylic acid, dissolved in 10 Cc. sodium hydroxide solution, heated to boiling for 2 minutes, cooled and acidified with sulphuric acid, will yield a white crystalline precipitate, which when washed and dried melts at 156°-157° C. (312.8°-314.6° F.) and when in solution produces a violet color on the addition of ferric chloride solution (salicylic acid). The filtrate from the precipitated salicylic acid has the odor of acetic acid and when boiled with sulphuric acid and alcohol yields the characteristic odor of the ethyl ester of acetic acid. 0.1 Gm. of acetylsalicylic acid dissolved in 5 Cc. alcohol, and 20 Cc. water added, should not produce a violet coloration on the addition of a drop of ferric chloride solution. If about 1 Gm. acetylsalicylic acid, carefully weighed, be boiled for 3 minutes with 15 Cc. normal alkali, then cooled and a few drops of phenolphthalein added, 38.6-38.9 Cc. tenth normal hydrochloric acid, for each gram of material used, should be required to produce a colorless solution. Acetylsalicylic acid should leave no weighable residue after ignition (Pharm. Helvetica).

Action and Uses.—It acts like salicylic acid, over which it possesses the advantage of producing less of the undesired local and systemic side effects, on account of the slow liberation of the salicylic acid. It passes the stomach practically unchanged, the complete decomposition occurring in the intestine.

Dosage.—0.3-0.1 Gm. (5-15 Grains) in capsules or wafers or dissolved in sweetened water or dry on the tongue, followed by a swallow of water.

Proprietary Preparation:

ASPIRIN.—A name applied to acetylsalicylic acid.

Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany (Farbenfabriken of Elberfeld Co., New York). U. S. patent No. 644,077. U. S. trademark No. 32,805.

BILE SALTS—Fairchild.—A preparation consisting essentially of sodium glycocholate and sodium taurocholate, in the proportion existing in ox bile, obtained from fresh ox-gall.

Action and Uses.—See Bile Salts, N. N. R., 1909, p. 31.

Dosage.—0.13 to 0.4 Gm. (2 to 6 grains); 4 to 5 Gm. (60 to 75 grains), per day.

Manufactured by Fairchild Bros. & Foster, New York.

ARSANILIC ACID AND ITS DERIVATIVES

Arsanilic acid is derived from arsenic acid, $AsO(OH)_3 = H_3AsO_4$, by replacing one hydroxyl by aniline (phenylamine); related compounds are made by substituting derivatives of aniline.

SODIUM ARSANILATE—*Sodii Arsanilas*.—Sodium Aniline Arsonate. Sodium Aminophenyl Arsonate. Sodium aniline arsonate, $C_6H_4(NH_2)(AsO.OH.ONa) = C_6H_7O_3NAsNa$, is the sodium salt of arsanilic acid, $C_6H_4(NH_2)(AsO(OH)_2)$, 1:4.

It is prepared by condensing aniline and arsenic acid, eliminating water and isolating the arsanilic acids. The sodium salt is prepared by the usual methods.

Sodium arsanilate occurs as white, odorless crystals soluble in 5 or 6 parts of water and more soluble in warm water. It has a faint salty taste. On standing, the aqueous solution assumes a yellowish tint.

Sodium arsanilate crystallizes with somewhat varying amounts of water of crystallization. The arsenic content varies in different preparations from 23 to 26 per cent.

An acid solution of sodium arsanilate is not affected by hydrogen sulphide in the cold; when the solution is warmed the arsenic may be completely precipitated by hydrogen sulphide. If a solution of sodium arsanilate is treated with hydrochloric acid and potassium iodide, iodine is set free. The resulting liquid, whether freed of iodine or not, gives, even in the cold, a precipitate of arsenic sulphide when treated with hydrogen sulphide.

The arsenic and water content of sodium arsanilate may be determined by the methods given in THE JOURNAL A. M. A., Sept. 21, 1907, p. 1041.

An aqueous solution of the salt gives with mineral acids a white precipitate of arsanilic acid, soluble in excess of acid. An aqueous solution of the salt gives with silver nitrate solution a white precipitate of silver arsanilate. An aqueous solution of the salt, after the addition of hydrochloric acid and sodium nitrate gives a deep red coloration with a solution of *n*-naphthol in caustic soda.

Actions and Uses.—The arsenic of the arsanilic acid is liberated very slowly in the system, thus producing the ordinary therapeutic effects of arsenic, with the advantage of a more continuous and less toxic action and less irritation. Toxic effects from excessive doses have been frequently noted, although the toxicity is stated to be about 1/40 of that of arsenic trioxide. The poisonous effects appear to be due largely to the arsenic component, the aniline taking no part in them. It is claimed that the use of sodium arsanilate is not followed by irritation, abscess formation, etc., which sometimes follow the use of other preparations of arsenic. The use of sodium arsanilate in large doses has occasionally been followed by degeneration of the optic nerve leading to blindness.

It is said to have about 1/40 the toxicity of arsenic trioxide. Sodium arsanilate has been recommended for the conditions which are favorably influenced by arsenic, such as anemia, nervous affections and diseases of the skin. It is said to have been very successful as a remedy for trypanosomiasis both in animals and of man, and is also said to be useful in other protozoal diseases, as syphilis, malaria, kala-azar, etc.

Dosage.—0.02 to 0.2 Gm. (1/3 to 3 grains) hypodermically every other day, gradually increasing, if necessary, until the single dose reaches 0.65 Gm. (10 grains) and until a total of 6.5 Gm. (100 grains) have been given. The drug should not be given by the mouth, as it is decomposed by the acid contents of the stomach, and toxic symptoms may result.

Proprietary preparations:

Sodium arsanilate was first introduced in the form of *Atoxyl*.

ATOXYL.—Atoxyl is sodium arsanilate containing about 26 per cent. of arsenic and corresponding closely to the formula $C_6H_4(NH_2) \cdot (AsO.OH.ONa) + 3 H_2O$. It is a white powder having the properties given above.

Manufactured by Vereinigte Chemische Werke Actiengesellschaft, Charlottenburg, Germany. (Victor Koechl & Co., New York). U. S. trademark No. 38,879.

Atoxyl Hypodermic Tablets, 1/3 grain, Koechl.—Each tablet contains 0.020 Gm. (1/3 grain) of atoxyl.

SOAMIN.—Soamin is a form of sodium arsanilate containing approximately 22 per cent. of arsenic and corresponding to the formula $C_6H_4(NH_2) \cdot (AsO.OH.ONa) + 5 H_2O$. It is a white crystalline substance having the properties given above.

Tablet Soamin, 5 grains.—Each tablet is said to contain 0.3 Gm. (5 grains) of soamin.

Tablet Soamin, 1 grain.—Each tablet is said to contain 0.065 Gm. (1 grain) of soamin.

Manufactured by Burroughs, Wellcome & Co., London, Eng., and New York. British trademark No. 302,133; U. S. trademark applied for.

ARSACETIN.—Arsacetin is sodium acetyl arsanilate, $C_6H_4(NH.CH_3CO) \cdot (AsO.OH.ONa)$ a compound derived from sodium arsanilate by replacing a hydrogen atom of the amino group in sodium arsanilate, with an acetyl radicle.

Arsacetin is a white crystalline substance, odorless, tasteless, and soluble to the extent of 10 per cent. in cold and 30 per cent. in hot water. It is free from arsenious or arsenic acid and solutions are not affected by boiling. It may be heated for an hour at 130° C. in the autoclave without undergoing decomposition.

Action and Uses.—See Sodium Arsanilate. It is claimed to be less toxic than sodium arsanilate and possesses the advantage of keeping well and being sterilizable without decomposition.

Dosage.—For hypodermic injection 0.1 Gm. (1½ grains) to 0.5 Gm. (7½ grains). For internal administration 0.05 Gm. (¾ grain) 3 to 4 times daily. Where energetic treatment is required in syphilis or trypanosomiasis two injections a week

of 0.6 Gm. (9 grains) each, given on successive days, should be continued until 20 injections have been given.

Manufactured by Farbwerke, vorm. Meister Lucius & Bruening, Hoechst on Main, Germany. (Victor Koechl & Co., New York City). U. S. trademark applied for.

MERCURIC OXYCYANIDE—Hydrargyri oxycyanidum.—Hydrargyrum oxycyanatum (Pharm. Helvetica, edit. 4).

Mercuric oxycyanide, $Hg(CN)_2 \cdot HgO$, is basic-mercuric cyanide.

22.2 Gm. mercuric oxide is triturated with 52 Cc. water and 12 Cc. of sodium hydroxide solution (U. S. P.) and then 27 Gm. of pulverized mercuric cyanide is added and the mixture triturated until it becomes colorless or nearly so. If the product is not entirely decolorized heating on a water bath for a short time will complete the reaction. The mixture is allowed to settle, the liquid portion decanted off and the solid residue recrystallized from hot water or is simply washed several times with cold water, collected and dried between filter papers. (Rupp and Goy, Arch. d. Pharm., 1908, p. 369.)

Mercuric oxycyanide occurs as a white, or nearly white, micro-crystalline powder which colors moist litmus paper blue. It is soluble in 17 parts water.

Boiled with a mixture of sodium hydroxide, ferrous sulphate and ferric chloride solutions, cooled and then treated with hydrochloric acid, mercuric oxycyanide yields a blue precipitate. A 1 to 20 solution gives a white precipitate with ammonia water soluble in excess of the precipitant. Tannic acid solution gives a yellow precipitate. Stannous chloride produces a grey-black precipitate. Hydrogen sulphide and ammonium sulphide produce a black precipitate. When potassium iodide is added to a solution of mercuric oxycyanide until it becomes yellow the addition of ammonia produces a red color which finally becomes a brown precipitate, which dissolves to a colorless solution in potassium iodide. An aqueous solution should not give a test for chloride nor should 0.2 Gm. leave a weighable residue when ignited. (Pharm. Helvetica, edit. 4.)

1 Gm. of mercuric oxycyanide digested with 1 Gm. sodium chloride in 20 Cc. water yields a solution which should require not less than 37 Cc. of tenth normal hydrochloric acid for neutralization, methyl orange or parantiphenol indicator being used.

Action and Uses.—Mercuric oxycyanide is recommended as a substitute for mercuric chloride. Its antiseptic power is said to be greater and it is claimed to be less irritating than mercuric chloride, because it does not act on albumin to the same extent. It has the advantage over the chloride that it does not corrode steel instruments.

Dosage.—It may be given by hypodermic injections in the same doses as mercuric chloride or may be applied locally in solution, 1:5000 increased as borne.

MERCURIC BENZOATE—Hydrargyri Benzoas.—Hydrargyrum benzoicum (Pharm. Française, edit. 1908), Mercuric Benzoate, $(C_6H_5COO)_2Hg + H_2O$, is the mercuric salt of benzoic acid.

10 Gm. glacial acetic acid is diluted with 100 Cc. water and 10 Gm. yellow mercuric oxide added and the mixture agitated until solution is effected. 14 Gm. sodium benzoate is dissolved in 100 Cc. water and added to the mercury solution. The precipitate which forms is collected and washed with water till free from acid and dried at 100° C. (212° F.). (Pharm. Française, edit. 1908.)

Mercuric benzoate is a white crystalline powder, slightly soluble in water, yielding a weakly acid solution, but insoluble in alcohol or ether. At 20° C. (68° F.) a 10 per cent. solution of sodium benzoate dissolves 1 per cent. of its weight of mercuric benzoate. Heated with alcohol it is decomposed into a basic salt of a yellow color. (Pharm. Française, edit. 1908.)

A solution of 1 Gm. mercuric benzoate and 0.5 Gm. sodium chloride in 20 Cc. water yields a black precipitate with hydrogen sulphide and with ferric chloride solution it yields a fawn colored precipitate of ferric benzoate.

A solution produced by shaking 1 Gm. mercuric benzoate with 20 Cc. water should not produce more than a faint turbidity when added to silver nitrate solution, acidified with nitric acid (limit of chloride). 2 Cc. of a similar solution when mixed with ferrous sulphate solution and then concentrated sulphuric acid added so as to form a layer beneath, should produce no brown coloration at the zone of contact of the two solutions (absence of nitrates).

Action and Uses.—The same as mercuric chloride.

Dosage.—Mercuric benzoate has been recommended for hypodermic use and in gonorrhea. In urethral cases the solution may be from 1:2000 and 1:1000 with an equal quantity of sodium chloride. For hypodermic injection the following may be given: Mercury benzoate, 0.02 to 0.03 Gm.; sodium chloride, 0.01 Gm.; cocaine hydrochloride, 0.15 Gm.; distilled water, 40 Cc.

URETHAN-Hoechst.—A name applied to Aethylis Carbamas, U. S. P.

Manufactured by Farbwerke, vorm. Meister Lucius & Bruening, Hoechst A.-M. (Victor Koechl & Co., New York.) Not patented or trademarked.

ARTICLES ACCEPTED FOR N. N. R. APPENDIX
Louisville Pharmacal Works, Louisville, Ky.

Elixir Duozyma.—Elixir Pepsin, Diastase and Hydrastis, L. P. W. A mixture said to contain in each 100 Cc.: pure scale pepsin (1:3000) 2.2 Gm. (33 grains); malt diastase 0.22 Gm. (3½ grains); golden seal 0.22 Gm. (3½ grains); glycerin, C. P., 10 Cc. (160 minims) and alcohol 15 per cent.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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[For other information see second page following reading matter]

SATURDAY, JUNE 26, 1909

[The large amount of space occupied by the index this week makes it necessary to omit some departments and to curtail the space given to others.]

THE INDEX

The index to the current volume appears in this issue. To those who are familiar with THE JOURNAL it needs no introduction, but for the new subscriber, or the old subscriber who has not familiarized himself with it, the following explanation may be in order:

The index is in three parts—the "General Index," the "Index to Subjects," and the "Index to Authors." The "General Index" is a complete index to all matter that has appeared in THE JOURNAL for the past six months. Except that it is larger, it differs in no essential way from the index of any other medical publication. The "Index to Subjects," on the other hand, is an index of articles which have appeared in the most important medical journals of the world—including, of course, THE JOURNAL's own articles. This "Index to Subjects" is practically an index medicus, not so exhaustive or complete as the *Index Medicus*, but of greater value to any one desiring to refer to the work that has been done during the past half year. In the "Index to Authors" appear the names of all authors whose articles are indexed in the "Index to Subjects."

Under the title, "The Guide to Current Medical Literature," the complete index of THE JOURNAL is reprinted in pamphlet form. Bound with it are the itemized lists of articles that have appeared in other medical journals as they were listed in THE JOURNAL each week. Its use obviates the necessity of referring to the bound volume of THE JOURNAL, and its compactness and scope make it a valuable and necessary addition to a physician's library.

PREPARE FOR THE FOURTH OF JULY

The time has come to sound again the annual warning of the approaching dangers of July Fourth, and once more to take up the task of counting the victims of our day of license and lawlessness. Year by year we see the daily press taking up the work more and more extensively, and becoming the most effective of all the allies in the fight against wanton manslaughter and

mutilation. What the Fourth of July would become without this vigorous fight by the public press is hard to imagine, for even as it is the amount of carnage and conflagration has scarcely been held stationary for the last few years. Yet there is reasonable hope of better things, for here and there vigorous individuals or organizations have come to the front, insisted on the enforcement of reasonable municipal ordinances, and by so doing have demonstrated that Fourth of July accidents can be practically abolished without any great difficulty. It is only a question of time when the suppression of lawlessness and its consequent damage to person and property will become something more than a rare, astounding spasm of civic common sense.

To tell the truth, the tardy reluctance with which we are giving up the nerve-racking noises and the deadly sports which seem inseparably connected with our idea of Independence Day testifies less to national inhumanity than to the absolute poverty of national ideas on the subject of pleasure and recreation. Rather than heartedly deprive American children of a day of pleasure, we have submitted smilingly to see them butchered to make a glorious holiday; for we have been incapable of devising any other than this crude and barbaric means of celebration. Is there another nation, ranking higher in the scale of civilization than an African tribe, which would not have devised many graceful and fitting ways of honoring the past and giving pleasure in the present, while satisfying the artistic senses through music, public pageants and other festivities? No doubt an increasing sensitiveness to the effect of the present blatant proclamation of our own rawness will join with humanitarian motives in changing and raising the character of our national holiday.

As things stand at present, however, we may look forward to having the care of some five thousand young victims of a pernicious tradition, and, according to past experience, we may save several hundreds merely by being aware of the necessity of anticipating tetanus infection. It is hardly necessary at the present time to urge thorough surgical cleansing and antitoxin prophylaxis of tetanus, for this lesson has been thoroughly learned. The number of cases of Fourth of July tetanus has been reduced from 415 in 1903 to 73 in 1907 and 76 in 1908, while at the same time the total number of accidents remained practically constant, and the deaths from causes other than tetanus actually increased from 60 in 1903 to 108 in 1908; it is evident, therefore, that tetanus has been more successfully prevented by physicians having charge of these injuries than was the case only a few years ago. Nearly all the cases of tetanus now observed are in patients who first consulted a physician too late to have proper prophylactic treatment. It may be well to call attention to the fact that the Society of American Bacteriologists has recommended that the minimum prophylactic dose of tetanus antitoxin should be 1,500 units; and a larger dose will, of course, do no harm.

Concerning the curative treatment of tetanus after it has once developed, the past year has added little that is new or hopeful. As ever, in the rapidly appearing cases with some severe symptoms, the patients usually die, while in a certain proportion of the slowly developing cases the patients recover, no matter what the treatment. Meltzer's method of inhibiting convulsions by intraspinal injections of magnesium sulphate solution has received some further trial, with several encouraging results, but it seems not to be entirely free from danger.¹ The effect of the magnesium sulphate seems to be merely to control the spasms and to give the body opportunity to excrete, destroy or neutralize the tetanus toxin. Antitoxin seems to have a distinct and real value in the treatment of tetanus, although this value is not great. The consensus of opinion seems to be that antitoxin has much greater curative effect when given intravenously, and into the spinal cord after as much cerebrospinal fluid as possible has been drawn off, than when used subcutaneously; also that it should be used unsparingly as to quantity in cases that progress unfavorably.

A PAN-AMERICAN PHARMACOPEIA?

The adoption by the Cuban government of the United States Pharmacopeia as its official standard, following so closely, as it does, the appearance of the Spanish edition of this work, "Farmacopea de los Estados Unidos de América," should be the initial step toward the admission of delegates from the Cuban government to the Pharmacopeial Convention of 1910. This suggests the possibility, if not the advisability, of similar representation, in the near future, of other Latin-American republics. While, under the present constitution of the United States Pharmacopeial Convention, representation is confined to organizations and institutions incorporated within the United States which have existed there continuously for five years immediately preceding the decennial convention, provision is made for amendments to the constitution which shall have the approval of the board of trustees of that corporation. We have no doubt that, in planning the translation of the Pharmacopeia into the Spanish language and providing for its circulation among the Spanish-speaking peoples of this hemisphere, the board of trustees had this contingency in mind, and that in due time the necessary steps will be taken thus to broaden the influence and scope of this publication. With New and Nonofficial Remedies, which contains the list of articles accepted by the Council on Pharmacy and Chemistry, already spoken of as something in the nature of a Pro-Pharmacopeia, and with English and German corresponding members of that council, perhaps the idea of an international *entente cordiale* in matters pharmacopeial is not, after all, so utopian.

1. For details of the magnesium sulphate treatment see the following articles: Meltzer and Auer: Jour. Exper. Med., Dec., 1906. Haubold, H. A., and Meltzer, S. J.: Spinal Anesthesia by Magnesium Sulphate, THE JOURNAL A. M. A., 1906, xlv, 647. Logan, Samuel: The Treatment of Tetanus by Intraspinal Injections of Magnesium Sulphate for the Control of Convulsions, THE JOURNAL A. M. A., 1906, xlv, 1502. Robinson, G. Canby: Treatment of Tetanus by Intraspinal Injections of Magnesium Sulphate, THE JOURNAL A. M. A., Aug. 10, 1907, xlix, 493. Miller: Am. Jour. Med. Sc., December, 1908.

Medical News

ILLINOIS

Hospital Dedicated.—St. Marguerite's Hospital, Peru, was dedicated with impressive ceremonies by the Bishop of Peoria, June 10.

Clinical Laboratory.—The clinical laboratory established at Paris by Dr. B. G. R. Williams has proven so successful during the last year that bacteriologic and pathologic departments are being established. The work in the laboratory is being done by the local practitioners.

Personal.—Dr. Robert J. Burns, Freeport, has been elected physician of Stephenson county.—Dr. H. R. Riddle, Mechanicsburg, has been elected physician to Sangamon county.—Dr. and Mrs. Charles G. Farnum and Dr. Alfred A. Knapp and family, Brimfield, have sailed for Europe.—Dr. Milo Eaton has assumed the duties of bacteriologist and chemist of the Peoria health department.—Dr. Martin R. Doyle has been appointed a member of the board of fire and police commissioners of East St. Louis.

Chicago

Hospital News.—A new building for the Chicago Baptist Hospital was discussed at a dinner given by the Woman's Aid Society of the institution, June 17.—The establishment within the city of a day camp for children predisposed to tuberculosis was discussed at a meeting of the board of directors of the Chicago Tuberculosis Institute, June 18. A committee was appointed to work out details of such a camp.—At the annual meeting of the Chicago-Winfield Tuberculosis Sanatorium, June 15, Dr. Theodore B. Sachs was elected a director.—The Chicago Eye, Ear, Nose and Throat College announces the completion of an annex adjacent to its present quarters, which doubles the capacity of the institution.—At the benefit concert given June 16, under the auspices of the Woman's Auxiliary of St. Mary's of Nazareth Hospital, about \$5,000 was realized to endow a bed.

Chicago Medical Society.—At the annual meeting of the Chicago Medical Society and its branches, the following officers were elected: President, Dr. John A. Robison; secretary, Dr. George F. Suker; councilors at large, Drs. George W. Webster, Merlin Z. Albro, William N. Senn, Edward A. Fischkin and Charles C. O'Byrne; alternate councilors at large, Drs. Willis O. Nance, James P. Houston, John E. Rhodes and Bernard Fantus. The North Side Branch elected Dr. Rudolph W. Holmes, president; Dr. William Hessert, vice-president; Dr. Paul F. Morf, secretary; Dr. Robert B. Preble, councilor; and Dr. Coleman G. Buford, alternate. The North Shore Branch elected Dr. Charles M. Robertson, president; Dr. Adolph C. A. Gaul, vice-president; Dr. Samuel J. McNeill, secretary; Drs. Clarence W. Leigh and Thomas A. Hogan, councilors, and Drs. Michael A. Griffin and William G. Lee, alternates. The Evanston Branch elected Dr. George W. Boot, president, Dr. William C. Danforth, vice-president; Dr. Stephen V. Baidarston, councilor, and Dr. Alice B. Brown, alternate. The Northwest Branch elected Dr. Ralph S. Michel, president; Dr. Melchoir Whise, secretary; Dr. Charles R. Moore, councilor, and Dr. Wallace M. Burroughs, alternate. The West Side Branch elected Dr. David W. Graham, president; Dr. Benjamin H. Breakstone, vice-president; Dr. Bernard Fantus, secretary; Dr. Clarence B. King, treasurer; Dr. Cassius C. Rogers, councilor, and Dr. Andrew M. Harvey, alternate. The Aux Plaines branch elected Dr. John W. Tope, president and alternate councilor; Dr. W. Evan Baker, Chicago, vice-president; Dr. Fred. W. Kettlestrings, secretary-treasurer, and Dr. Charles E. Humiston, councilor. The Douglas Park Branch elected Dr. Vanay F. Masilko, president; Dr. John H. Edgecomb, vice-president; Dr. James G. Carr, secretary; Dr. Joseph L. Abt, councilor, and Dr. Edward E. Cunat, alternate. The Stock Yards Branch elected Dr. Samuel T. Felmlee, president; Dr. Samuel L. Fridus, vice-president; Dr. Louis J. Isaacs, secretary; Dr. Hugo E. Betz, councilor, and Dr. David R. Landau, alternate. The Englewood Branch elected Dr. Martin W. Bacon, president; Dr. Arthur C. Kleutgen, vice-president; Dr. C. Hubart Lovewell, secretary-treasurer; Dr. Carl Langer, councilor; Dr. Garrett J. Hagens, alternate, and Drs. William H. Bohart and John G. Campbell, members of Englewood council. The South Side Branch elected Dr. William Fuller, president; Dr. Otis H. Maclay, secretary; Drs. Joseph L. Miller, G. Frank Lydston, and Edwin B. Tutenr, councilors, and Drs. Edward P. Norcross, M. Milton Portis, and Jacob F. Burkholder, alternates. The South Chicago Branch elected Dr. Don S. Harvey, president; Dr. John S. Stanton, secretary; Dr. Demetrius Stanoff, treasurer; Dr. Elmer E. Tausey, councilor, and Dr. John A. Anderson, alternate. The Calumet Branch

elected Dr. Charles F. Clayton, president; Dr. Kaymond C. Libberton, vice-president; Dr. William H. Connor, secretary-treasurer; Dr. Jacob S. Kaufman, Blue Island, councilor, and Dr. Gerhard Seim, Blue Island, alternate.

MARYLAND

Baltimore

Faculty Election.—The faculty of Maryland Medical College has elected the following officers: President, Dr. Alexander D. McConachie; vice-president, Dr. J. William Funck; dean, Dr. Harry Gross, and assistant dean, Dr. William S. Smith.

Personal.—Dr. William H. Welch sails for Europe this month.—Dr. William S. Halsted sailed for Europe June 11.—Dr. John W. Chambers has had conferred on him the honorary degree of D.Sc., by Washington College, Chestertown.—The degree of LL.D. was conferred on Dr. Randolph Winslow by the University of Maryland, June 16, and the degree of A.M. on Dr. Samuel M. Wagaman, Hagerstown.—Dr. Harry Friedenwald was elected president of the Federation of American Zionists at its twelfth annual meeting in New York, June 16.—Drs. Lillian Welsh and Mary Sherwood sailed for Europe June 16.—Dr. Louis W. Knight was given the honorary degree of LL.D. by Loyola College, Baltimore, June 17.—Dr. Harry Friedenwald sailed for Europe June 16.—Dr. Samuel C. Chew, professor of medicine in the University of Maryland, has resigned his position, which he has held for nearly forty-five years.

Commencement Exercises.—At the thirty-third annual commencement of Johns Hopkins University, June 8, there were 50 medical graduates, and the following appointments were announced: Adam T. Bruce, fellowship in biology; William Dana Hoyt, Baltimore, University fellowship; Emma Longfellow, Machias, Maine, physiology; Francis Weld Peabody, M.D., Boston, pathology; and the following in the medical faculty: Dr. J. Morris Slemons, associate professor of obstetrics; Dr. J. H. Mason Knox, associate in pediatrics; Charles D. Snyder, Ph.D., associate in physiology; Dr. N. E. B. Iglehart, instructor in surgery; Dr. Edward M. Singewald, instructor in neurology; Dr. G. Lane Taneyhill, Jr., instructor in neurology; Dr. Charles W. Larned, instructor in medicine; Dr. Henry Lee Smith, instructor in medicine; Dr. Samuel Wolmon, instructor in medicine; Dr. Harry S. Greenbaum, instructor in medicine; Dr. Leonard G. Rowntree, instructor in experimental therapeutics; Arthur H. Koelker, Ph.D., instructor in physiologic chemistry; Dr. Herbert M. Evans, instructor in anatomy; Dr. Milton C. Winternitz, instructor in pathology; Dr. Charles M. Byrnes, instructor in neurology; Dr. John W. Churchman, instructor in surgery; Dr. J. Staige Davis, instructor in surgery; Dr. William A. Fisher, Jr., instructor in surgery; Dr. Omar B. Pancoast, instructor in surgery; Dr. Edward H. Richardson, instructor in gynecology; Dr. Frank C. Ainley, assistant in obstetrics; Dr. Bertram M. Bernheim, assistant in surgery; Dr. Christian Dencker, assistant in neurology; Dr. Willis D. Gatch, assistant in surgery; Dr. Emil Goettsch, assistant in surgery; Dr. Eugene J. Leopold, assistant in medicine; Dr. David J. Macht, assistant in medicine; Edgar A. Slagle, Ph.D., assistant in medicine, in charge of the laboratory of the chemical division of the medical clinic; Dr. Thomas P. Sprunt, assistant in pathology; and Dr. Charles H. Stubenraugh, assistant in medicine.—The College of Physicians and Surgeons graduated a class of 46 June 2. The degrees were conferred by Dr. William P. Spratling.

MASSACHUSETTS

Hospital Incorporated.—The Gloucester Hospital has been incorporated with a capital of \$50,000 by J. Warren Wursen and Martha J. Choate.

Graduation Exercises.—The commencement exercises of the College of Physicians and Surgeons, Boston, were held June 2, and a class of 14 was graduated. The doctorate address was delivered by Dr. Charles H. Hughes, St. Louis, on "Our Battle for Humanity and How to Fight It," and degrees were conferred by Dr. C. C. Farnham.

Alumni Elect.—At the annual dinner and meeting of Tufts Medical Alumni Association, June 8, the following officers were elected: Dr. William B. Keeler, president; Drs. Loretta J. Cummins and Caroline A. Cox, vice-presidents; Dr. Leon S. Medalia, secretary; Dr. Oliver G. Tinkham, Weymouth, assistant secretary, and Dr. H. Howard Flagg, treasurer.

Personal.—Capt. Edward A. Cunningham, Cambridge, and Lieut. Calvin B. Faunce, Boston, assistant surgeons, medical department M. V. M., have been assigned to the ambulance company section of the hospital corps.—Dr. Clement H. Halliwell has succeeded Dr. Arthur S. Hartwell, resigned, as a member of the board of health of Norwood.—Dr. Freeman A. Hall, Worcester, has been elected superintendent of the

Burbank Hospital, Fitchburg.—Dr. Harry H. Nevers has been appointed city bacteriologist and physician to the board of Health of Lawrence.

Tuberculosis.—At the annual meeting of the associated committees of the Massachusetts Society for the Prevention and Control of Tuberculosis, held at Boston, the following officers were elected: President, Dr. Arthur T. Cabot; secretary, Dr. Thomas F. Harrington; corresponding secretary, Dr. John B. Hawes, all of Boston; executive committee, Drs. Alfred Worcester, Waltham; Henry Jackson, Boston; H. Lincoln Chase, Brookline, and the chairmen and secretaries ex officio.—The trustees of the Boston Consumptive Hospital have united in a petition to the city government asking an appropriation of \$29,000 to be expended experimentally by an appointed committee in the maintenance for one year at Franklin Field of a school for 200 tubercular children.—The contract for the State Tuberculosis Sanatorium, Springfield, has been awarded to the H. C. Wood Company of Westfield, for \$56,671.

NEW YORK

Sale of Skimmed Milk Illegal.—A decision of the Court of Appeals has sustained the lower courts in overruling the demurrer of a dairy company to an action brought by the state to recover a \$5,000 penalty for selling skimmed milk. The company demurred on the ground that the statute under which the milk was sold was unconstitutional, in that it discriminated between New York and the other counties.

Personal.—Dr. Willis G. McDonald of Albany has had the honorary degree of LL.D. conferred on him by Fordham University.—Drs. M. May Allen, Nathan W. Soble and Montgomery E. Leary have been elected directors of the Rochester Public Health Association.—Dr. George W. Bates, Schenectady, who has served 43 years with the military companies of New York, Connecticut and Massachusetts, has resigned as captain and assistant surgeon of the Second Infantry, N. G. N. Y.

Consumptive Day-Camp Opened.—Last week there was opened a day-camp in Poughkeepsie, where consumptives go to obtain the benefit of rest, sunshine, fresh air and good food under proper medical supervision. Patients are also instructed in general hygiene, the nature of infection of tuberculosis, and measures to be taken to prevent its spread. The equipment of the camp consists of one nurses' tent, five 14 x 14, and eleven 9 x 9 tents, a dining room and laundry, and two bath houses. The camp was constructed and equipped at a cost of \$5,000 by the citizens of Poughkeepsie, and the management is under the direct control of the local board of health.

Must Report Tuberculosis Cases.—Dr. Eugene H. Porter, State Commissioner of Health, says he will compel physicians of the state to obey the new law which requires that all cases of tuberculosis shall be reported as soon as discovered through the local health officers. The name, age, sex, color, occupation, place where last employed and address of every person known to the physician to have tuberculosis must be reported to the local health officer within twenty-four hours after the knowledge comes to the physician. Failure to comply with this law is a misdemeanor and is punishable with a fine of from \$5 to \$50. The enforcement of this law was begun last year, but the returns have been far from satisfactory. Last year 26,230 cases were reported, and it is estimated that at least 75,000 cases exist in the state.

Buffalo

Personal.—Dr. Alfred Regan has succeeded Dr. Timothy F. Donovan as sanitary inspector of the health department. Dr. Donovan has accepted a position in Bellevue Hospital, New York City.—Dr. Edward D. Clark has been appointed surgeon of the steamer *Northwest* for the season.

Fire at State Hospital.—An overheated kiln in the drying room of laundry building of the Buffalo State Hospital set fire to the building June 16, and caused damage to the extent of about \$15,000. No injury was done the buildings of the hospital proper, and owing to the excellent discipline there was no panic among the inmates of the institution.

Academy Election.—At the annual meeting of the Buffalo Academy of Medicine, June 8, the following officers were elected: President, Dr. Earl P. Lothrop; secretary, Dr. Harry R. Trick; treasurer, Dr. Lawrence Hendee; trustee, Dr. Grover W. Wende. Section on surgery: Chairman, Dr. Thew Wright; secretary, Dr. James A. MacLeod. Section on medicine: chairman, Dr. Thomas J. Walsh; secretary, Dr. Henry P. Frost. Section on obstetrics and gynecology: Chairman, Dr. Burt C. Johnson; secretary, Dr. James F. Whitwell. Section on pathology: Chairman, Dr. Frederick J. Parmenter; secretary, Dr. Norman K. MacLeod.

New York City

Commencement.—The eleventh annual commencement exercises of Cornell University Medical College were held June 9, when a class of 61 was graduated. The address to the graduating class was delivered by Dean T. L. Crape of the university faculty.

Lease Buildings for Hospital.—The New York Neurological Institute has leased the six-story building at 149 and 151 East Sixty-seventh street, which will be fitted up for hospital purposes. The institution has the option to purchase the property at \$175,000. Among the incorporators of the institute are Drs. Joseph Collins, Pearce Bailey and Joseph Fraenkel.

More Straus Milk Depots.—Ten additional Straus milk depots have been opened in the city. They are located in parks and on recreation piers; there are now seventeen milk stations altogether. At the beginning of his work eighteen years ago Mr. Straus supplied 34,000 bottles of milk during the first year. Last year he dispensed over 34,000 bottles of milk and 1,500,000 glasses of pasteurized milk.

Personal.—Dr. John Aspell and Dr. James N. Butler have been elected directors of the Fordham College Alumni Association.—Dr. and Mrs. E. H. Porter, Dr. H. Holbrook Curtis, and Dr. and Mrs. Leigh Hunt have sailed for Europe.—Drs. Sidney A. Stein, H. Fred Lange Ziegel and David Sheithis have been appointed adjunct visiting physicians to Beth Israel Hospital, and Dr. Eli Moschowitz has been appointed pathologist to the same institution.—Dr. Dell E. Yarnell has resigned as secretary of the Green Point Branch of the Y. M. C. A.—Dr. Robert H. Herkimer, formerly chief of the bureau of contagious diseases, Brooklyn, has been made diagnostician of the bureau.—Dr. Willard T. Graham, Brooklyn, has been appointed superintendent of the Indiana Methodist Hospital, Indianapolis.—A fire in the house of Dr. Walter B. James, June 10, did damage to the extent of about \$50,000.

NORTH CAROLINA

Physicians Found Not Guilty.—In the Superior Court, June 12, at Wadesboro, a jury brought a verdict for the defendants in a suit in which Mrs. Reddie Kiker asked damages of \$10,000 for alleged malpractice from Drs. Romulus Armfield, Marshville, and H. Moses Brooks, Olive Branch.

Commencement.—The commencement exercises of the Medical Department of the University of North Carolina were held in Chapel Hill, June 1, when a class of 12 was graduated. Dr. William H. Welch, Baltimore, delivered the doctorate address. The degree of LL.D. was conferred on Dr. Richard Henry Whitehead, the new dean of the Medical Department of the University of Virginia.

Personal.—Dr. Andrew J. Crowell, Charlotte, is reported to be seriously ill at the Charlotte Sanatorium.—Dr. Roger A. Smith, Goldsboro, sustained severe injuries in a railway accident last week.—Dr. John S. McKee, Raleigh, has been elected demonstrator of obstetrics, and Dr. J. M. Harper, Kinston, assistant in chemical pathology in the Medical Department of the State University.—Dr. Charles E. Ross has been elected attending physician of the State Institution of Deaf and Dumb at Morgantown.—Dr. S. Westray Battle, Asheville, recently returned from England.

PENNSYLVANIA

Medical Building Planned.—Architects are making plans for a School of Medicine at the University of Pittsburg to adjoin the Grant building now being completed for the university. The building is to be in the same general style of architecture, and will cost about \$200,000.

Tablet to Early Surgeon Unveiled.—With impressive exercises, a tablet to the memory of Nathaniel Bedford, the first surgeon at Fort Pitt, was unveiled June 2, in Old Trinity Church Yard, Pittsburg. Dr. Bedford located in Pittsburg in 1816, and the tablet was presented by the Pittsburg Chapter, D. A. R.

Personal.—Dr. Thomas S. Arbuthnot has been elected dean of the College of Medicine of the University of Pittsburg.—Dr. J. Calvin Wilson, Franklin, has been commissioned captain and assistant surgeon of the Sixteenth Infantry, N. G. Pa.—Dr. Briscoe has been elected resident physician of the State Hospital, Norristown.—Dr. Charles D. Schaeffer, formerly mayor of Allentown and chief surgeon of the Allentown Hospital, who has been critically ill, is reported to be improving.

Philadelphia

University of Pennsylvania Commencement.—The one hundred and fifty-third annual commencement exercises of the University of Pennsylvania were held in the Academy of Music

June 16. A class of 111 was graduated and the annual address was delivered by the dean of the college department, Josiah Penniman, who spoke on "The Best in the University Training."

Guard Hospitals Against Noise.—The Director of Public Safety has decided to have the police take every precaution this year to protect the sick and injured from the annoyances they have heretofore suffered as a result of the celebration of Fourth of July. Policemen will be placed in front of hospitals and other institutions with instructions to enforce orders that no noise is to be made within a certain distance of these institutions.

Internes Appointed.—Director Neff has appointed the following men to the resident staff of the Philadelphia General Hospital: Drs. John S. Samman, Richard H. Lyon, Carol R. Baker, Philip F. Williams, James C. Lyons, Leon Jonas, Arthur F. Jackson, William Hartz, Samuel Largman, Hyman I. Goldstein, Robert P. Devereux, Herbert H. Thompson, Etley P. Smith, John H. Lilley, Oscar J. Klevan, Charles P. Henry, Benjamin W. Key, Louis C. Goldman and Hubert B. Gudger.—Dr. John P. MacDonald has been appointed to the resident staff of the Frankford Hospital.

Dispensary Staff Changes.—The following have resigned from the dispensary staff of the Hospital of the University of Pennsylvania: Drs. Henry D. Jump, Albert P. Francine, Clifford B. Farr, Myer Solis-Cohen, George T. Lukens, Robert S. McCombs, Howard K. Hill, Harvey E. Schoek, E. C. Bender, Charles W. Fox, Daniel M. Hoyt, Linton Turner and Isaac H. Jones.—The following have been appointed to the staff: Chief consultant, Dr. Milton H. Fussell; physician in charge, Dr. Frederick H. Klaer, and assistant physicians, Drs. Edward H. Goodman, George M. Piersol and Robert Torrey.

Personal.—Dr. Charles E. de M. Sajous received the degree of LL.D. at the annual commencement of St. Joseph's College, June 15.—Drs. Henry W. Cattell, Everett P. Barnard, D. B. Shumway and Francis W. White have sailed for Europe.—Dr. George E. Price has been made assistant professor of mental and nervous diseases and Dr. J. Leslie Davis assistant demonstrator of anatomy in Jefferson Medical College.—Dr. Adolph Feldstein, a visiting physician at the Jewish Hospital for forty-four years, has resigned on account of advanced age.—Dr. Charles A. Oliver has resigned as clinical professor of ophthalmology in the Woman's Medical College of Pennsylvania.

Talks to Mothers.—The Department of Public Health is concerned in the health of infants and it has organized an alliance for the care of babies. A corps of 150 physicians has volunteered its services, committees have been organized in every ward and school houses have been obtained where lectures will be given every Wednesday, beginning June 16, for the next eight weeks. These lectures will be given under the direction of the Philadelphia Alliance for the Care of Babies, under the auspices of the Department of Public Health, the Board of Education, the Congress of Mothers, the Home and School League and allied associations. Each member of the ward committees will be supplied with a list of young mothers in their ward, and an effort will be made to interest each in the lectures. Some of the subjects to be taken up are the preparation and care of milk, the danger of flies, diet, bathing, cleanliness, the care of the eyes, sanitation and home conditions.

GENERAL NEWS AND COMMENT

Warning Concerning Unauthorized Agent.—Dr. P. L. and A. H. Hilsman of Albany, Ga., write that a man who calls himself Dr. M. Wagner of Jacksonville, Fla., pretends to represent some instrument houses. One of these, the Kny-Scheerer Company, in reply to an inquiry, stated that the alleged agent has never represented them, and that they desire assistance in locating him. Their address is 410 W. 27th street, New York City. Drs. Hilsman write that this Dr. Wagner took orders for goods and received money on account, but no goods have been sent. They describe him as a German with broken accent, about 5 feet 8 inches high, about 140 pounds in weight, and with dark hair and blonde mustache.

The Carroll Fund.—The following subscriptions have been received since the last report:

Medical Officers of the Army.....	\$ 20.00
Medical Officers of the Navy.....	15.00
Montana State Medical Association.....	25.00
Dr. F. R. Slopanskey, Helper, Utah.....	3.00
Dr. P. S. Spearman, Whiting, Iowa.....	1.00
Harris County Medical Society, Houston, Texas.....	26.75
Dr. Charles K. Winne, Jr., Albany, N. Y.....	5.00
Leyland Line, New Orleans, M. J. Sanders, Manager....	25.00
Jefferson County Medical Society, Louisville.....	16.00
Aux Plaines Branch of the Chicago Medical Society.....	10.00

Dr. C. M. Drake, Knoxville, Tenn.....	5.00
American Investment Company, Atoka, Okla.....	5.00
American Association of Pathologists and Bacteriologists, Buffalo, N. Y.	100.00
Total	\$ 256.75
Previously reported	5,392.86
Grand total	\$5,649.61

Remittances should be sent to Major Ireland, care Surgeon-General's Office, War Department, Washington, D. C.

Civil Service Examinations.—The United States Civil Service Commission announces an examination on July 14, at various places, to secure eligibles from which to make certification to fill vacancy in pathology (male) with salary of \$2,000 per annum in the Freedman's Hospital, Washington, D. C. Microscopic technic, hematology, pathologic histology, gross pathology, and training and experience are the subjects for examination, and experience of at least one year in a pathologic laboratory and ability to make pathologic examinations and report thereon are essential.—An examination is announced for July 21, at various places in the United States to secure eligibles from which to make certification to fill vacancies as they may occur in the position of physician in the Panama Canal service. Applicants must be citizens of the United States, between 20 and 45 years of age, graduates of recognized medical schools, and must have had at least one year's experience as internes in general hospitals. Application should be made to the United States Civil Service Commission, Washington, D. C., or the secretary of the local board of examiners.

Elections.—At the twelfth annual meeting of the American Gastro-Enterological Association, held in Atlantic City, June 7 and 8, the following officers were elected: President, Dr. Julius Friedenwald, Baltimore (re-elected); vice-presidents, Drs. Walter B. Cannon, Boston, and John A. Liehty, Pittsburgh, and secretary-treasurer, Dr. Charles D. Aaron, Detroit.—At the meeting of the Lackawanna Association of Railway Surgeons, held in Delaware Water Gap, Pa., May 14 and 15, the following officers were elected: President, Dr. Henry T. Dana, Cortland, N. Y.; vice-presidents, Drs. Richard T. Bang, New York City, and George M. Cady, Owego, and secretary, Dr. Jonathan M. Wainwright, Scranton, Pa.—The twenty-fourth annual Conference of the State and Provincial Boards of Health of North America was held in Washington, D. C., June 4-6, and the following officers were elected: President, Dr. Joseph Y. Porter, Jacksonville, Fla.; vice-president, Dr. Charles A. Hodgetts, Toronto, Ontario (re-elected), and secretary-treasurer, Dr. Henry M. Braeken, Minneapolis, Minn.—At the twenty-third annual meeting of the American Orthopedic Association, held in Hartford, Conn., June 15-17, the following officers were elected: President, Dr. Augustus Thorndike, Boston; vice-presidents, Drs. Albert H. Freiberg, Cincinnati, and Michael Hoke, Atlanta, Ga.; secretary, Dr. Robert B. Osgood, Boston (re-elected); treasurer, Dr. Gwilym G. Davis, Philadelphia (re-elected), and executive committee, Drs. Ansel G. Cook, Hartford, John Ridlon, Chicago (re-elected), Robert W. Lovett, Boston, Reginald H. Sayre, New York City, and Robert B. Osgood, Boston.

CANADA

Antituberculosis Societies.—Charlotte County, N. B., Association for the Prevention of Tuberculosis has been formed at Saint Stephen.—The Auxiliary Antituberculosis Society, at Victoria, B. C., held its annual election May 26.

Commencement.—At the annual commencement exercises of McGill University, Montreal, a class of 71 was graduated, and about 100 were graduated from Toronto. In the Medical Department of Toronto University, there has been a great falling off in the freshman class, due it is believed, to the recent establishment of the five-year course.

Personal.—Dr. H. McIntosh, formerly medical superintendent of the Vancouver General Hospital, is spending three months in hospitals in eastern Canada before commencing private practice in Vancouver.—Dr. McGrath, St. Johns, N. B., has been made a member of the local board of health.—The faculty of the Manitoba Medical College, on June 15, presented a gold watch, chain and locket to Dr. H. H. Chown, dean of the faculty, in recognition of his long and arduous service in behalf of the institution.

Provincial Medical Association.—The twenty-ninth annual meeting of the Ontario Medical Association was held in Toronto, June 1-3. The features of the meeting were the discussion of peritonitis, introduced by Dr. John B. Deaver, Philadelphia, and that on the pasteurization of milk, introduced by Dr. John A. Amyot, Toronto, who advocated the official pasteurization of all milk not certified; followed by Dr. Charles Sheard, Toronto, who objected to pasteurization on

the ground that dirty milk would be brought into the city; Dr. Henry T. Machell, who favored pasteurization during the summer months, and Dr. Charles J. C. Hastings, Toronto, who strongly upheld Dr. Amyot. It was decided to meet next year in Niagara Falls. The following officers were elected: President, Dr. Henry R. Casgrain, Windsor; vice-presidents, Drs. Harry B. Anderson, Toronto; John M. Rogers, Ingersoll, James C. Connell, Kingston; Joseph R. Arthur, Collingwood; secretary, Dr. Frederick A. Clarkston, Toronto; assistant secretary, Dr. G. S. Strathy, Toronto; and treasurer, Dr. J. Heurner Mullin, Hamilton.

FOREIGN

Honors for Tamassia of Padua.—Prof. A. Tamassia of the chair of medical jurisprudence at the University of Padua was recently elected member of the Italian senate, and his election and the thirtieth anniversary of his connection with the university were celebrated simultaneously May 29 by the presentation from the citizens, faculty and students of parchment testimonials, a gold medal, a bust of himself, and a banquet.

Short Vacation Course at Berck.—Calot announces a course of nine lectures, August 2 to 8, with demonstrations and practical training in orthopedies for the general practitioner and in treatment of external tuberculous lesions, affections of the bones, spine, etc. The course has been arranged partly to accommodate visiting physicians and, as the number of places is limited, application must be made in advance. Address Dr. Privat, Institut Orthopédique, Berck Plage (P. de C.) France.

Policlinic at Cairo.—An Egyptian society has been formed for the purpose of organizing hospital facilities where needed and has succeeded in interesting the government, so that a large polyclinic with a connecting hospital will soon be opened at Cairo with an annual subsidy. The medical chief is Dr. Hilmi, and six services have already been organized; they are in charge of four German and two Egyptian physicians, but later Egyptian physicians will be given the preference throughout. It is hoped that the hospital will be ready to be opened in January.

Second International Congress on Industrial Accidents.—China, Japan, Greece and the various European countries except possibly, Russia and Spain, sent delegates to this congress, which convened at Rome the last week in May. The western hemisphere does not seem to have been represented. Among the points especially emphasized in the proceedings was the necessity for extremely careful examination of the injured workman at the first examination, and for shortening the interval between the accident and the awarding of the indemnity; delay fosters neuroses which otherwise would not develop or might be promptly cured, as the Germans are now learning. One of the resolutions urged the encouragement and generalization of study of the working man at his work, not only by the medical but by certain other professions. Another resolution urged that the first examination be made as complete as possible and the law's delays reduced to the minimum. Another advocated holding lectures and exhibitions in industrial centers to inform working men of the legislation and other measures affecting and protecting them, both from the legal and the hygienic points of view. The congress also expressed its approval of having special institutions in the larger industrial centers to be devoted especially to treatment of industrial accidents. Perhaps the main feature of the congress was the presentation and comparison of the different methods of handling the subject of industrial accidents in various countries. The next congress will meet at Dusseldorf, Germany.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, June 5, 1909.

London School Children

The report of Dr. James Kerr, medical officer for education of the London County Council, for the twenty-one months ending, December, 1908, which has just been published, contains much of interest. It is only beginning to be realized that in providing free and compulsory education for children it is necessary for the state also to assume control over their health in order to secure as good results as possible from the enormous expenditure. Early legislation took no account of this fact whatever: it simply provided the schools and compelled parents to send their children to them. Dr. Kerr insists that to secure the best results every public provision for the care of children must be placed under the control of the education authority. This will simplify laws and avoid endless overlapping and complications. An attempt has been made to regard all that concerns the child in school as under the

control of the educational authority and all that concerns it outside the school as under the control of the local sanitary authority. This has led to a want of coordination and failure in securing the desired ends. Thus attempts to secure cleanliness of the person have been frustrated by lack of adequate means. Dr. Kerr is of opinion that the only solution is to commit all provisions for aiding growth and development during school life, from the ages of 3 to 16, to the education authority, which would then administer all matters relating to feeding, teaching, cleansing, medical treatment and social protection of children.

Dental Surgery and the Public Health

At the annual meeting of the British Dental Association Mr. F. Lawson Dodd delivered an address on this subject. He said that they were to-day witnessing the gradual recognition of dentistry as a branch of preventive medicine. The condition they had to face was that 86 per cent. of the poorer classes—who constitute seven-tenths of the population—are suffering from dental disease to a greater or less degree. The building up of a system of treatment of the dental disease among elementary school children was in view. The first aim would be the extension and multiplication of facilities for the care of the teeth. Not until a dental clinic was established in every center of elementary education would the dentist be doing his share in the maintenance of the welfare of the race.

Tuberculosis Exhibition at the East End

A tuberculosis exhibition, organized by the National Association for the Prevention of Tuberculosis, has been opened in Whitechapel by Mr. Burns, president of the local government board. The causes of consumption, such as dirt and the absence of light and air are illustrated by photographs of close unventilated rooms. A full-size reproduction of a single-roomed London tenement, dirty, dark and airless, in which four persons live, stands side by side with the same room, swept and garnished. There are models of unhealthful dwellings, including the now condemned back-to-back dwellings. Mr. Burns computed that 300,000 persons in England and Wales suffer from tuberculosis, but there has been great improvement. Forty years ago the death rate from the disease was 247 per 100,000; now it is only 115. However, in spite of the improvement, one out of every 11 deaths is due to tuberculosis. In Germany, he said, conditions are even worse. Of every 1,000 German workmen invalided between the ages of 20 and 45, no fewer than 548 suffer from tuberculosis.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, June 3, 1909.

The Progress of Cremation

The Society for the Encouragement of Cremation has recently held its twenty-eighth general assembly, under the presidency of M. Barrier, director of the veterinary school of Alfort and member of the Academy of Medicine. M. Georges Salomon, general secretary of the society, set forth the increase of cremation. There are at present in France cremation furnaces at Paris, at Rouen, at Marseilles and at Rheims; there will be one soon at Lyons and another at Dijon. Since cremation has been authorized, a hundred thousand bodies have been burned at Paris alone, and the number increases each year.

The society is redoubling its efforts. A committee has been instructed to ask the Minister of Public Works to have the railway charges on urns containing the ashes of the dead reduced below those on the corpses themselves, for an evident anomaly exists here. The society also asks that the municipal council of Paris install a second crematory monument at the Montparnasse cemetery, in addition to that at Père Lachaise. The municipal council has made a grant of 1,000 francs (\$200) for an apparatus for rapid cremation; this prize has been raised to \$500 by the Society for the Encouragement of Cremation, and is to be awarded through a competitive contest.

Commission on the Abuse of Free Hospital Privileges

As I mentioned in a previous letter, a commission has been appointed to study the means of preventing the admission of well-to-do patients into the hospitals (THE JOURNAL, May 1, 1909, lii, 1437). This commission consists of six medical members, representing various professional bodies, and seven non-medical members, drawn from the administration of the public charities, one of whom is a secretary without the right to vote. It was to be expected that this mixed character of the commission would scarcely tend toward a ready under-

standing. Thus, Dr. Tourtourat, delegate of the *Syndicat des médecins du département de la Seine* offered the resolution that "the hospital is exclusively reserved for paupers and the needy, and its services are gratuitous;" the medical members voted unanimously for and the non-medical members against it. M. Mesmeur, director of the public charities, remarked that he opposed the resolution because it suppressed the revenues of the hospitals. As a matter of fact, the admission of paying patients brings in only about \$40,000—not a great item in a budget of \$7,000,000. At all events, the incident shows that the composition of the commission does not allow the physicians to gain their point, even on an essential point on which all are in complete agreement.

Medical Secrecy and Certificates Delivered After Death

The Court of Appeals (*Cour de Cassation*) has decided recently that Dr. Routier, head of a service at the Necker Hospital, did not violate professional secrecy in giving to the sister of a patient on whom he operated a certificate of the causes of death. The line of the argument for Dr. Routier was that the cause of death ought always to be known, if not to the public, at least to the public authorities and to the family. How could measures be taken against contagious diseases if the causes of the deaths therefrom were not known? How could mortality statistics be drawn up if the various causes of death remained secret? The physician, in such cases, is under obligation to certify the cause of death to the proper authorities; and the most elementary propriety requires that he also furnish to the family of the deceased all particulars in regard to the cause of death. It would be more than strange if such information were withheld from the grief-stricken relatives under the pretext of professional secrecy. These arguments were sustained by the court.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, June 2, 1909.

Organization for Care of Nurslings in Bavaria

Under the title *Zentrale für Säuglingsfürsorge* in Bayern there has been founded in Munich an organization for the systematic campaign against infantile mortality in Bavaria, to act in cooperation with communities, associations and societies at present providing institutions under independent management for the care of infants. This central organization will be conducted by a working committee, consisting of university professors, pediatricians, government officials and others experienced in the care of infants. The purpose of the institution is, first, to establish general principles for development of infantile hygiene and second, to advance the local institutions by expert scientific advice and financial assistance. The organization is also to assist the government in the improvement of infantile hygiene by its advice; it receives from the state treasury an appropriation to cover the expense of management.

A German Motherhood Society

An important means for the campaign against infantile mortality is care for the puerperal period among working women, so that they may be in a position to nourish and care for the infant at its most dangerous period, i. e., in the first weeks of life. For this reason the Reichstag has made the provisions which I have noted in a previous letter. The bill for imperial insurance regulation also treats this question and provides for further care for lying-in women. These provisions, however, are insufficient to insure the proper care of new-born children by working women. For this reason efforts of late have been increasing to insure lying-in women the means of sparing themselves a long enough time after delivery and of providing themselves sufficient nourishment, so that they may themselves nurse their infants, as far as possible or at least devote themselves sufficiently to their care. The first motherhood society, which is to be regarded as a forerunner of a general motherhood insurance, was founded a short time ago at Karlsruhe. The functions of the society consist in the provision of money for lying-in women and nursing premiums. At the same time the office serves the purpose of instruction and explanation. The member has a claim on the society only when she has belonged to it at least one year. Only residents of Karlsruhe or persons employed there whose private or family income for the last year did not exceed the sum of \$750 (3,000 marks) are entitled to membership. Members who leave Karlsruhe but still reside in Germany are entitled to a claim on the society only until the next demand. As money for childbed after a membership for one year \$5 (20 marks), after two years \$7.50, after three years \$10 are paid, half of which is given on notice of delivery

and one-fourth after the lapse of one and two weeks each. Under special circumstances the management may pay the whole sum at one time. In case of twins the sum is raised \$2.50 (10 marks). Mothers belonging to the society who suckle their children for six weeks after delivery receive a nursing premium of 75 cents (3 marks), and those who continue to nurse their children three months after delivery receive a further premium of 75 cents. Every member pays as monthly dues 12 cents (50 pfennig). Some officials and sick benefit associations have already placed considerable sums at the disposal of the new society.

Traveling Tuberculosis Exhibitions

In its efforts against tuberculosis the German central committee has recently availed itself of the so-called traveling tuberculosis museums, that is, a collection of exhibition material illustrating the origin, spread, and control of tuberculosis. These exhibitions can be sent to various places and are used in connection with popular lectures arranged by the central committee or in other ways. Such traveling tuberculosis museums have been established in Karlsruhe, Darmstadt and Hannover, and have been sent to various places and inspected by the populace with great interest. The traveling museum of the German central committee consists of the following parts:

1. Illustrating the structure of the human body: Six anatomical plates of the thorax, lungs and the breathing, two models of the thoracic organs.

2. Illustrating the nature and origin of tuberculosis: Figures showing expectoration from the lungs containing tubercle bacilli, thirty kinds of dust from various workshops, a schematic illustration of the entrance of tubercle bacilli into a pulmonary vesicle, also showing the origin of tuberculosis in the mouth, throat and ear.

3. Illustrating the development and course of tuberculosis: Schematic illustration of the various stages of consumption, pathologic preparations of human and animal tuberculosis, Röntgen pictures of various stages of pulmonary tuberculosis, pictures illustrating lupus and tuberculosis of the skin.

4. Illustrating the spread of tuberculosis: Tables showing the total mortality and the mortality from tuberculosis in the German Empire, Prussia, England, Scotland and Ireland.

5. Illustrating the prevention of tuberculosis: Models and figures showing the care of the teeth, tables showing the nutritive value of the most common articles of food, statistics on the connection between tuberculosis and alcoholism. Illustration of the hygiene of dwellings, method of preventing the distribution of sputum (sputum cloths, sputum bottles, sputum cups, and apparatus for disinfection).

6. Illustrating the treatment and cure of tuberculosis: Pictures of popular sanatoria, reclining chairs, tables illustrating the extent and success of invalid insurance in the treatment of tuberculosis and the exhibition of the German institutions for tuberculosis.

New Diagnosis of Insanity

The latest development of serum methods of diagnosis appears to be that of Dr. Much and Dr. Holzmänn of the Hamburg Eppendorf Hospital, who publish a reaction in No. 20 of the *Münchener medizinische Wochenschrift* which is claimed to be typical for certain forms of mental disease. They claim that in manic depressive insanity and dementia præcox, substances are found in the blood which are absent in other diseases and in healthy individuals. The method is as follows: Washed human blood corpuscles are dissolved by cobra venom poison. If cobra venom is added to normal human serum the solution of the blood corpuscles proceeds unhindered. On the other hand, it is said that an inhibition occurs on the addition of serum taken from patients with the two above named diseases. The reaction is said to occur in the blood of persons who at the time show no signs of circular insanity, but who belong to families in which this form of mental disease prevails. The authors have tried their method with satisfactory results in 400 cases.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, June 1, 1909.

The Fight Against Trachoma in Austria

Since the infectious nature of trachoma has been recognized, several attempts have been made to suppress or to minimize the epidemics, which in this country have been of daily occurrence. There are three parts of the empire in which the disease has had a firm hold on the population: Hungary, Galicia and Bukovina. Reliable statistics are obtainable only from military sources in regard to the conditions in the past. Thus in 1835 a certain regiment recruiting from the south-

eastern districts of Hungary, had 74 per cent. of its men affected by trachoma. One consideration must be given to the possibility of an incorrect diagnosis, as the diagnostic means at present at our disposal perhaps allow of a more sure recognition of the disease; but still the prevalence of trachoma in former days was so manifest that it was called "Hungarian" or "Galician ophthalmia," while now it is known here only as "Egyptian ophthalmia." Even thirty years ago, 0.2 to 1 per cent. of the entire population was suffering from the symptoms of trachoma. Since then, much has been done to eradicate it. Thus at present no more than 2 or 3 per cent. of the soldiers suffer from trachoma, especially in the regiments from the affected districts. The maximum was 23 per cent. in a regiment, while the majority of the soldiers are free from it. There are among 162 regiments with 350,000 men no more than 18 regiments affected, with 706 cases last year. This is really a marked improvement if it be compared with the fact that in Galicia there were in this year 5,980 persons who applied to the hospitals for relief from trachoma, or 38 per cent. of all eye patients. The navy of this country is nearly exempt from trachoma. In 1890 there were 0.9 per thousand only of the entire navy affected, while in the report for 1908 only two cases were noted. The means by which the relative freedom of the majority of regiments from all infection is attained is by rigid exclusion of all suspected cases by invalidation into hospitals of all soldiers acquiring the disease and by strict supervision with adequate instructions of regiments stationed in infected or suspected regions. It may be noted, in parenthesis, that while even twenty years ago, our famous ophthalmologists were wont to make a correct guess-diagnosis of trachoma by being told whence the patient came, at present they must be very careful not to misinterpret the fact. Therefore, one does not see approximately as many operations for disfigurement of the eyelids in the eye clinics as was the rule a quarter of a century ago. On the other hand, the eye clinics are a favorite place for the military surgeons, who are sent there by the ministry of war to complete their knowledge in this so important branch of medicine. American physicians will appreciate the work done in this line, if they consider what rigid measures are taken by the American government to prevent the immigration of Russian aliens affected with trachoma, and if they remember that the population of Russia intermingles freely with the Hungarian and Galician population, being united to it partly by the bonds of creed, partly by nationality.

Depopulation of the City

In the distribution of the population, as shown by the report of the board of health, a remarkable change has been noticed within about fifteen years, causing a sure depopulation of the central parts of Vienna, while the peripheral parts, or rather suburbs, have increased in density of population to such a degree that they in their turn will soon be fit for depopulation. The increased facilities for communication, caused by changing the entire system of horse into electric traction cars, the growing wealth and the recognition of the value of pure air for health have prompted many a city dweller to live out of town not only during summer, as is here the custom, but all the year round. Now an unexpected fact has been reported; the city of Vienna is the healthiest spot in Austria. This paradox is explicable only by the assumption that the low density of population there, together with the absence of so many infectious children and adults, have a very satisfactory influence on those who remain there. Whilst the mortality of Vienna is 16.7 per thousand, in the city itself it is only 12.5 per thousand and the morbidity is also low as the diseases of infancy figure only in a small proportion. The increasing population of the outskirts has prompted the erection of many smaller hospitals in these districts, whilst the central hospitals are doomed, for in a year or two, the old General Hospital, well-known to all students, will be pulled down to be rebuilt out of town, in healthy grounds.

Prohibition of the Sale of the "Energos" Fraud

By the ordinance of the Minister of the Interior, the electrical apparatus called "Energos" said, by its manufacturers, to possess healing properties for all nervous disorders, impotency, failing strength, etc., has been struck off the list of salable articles. The wide-spread advertising of this instrument of fraud has also been put under control, and care has been taken that the importation of the various parts of the apparatus be also prevented. What the reason of this sudden energetic action may be is not known; perhaps the repeated petitions by medical corporations have effected the issue of this ordinance. At any rate, it is satisfactory to note that slowly the government comes to understand its duties in regard to the protection of the public in this respect.

Pharmacology

SUCCUS ALTERANS

Report of the Council on Pharmacy and Chemistry

The following report was adopted by the Council:

It is believed that unwarranted and exaggerated therapeutic claims are made for *Succus Alterans* by its manufacturers, Eli Lilly & Co., Indianapolis. In view of the disastrous results which may follow, if, from the statements made, physicians should be led to rely on the product as a treatment for syphilis, it is recommended that *Succus Alterans* be refused recognition and that this fact be published with comments.

W. A. PUCKNER, Secretary.

COMMENT: *Succus alterans* is a preparation which has been put on the market for some years by Eli Lilly & Co., as a remedy for syphilis. The serious character of this disease and especially the deplorable results that ensue from its improper or insufficient treatment, should make a firm hesitate to advise any treatment for it which experience has not demonstrated to be at least as efficacious as that which is generally accepted and well proved. *Succus alterans* is the result of a combination of circumstances; no one person is responsible for it. It was probably the natural desire for a remedy free from the occasional injurious results of mercury that led Dr. J. Marion Sims to advocate the use of a collection of indigenous American plant drugs, sarsaparilla, stillingia, xanthoxylum, etc., which had a local reputation for the cure of syphilis. These drugs are supposed to be inert when the dried plants were used, and this gave an opportunity for the development of a nostrum. The ingredients are well known, but as their virtues are supposed to be lost in drying, the physician can not have his druggist compound them, but must, perforce, prescribe the proprietary combination.

Those who consented to experiment with the new remedy soon found that the claims to curative properties were unfounded, but the strong commercial interests backing it have prolonged its life to the present time. Authorities on syphilis either say nothing about the preparation or mention it merely to condemn; but the proprietors of the nostrum continue to assert that it is not only practically a specific in syphilis, but now recommend it for various derangements of the blood and all sorts of skin diseases.

This being the case, what shall the wise physician do? Shall he blindly follow an authority of a past generation or shall he recognize that the claims of an interested manufacturer ought not to weigh against the consensus of his present-day confrères who have given the treatment of syphilis their special attention? The exploitation of such a preparation is deserving of strong censure. By such methods the firm places itself on the same plane as those nostrum venders, who advertise certain antiseptic sprays and gargles as cures for epidemic meningitis and diphtheria and thereby deprive credulous victims of the curative antitoxin treatment. *Succus alterans* is not a new remedy on trial for its possibilities of improvement in therapeutics; it is an old mixture which has been tried and found wanting.

The Physician and Nostrums

Dr. William C. Herman, Cincinnati, in a paper with the above caption read before the Cincinnati Academy of Medicine,¹ handled nostrums, both of the "patent medicine" and "ethical proprietary" types, without gloves. Dr. Herman has had some years' experience as a pharmacist, and is able to look at the nostrum evil from the viewpoint of both physician and druggist. After defining the term and showing the difference between the true "patent medicine" nostrum—somewhat of a rarity—and the proprietary nostrum, Herman refers to the nostrum proprietor and asks: "Who is he and what are his qualifications? He frequently is a doctor who has not been successful in his practice, a drug clerk who notes how easy the money came for the other fellow, for, as Colonel Sellers said years ago, 'there's millions in it.' He may be an advertising agent, a lawyer or a combination of the above. . . . What are his qualifications? He must have a maximum of gall, a

minimum of conscience, a genius at writing deceptive advertisements . . . and many doctors to prescribe and advertise his nostrums."

Referring to that large class of remedies which, while never advertised direct to the laity, are, nevertheless, used and purchased by the general public because physicians prescribe them in "original packages," he says: "The general public never hear of them through the public press. All their publicity is secured through the medical press, by means of the manufacturer's literature, sometimes gotten out in the shape of a medical journal and through samples to doctors. For one physician capable of prescribing the precise medicinal agents needed by each individual patient, there are at least five who prescribe these proprietaries."

The laws of various states make it legally impossible for a layman to purchase certain poisonous and habit-forming drugs except on a physician's prescription; the nostrum trade, however, leaves a loophole for those who want these drugs. Says Dr. Herman: "You can not buy codein from the average druggist, but he will sell you an ounce box of antikaumnia and codein tablets or antikamnia and heroin if you prefer. Neither can you buy chloral, but you can buy somnos and bromidia by the pint if you have plenty of money. . . . From one party who bought a pint bottle of somnos every week, I inquired how he became acquainted with it; he promptly answered, his doctor prescribed a small bottle, but it was too expensive that way, so he buys it by the pint now and he gets the original bottle."

Dr. Herman suggests that physicians study the U. S. Pharmacopeia and the National Formulary and "get acquainted with some real medicine and give up this canned or ready-to-wear medicine."

Correspondence

University Theses in the Library of the College of Physicians

To the Editor:—I notice that on page 1932 of your issue of June 12, certain desiderata in British libraries are mentioned and in connection with this the statement is made that in many, if not all of our American libraries, complete sets of university dissertations and degree theses are wanting.

I beg to say that so far as the library of the College of Physicians is concerned, we have a complete series of the "Thèses de Paris" from 1880 up to the present time, and that we receive all the dissertations from twenty-eight European universities and one South American presented for degrees.

Our library is perhaps richer than any other in this country (with the exception, of course, of the Surgeon-General's in Washington) in such theses, and in complete files of many of not only our ordinary, but rarer medical journals, of which we take over 600.

I would not have troubled you with this note but for the fact that the members of the profession at large, I am sure, are not aware of the extraordinary character and value of the library of the College of Physicians, one of the first rank in the world.

W. W. KEEN, Philadelphia.

A Disclaimer Concerning Proprietaries

To the Editor:—My attention has been called to the fact that a concern known as the "A. M. C." is advertising a number of preparations said to possess medicinal properties, one of which is called "Expectorant (Hare)"; another, "Tonic Comp. (Hare)." I am also told that traveling salesmen employed by this concern are representing that I am responsible for these formulas and that I have a financial interest in them. Please state for the benefit of your readers and for my protection that such a use of my name is without any justification whatever. I never heard of the "A. M. C.," whatever that may mean, before to-day, nor do I know what its compounds contain. It is hardly necessary for me to add that all statements made by any one to the effect that I have any interest in any pharmaceutical or chemical preparation are absolutely untrue.

H. A. HARE, Philadelphia.

1. Kentucky Med. Jour., May 1, 1909.

The Public Service

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended June 19, 1909.

Russell, A. C. H., medical inspector, transferred to the retired list from June 30, 1909.

Wieber, F. W. F., surgeon, detached from command of the Naval Hospital, Canacao, P. I., and ordered home to wait orders, with three months' delay en route.

Hathaway, G. S., P. A. surgeon, ordered to the Navy Yard, Mare Island, Cal.

Irvine, W. L., acting asst.-surgeon, commissioned acting assistant surgeon, with rank of lieutenant, junior grade, from June 9, 1909.

Stitt, E. R., surgeon, detached from the Naval Medical School, Washington, D. C., and ordered to command the Naval Hospital, Canacao, P. I.

Minter, J. M., asst.-surgeon, discharged from treatment at the Naval Medical School Hospital, Washington, D. C., and granted sick leave for one month.

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ended June 19, 1909.

Pillsbury, H. C., 1st lieutenant, granted leave of absence for 2 months when relieved from duty in the Philippines Division.

Jones, H. W., 1st lieutenant, ordered to Washington, D. C., for temporary duty at the Walter Reed Army General Hospital.

Van Poole, G. N., capt., relieved from duty at Fort Sloeum, N. Y.; will proceed at the expiration of his present leave of absence to Fort Sheridan, Ill., for duty.

Banister, W. B., major, ordered from San Francisco to Fort Snelling, Minn., for duty as surgeon and as acting chief surgeon, Department of Dakota.

Bispham, W. N., major, granted leave of absence for 14 days.

Reynolds, F. P., major, relieved from duty at Fort Snelling, Minn.; will proceed to Fort Monroe, Va., for duty.

Snyder, C. R., capt., granted leave of absence for 15 days.

McAndrew, P. H., capt., leave extended 10 days.

Johnson, R. W., major, retired from active service June 16, 1909.

Truby, A. E., major, ordered to command field hospital at camp near San Francisco.

Fauntleroy, P. C., major, ordered to command field hospital at camp, Sparta, Wis.

Reynolds, F. P., major, ordered to command field hospital at camp, Antietam, Md.

McLellan, G. H. M. R. C., ordered from Fort Crook, Neb., to Fort Omaha, for temporary duty.

Austin, T. C. M. R. C., ordered to active duty; will proceed to Jackson Barracks, La., for duty.

Conzelmann, F. J., M. R. C., granted leave of absence for 10 days.

Snow, C. G., M. R. C., ordered to duty with troops en route and at Sparta, Wis.

Miner, Donald, M. R. C., honorably discharged from the service of the United States, his services being no longer required.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended June 16, 1909:

Eager, J. M., asst. surgeon-general, relieved from duty at the bureau in charge of the division of sanitary reports and statistics, to take effect June 23, 1909, and directed to proceed to Portland, Me., and assume command of the Portland Quarantine Station.

Stoner, George W., surgeon, reassigned to duty as chief medical officer at Ellis Island, N. Y., to date from March 8, 1909.

Kallock, P. C., surgeon, on arrival of Surgeon J. M. Eager, relieved from command of the Portland, Me., Quarantine Station.

Brooks, S. D., surgeon, granted 1 month's leave of absence from July 1, 1909.

McIntosh, W. P., surgeon, detailed as member of board of medical officers convened under bureau order of June 5, 1909.

Geddings, H. D., surgeon, detailed to attend the meeting of the International Commission for the revision of the international classification of diseases and causes of death to be held in Paris, France, July 1-3, 1909.

Young, G. B., surgeon, reassigned to duty in command of the Marine Hospital at Chicago, to date from March 24, 1909.

Rosenau, M. J., surgeon, granted 1 month's leave of absence from June 8, 1909, on account of sickness.

Clark, Taliaferro, P. A. surgeon, granted 7 days' leave of absence from June 11, 1909, under paragraph 191, Service Regulations.

McMullen, John, P. A. surgeon, relieved as member of board of medical officers convened under bureau order of June 5, 1909.

Moore, Dunlop, P. A. surgeon, leave granted May 1, 1909, for 3 months from June 3, 1909, amended to read 3 months from June 3, 1909, on account of sickness.

Goldberger, Joseph, P. A. surgeon, directed to proceed to Philadelphia, on special temporary duty.

Trask, J. W., P. A. surgeon, detailed as asst. surgeon-general in charge of the division of sanitary reports and statistics, to take effect June 24, 1909.

Campbell, P. M., acting asst.-surgeon, granted 30 days' leave of absence from June 10, 1909.

Hunter, S. B., acting asst.-surgeon, leave granted May 19, 1909, for 4 days from May 18, 1909, amended to read 14 days from May 18, 1909.

Lawhorn, C. C., acting asst.-surgeon, granted 15 days' leave of absence from June 11, 1909.

Lowthian, Elvin, acting asst.-surgeon, granted 3 days' leave of absence from June 9, 1909, under paragraph 210, Service Regulations.

Miranda, R. U. L., acting asst.-surgeon, leave granted May 15, 1909, for 4 months from June 1, 1909, amended to read 4 months from June 8, 1909.

Porter, Joseph Y., Jr., acting asst.-surgeon, granted 30 days' leave of absence from July 1, 1909.

Rea, Robert H., acting asst.-surgeon, granted 2 days' leave of absence from June 16, 1909.

Rodman, John C., acting asst.-surgeon, leave granted June 3, 1909, for 7 days from June 8, 1909, revoked.

Schwartz, Louis, acting asst.-surgeon, granted 28 days' leave of absence from July 12, 1909.

Stoddard, C. S., acting asst.-surgeon, granted 30 days' leave of absence from June 15, 1909.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public-Health and Marine-Hospital Service, during the week ended June 18, 1909:

SMALLPOX—UNITED STATES

California: Sacramento, May 22-29, 1 case.
Delaware: Millboro, May 6-June 10, 2 cases.
Florida: Pensacola, May 1-31, 1 death.
Georgia: Macon, May 31-June 6, 3 cases.
Indiana: Fort Wayne, May 28-June 5, 8 cases; South Bend, 1 case.
Kansas: Kansas City, May 28-June 5, 6 cases.
Kentucky: Lexington, May 29-June 5, 1 case; Newport, May 30-June 6, 1 case; Paducah, May 23-30, 1 case.
Louisiana: Hammond, May 15-June 5, 1 case.
Michigan: Grand Rapids, May 29-June 5, 1 case.
Minnesota: Duluth, May 28-June 4, 2 cases.
Missouri: Kansas City, May 28-June 4, 1 case.
Montana: Butte, May 26-June 3, 7 cases.
New Jersey: Hoboken, May 28-June 5, 1 case.
Pennsylvania: Bullis Mills, April 29-June 14, 9 cases; Harmony, May 13-June 14, 1 case.
Ohio: Cincinnati, May 27-June 4, 5 cases; Geneva, April 20-June 10, 7 cases; Plain City, March 1-June 10, 74 cases.
Texas: San Antonio, May 28-June 5, 11 cases.
Virginia: Richmond, May 28-June 5, 5 cases.
Washington: Tacoma, May 23-30, 3 cases; Walla Walla, May 28-June 5, 1 case.
West Virginia: Wheeling, May 28-June 5, 2 cases.
Wisconsin: La Crosse, May 28-June 5, 1 case; Marinette, May 22-29, 1 case; Milwaukee, 1 case.

SMALLPOX—FOREIGN

Canada: Halifax, May 24-31, 2 cases; Winnipeg, May 22-29, 2 cases.
Ceylon: Colombo, April 17-24, 3 cases.
China: Canton, April 17-May 1, 10 cases.
France: Paris, Jan. 16-23, 4 cases received; Feb. 20-27, 3 cases; (out of date); May 8-22, 4 cases.
Germany: Hamburg, May 16-23, 2 cases, Russian emigrants.
Great Britain: Bristol, May 15-22, 2 cases, 2 deaths.
India: Bombay, May 4-11, 24 deaths; Calcutta, April 24-May 1, 100 cases; Madras, May 1-7, 4 deaths; Rangoon, April 24-May 1, 8 deaths.
Indo-China: Saigon, April 10-May 1, 10 cases, 4 deaths.
Italy: May 16-23, 10 cases, 4 deaths; Turin, May 14-21, 1 case.
Java: Batavia, April 24-May 1, 4 cases.
Mexico: Guadalajara, May 20-27, 3 deaths; Mexico, April 17-May 8, 66 deaths; Monterey, May 23-30, 5 deaths.
Persia: Astrabad, April 13-24, epidemic.
Portugal: Lisbon, May 15-29, 12 cases.
Russia: Moscow, May 8-15, 29 cases, 6 deaths; Riga, May 15-29, 18 cases; St. Petersburg, April 24-May 8, 28 cases, 13 deaths; Warsaw, March 29-April 3, 5 deaths.
Serbia: Belgrade, May 8-15, 4 cases, 4 deaths.
Spain: Barcelona, May 17-24, 6 deaths; Valencia, May 8-15, 10 cases, 1 death.
Switzerland: Geneva, May 8-15, 2 cases.
Turkey: Constantinople, May 8-16, 2 cases; Smyrna, April 29-May 6, 1 case.
Uruguay: Montevideo, March 1-31, 8 cases.

YELLOW FEVER

Barbados: May 15-29, 3 cases.
Brazil: Manaus, May 8-15, 9 cases, 4 deaths; Para, May 8-22, 10 cases, 10 deaths.
Mexico: Merida, May 30-June 2, 2 cases.
Portugal: Lisbon, June 1-14, 2 cases, in quarantine, from steamship *Langfranc* from Para.
Venezuela: Maiquetia, May 24, 1 case, 1 death.

CHOLERA

India: Bombay, May 4-11, 10 deaths; Calcutta, April 24-May 1, 105 cases; Rangoon, 7 deaths.
Russia: St. Petersburg, May 20-27, 4 cases.

PLAGUE

Chile: Antofagasta, May 1, 5 cases; Arica, May 13, present; Iquique, May 8, 20 cases, 14 deaths.
China: Amoy, May 5, present; Am Phau, April 24-May 1, 5 cases, 3 deaths; Canton, April 17-May 1, 80 cases, 55 deaths.
India: Bombay, May 4-11, 313 deaths; Calcutta, April 24-May 1, 127 deaths; Rangoon, 18 deaths.
Indo-China: Saigon, April 10-May 1, 9 cases, 9 deaths.
Peru: April 24-May 8, 57 cases, 32 deaths.
Venezuela: Caracas, June 3-9, 2 cases.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

SUPPRESSED OR DELAYED ERUPTION IN MEASLES

To the Editor:—Please publish a list of the best remedies to use in measles to bring out the eruption when it is suppressed or delayed.
H. W. H., Kansas.

ANSWER.—There is probably no drug that will "bring out" the eruption in measles, and the administration of a drug for this purpose might obscure the symptoms by causing an eruption of its own. A simple warm bath undoubtedly hastens the appearance of the characteristic exanthem in measles. When the eruption is distinctly delayed or retrocedes, the brief use of the hot pack may be useful; this may be applied to the chest and abdomen and especially to the extremities. From the onset of the disease care should be taken to keep the skin active by warmth and bathing.

"QUININ INHALATIONS IN PERTUSSIS"

To the Editor:—In an article by Dr. H. C. Masland in THE JOURNAL, June 5, 1909, page 1832, a formula is given, the two notations of which do not seem to correspond. Kindly state which of the two is correct.
H. M. L., Brooklyn.

ANSWER.—In fairness to Dr. Masland, it should be stated that the error was not his; in the manuscript the metric notation only was given, the apothecary's notation being added in THE JOURNAL office. Dr. Masland informs us, however, that the amount of liquid petrolatum, given by him originally as 25 c.c., should be 20 c.c. The corrected prescription, therefore, should read:

	gm. or c.c.
R	
Potassium hydroxid	29|6
Alcohol q. s. ad.....	200|
Add 5 c.c. of the above to	
Liquid petrolatum	20|
Oleic acid	10|

CLEANLINESS IN REFRIGERATORS—KEEPING MILK COVERED

To the Editor:—1. Please explain the nature of the jelly-like substance that collects in the refrigerator pipes which carry off the water from melting ice.

2. Is it essential to keep milk in bottles sealed with paper caps while in the refrigerator?
C. A. DEXTER, Columbus, Ga.

ANSWER.—1. The substance referred to consists of the impurities in the ice increased in bulk somewhat by the growth of fungi which may take place even at the low temperature of the ice-box.

2. Milk should be kept sealed. Although micro-organisms grow very slowly in it at the temperature of the refrigerator, such a growth does take place, and it is very desirable to prevent the entrance of outside germs as far as possible.

SANFELICE'S CANCER SERUM

To the Editor:—Please give any information concerning the serum of Prof. Sanfelice for cancer, which I find mentioned in brief in a pharmaceutical journal.
J. L. McALLISTER, Beaver, O.

ANSWER.—Sanfelice asserts, as a result of investigations extending over a number of years, that the cause of cancer is a micro-organism which belongs to the pathogenic saccharomycetes. These organisms when inoculated by themselves will only occasionally, but more frequently than the cells, give rise to malignant tumors. These results of Sanfelice are said to have been confirmed by Leopold and by Plimmer. Sanfelice found that malignant growths could be reproduced by cells that did not contain the organisms, but only their toxins. By inoculating the toxin in an attenuated form into a series of dogs he was able to obtain an antitoxic serum which caused the degeneration of cells of tumors produced by inoculation of malignant tumors or their toxin. He then proceeded to try the serum on dogs affected with spontaneous tumors. Eleven animals having malignant tumors in various parts of the body were inoculated and all recovered. This success encouraged him to try the effect of the serum on men. Three cases gave very encouraging results. By the disaster at Messina his collections of serums and animals undergoing treatment or cured were destroyed. He is beginning to reconstruct what he has lost and to continue the work from which he hopes to obtain such desirable results. The following articles may be referred to:

Sanfelice, F.: Inoculability of Malignant Tumors, *Riforma medica*, 1904, xx, No. 36; abstr. in JOUR. A. M. A., No. 26, 1904, 1669.

Sanfelice, F.: Azione dei prodotti solubili dei blastomiceti in rapporto alla etiologia dei tumori maligni, *Riforma medica*, 1906, xxii, No. 28.

Piccinini, M. G.: Report of a lecture given by Prof. Sanfelice, May 13, 1909, at Bologna: La natura e la terapia del cancro, *Poli-clinico*, 1909, xvi, No. 21, p. 659.

Marriages

JOHN HENRY GRAHAM, M.D., to Miss Alice Kathryn Nickel, both of Butte, Mont., June 8.

GORDON WILSON, M.D., Baltimore, to Miss Elizabeth Preston Elliott, at Baltimore, June 5.

HARRY MELVILLE HALL, M.D., to Miss Jane S. Wheat, both of Wheeling, W. Va., May 20.

HENRY CULP EARNSHAW, M.D., to Miss Rachel B. Tatnall, both of Bryn Mawr, Pa., June 12.

F. H. CREAMER, M.D., Le Beau, S. D., to Miss Katherine Hobson of Des Moines, Iowa, June 2.

ALBERT G. WEBSTER, M.D., Dunleith, W. Va., to Miss Lillian M. Schoenborn at Baltimore, in March.

WILLIAM M. STOCKWELL, M.D., to Miss Clara S. Phelps, both of Suffield, Conn., at Hartford, June 8.

CHARLES H. McMILLAN, M.D., Bobbin, Texas, to Miss Helen Isabell Matthews, at St. Louis, May 5.

T. K. WORTHINGTON, JR., M.D., Philadelphia, to Miss Mary Worsdale Spencer, at Baltimore, June 7.

EDWARD HENRY HERBERT OLD, M.D., U. S. Navy, to Miss Anne Eugenia Smith of Pittsburg, June 2.

ZENO BROWN, M.D., Greenville, N. C., to Miss Nannie Lou Waldrop of Hendersonville, N. C., June 16.

FREDERICK D. McALLISTER, M.D., to Miss Gladys Anna Schreiber, both of Lawrence, Mass., June 8.

CHARLES EASTMOND, M.D., Brooklyn, N. Y., to Miss Bonnie Belle Dorland of Arlington, N. J., June 16.

WILLIAM RICHARD DEAR, M.D., M.R.C., U. S. Army, to Miss Greta Marian Tibbitts of Washington, June 2.

WILLIAM D. HILLIARD, M.D., Asheville, N. C., to Mrs. H. M. Colby of New York City, at Charlotte, N. C., June 3.

THOMAS LEE MCCARRIER, M.D., Baltimore, to Miss Myrtle Edna Bream of Gettysburg, Pa., at Baltimore, June 5.

Deaths

Scott Lafavra Rountree, M.D. University of Pennsylvania, Philadelphia, 1860; a member of the Medical Association of the State of Alabama; a surgeon of Hardee's Brigade and later of the Ninth Tennessee Cavalry and Eighth Alabama Cavalry in the Confederate service during the Civil War; a charter member and for ten years president of the Morgan County Medical Society; for eighteen years health officer of Morgan county; and founder of Hartsells, Ala., died at his home, June 8, aged 71.

Robert K. Tuthill, M.D. New York Medical College, New York City, 1859; a member of the American Medical Association; consulting surgeon to Vassar Brothers' Hospital, Poughkeepsie; surgeon of U. S. Volunteers during the Civil War; assistant surgeon of the Twentieth New York Volunteer Infantry and later surgeon in chief of the First Division, Twelfth Army Corps Volunteer Infantry during the Civil War; at one time president of the Medical Society of Dutchess county; died at his home in Poughkeepsie, June 9, from pneumonia, aged 73.

John Fletcher Reger (thirty-five years of practice, W. Va.); U. S. Pension Examining Surgeon; a member of the staff of Reynold's Memorial Hospital, Moundsville, W. Va.; a member of the National Association of Railway Surgeons; American Academy of Railway Surgeons, and Baltimore and Ohio Association of Railway Surgeons; local surgeon of the Baltimore and Ohio Railroad; died at his home in Littleton, W. Va., May 10, from neurasthenia, aged 72.

Joseph Spiegelhalter, M.D. Humboldt Medical College, St. Louis, 1862; a member of the American Medical Association, American Association for the Advancement of Science, and American Public Health Association; a veteran of the Civil War; health officer of St. Louis in 1865; coroner of St. Louis county, from 1866 to 1870; a member of the board of health of St. Louis from 1876 to 1887; died at his home in that city, June 7, aged 74.

Walter Franklin Fundenberg, M.D. University of Maryland, Baltimore, 1850; surgeon of the One Hundred and Thirty-sixth and One Hundred and Seventy-sixth Pennsylvania Volunteer Infantry during the Civil War; said to have been the oldest dentist of Pittsburg; died in Atlantic City, Nov. 22, 1908, aged 80.

Joseph Everett Kunkler, M.D. College of Medicine and Surgery (Physiomedical), Chicago, 1896; a member of the Missouri State Medical Association; for one year professor of anatomy in his alma mater and for two years health commissioner of Bloomington, Ill.; died at his home in Clinton, Mo., June 6, aged 42.

Harry Norvill Curtis, M.D. New York Homeopathic Medical College, New York City, 1881; of Marietta, Ohio; a member of the Ohio State Medical Association; and several times a member of the city council of Marietta; died suddenly at the Marietta Country Club, June 7, from cerebral hemorrhage, aged 56.

John Rutherford Ballah, M.D. University of Michigan Homeopathic College, Ann Arbor, 1900; who had done special work in bacteriology and the preparation of antitoxin; and whose last post of duty was in the Government laboratory at Regina, Sask.; died in that city May 31, from pneumonia, aged 32.

Raymond Kantner Weber, M.D. Jefferson Medical College, Philadelphia, 1905; a member of the Medical Society of the State of Pennsylvania and Reading Medical Association; a member of the staff of Reading Hospital; died suddenly June 3, from heart disease, at his home in Reading, aged 26.

George Sparks, M.D. University of Texas, Galveston, 1894; of Sweetwater, Texas; health officer of Nolan county; and chief surgeon of the Texas division of the K. C. M. and O. Railway; died in San Angelo, Texas, Aug. 2, 1908, from tuberculous laryngitis, aged 39.

Alexander Sanford Clarke, M.D. College of Physicians and Surgeons, New York City, 1876; Academy of Medicine, Nancy, France, 1887; a member of the New York Academy of Medicine; died at his home in Paris, France, May 26, from arteriosclerosis, aged 66.

Clinton Thompson Brandow, M.D. Syracuse (N. Y.) University, 1898; a member of the American Medical Association; at some time health officer of Locke, N. Y., and a trustee of the village of Moravia; died at his home in that village, June 1, aged 31.

John Scott Williams, M.D. Medical Department of the University of Iowa, Keokuk, 1865; Washington University Medical College, St. Louis, 1871; a member of the American Medical Association; died at his home in Jerseyville, Ill., June 4, from cerebral hemorrhage, aged 69.

Dwight Calkins, M.D. Bellevue Hospital Medical College, New York City, 1897; of Battle Creek, Mich.; died at the home of his parents in Allegan, Mich., June 10, from dilatation of the heart, following an automobile accident, aged 36.

Edmond Montgomery Moffett, M.D. New York University, New York City, 1882; of New York City; some-time surgeon of the Seventy-first Infantry, N. G. N. Y.; died at his home in West New York, N. J., June 11, aged 60.

Emery James Dunn, M.D. New York University, New York City, 1883; formerly of Schroon Lake, N. Y., and supervisor of the town from 1902 to 1907; died at his home in Dolgeville, June 8, from rheumatism, aged 56.

David T. Douglass, M.D. Rush Medical College, Chicago, 1871; of Colfax, Ill.; a member of the American Medical Association; died at the home of his brother in Morristown, N. J., February 5, from paralysis, aged 66.

Joseph Cobb Walker, M.D. University of Nashville, Tenn., 1900; a member of the Medical Association of the State of Alabama; died at his home in Birmingham, June 3, after an operation for appendicitis, aged 36.

Alfred Warren, M.D. Missouri Medical College, St. Louis, 1880; for many years a member of the local board of U. S. Pension Examining Surgeons; died suddenly at his home in Casey, Iowa, June 2, aged 65.

Clarence Eugene Gunther, M.D. Long Island College Hospital, Brooklyn, 1880; afterward a professor in his alma mater; died in his apartments in New York City, June 12, from heart disease, aged 48.

John Edward Snyder, M.D. Western Pennsylvania Medical College, Pittsburg, 1901; local surgeon to the Carnegie Steel Company; died at his home in Sharpsburg, Pa., June 9, from angina pectoris, aged 30.

Hugh Jones Hughes, M.D. National Medical College, Chicago, 1895; of Muskogee, Okla.; died in the Muskogee Hospital, June 6, from peritonitis, a few hours after an operation for appendicitis, aged 40.

Jeremiah Nelson Anderson, M.D. New York Homeopathic Medical College, New York City, 1864; of Toronto; died suddenly while making a call in that city, June 8, from cerebral hemorrhage, aged 68.

William L. York, M.D. Medical College of Georgia, Augusta, 1868; a member of the Oklahoma State Medical Association; died at his home in Hobart, Okla., May 18, 1908, from cerebral hemorrhage, aged 59.

J. Fain Stephens, M.D. University of Tennessee, Nashville, 1878; was shot and instantly killed in an express car on the Tennessee Central Railroad at Boma, by an insane person, May 28, aged 52.

H. V. Westmoreland, M.D. Atlanta (Ga.) Medical College, 1869; of Greer, S. C.; a Confederate veteran; died in Jefferson Medical College Hospital, Philadelphia, June 4, from nephritis, aged 64.

Robert H. Brown, M.D. Rush Medical College, Chicago, 1869; a veteran and historiographer of the Civil War; died in his rooms in Wichita, Kan., June 8, from cerebral hemorrhage, aged 73.

William C. Mason, M.D. College of Physicians and Surgeons, Keokuk, 1865; a member of the Illinois State Medical Society; died at his home in Walnut, April 3, from pneumonia, aged 68.

Theodore Freylinghuysen Kerr, M.D. College of Physicians and Surgeons, New York City, 1874, of Cooperstown, N. D.; died in New York City in May, 1909, from erysipelas, aged 64.

James Harvey Jones, M.D. Medical College of Ohio, Cincinnati, 1854; of LaCygne, Kan.; died at the home of his daughter near that place, May 29, from nephritis, aged 83.

John M. Conningham, M.D. University of Tennessee, Nashville, 1888; a member of the Tennessee State Medical Association; died at his home in Shelbyville, June 5, aged 59.

Robert B. White (examination, Ohio, 1897); for nearly half a century a practitioner of Blackford county, Ind.; died at his home in Montpelier, June 1, aged 78.

James Mattingly Moore, M.D. Tulane University, New Orleans, 1859; died at his home in Waterproof, La., April 2, from heart disease and senility, aged 80.

William T. Griffin, M.D. Niagara University, Buffalo, 1898; of Buffalo; died in the Emergency Hospital in that city, June 5, from cerebral hemorrhage, aged 32.

William Albert Rockafellow, M.D. Medical College of Ohio, Cincinnati, 1879; of Laughery, Ind.; died in Hartford, Ind., April 27, from typhoid fever, aged 53.

George R. Repp, M.D. Central College of Physicians and Surgeons, Indianapolis, 1890; of Tipton, Ind.; died suddenly in his office in that city, June 4.

Daniel H. Dornsife, M.D. Jefferson Medical College, Philadelphia, 1877; died at his home in Tunkhannock, Pa., April 25, from paralysis, aged 69.

Frank S. Burroughs, M.D. Hahnemann Medical College, Chicago, 1884; died at his home in Menasha, Wis., June 3, from locomotor ataxia, aged 55.

Ashley R. McCollough, M.D. Hahnemann Medical College of the Pacific, San Francisco, 1897; died at his home in Williamsport, Ind., June 6, aged 51.

William M. Young, M.D. Rush Medical College, Chicago, 1853; died at his home in Galesville, Wis., June 7, from cerebral hemorrhage, aged 80.

Joshua H. Wilson, M.D. Meharry Medical College, Nashville, Tenn., 1905; died at his home in New Bern, N. C., June 5, from appendicitis, aged 30.

Thomas Worcester Dike, M.D. Boston University School of Medicine, 1890; formerly of Bath, Maine; died in Westboro, Mass., April 17, aged 43.

Gettus E. Starnes, M.D. Eclectic Medical Institute, Cincinnati, 1885; died at his home in Dunkirk, Ohio, June 1, from tuberculosis, aged 52.

Henry J. Boughton, M.D. New York University, New York City, 1859; died at his home in San Francisco, Oct. 20, 1908, from heart disease.

John Monlezun, M.D. Tulane University, New Orleans, 1896; died at his home in New Orleans, June 4, from tuberculosis, aged 36.

Richard D. Evans, M.D. University of Maryland, Baltimore, 1886; of Butte, Mont.; died in a hospital in that city, June 8, aged 53.

Edward W. Trowbridge, M.D. University of Buffalo, 1879; died at his home in Watertown, N. Y., June 9, aged 60.

Lovina A. Thorpe, M.D. Cleveland Homeopathic Medical College, 1883; died at her home in Cleveland, April 23.

George Storrs Fife, M.D. surgeon in the Civil War; died at his home in San Francisco, Dec. 5, 1908, aged 72.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

June 12

- 1 *Diet as a Prophylactic and Therapeutic. H. W. Wiley, Washington, D. C.
- 2 Sodium, Lithium, Calcium and Magnesium, and their Action in the Treatment of Disease. J. V. Shoemaker, Philadelphia.
- 3 Treatment of Tuberculosis by Administration of Mercury. B. L. Wright, U. S. Navy.
- 4 Increased Urinary Calcium Excretion in Tuberculosis. A. C. Croftan, Chicago.
- 5 Acute Gastric Dilatation as a Postoperative Complication. J. O. Polak, Brooklyn.
- 6 Treatment of Pneumonia, with Special Reference to the Use of Quinin. J. A. Keown, Lynn, Mass.
- 7 Ureteral Calculi. J. F. Erdmann, New York.
- 8 Hysterosalpingostomy. R. C. Turek, Jacksonville, Fla.
- 9 Pancreatitis, Chronic and Acute, From Obstruction of the Duct by a Calculus at the Ampulla of Vater. O. W. H. Mitchell, Columbia, Mo.
- 10 Symptoms and Diagnosis of So-Called Chronic Rheumatism. C. Ogilvy, New York.

1. Diet.—Wiley calls attention to the increasing belief among physicians that diet is an important factor, both in the production and in the cure of disease. Accepting the modern theory of specific infection in the cause of disease, we should, he asserts, also accept its attendant theories, which he states briefly as follows: A perfectly healthy, well-nourished organ doesn't easily become infected with any disease germ. This being so, it is evident that food, or diet, must play an important part in the prevention of disease, because the normal condition of the body and the maximum power of self-protection is directly dependent on the character and amount of the diet. As to what is the best diet, Wiley states, as a general proposition, that the ordinary normal diet of man selected by the necessities of nutrition and by taste, is considered, all in all, the best. With regard to the theory advanced by some that the diet of the average man contains too large a percentage of protein, Wiley is not willing to agree to the extreme claims made by those who advance it. While he will admit that the amount of protein consumed may be greater than is desirable, he would not go to the extreme of supposing that it should be diminished by one-half or two-thirds or even more. On the subject of mastication he would also take a conservative stand. While admitting both the desirability of thorough mastication and that the average individual does not masticate his food enough, yet he is of the opinion that to carry mastication to excess might result first in diminishing the actual quantity of food necessary, and second, in interfering with the proper process of digestion. He ventures the question whether it may not be possible that excessive mastication, that is, converting the meal hour into a mere mechanical exercise, may not in the end threaten the human family with grave dangers of insufficient nutrition.

In discussing the therapeutic value of food, he touches on the subject of adulteration and sophistication. He asserts that while the healthy individual may use considerable quantities of milk, for instance, containing formaldehyd, boric acid or sodium benzoate, or other preservatives and receive no apparent injury, the case is entirely different with the invalid. The first requisite which we could make for foods for invalids is that they should be pure. The next most important thing is to find a pure food which the invalid can digest. In closing his article, Wiley calls attention to the fact that the science of nutrition is unfortunately not very extensively included in the curricula of our medical schools. In his opinion the time will come when we shall see the professorship of dietetics in medical schools advanced to the same rank as that of medicine. He goes even further and states that "the practice of medicine in the future will be largely a practice of dietetics."

Medical Record, New York

June 12

- 11 *Inadequacy of the Sanatorium Treatment of Tuberculosis. M. Fishberg, New York.
- 12 *Treatment of Syphilis and Parasyphilis of the Nervous System. D'O. Hecht, Chicago.
- 13 Concealed Appendix. A. H. Golet, New York.
- 14 *Some Corcoran's Cases. P. F. O'Hanlon, New York.

11. Sanatorium Treatment of Tuberculosis.—Fishberg deplores the fact that the average consumptive and often his medical adviser look on the sanatorium as the only place where he may be cured of his disease. Those patients who for some reason can not gain admission to sanatoria consider themselves doomed, lose courage, and often fail to make any attempt to submit to treatment at home. The available sanatoria are overcrowded and patients have to wait for months before accommodations can be found for them in existing institutions. Considering the large number of living consumptives and the enormous sum of money necessary to invest for the equipment and maintenance of sanatoria, it is hardly to be hoped that in the near future the number of beds will be increased to such an extent as to accommodate all those who are in need of institutional treatment.

It is well-known that many more consumptives are being cured at home than in sanatoria. Autopsy findings show that about 70 per cent. of humanity have had tuberculosis some time during their lives. It is also established that the majority of these have been cured of the disease. Even conceding that the well-to-do, who only rarely come to autopsy, would not show such a large proportion of tuberculosis, it argues in favor of the curability of consumption among the poor in their homes, in their usual *milieu*.

The sanatoria only admit incipient cases, which display no constitutional symptoms, such as fever, rapid loss of weight, etc. These are just the cases that are, under proper care, getting along well at home, at a much lower cost to the patient and to the community. Acute cases, as well as active cases with fever, emaciation, anorexia, albuminuria, etc., are not doing well in either place. The lower mortality rates in sanatoria is in a measure due to the fact that all unfavorable cases are persuaded to leave for home.

The ultimate results of sanatorium treatment are not as good as some authors lead us to believe. The German sanatoria show results that about 40 per cent. of all the cases are able to work and earn at least one-third of the standard wage at the expiration of five years after discharge. Considering that the average duration of life of the consumptive is about seven years and that the sanatoria admit only incipient cases, it is a question whether 40 per cent. of a given number of incipient cases treated at home would not show similar results. According to Hammer and Croissant the results obtained in the treatment of consumptives in dispensaries are about the same, and from the standpoint of the duration of the favorable results, even better. The excellent results obtained by Trudeau and reported by Brown are not conclusive. They by no means prove that the mortality of the sanatorium patients is lower than that of the patients who are cared for at home. It is not fair to compare the death rates of consumptives with those of the general population when testing one method of treatment with another. The only conclusive method of comparing results of treatment is to elicit the mortality of sanatorium patients as compared with results obtained in home treatment, but such a study has not yet been made on a large scale. Economically sanatoria are expensive. The initial outlay for building and equipment, which amounts to about \$1,000 per bed, and maintenance, which amounts to about one dollar per day per patient, precludes at present the hope of building and maintaining a sufficient number of sanatoria to provide for all consumptives in any country. The fact that there are indications that the results obtained in dispensaries are not below those obtained in institutions, and at a much lower rate of expense, urges that we must turn our attention to the home treatment of tuberculosis.

The prophylactic results of sanatoria are of negligible value, considering that they admit the incipients and refuse the most dangerous—the advanced cases.

12. Syphilis and Parasyphilis of the Nervous System.—Hecht concludes his résumé of this subject as follows:

(1) Syphilis and parasyphilis of the nervous system continue to stand in direct and indirect causal relation to primary syphilis, although their nosologic position is very likely to undergo revision if the Schaudinn discovery and sero-diagnostic values of to-day stand the test of time and fur-

ther development; (2) the therapeutic position, it is hoped, will also share in this signal advance, but in the expectant interval it is well to insist that neither a routine nor a haphazard administration of antispecifics is commendable; (3) treatment to be intelligent must meet the requirements of each case with due regard for the many collateral, chiefly supportive measures; (4) antispecifics, when indicated in these conditions, mean mercury and iodids; (5) in the vast majority of the cases occurring in neurologic practice, mercury by inunction is the method of choice; (6) the Fränkel exercise treatment for the ataxia of tabes loses none of its efficiency if a departure is taken from the original complex plan to a simpler one.

14. **Some Coroner's Cases.**—O'Hanlon describes several unusual cases which came under his observation as coroner's physician. These were multiple fractures of the base of the skull without outward evidences of a severe injury, the carotid artery pierced by the rib of an umbrella, removal of the entire placenta by curetting, with a five months' fetus left in the utero, and death from the kick of a horse.

Lancet-Clinic, Cincinnati

June 5

- 15 Extrauterine Pregnancy, with Report of Cases. J. W. Hamilton, Mt. Vernon, Ill.
- 16 Psychoprophylaxis in Childhood. T. A. Williams, Washington, D. C.

Medical Fortnightly, St. Louis

June 10

- 17 Some Constitutional Diseases. R. B. H. Gradwohl, St. Louis.
- 18 Diagnosis of Diseases of the Sigmoid Flexure. E. Walker, Evansville, Ind.
- 19 Paresthesia. J. V. Shoemaker, Philadelphia.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

May 29

- 1 After-Treatment of an Uncomplicated Case of Extraction of Senile Cataract. A. Lawson.
- 2 Prostatectomy. J. H. Nicoll.
- 3 *Autoinoculation and Reinfection of Syphilis. J. Hutchinson.
- 4 Simple Method of Serodiagnosis of Syphilis. A. Fleming.
- 5 Serodiagnosis of Syphilis. J. McIntosh.
- 6 The Biologic Syphilis-Reaction, Its Significance and Method of Application. C. H. Browning and I. McKenzie.
- 7 Serodiagnosis of Syphilis. H. W. Bayly.
- 8 Tracheotomy Cases in which there were Long Periods of Inability to Dispense with the Tube. D. Forbes and R. M. Courtauld.
- 9 Smallpox As It Affects London: Retrospect and Forecast. A. F. Cameron.

3. **Reinfection in Syphilis.**—Hutchinson gives a number of instances in which contrary to the general experience a primary chancre showed itself to be autoinoculable and a number of other cases in which reinfection occurred in patients who had been cured of a first or even second attack of syphilis. The period at which reinfection may take place is as short as eighteen months and its length appears to be inversely proportional to the energy and success of the treatment of the former infection. The second infection may be lighter or more severe than the first.

British Medical Journal, London

May 29

- 10 Volvulus. H. F. Waterhouse.
- 11 *The Immediate and Ultimate Results of Gastroenterostomy for Gastric and Duodenal Ulcer. L. A. Bidwell.
- 12 Treatment of Acute Appendicitis. R. C. Bailey.
- 13 Resection of the Cecum for Cancer of the Ileocecal Valve. H. Cripps.
- 14 Perforated Duodenal Ulcer Treated by Suture and Gastroenterostomy. W. P. Noall.
- 15 Perforated Gastric and Duodenal Ulcers Treated Successfully Without Suture of the Perforation. E. M. Corner and W. Bristow.
- 16 Traumatic Rupture of the Sigmoid Colon: Operation: Recovery. W. Sheen.
- 17 Treatment of Severe Cases of Chronic Colitis. P. L. Mumery.

11. **Gastroenterostomy.**—Bidwell reports a mortality of nearly 5 per cent. in gastroenterostomy operations for ulcer and he states that the estimate of 1 per cent. mortality, given by some authors is entirely too favorable. His ex-

perience makes him hesitate to assert that the risk of a gastroenterostomy is practically *nil*. This mortality should be contrasted with that under medical treatment which he reckons at 10 per cent. The immediate results are very good but unless the pylorus is constricted the stomach contents will eventually find their way through it again and the gastroenterostomy opening will close. By investigation of the ultimate results Bidwell found that about 56 per cent. of the patients were absolutely cured and another 26 per cent. were in almost perfect health. He regards the operation as indicated in every case of chronic gastric ulcer which has resisted medical treatment or has recurred after it. The presence of dilatation is an absolute indication for gastroenterostomy. The operation is also indicated in every case of duodenal ulcer as soon as it can be diagnosed, as practically no case of duodenal ulcer is permanently cured by medical means. In acute gastric ulcer the indications for operation are repeated severe hemorrhages which are threatening the patient's life; and, secondly, symptoms of acute pain and shock, suggesting that the ulcer is spreading toward the visceral peritoneum, and that perforation is imminent. Bidwell believes that an ulcer in any part of the stomach or duodenum can be cured by gastroenterostomy; but if the pylorus is not stenosed it must be occluded at the same time, otherwise the results are not likely to be permanent.

Journal of Obstetrics and Gynecology of the British Empire, London

May

- 18 Reports of the Rotunda Hospital. E. H. Tweedy and R. J. Rowlette.
- 19 Treatment of Labor in Contracted Pelvis. F. Schauta.
- 20 Cesarean Section in an Aged Primipara. T. B. Grimsdale.
- 21 *Ovarian Transplantation. G. A. Casalis.

21. **Ovarian Transplantation.**—Casalis reports a case in which he transplanted in 1905 the sound portion of the left ovary in a woman aged 26, on whom he operated for adherent retroverted uterus with double tubo-ovarian disease (gonorrheal infection). She has menstruated more or less normally since, but during the last year crises have preceded each period, of a somewhat alarming character: she suffers violent headache, intense abdominal pains, three or four severe rigors, cyanosis of the face and extremities, becomes almost pulseless, vomits incessantly and frequently passes one or two offensive motions. Then a reaction sets in with perspiration, flushed face, full and bounding pulse, and the menses appear. Casalis regards it as an early surgical menopause in a woman now just 40. The ovary is undergoing retrogressive changes. It is interesting that the ovarian transplantation was successful, even if only momentarily so. The ideal would be to perform with transplantation an arterial anastomosis, but that appears difficult if not impossible.

Presse Médicale, Paris

May 15, XVII, No. 39, pp. 345-352

- 22 Escape of Cerebrospinal Fluid Through the Nasal Cavities. (Écoulement du liquide céphalo-rachidien par les fosses nasales.) A. Vigouroux.

May 19, No. 40, pp. 353-368

- 23 *Gonococcus Septicemia and Vaccine Treatment. Dieulafoy.
- 24 *Test for Blood in Urine. (Procédé simple pour la recherche du sang dans les urines.) Albarran and Heitz-Boyer.

May 22, No. 41, pp. 369-376

- 25 Simplified Technic for Extirpation of Epithelioma of Pharyngeal Isthmus. Jacques.

23. **Gonococcus Septicemia.**—Dieulafoy reiterates that gonorrhea is not merely a local affection but at any moment it may become a septicemia which may prove rapidly fatal, or it may induce acute and chronic joint affections, ulcerative and proliferating endocarditis, pericarditis, bronchopneumonia, meningitis, infarcts in the lungs, peritonitis, pleurisy, phlebitis, etc. The urethral process may have long healed or it may vanish as the other symptoms appear. Barbiani has reported a case in which gonococci were cultivated from the blood in what was apparently a case of acute articular rheumatism. Profuse sweats seem to be characteristic of gonococcus septicemia; other symptoms may suggest typhoid. In a recent case Dieulafoy reports a typhoid syndrome, fatal in one week, which proved to be solely a gonococcus septicemia.

In two other cases described in detail the patients were convalescing from gonococcus septicemia when typhoid fever developed. They had been treated with gonococcus vaccine and the results have impressed him with the great value of the opsonin vaccination technic.

24. Test for Blood in Urine.—Albarran insists on the importance of a simple and reliable bedside test for blood in the urine especially in cases in which the urine does not contain blood when the patient is in repose, but it becomes blood-stained after a walk or other exercise, showing irritation from a stone or other cause. The Meyer test has proved very reliable for this purpose. The reagent is an alkaline solution of phenolphthalein; 2 gm. of phenolphthalein and 20 gm. of potash are dissolved in 100 c.c. of distilled water, to which are added 10 gm. of pulverized zinc. The mixture is boiled for four minutes, shaking the vessel; the fluid, red at first, rapidly loses its tint. As soon as the boiling fluid is decolorized, it is filtered; the reagent thus prepared will keep for months. The test is made with 2 c.c. of urine mixed with 1 c.c. of the reagent, well shaken; then three or four drops of ordinary hydrogen dioxid solution are added. In the presence of blood in the urine the fluid turns bright red, the rapidity of the change and intensity of the tint proportionate to the amount of blood present. The reaction occurs distinctly when there is at least 1 to 100,000 blood in the urine, sometimes when the microscope reveals only a few isolated blood corpuscles. The reaction is not influenced by the presence or absence of pus, albumin, pigments, sugar, uric acid or urates, acetone, indican, etc., nor by the ordinary drugs which the patient may have been taking.

Semaine Médicale, Paris

May 19, XXIX, No. 20, pp. 229-240

- 26 *Neuropathic Ileus with Stercoraceous Vomiting. M. Roch and de Senarclens.

May 26, No. 21, pp. 241-252

- 27 Laryngostomy and Various Methods for Dilatation of the Larynx from Withont. A. Sargnon and R. Barlatier.
28 *Comparative Hyperemia Test in Operating for Gangrene. (L'épreuve de l'hyperémie comparée pour servir à la détermination du lieu d'amputation dans les gangrènes spontanées du pied.) F. Lejars.

26. Neuropathic Ileus.—Roch did not feel justified in operating in the case of ileus described as the young woman was a notorious hysteric and there was no tympany or pain and an operation performed the year before for a similar syndrome had revealed that the viscera were normal. Pseudo-strangulation of hysteric origin had been diagnosed from the stercoraceous vomiting by several physicians consulted. The patient died before there had been supposed to be any cause for alarm, and autopsy disclosed a loop of jejunum strangulated by a band from the peritoneum. The good general condition, occasional passage of a little stool, suppleness of the abdomen and absence of pain had disguised the organic trouble but he is convinced now that stercoraceous vomiting justifies intervention, if simulation can be excluded, even when the patient seems otherwise in good condition, and when the neuropathy is known to be the main cause of the trouble.

28. Comparative Hyperemia as Test for Point to Amputate in Gangrene.—After removal of a constricting band the blood rushes down into the limb and the zone of vitality is recognized as it is demarcated by the diffusion of the blood in the tissues. The test has given good service in the twenty-two cases in which it has been applied to date. If the hyperemia is clearly defined and pronounced it may be possible to accept the findings as an indication that more of the limb may be saved.

Münchener medizinische Wochenschrift

May 11, LVI, No. 19, pp. 953-1000

- 29 Obstetric Operations for Anomalies in Soft Parts. (Ueber die geburtschilfflichen Hilfsoperationen bei abnormer Enge und bei unvollkommener Erweiterung der Weichteile.) J. Pfannenstiel.
30 *Roentgen-Ray Treatment in Gynecology. Albers-Schönberg.
31 Importance of Serodiagnosis of Syphilis in General Practice. (Bedeutung der Wassermannschen Serodiagnose der Syphilis für die Praxis.) C. Kopp.
32 The Blood Pressure, and Auscultation Method for its Determination. (Ueber Blutdruck und dessen auskultatorische Bestimmungsmethode.) Ehret.
33 Bacteriologic Diagnosis of Typhoid. Wiens.
34 *Cholesterin Concrements and Their Importance in Inflammatory Gallstone Lesions. (Bedeutung des radiären Cholester-

instein für die entzündliche Gallensteinkrankheit.) A. Baemeister.

- 35 Present Status of Treatment of Gonorrhea in France. (Gonorrhoeotherapie in Frankreich.) K. F. Hoffmann.
36 Influence on Gastric Secretion of Salt Solutions Introduced into the Intestine. (Beinflussung der Magensekretion nach Zuführen von Salzlösungen in den Darm.) G. v. Benzenr.
37 *Fatal Atoxyl Poisoning. (Ueber einen tödlich verlaufenen Fall von Atoxylvergiftung.) H. Schlecht.
38 *Sclerosis of Abdominal Vessels. (Sklerose der Abdominalgefäße.) Rossbach.
39 Successful Treatment of Pulmonary Lesions with the Suction Mask. (Behandlung der Lungenkrankheiten mit der Kuhnschen Saugmaske.) J. H. Greeff.

30. Roentgen Treatment in Gynecology.—Albers-Schönberg read this article as his address at the recent congress of the German Roentgen Association. He states that Roentgen treatment is an important aid in various gynecologic affections for those who understand the technic of deep exposures. It is possible with them to put an end to menstruation, to cause the shriveling of myomas and cessation of hemorrhages caused by the myomas and the menses, the arrest of preclimacteric and postclimacteric hemorrhage and the relief of menstrual disturbances at any age, with or without sterilization. He relates his experiences in these various lines, remarking that intramural myomas respond more readily to Roentgen treatment than the subserous and the pedunculated. Very large, old myomas already showing calcification resist the rays. He has never witnessed any by-effects during or in consequence of the exposures. The symptoms of the premature menopause were slight, and the appearance of "hot flashes" announced that the desired result was being attained. Older patients are more amenable to Roentgen treatment than younger women.

34. Cholesterin Stones and Inflammation of the Gall Bladder.—Baemeister maintains that simple stagnation of the bile is liable to cause the cholesterin to crystallize out and build up a stone by radial formation. This occurs without inflammatory processes, but the stone once formed is liable to cause irritation and secondary inflammation and possibly compression, and, by occlusion of the neck of the gall bladder, induce stagnation of the secretion in the pancreas, with acute necrosis of the pancreas in consequence.

37. Fatal Atoxyl Poisoning.—The patient was a man of 29, robust and free from abuse of alcohol. He was treated with mercury salicylate ten weeks after infection, after a three weeks inunction course. About 0.4 gm. (6 grains) in nine days were injected. After a pause of six days a total of 2.4 gm. (36 grains) of atoxyl was injected in the course of eight days in four injections. Symptoms of arsenic poisoning developed the next day, fatal in a few hours.

38. Sclerosis of the Abdominal Vessels.—Rossbach relates a case in which painful sensations for years in the abdomen sometimes increased to actual crises, but, although the left ventricle was much hypertrophied and the blood pressure high, the kidneys were intact and the capillaries free from sclerosis. The abdominal aorta, however, was in such an advanced stage of sclerosis that it was merely a rigid tube. In order to propel the blood through it, the heart had to do so much extra work that hypertrophy was inevitable. The pains in the abdomen corresponded to the clinical picture of "intermittent intestinal angiosclerotic dyspragia," "intermittent anemic dysperistalsis," "arteriosclerotic colic," and "abdominal angina."

Ugeskrift for Læger, Copenhagen

April 8, LXXI, No. 14, pp. 367-390

- 40 *Râles from Vibration of Trachea, etc. (Om "Synkningsrâlelyd.") Israel-Rosenthal.
April 15, No. 15, pp. 391-416
41 Study of Some Life-Insurance Figures. (Erfaringer angaaende Dødeligheden blandt Statsanstaltens Forsikrede, 1871-1905.) G. G. Stage.
April 29, No. 17, pp. 445-476
42 Three Cases of Subchronic "Uveo-parotid Fever." (Om en Febris nyeo-parotidea subchronica lokaliseret til Glandula Parotis og Øjets Uvea og hyppigt kompliceret med Pareser af cerebrospinale Nerver.) C. F. Heerfordt. Commenced in No. 16.

40. Vibration Râles.—Rosenthal calls attention to the importance of differentiating the sounds resembling râles caused by the vibration of the trachea, especially during swallowing. They may simulate the signs of an incipient tuberculous

apical process, but they are not limited to the phases of respiration and occur both during inspiration and expiration and in the pauses. The vibration râles can be controlled by laying the finger on the patient's larynx during auscultation and watching the thyroid prominence. If the patient "swallows a little air" or takes a sip of water, the true nature of the vibration râles becomes apparent. They can be further positively differentiated by having the patient open his mouth during auscultation—this prevents the vibrations. He discusses the mechanism and the characteristics of the sounds, comparing them with the sounds when a fluid is swallowed and when it is passed through the cardia (*Schluckgeräusche* and *Durchpressgerausch*).

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

DIET IN HEALTH AND DISEASE. By Julius Friedenwald, M.D., Professor of Gastro-Enterology in the College of Physicians and Surgeons, Baltimore, and John Ruhräh, M.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Cloth. Pp. 765. Edition 3. Price, \$4 net. Philadelphia: W. B. Saunders Co., 1909.

TREATMENT OF THE DISEASES OF CHILDREN. By Charles Gilmore Kerley, Professor of the Diseases of Children in the New York Polyclinic Medical School and Hospital. Edition 2. Cloth. Pp. 629, with 78 illustrations. Price, \$5. Philadelphia: W. B. Saunders Co., 1909.

MYOMATA OF THE UTERUS. By Howard A. Kelly, Professor of Gynecology in the Johns Hopkins University, and Thomas S. Cullen, Associate Professor of Gynecology, Johns Hopkins University. Cloth. Pp. 723, with illustrations. Price, \$7.50. Philadelphia: W. B. Saunders Co., 1909.

HANDBOOK OF DISEASES OF THE RECTUM. By Louis J. Hirschman, M.D., Detroit, Lecturer on Rectal Surgery and Clinical Professor of Proctology, Detroit College of Medicine. Cloth. Pp. 374, with 147 illustrations. Price, \$4. St. Louis: C. V. Mosby Medical Book Co., 1909.

ESSENTIALS OF MEDICAL CHEMISTRY, Organic and Inorganic. Prepared Especially for Students of Medicine. By Lawrence Wolff, M.D., Physician to the German Hospital, of Philadelphia. Edition 7. Revised by A. Ferree Witmer, Ph.G., M.D., Fellow of the College of Physicians, Philadelphia. Cloth. Pp. 225. Price, \$1. Philadelphia: W. B. Saunders Co., 1908.

DIETETICS FOR NURSES. By Julius Friedenwald, M.D., Professor of Gastro-Enterology in the College of Physicians and Surgeons, Baltimore, and John Ruhräh, M.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Edition 2. Cloth. Pp. 395. Price, \$1.50. Philadelphia: W. B. Saunders Co., 1909.

AMERICAN POCKET MEDICAL DICTIONARY. Edited by W. A. Newman Dorland, A.M., M.D., Assistant Obstetrician to the Hospital of the University of Pennsylvania. Edition 6. Flexible leather. Pp. 598. Price, \$1. Philadelphia: W. B. Saunders Co., 1909.

LECTURES ON THE USE OF MASSAGE AND EARLY MOVEMENTS IN RECENT FRACTURES AND OTHER COMMON SURGICAL INJURIES, Sprains and their Consequences, Rigidity of the Spine, and the Management of Stiff Joints Generally. By Sir William H. Bennett, K.C.V.O., F.R.C.S., Consulting Surgeon to St. George's Hospital. Edition 4. Cloth. Pp. 134, with illustrations. Price, \$1.75. New York: Longmans, Green & Co., 1909.

REPORT OF THE COMMISSIONER OF EDUCATION FOR 1908. Vol. II. Cloth. Washington: Government Printing Office, 1909.

REPORT OF THE VETERINARY DIRECTOR GENERAL AND LIVE STOCK COMMISSIONER. J. G. Rutherford, V.S., For the Two Years ending March 31, 1908. Sessional Paper No. 15a, Dept. of Agriculture, Canada. Paper. Pp. 144.

LEHRBUCH DER NERVENKRANKHEITEN. Herausgegeben von Dr. Hans Curschmann, dirigierendem Arzt der inneren Abteilung des St. Rochus-Hospitals in Mainz. Cloth. Pp. 977, mit 289 in den Text gedruckten Abbildungen. Price, 24 marks. Berlin: Verlag von Julius Springer, 1909.

JAHRESBERICHT ÜBER DIE FORTSCHRITTE DER INNEREN MEDIZIN IM IN- UND AUSLANDE. Redaktion: Dr. Schreiber, in Magdeburg, Dr. Rigler in Leipzig. Bericht über die Jahre 1902 und 1903. 1. Band. Paper. Pp. 776. Leipzig: Verlag von Dr. Werner Klinkhardt, 1909.

LA FIEBRE AMARILLA Y EL MOSQUITO ESTEGOMYIA: Exposicion Popular de la Doctrina Moderna. Por el Dr. José Manuel Espin y Garriga. Paper. Pp. 31.

Treatment of Leukemia.—B. Thomas, in *Northwest Medicine*, states that in the treatment of this condition fresh air, good diet, rest, physical and mental, are essential. Of drugs, he considers that arsenic has the most influence on the course of the disease, though iron is also of value. At present he believes that the x-ray is the best palliative treatment at our command.

Medicolegal

Opinion Evidence of Physicians and Osteopaths and Impotence in Injury Cases

The Supreme Court of Wisconsin says, in the personal injury case of *Bucher vs. Wisconsin Central Railway Co.*, that the opinions of medical men may be rejected as an insufficient basis for a finding of fact by a jury where the court is convinced that reasonable certainty is outside of the possibilities of the situation. Therefore, obvious error of opinion, opinion based on insufficient data, or nonsense clothed in words of "learned length," may be disregarded by this court as a basis for supporting a verdict.

With reference to the testimony of certain osteopaths who were put forward as expert witnesses, the court says that much of it was practically meaningless, mere nonsense, and was no doubt prejudicial to the defendant. The testimony of experts is proverbially unreliable at best, even when the experts are learned and competent, because bias is almost unavoidable on account of our mode of selecting experts, and bias requires small basis on which to ground an opinion. But where this unreliability is accentuated by a showing that the expert has little or no data on which to base the opinion, and the subject on which he expresses an opinion is one recognized by the approved learning of the times to be of great doubt and difficulty, or where the alleged expert demonstrates his lack of knowledge by his testimony, such testimony will not be sufficient to support a verdict which to this court seems unjust or excessive.

Again, the court says that it is very easy to exaggerate before a jury the cause, effect, or probable permanency of such a condition as impotence. The same is true with regard to nervous disorders. Both are easy to feign, hard to disprove, exaggerated by auto-suggestion, and it is comparatively easy for an expert to have an opinion tracing either to a particular physical injury, instead of to a disease, a mental condition or a general impairment of health.

If loss of sexual power is to be thrown into the scale as an item for which the plaintiff is entitled to be compensated in a personal injury case, common sense informs us that in practically all cases of severe injury, pain, suffering or sickness there must be and ordinarily is during such period of stress a suspension of the sexual functions. This is also true of the lower animals. The consequence of considering this as an additional or independent item of damages must be that every sick or injured man may assert his sexual impotence as a ground for recovery additional to pain, sickness, or suffering, and thus duplicate damages.

Cases may no doubt occur of direct injury to the generative organs in which some such ground of damages would not be a matter of mere conjecture, and what is here said has no reference to such cases. But if one in consequence of an injury is continually suffering pain and sickness, he is not apt to be concerned about his sexual powers or pleasures. If so, pain must have lost its usual distracting effects, and affliction its usual chastening consequences.

In the instant case, if the plaintiff was sick and disabled to the extent he claimed, he would in all probability be more concerned about his pain and sickness than about his sexual potency when he consulted a physician, and there is a strong element of improbability in the claim that one really seriously ill and suffering pain, consulting a physician for relief, would also bring up the matter of his sexual impotence while in this distressful condition as an item of injury, instead of regarding it as a consequence of his pain and sickness, if he noticed it at all. Damages based on any such ground and the evidence to support such damages will be closely scrutinized by this court and limited within proper bounds, and the verdict of a jury resting on opinion evidence which does not commend itself to the court as reasonable or sound will not be given the weight to which a verdict is entitled where it rests on facts.

It was not proper for a physician to testify to the possible consequences of impotence in these words: "It may go on for years, and might terminate in something more serious."

Abortionists Guilty of Murder in the Second Degree

The Supreme Court of Iowa says, in the case of *State vs. Gibbons*, that the crime of murder in the second degree necessarily involves an act done with malice aforethought. But that term used in defining the crime is technical rather than descriptive. It does not necessarily require an intent to murder. Malice aforethought may be implied where there is no intent to kill, but an intent to commit a felony from which death results, although that result is unintended. That death resulting from a criminal attempt to commit an abortion constitutes murder in the second degree is in Iowa well settled. An indictment is not objectionable because it does not charge that the attempt to procure a miscarriage by means of drugs or instruments was made with malice aforethought. And a ruling in this case that such an indictment did not charge murder in the second degree and that, as the indictment was not sufficient to sustain a conviction for murder, dying declarations were not admissible, was prejudicial to the prosecution, for the result was not only to relieve the defendant from punishment for the higher crime, but also to make it more difficult by reason of the exclusion of dying declarations to convict for any crime.

State Board Not Required to Recognize Licenses from Other States

The Supreme Court of South Carolina says that the petitioner in the case of *Hollis vs. State Board of Medical Examiners* asked that the court by its writ of mandamus require the State Board of Medical Examiners to issue to him a license to practice medicine. The application rested on the allegations that the petitioner had stood the examinations required by the boards of medical examiners of the states of Georgia and Virginia, and had received from each of those boards a license to practice as a physician; that he presented these licenses to the defendant board of medical examiners of South Carolina, tendering at the same time the statutory fee of \$5, and demanded a license to practice medicine in South Carolina, but the license was refused; that at the time of the demand the board of medical examiners of South Carolina recognized licenses granted by the boards of examiners of the states of Georgia and Virginia under a reciprocal arrangement existing by virtue of section 9 of an act, entitled "An act to regulate the practice of medicine in South Carolina, to provide for a State Board of Medical Examiners, and to define their duties and powers," approved Feb. 27, 1904, which provides: "The board shall be empowered without examination to indorse, on receipt of the license fee of five dollars, the licenses issued by other state boards having an equal standard: Provided, said other state boards accord to the licenses of the South Carolina state board the same courtesy; and said other state board licenses, when indorsed, shall entitle the holder to registry in this state, and to all the rights and privileges thereby granted."

The statute does not require the board of medical examiners of South Carolina to indorse or recognize licenses from other states, but merely empowers them to do so on the conditions mentioned in the statute. The matter was one placed by the statute entirely within the discretion of the board. The case of *State vs. Matthews*, 81 S. C., 414, was relied on by the petitioner; but that case in its facts was the opposite of this. There the mandamus was issued against the board of pharmaceutical examiners, because the petitioner was a graduate of a reputable college of pharmacy, and the statute there under consideration provides: "No examination shall be required in case the applicant is a regular graduate in pharmacy from any reputable college; but such applicant shall be entitled to a license on furnishing evidence of his graduation satisfactory to the said board and on payment of the fee of five dollars." In that case the discretion to refuse a license to the graduate of a reputable college of pharmacy was expressly denied to the board, while in this case the statute contemplates that the granting or refusing of the license in this state to an applicant holding a license from the board of examiners of another state shall be entirely within the discretion of the board of medical examiners of South Carolina. Therefore the petition for mandamus is denied.

Presumptions as to Impotence

The Court of Appeal, First District, California, says, in the divorce case of *Hobbs vs. Hobbs*, that it knows of no presumption that impotence is incurable. There is a well-known and valuable rule of olden times, often repeated in the decisions and text-books, that impotence shall be presumed after three years of ineffectual cohabitation, and shall not be presumed before. It is sometimes called the rule of triennial cohabitation. At the end of three years, if the marriage remain unconsummated, impotence was presumed. The plaintiff was required to show a triennial cohabitation, or that the defect or cause was obvious to inspection; and in all cases where the condition of the sexual organs was an essential element in the proofs the court ordered an inspection of the person by medical experts. These medical inspectors were usually three in number, and were sworn to perform their duties. In one of the old books of English Practice the form of the oath was as follows: "You are produced as inspectors in a cause. . . . You respectively swear that you will faithfully, to the best of your skill, inspect the parts and organs of generation of each said A. and B.; make a just and true report in writing to the judge ordinary of this court, whether the said A. is capable of performing the act of generation, and, if incapable, whether such his incapacity can be cured by art or skill; and also whether the said B. is or is not a virgin; whether she hath or hath not any impediment on her part to prevent the consummation of the marriage, and that one of you will deliver such report under your hands and seals closely sealed up to one of the registrars of Her Majesty's Court of Probate." These old rules were derived from the Canon Law, and were invariably enforced in the Ecclesiastical Courts. While in modern times the courts do not adhere to the old rule as to three years' cohabitation in order to raise a presumption of impotence, yet they hold that the contract of marriage is of too solemn a nature and of too much importance to society to be set aside and annulled except on clear proof of such physical condition of one of the parties at the time of the marriage that it would operate as a fraud on the other party to compel them to live together as husband and wife in name only, without the comforts of marriage and with no prospect of children. It is therefore in all cases necessary for the plaintiff to establish the impotence at the time of the marriage and its incurable nature.

Microsphygmia.—This is the name given by G. Variot to a syndrome characterized by a special and constant condition, independent of any cardiac cause, of imperceptible or almost imperceptible pulse in most or all of the arteries in which it is usually readily perceived. There is no anatomic lesion discoverable as a cause in the circulatory system and it appears to be due to permanent spasm of the arteries. Variot finds it associated with mental debility and ichthyosis, usually existing since childhood or congenital. Richet, *fils*, and Saint Giron have pointed out that mental debility or idiocy is much more commonly associated with the symptom than is ichthyosis, and Variot himself has observed one case without that feature. Others have observed the syndrome attending hereditary syphilis, and Vincent (*Bull. Soc. méd. d. Hôp.*, Nov. 20, 1908, p. 588) has put forward a theory of thyroid dystrophy to account for the symptom, based on some observations in adults. A case of microsphygmia apparently of long duration but unattended by mental failure or ichthyosis, and with probable thyroid dystrophy, is reported in the same publication Feb. 12, 1909, p. 263, by Morichan-Beauchant (of Poitiers). While Variot (*Bull. Soc. méd. d. Hôp.*, Dec. 4, 1908) holds that microsphygmia may coexist with myxedema, he doubts the direct relation between the two. It is possible he thinks, that this arterial spasm, which is the most constant and characteristic feature, may have for its cause several different factors, syphilis, myxedema, etc., and that it would be impossible to attribute all the forms of cerebral and vasomotor trouble that seem at times to occupy the first place in the etiology of microsphygmia to any one cause.

Society Proceedings

COMING MEETINGS

American Ophthalmological Assn., New London, Conn., July 14-15.
Idaho State Medical Association, Seattle, Wash., July 19.
Oregon State Medical Association, Seattle, Wash., July 19.
Washington State Medical Association, Seattle, July 20.
Wisconsin State Medical Society, Madison, June 30-July 2.

AMERICAN ACADEMY OF MEDICINE

*Thirty-fourth Annual Meeting, Hotel Dennis, Atlantic City, N. J.,
June 5-7, 1909*

The President, DR. HELEN C. PUTNAM, Providence, R. I., in
the Chair

The Value of the Nurse in the Public School

DR. THOMAS A. WOODRUFF, Chicago: Although primarily the work of the school nurse is for the purpose of promoting cleanliness and preventing disease, her services are valuable in more ways than can be enumerated in rules and regulations printed for her guidance. The school nurses of Chicago are under the joint supervision of the Chicago Department of Health and the Visiting Nurses' Association. They are paid by the city and each nurse has charge of a certain number of schools. They have proved themselves to be useful and indispensable to the public school system, as well as to the Department of Health of Chicago. A summary of the benefits of their work shows: 1. A decrease in the spread of contagion. 2. They teach the parents, family and children cleanliness and personal hygiene. 3. They instruct the mother in the care of her children and impress on her the benefits to be derived from cleanliness, fresh air and right living. 4. They render more effective the efforts of the medical inspector by visiting the homes of the children and reporting back information of the conditions found there. 5. They frequently find cases of deprivation and disease in the home which would otherwise go undiscovered and the work of the medical inspector would be of little advantage in the school. 6. They make it possible to treat cases of minor ailments in the school.

DISCUSSION

DR. MCBRIDE, Los Angeles: The question of the inspection of school children was first simply one of inspecting the eyes and ears. It now involves the general hygiene of the school children, which means ultimately an attempt to recreate the vigor of the race. I have been much interested in the work of Dr. L. Gulick of New York in his introduction of calisthenic exercises after every recitation.

DR. HELEN C. PUTNAM, Providence, R. I.: The calisthenics carried out by Dr. Gulick are, I believe, corrective to the attitudes of the children assumed while sitting. They are intended to straighten the back, expand the chest, put in action the leg muscles, bring the shoulders together, throw back the head, and during the few minutes in which they are carried out the windows are thrown wide open.

DR. CASEY A. WOOD, Chicago: Of all the work done by the school nurse I have been most impressed by the influence she has on the mothers of the children in their homes. I believe the work is much more effective and permanent than it would be were the work confined to the schools. The work is much more vital and she is really a hygienic missionary, possessing the highest qualifications for the work.

DR. LEARTUS CONNOR, Detroit: The work of the school nurse appeals strongly to me because it is a part of the education by which the children shall be made to live in the conditions in which they have to do their work, enabling them to be of some use in the world. Most children do not "make good," not through any fault of their own, but because of the system of education of the past.

DR. H. TOMLINSON, St. Peter, Minn.: While it is absolutely necessary that the immediate physical welfare of the child should be studied and those conditions which are harmful eliminated, yet the work will be only properly done when certain definite lines of work are laid out in determining the physical capacities of the child; how far any impairment interferes with his capacity to study and to acquire knowledge. If a child physically unfit and primarily limited in mental capacity

is placed in the routine of the public school the result will be disastrous. A careful biological analysis of the individual child is absolutely necessary.

DR. HELEN C. PUTNAM: Do the school nurses of Chicago take the rôle of educators in parents' clubs; also are there any complaints from physicians that the medical inspector and school nurse deprive them of their legitimate patients by sending them to specialists and to hospitals?

DR. JOSEPH K. WEAVER, Norristown, Pa.: I feel that the true function of the school nurse is the home hygienist, and that the work of the medical inspector and of the school nurse must necessarily go together, the nurse seconding the work of the inspector by going into the home, teaching the mother the principles of the preparation of food and of cleanliness.

MISS LYDIA A. KIRBY, Director of Special Schools, Philadelphia: I am sorry to say that in Philadelphia we have not a full corps of nurses, but those whom we have are so fully appreciated by the teachers that I feel that the necessary appropriation will be forthcoming. We are organizing in every ward, school and home associations, in which the teachers and parents come together and the mothers are instructed in cooking, home-making, cleanliness and the care of the children. There are sometimes 200 mothers present.

DR. M. P. E. GROSZMANN, Plainfield, N. J.: The claim that the school nurse in fulfilling her important function is taking the legitimate rights of the physician is due to two facts: (1) The physician is not yet considered by parents generally as a hygienic adviser and preventer of disease, but as one who is to be called in when something requires immediate cure; (2) in some families the physician is rather distrusted and is not considered a counselor. There must be, therefore, an absolute reversal of the position of the physician in the home.

DR. T. A. WOODRUFF: In Chicago the claim made by a certain class of practitioners that the school nurse was appropriating work that rightly belonged to them was thoroughly investigated by the Chicago Medical Society and was found in a large sense not true. I do not think that there is now any dissatisfaction among physicians in regard to the work. It should be remembered, however, that the physician has put the school nurse where she is, and has taught her what she knows of hygiene. If the school inspector falls far short of what he should be, it is not so much his fault, as it is due to the fact that he is underpaid. He can not give the time to following the cases into the home. In some cases he won't do it. In other cases the families are afraid of the physician and will hide the children. The nurse, on the other hand, is welcomed and allowed to do whatever is necessary. Unfortunately, the nurses are so poorly paid that it is going to be difficult to secure a sufficient number.

(To be continued)

CONNECTICUT STATE MEDICAL SOCIETY

*One Hundred and Seventeenth Annual Meeting, held in Hartford,
May 26-27, 1909*

The President, DR. SELDOM B. OVERLOCK, Pomfret, in the
Chair

Officers Elected

The following officers were elected: President, Dr. Samuel D. Gilbert, New Haven; vice-presidents, Drs. Theodore R. Parker, Willimantic, and William J. Tracy, Norwalk; secretary, Dr. Walter R. Steiner, Hartford; treasurer, Dr. Joseph H. Townsend, New Haven; delegates to the American Medical Association, Drs. D. Chester Brown, Danbury, and Everett J. McKnight, Hartford.

New Haven was chosen as the next meeting place.

Bacterial Vaccines in Treatment of Disease

DR. C. J. BARTLETT, of New Haven, first outlined briefly the development of the opsonic method. Bacterial vaccines were contrasted with antitoxins and the general principles underlying vaccine therapy were discussed:

This method of treatment is specific in the strictest sense of the word. In the majority of infections, autogenous vaccines must be used in order to obtain satisfactory results.

Wright insists that the frequent determination of the opsonic index is essential, but in this country many of those who are using vaccines are evidently disregarding the index and have obtained good results. Localized staphylococcus infections are particularly favorable to this form of treatment. Hartwell and Lee emphasize its especial value in the treatment of boils about the face to prevent scarring. It has proved of value in severe cases of Rigg's disease. According to Wright, antiseptics should not be used together with vaccine therapy as they counteract the action of the opsonins. Ross and others report excellent results in cases of erysipelas. Gabritschewsky's prophylactic work against scarlet fever by means of streptococcus vaccines is interesting but requires confirming.

A few cases of streptococcus endocarditis and puerperal sepsis with favorable outcome under vaccine therapy are reported but this result is the exception and not the rule. Auto-genous, not stock streptococcus vaccines, should always be used when possible. Of gonorrheal infections, gonorrheal arthritis appears most amenable to vaccine therapy. Aronstam has reported favorably on its use in acute urethritis and Hollister and others in gonorrheal vulvovaginitis. In cystitis and pyelitis, due to the colon bacillus, it has been used with good results. In typhoid Richardson's results and the recent report of Watters are encouraging. Two cases of actinomycosis, successfully treated, have been reported. Pneumococcus endocarditis is not favorably affected by vaccines. A case of favus of twenty-three years' standing, cured by vaccines, has just been reported by Perssons. From theoretical considerations, it seems probable that better results than yet reported may be obtained in general infections if appropriate vaccines can be used early in the disease. Latham's results in administering vaccines by mouth indicate the possibility of simplifying vaccine therapy. For the successful employment of this method of treatment, more accurate diagnoses than in the past must be made. Laboratory experts must be called on more frequently than heretofore.

Venesection and Dermatology

DR. THOMAS M. BULL, Naugatuck, referred to the antiquity of venesection as a remedial measure; he discussed its value and emphasized the necessity of selecting patients for this purpose. He related cases of eczema and psoriasis in which it had been of value, and closed with some theoretical considerations as to its use, and described the technique.

Localizations of Lesions of the Genitourinary Tract

DR. F. H. COOPS, Bridgeport: It is necessary to have a definite and systematic plan of procedure in order to arrive at an accurate diagnosis. The perfection of the older clinical methods and the invention and use of such modern instruments as the urethroscope, the cystoscope, the different urinary segregators and x-ray photographs has made urology one of the most exact of the medical sciences. As complete a history of the case as possible should first be obtained. Next the secretions and excretions of the tract should be thoroughly investigated, mechanically, chemically and microscopically. When we have thus arrived at certain conclusions regarding the nature and location of the trouble we make use of the different instruments and other mechanical devices at hand in order to elicit our diagnosis. The patient and the experienced investigator going over in this way each portion of the tract in turn, noting and properly interpreting all that he hears, feels and sees, will be fully rewarded for the pains that he has taken.

Ocular Manifestations of Systemic Diseases

DR. M. H. GILL emphasized the importance of using silver nitrate in the eyes of the new-born, and urged the making of that process obligatory by statute. He also spoke of the necessity of examining a child's refraction on the first appearance of a "crossed eye." He advised frequent inspection of the eye ground in general constitutional disturbances, and showed the necessity of referring patients to oculists rather than to opticians.

Partial Responsibility of the Insane

DR. FREDERICK T. SIMPSON, Hartford, said in part: Psychiatrists while studying all other aspects of insanity have ignored the question of responsibility. They have included under insanity in the most recent text-books such conditions as neurasthenia, psychasthenia, hysteria, chronic alcoholism, etc. All the psychoses may be mild, moderate or severe in intensity. There are all degrees of departure from the normal type of mental soundness. It is therefore an absurdity for the law to require that a physician declare a man either totally sane and responsible, or totally insane and irresponsible. It must be recognized that there are different degrees of impairment of responsibility as there are different degrees of impairment of any and all of the other powers and capacities of the individual. Many patients belonging to these classes of mildly insane can not be shut up in asylums. Since they are allowed to go at large, they must be held responsible for their conduct. In point of fact, with most insane persons, the knowledge of right and wrong is well preserved and a large proportion of them are, in their outside social relations, well-behaved persons. They can do wrong like other persons, and usually acknowledge it or excuse it in the natural way. Punishment, or discipline of any sort has the same deterrent effect. The physician has too often sought to rescue the accused on trivial disturbances of mental health. If the medical profession frankly acknowledges that the insane are by no means irresponsible, and that the degree of responsibility is a matter to be determined by careful investigation of all the facts, the present irrational distinction made between medical and legal responsibility will be dropped and the interests both of justice and humanity will be furthered.

Hemolysis in the Diagnosis of Malignant Tumor

DR. HAROLD S. ARNOLD, New Haven, reviewed some of the literature on this subject and gave his experience with hemolysis in 53 tests, at the New Haven Hospital:

Of 13 malignant tumors, 12 gave positive hemolyses; 4 benign tumors gave negative tests; of 32 cases of acute and chronic disease, 1 only, a case of lobar pneumonia, gave a positive reaction. It may be concluded, therefore, that the test, while not infallible, is nevertheless a valuable aid in the diagnosis of malignant growths.

The Influence of Thoughts and Emotions in Causation of Disease

DR. SAMUEL D. GILBERT, New Haven, treated this subject from the standpoint of the general practitioner:

Literature abounds in illustration of such influences. Our environment as a nation is largely and chiefly responsible for the prominence of mental conditions as a factor in the etiology of diseases to-day. The way of living now is different from that of thirty years ago. There were then no telephones, electric cars, wireless telegraphy, automobiles, four and a half days transatlantic steamships, etc. Modern inventions with the labor problems, and the ways of doing business, and the conduct of the sports all conspire to make the whirl and rush of our daily life. The thoughts and emotions exercise their influence on and through the stomach, on nutrition and sleep. This begins at birth. The first individual impressions made on the infant are evident by them. Hence the importance of right influences exercised by nurse and parents; right home surroundings and atmosphere at this early period, as a healthy normal child makes a healthy and sane man or woman. Three of the most common emotions are fear, worry and selfishness. Under fear, fear of bacilli is mentioned as a growing emotion among others. Fear is a direct cause of paralysis agitans among other diseases. Selfishness is the bottom of the hysterical state and frequently in the rich is a cause of neurasthenia. There is one kind of influence causing diseases for which we as physicians are responsible, and that is due to our relations with our patients. Dr. Cabot is quoted as making these points: First, the doctor habit; second, the physician as a cause of disease; third, physical harm from physical diagnosis and treatment. The physician should have the moral courage to tell patients who are not ill that

they should stay away for their own good. The physician who treats every little ailment, particularly local troubles as of the throat or vagina where they are trifling, is in that way making a hypochondriac and so is himself a cause of disease. The doctor should not make too frequent and minute examinations in, for example, chronic cardiac or kidney disturbances, as he is thereby doing psychical harm. We are often blind to the fact that disease is not caused by some hidden germ or material cause, but by something right before our eyes, *i. e.*, the influence of the thoughts and emotions.

The Physician as an Educator in Sanitation

DR. FRANK E. GUILD, Windham: Any study of public hygiene is largely a matter of the destruction and prevention of the dissemination of pathogenic bacteria. Our present knowledge of the cause of disease is due to the comparatively recent discoveries of the nature and activities of the bacteria, which was made possible by the discovery and application of the achromatic lense to the microscope. This was of great value as a help in diagnosis and as a means of identifying micro-organisms now known to be the cause of many diseases. The demonstration by Louis Pasteur, that bacteria caused a large number of diseases did away with the numerous and conflicting theories previously held. With this new knowledge, the responsibility to the public of the physician was greatly increased, especially so when we consider that 50 per cent. of all maladies are extrinsic and preventable. The epithelium of the skin and mucous membrane guards the living body from pathogenic bacteria. There are four avenues of entrance for these germs to the living organs: (1) inoculation by wound infection or by bites or stings of infected insects; (2) through the alimentary canal; (3) through the respiratory system; (4) through the genitourinary apparatus. To the physician and sanitarian belong the care and prevention of such infection and their endeavor should be to guard these portals. Before Grassi proclaimed *Anopheles claviger* as the true transmitter of malaria, or before typhoid fever was known to need no period of incubation in the soil, or before Reed, Carroll, Lazear and Agramonte proved the mosquito to be the true carrier of yellow fever, infectious diseases were divided into contagious, miasmatic and miasmato-contagious. We recognize the alertness of the medical profession in its fight with tuberculosis and we expect to see the time when it will be under control. But while fighting this disease, we must with equal zeal guard against all infectious diseases. From August, 1908, to April, 1909, there were in the state of Connecticut 2329 deaths from infectious diseases other than tuberculosis. How many of these deaths and how much of the cost and discomfort of those who did not die but were sick with these diseases might have been prevented, it is impossible to say. Much of this condition was due to ignorance and carelessness. If the state would be more generous with its money in hiring men trained in sanitation to supervise the instruction and care of these matters, this condition would be different. Pure and cheap milk is a necessity. How to get it is a problem to be solved. How to prevent river contamination from urban sewage and suburban contamination of wells and springs, and how safely to quarantine families and how to disinfect rooms in such a manner as to be perfectly safe for future habitation, are other problems to be solved. These problems are capable of solution through educated supervision. Not only health officers but the masses must be taught in the same way as is being done to-day in the effort to exterminate tuberculosis, and this instruction must be furnished by the physician.

Importance of More Careful Surgical Diagnosis and the Aid Afforded by Various Differential Tests

DR. HARRIS F. BROWNLEE, Danbury: One of the greatest evils in surgery to-day is that of faulty diagnosis, which outside of the large surgical centers prevails to an unnecessary degree among both physicians and surgeons. Errors are frequently unavoidable owing to the real difficulties of the case, but often occur from lack of care in taking the history and making the examination. Diagnosis is an art, a science and an intuition, and no department of medicine or surgery is

more worthy of cultivation. Illogical deductions may be drawn from accurate facts, but more often logical deductions are drawn from inaccurate facts. However these errors may be arrived at, they lead to lack of confidence on the part of the public and to general discredit.

Differential tests: The blood count is an assistance if interpreted as indicating an inflammatory process and not an established condition. The Cammidge test is apparently positive in pancreatic affections. The demonstration of occult blood and the estimate of hydrochloric acid is helpful in diagnosis of cancer of the digestive tract. The Roentgen ray is positive in demonstrating renal, ureteral or vesical calculi, but negative as to biliary calculi. By ureteral catheterization, the administration of methylene blue, indigocarmine and phloridzin, by cryoscopy and by noting the electrical conductivity after administration of indigocarmine we gain information regarding affections of the urinary tract, and as to the functional activity of each kidney. By noting changes in the blood pressure and by lumbar puncture we gain knowledge of cerebrospinal affections. By paracentesis we determine the character of various effusions. All these tests are helpful and hopeful; we should know their value and be able to interpret their meaning even though uninformed as to their technic, which naturally belongs to the men of the laboratory. They are, however, not a short cut to diagnosis. A careful painstaking history, and a thorough examination constitute the true basis of accurate diagnosis. We can not all be leaders or pioneers, but we can at least be intelligent followers.

Appendicitis in Pregnancy

DR. OTO G. RAMSAY, New Haven: There is change in general opinion as to severity or fatality of this condition. There is no apparent relationship between pregnancy and a primary attack, though it is probable that pregnancy increases liability to a second attack. Pregnancy increases severity or fatality of suppurative cases. Operation is indicated in every case in which there is the least suspicion of suppuration.

Extrauterine Pregnancy

DR. P. H. INGALLS, Hartford, discussed the diagnosis of ectopic gestation and when to operate:

It is an error to interfere when the patient is pulseless and in a condition of profound shock. By rallying the patient from profound shock, before operating, I find that my results are more satisfactory. These cases are not rare; many of them go on to tubal abortion and the patients recover without attention. The diagnosis is often difficult. When a diagnosis is made, operation should be done before rupture; when rupture has occurred the patient should be allowed to rally and then operated on.

Heredity in Crime

DR. CARMALT's paper on heredity in crime refers first to the well-known rules observed in breeding of domestic animals and considers that natural selection is observed nearly as strictly as in man:

Many names which have become famous in all departments of learning are instances of this, for example, the marriages of persons of like tastes, while marriages between these people and degenerates are rare. The Edwards family, *i. e.*, the descendants of Jonathan Edwards, may be taken as an illustration. Galtori's investigations show that there is a fairly well-marked hereditary influence by which different professions keep up the lines; there are instances of theological families, legal families, physicians and scientific families. There are authorities for classifying high moral qualities as inheritable. *Per contra* consider "the Jukes," the "tribe of Ishmael," the Owens family as equally marked instances of degenerate families. There are difficulties in getting genealogic records of criminals. There is a definite relation of pauperism to crime. Pauperism, idiocy, imbecility, epilepsy are all inheritable and associated diseases and I argue that crime belongs to them. It is the duty of the state to prevent the propagation of such types, and I advocate the "sterilization of the unfit," both criminals and imbeciles.

Effect of Removing Large Portions of the Small Intestine

DR. J. M. FLINT, New Haven, referred to three investigations, which have already been published on this subject, with results that differ radically, both as to the percentage that may be removed safely and with reference to the effect of the resection on the organism. A reworking of the problem justified the following conclusions:

1. As much as 75 per cent. of the total small intestine may be removed without fatal results. The animals may gradually return to a condition of practically normal weight and metabolism when maintained on a favorable diet under good conditions.
2. The animals suffer from a severe diarrhea, loss of weight, ravenous thirst and appetite from which they gradually recover until conditions may return to those of a normal animal. They remain, however, extremely sensitive to unfavorable conditions of diet and living.
3. Metabolic studies on such animals show that there is a marked increase in the elimination of the nitrogens, fatty and carbohydrate elements of the food. Their elimination may reach 66 per cent. of the diet content. After compensation is established, on a rich easily assimilated diet, digestion goes on as in a normal dog, except for an increase in intestinal putrefaction as indicated by the amount of indican in the urine. An increase in the fatty content of the food may lead to an increased elimination of nitrogen and fats to a point about 25 per cent. above normal. The carbohydrates, on the contrary, are absorbed to a degree considerably above normal after the compensation is established.
4. The compensatory process consists in a hypertrophy of the remaining portion of the small intestine as well as a hyperplasia. There is no regeneration of the villi or crypts. Computation makes it probable that approximately the original area of the intestine is restored by the compensation. There is apparently no adaptation on the part of either the stomach or the colon to take over the function of the small intestine, although in one case only there was a marked dilatation of the stomach. The remaining organs are normal macroscopically and microscopically.
5. There are 30 cases in the literature in which over 200 cm. of the intestine have been resected. The mortality is 20 per cent., which is probably much lower than it should be owing to the greater probability of successful cases finding their way into literature. Human patients behave in general like the animals. They show similar metabolic disturbances. In one case (Schlatter's) there was distinct evidence of a compensatory process. No regeneration or hypertrophy has ever been reported on a human case.
6. Resection of the human intestine is never an operation of choice. The surgical rule has been and will continue to be a resection of the minimum amount which the pathologic conditions allow. From the metabolic studies it would seem wise to give these patients a rich and easily assimilated diet, relatively poor in fats and relatively rich in carbohydrates.

Practical Points in the Administration of Anesthesia

DR. RICHARD F. RAND, New Haven, related some practical points he had found of use in giving anesthetics. After an experience with the drop method in nearly 300 cases, he preferred it to the cone or Bennett inhaler, the two methods he had previously employed. In speaking of the choice of anesthetics he said that in surgery of the brain chloroform was preferred, but that ether was better in nephritis or diabetes. At night ether is less dangerous than chloroform.

The Natural Channels of Absorption Evoking the Chemical Mechanism of Gastric Secretion.—By means of a specially devised rubber balloon, shaped like a washer, Edkins and Tweedy (*Jour. Physiol.*, 1909, xxxviii, 263) found it possible to separate functionally the pyloric from the fundal end of the stomach in experimental animals, and to study the independent secretions of the two parts. Experiments on animals in which all the gastric branches of the vagus nerve were cut, indicate that secretion in the stomach is evoked, partly at least, by certain substances occurring in the course of digestion, which are absorbed by the pyloric mucous membrane and which liberate a hormone, gastrin, that acts as a secretion stimulant for the fundus mucosæ. It is further found that a hormone is produced in the duodenum which stimulates secretion in both fundus and pyloric regions of the stomach. After washing out the stomach with warm normal salt solution, and introducing 2 per cent. meat extract solution under slight pressure into the duodenum in the fasting state, a liberal secretion occurred in the region of the divided stomach. The secretion of the pyloric end was alkaline; that of the fundus showed a maximum acidity of 0.16 per cent. hydrochloric acid. When the fluid substances were confined to the pylorus the fundus responded with a secretion containing both hydrochloric acid and pepsin. Of the different food substances employed, either in the pyloric region or duodenum, the effectiveness was apparently in the following order; meat extracts, dextrose, dextrin, and last, hydrochloric acid. If the food substances were confined to the fundus region there was no evidence of any secretion whatever.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

- ARIZONA: Phoenix, July 5-6. Sec., Dr. Ancil Martin.
ARKANSAS: Homeopathic, Little Rock, July 13. Sec., Dr. P. C. Williams, Texarkana.
ARKANSAS: Regular, Little Rock, July 13. Sec., Dr. F. T. Murphy, Brinkley.
COLORADO: Denver, July 6. Sec., Dr. S. D. VanMeter, 1723 Tremont Place.
CONNECTICUT: Regular, New Haven, July 13-14. Sec., Dr. Charles A. Tuttle, 196 York St.; Homeopathic, New Haven, July 13. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, New Haven, July 13. Sec., Dr. T. S. Hodge, 17 Main St., Torrington.
DISTRICT OF COLUMBIA: Washington, July 13-16. Sec., Dr. George C. Ober, 210 B St., S. E.
INDIANA: 120 State House, Indianapolis, July 13-15. Sec., Dr. W. T. Gott.
KENTUCKY: Louisville, July 6. Sec., Dr. J. N. McCormack, Bowling Green.
MAINE: State House, Augusta, July 13-14. Sec., Dr. Frank W. Searle, 806 Congress St., Portland.
MASSACHUSETTS: State House, Boston, July 13-15. Sec., Dr. Edwin B. Harvey, Room 159, State House.
NEW HAMPSHIRE: Concord, June 29-30. Regent, Mr. H. C. Morrison.
NEW MEXICO: Santa Fe, July 12. Sec., Dr. J. A. Massie.
NORTH DAKOTA: Grand Forks, July 6-8. Sec., Dr. H. M. Wheeler.
OKLAHOMA: Guthrie, July 13. Sec., Dr. Frank P. Davis, Enid.
OREGON: Portland, July 6. Sec., Dr. R. C. Coffey.
RHODE ISLAND: Room 313, State House, Providence, July 1-2. Sec., Dr. Gardner T. Swarts, 315 State House.
SOUTH DAKOTA: Watertown, July 14-15. Sec., Dr. H. E. McNutt, Aberdeen.
UTAH: Salt Lake City, July 5. Sec., Dr. G. F. Harding, 310 Templeton Bldg.
VERMONT: Burlington, July 13-15. Sec., Dr. W. Scott Nay, Underhill.
WASHINGTON: Seattle, July 6-8. Sec., Dr. Kenneth B. Turner, Walker Bldg.
WEST VIRGINIA: Charleston, July 13-15. Sec., Dr. H. A. Barbee, Point Pleasant.
WISCONSIN: Madison, July 13-15. Sec., Dr. J. V. Stevens, Jefferson.

Illinois January Report

Dr. J. A. Egan, secretary of the Illinois State Board of Health, reports the written examination held at Chicago, Jan. 18-20, 1909. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 45, of whom 21 passed and 23 failed. One candidate took an incomplete examination. The following colleges were represented:

College	PASSED	Year Grad.	Total No. Ex.
Bennett College of Eclectic Medicine and Surgery.	(1908)		2
Chicago College of Medicine and Surgery.....	(1909)		3
College of Medicine and Surgery, Chicago.....	(1908)		1
Hahnemann Medical Coll. and Hospital, Chicago..	(1908)		1
Jenner Medical College	(1908)		1
College of Phys. and Surgeons, Chicago... (1894)	(1897)		2
Rush Medical College	(1907)		1
Northwestern University Medical School.....	(1908)		1
Medical College of Indiana.....	(1903)		1
University of Iowa	(1908)		1
Washington University	(1908)		2
Columbia University, Coll. of Phys. and Surgs....	(1908)		1
Medical College of Ohio	(1902)		1
University of Nashville	(1901)		1
McGill University, Quebec	(1908)		1
University of Naples, Italy	(1906)		1
FAILED			
Chicago College of Medicine and Surgery.....	(1908)		2
Illinois Medical College	(1908)		3
Jenner Medical College	(1908)		4
National Medical University	(1907)		2
College of Physicians and Surgeons, Chicago....	(1908)		1
Keokuk Medical College	(1896)		1
Barnes Medical College	(1908)		3
St. Louis College of Physicians and Surgeons....	(1908)		3
Cleveland Medical College	(1870)		1
Medical College of the State of South Carolina...	(1902)		1
Meharry Medical College	(1907)		1
University of Budapest, Hungary	(1907)		1

Oregon January Report

Dr. R. C. Coffey, secretary of the Oregon State Board of Medical Examiners, reports the written examination held at Portland, Jan. 5-7, 1909. The number of subjects examined in was 16; total number of questions asked, 114; percentage required to pass, 75. The total number of candidates examined was 52, of whom 31 passed, including one non-graduate, and 21 failed, including one non-graduate. The following colleges were represented:

College	PASSED	Year Grad.
Denver and Gross College of Medicine.....	(1907)	
George Washington University.....	(1908)	
Northwestern University Medical School.....	(1902)	
Northwestern University Woman's Medical School.....	(1895)	
Hahnemann Medical College and Hospital, Chicago.....	(1906)	
Rush Medical College.....	(1891) (1900) (2),	(1906)
American Medical Missionary College.....	(1905)	
University of Iowa.....	(1907)	
Kansas Medical College.....	(1905)	
Tulane University of Louisiana.....	(1907)	
University of Missouri.....	(1893)	
St. Louis College of Physicians and Surgeons.....	(1906)	
Barnes Medical College.....	(1903)	
University of Buffalo.....	(1898)	
Miami Medical College.....	(1908)	
University of Oregon.....	(4), (1908)	
Willamette University.....	(2), (1907)	(1908)
Jefferson Medical College.....	(1886)	(1904)
Woman's Medical College of Pennsylvania.....	(1908)	
University of Vermont.....	(1905)	
University of Helsingfors, Finland.....	(1896)	

College	FAILED
Northwestern University Medical School.....	(1907) (1908)
Rush Medical College.....	(1886)
College of Physicians and Surgeons, Chicago.....	(1885) (1903) (1905)
Chicago College of Medicine and Surgery.....	(1904)
Kansas Medical College.....	(1906)
University of Louisville.....	(1907)
Missouri Medical College.....	(1890)
St. Louis University.....	(1908)
St. Louis College of Physicians and Surgeons.....	(1908)
University of North Carolina.....	(1906)
University of Oregon.....	(1908)
Willamette University.....	(1906) (1907)
Pulte Medical College.....	(1877)
Jefferson Medical College.....	(1904)
Western University, London, Ontario.....	(1896)
University of Turin, Italy.....	(1899)

New Mexico April Report

Dr. J. A. Massie, secretary of the New Mexico Board of Health and Medical Examiners, reports the written examination held at Santa Fe, April 12, 1909. The number of subjects examined in was 13; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 4, of whom 3 passed and 1 failed. Sixteen candidates were licensed on presentation of satisfactory credentials. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Alabama.....	(1899)		80.4
Memphis Hospital Medical College.....	(1902) 78.4; (1906)		78.9

College	FAILED
Georgia College of Eclectic Medicine and Surgery.....	(1890) 70.

College	LICENSED ON CREDENTIALS	Year Grad.
Denver and Gross College of Medicine.....	(1906)	
Illinois Medical College.....	(1903) (1906)	
College of Physicians and Surgeons, Chicago.....	(1905)	
Bennett College of Eclectic Medicine and Surgery.....	(1879)	
Hahnemann Medical College and Hospital, Chicago.....	(1899)	
Rush Medical College.....	(1899)	
Louisville Medical College.....	(1872)	
University of Maryland.....	(1863)	
University of Minnesota.....	(1901)	
Marion-Sims Beaumont College of Medicine.....	(1903)	
Starling Medical College.....	(1897)	
Miami Medical College.....	(1903)	
Hahnemann Medical College and Hospital, Philadelphia.....	(1897)	
Jefferson Medical College.....	(1896)	
University of Texas.....	(1904)	

Georgia April and May Reports

Dr. E. R. Anthony, secretary of the Regular Board of Medical Examiners, reports the written examinations held at Atlanta, April 30-May 1, 1909, and at Augusta, May 3-4, 1909. The number of subjects examined in was 10; total number of questions asked, 50; percentage required to pass, 80.

At the examination held at Atlanta, April 30-May 1, the total number of candidates examined was 113, of whom 91 passed and 22 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Alabama.....	(1908)		80.
George Washington University.....	(1906)		85.
Atlanta College of Physicians and Surgeons.....	(1903) 84; (1909) the grade of 80 was reached by six; 81 by one, 82 by two; 83 by one; 84 by two; 85 by three; 86 by one; 87 by seven; 88 by three and 89 and 90 by one each.		
Atlanta School of Medicine, (1909) the grade of 80 was reached by four; 81 and 82 by three each; 83 by six; 84 by eight; 85 and 86 by five each; 87 by three; 88 by two; and 89 and 91 by one each.			
College of Physicians and Surgeons, Chicago.....	(1907)		83.
University of Louisville.....	(1908)		80.
Baltimore Medical College.....	(1906) 80; (1908)		85.

Maryland Medical College.....	(1904) 81; (1906)	86.
Johns Hopkins Medical School.....	(1906)	87.
College of Physicians and Surgeons, Baltimore.....	(1908)	80.
North Carolina Medical College.....	(1909)	85. 86.
Medical College of the State of South Carolina.....	(1900)	80.
Memphis Hospital Medical College.....	(1903)	80.
University of Tennessee.....	(1905)	84.
Meharry Medical College.....	(1909) 80, 82, 86, 87, 87.	
University of the South.....	(1906)	82.

FAILED

Atlanta College of Physicians and Surgeons.....	(1909) 73, 76, 77, 78.
Atlanta School of Medicine.....	(1909) 74, 75, 76, 77, 78.
North Carolina Medical College.....	(1907) 76.
Leonard Medical School.....	(1906) 77; (1908) 74.
Meharry Medical College.....	(1908) 76, 76, 77; (1909) 67, 77, 77.
Knoxville Medical College.....	(1905) 78; (1908) 75.
Chattanooga Medical College.....	(1909) 75.
University of West Tennessee.....	(1908) 72.

At the examination held at Augusta, May 3-4, 1909, the total number of candidates examined was 24, of whom 21 passed and 3 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Alabama.....	(1909)		83.
Medical College of Georgia.....	(1909) 80, 80, 80, 81, 82, 82, 83, 84, 84, 84, 85, 86, 86, 87, 87, 87, 88, 88, 89.		
Chattanooga Medical College.....	(1902)		85.

FAILED

Medical College of Georgia.....	(1908) 71; (1909) 73, 74.
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Massachusetts May Report

Dr. E. B. Harvey, secretary of the Board of Registration in Medicine, reports the written examination held at Boston, May 11-13, 1909. The number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 32, of whom 19 passed, and 13 failed, including 3 non-graduates. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Howard University.....	(1907) 75; (1908)		84.
Georgetown University.....	(1908)		79.7
Baltimore Medical College.....	(1908)		75, 75.
Johns Hopkins Medical School.....	(1909)		80.9
Medical School of Maine.....	(1908)		84.
Tufts College Medical School.....	(1908)		75.
Harvard Medical School.....	(1906) 82.6; (1907) 82.5; (1908)		77.1, 79.6
New York Homeopathic Med. Coll. and Hospital, (1881)			75.
Dartmouth Medical School.....	(1906)		82.3
Woman's Medical Coll. of the N. Y. Infirmary.....	(1891)		82.5
University of Pennsylvania.....	(1907)		82.3
University of Vermont.....	(1905) 75.2; (1908)		76.5
University of Aberdeen, Scotland.....	(1904)		79.6

FAILED

Baltimore Medical College.....	(1908)		72.2
College of Physicians and Surgeons, Boston, (1908)			58.2, 60.7, 65.
Dartmouth Medical School.....	(1899)		67.7
University of the South.....	(1901)		67.2
University of Vermont.....	(1903)		70.1
University College of Medicine, Richmond.....	(1907)		63.5
Laval University, Quebec.....	(1905)		65.5
University of Naples, Italy.....	(1900)		71.

Leucocytes in Tuberculosis.—Because the study of the opsonic index gave uncertain results and entailed a cumbersome technique J. F. Hultgen (*Transactions of the Chicago Pathological Society*, Feb. 1, 1909) resorted to the study of the leucocytes, hoping that it might furnish a guide to the administration of tuberculin. He examined the blood in 500 cases. In incipient tuberculosis the blood picture of secondary anemia with comparative lymphocytosis was found. The same condition is found in recovery from any infection. It is occasioned in this instance by the intermittent autoimmunization against the tuberculin that enters the blood from the tuberculous focus. Hultgen proposes, therefore, to use the leucocyte count as a guide in the administration of tuberculin. The leucocytes respond readily and invariably to changes in the amount of antibodies in the circulation, as is shown by the actual and typical postinfectious leucocytic equilibrium found in recovery from any infectious disease; the development of the blood picture under the use of tuberculin; the deviation from this equilibrium when overdoses of the tuberculin are given and the subsequent return to it; by the deviation from this proportion during intercurrent bronchitis or bronchopneumonia occurring in tuberculosis; and, again, by its return toward this characteristic type. It is not good practice to use the local reaction alone as a guide in the administration of tuberculin, for there is no definite relation between the local reaction and the general immunity.

Book Notices

MARRIAGE AND DISEASE. An Abridged Edition of Health and Disease in Relation to Marriage and the Married State. Edited by H. Senator and S. Kaminer, Berlin. Translated from the German by J. Dulberg, M.D., Manchester, Eng. Cloth. Pp. 452. Price, \$2.50. New York: Paul B. Hoeber, 1909.

As an abridged edition of the larger work which has received so much commendation, the present volume has many advantages. A rather careful examination fails to reveal any unfavorable criticism to be made on the work. The chapter on sexual hygiene in married life by Professor Fürbringer of Berlin is worth circulation as a separate pamphlet, for it must be confessed that there is hardly any work on this subject for the general public which is comparable to this chapter. The various divisions of the general subject are treated by Berlin physicians who stand high in scientific attainments, and the field is thoroughly covered, from consanguinity in marriage and its effects on the offspring, to professional secrecy and economic considerations.

SCIENTIFIC NUTRITION SIMPLIFIED. By Goodwin Brown, A.M. Cloth. Pp. 200. Price, 75 cts. New York: Frederick A. Stokes Co.

Brown's neat little volume may be called a digest of the most practical facts—as they have appealed to him—along the line of food reform. He gives special attention to the works of Fletcher on thorough mastication of the food, and of Chittenden and Fisher on the more careful selection of food in accordance with its constituents and the needs of the body. Brown makes no claim of originality, but says that he simply is endeavoring to make accessible some of these facts which are so worthy of attention. He has succeeded fairly well, and the book supplies a definite need, regardless of whether or not one wishes to follow Fletcher and others to the full extent that their theories carry them. This book may be safely recommended to patients who are interested or need to become interested along the lines referred to.

THE HUMAN SPECIES. By Ludwig Hopf. Authorized English Edition. Cloth. Pp. 457, with illustrations. Price, \$3. New York: Longmans, Green & Co. 1909.

In this work the structure, functions and diseases of the human species are compared with those of animals. It is evident that the book is intended for the general reader interested in the biologic relationships of human beings, and to such it is heartily recommendable, being instructive, easy to read, and trustworthy in most of the essentials. Especially interesting in the discussion of the ancestors of man, of the distribution of mankind, of psychology and special comparative psychology, of emotions and their expression, of social conditions and observances, and of arts and handicrafts. There are mistakes and shortcomings in the section on pathology. We are told that cultures of tubercle bacilli can not be inoculated into guinea-pigs. Nothing is said of the relation of *Treponema pallidum* to syphilis. The proof that yellow fever is communicated by a mosquito is stated inadequately. The style is simple and adapted to the demands of persons of general education.

MEDIZINAL-BERICHTE ÜBER DIE DEUTSCHEN SCHÜTZGEBIETE. Volume for 1906-7. Cloth. Pp. 324. Price, 7.50 marks. Volume for 1907-8. Cloth. Pp. 528, with illustrations. Price, 9 marks. Herausgegeben vom Reichs-Kolonialamt. Berlin: Ernst Siegfried Mittler und Sohn.

These two volumes are official reports of the diseases, sanitary conditions and other matters pertaining to health in the German dependencies for the periods indicated. The reports give a good idea of the German activities in these matters, and are of great value and interest to health officers and students of public health questions.

ATLAS AND EPITOME OF OPHTHALMOSCOPY AND OPHTHALMOSCOPIC DIAGNOSIS. By Prof. Dr. O. Haab of Zürich. Second American Edition. Edited by G. E. de Schweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania and Ophthalmic Surgeon to the University Hospital. Cloth. Pp. 94, with illustrations. Price, \$3. Philadelphia: W. B. Saunders Co., 1909.

ATLAS OF THE EXTERNAL DISEASES OF THE EYE, including a brief Treatise on the Pathology and Treatment. By Prof. Dr. O. Haab of Zürich. Edition 3. Edited by G. E. de Schweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania and

Ophthalmic Surgeon to the University Hospital. Cloth. Pp. 244, with illustrations. Price, \$3. Philadelphia: W. B. Saunders Co., 1909.

These books of Haab's have been found to be of such practical value that they have been translated into twelve or more languages, one of the latest being Japanese. We all appreciate the value of good illustrations; and these books contain examples of the best colored plates, showing the ocular conditions as seen in life, and also many pathologic illustrations. The text is brief and practical and the description of the external ocular diseases is preceded by a concise, accurate description of the various functional eye tests and methods for the detection of the diseases which are described in full later on. The "Atlas of Ophthalmoscopy" is in its fifth German edition, from which this second American edition is taken. Valuable additions have been made to the illustrations of both works. As Haab well says, a study of these books gives one the atmosphere of a large clinic. They should prove profitable to all physicians, and particularly those in general practice.

DIE ENTSTEHUNG UND VERBREITUNG DER TUBERKULOSE IM WEIBLICHEN GENITALTRACTE. Von Dr. Albert Blau, Assistenten der Klinik von Rosthorn in Wien. Paper. Pp. 95. Price, 4 marks. Berlin: S. Karger, 1909.

Blau concludes from the literature, from experimental work, and from clinical observations that primary tuberculosis of the female genital tract is rare and that of the upper genitals practically unknown; and that, while infection of the genitals is possible, it occurs only when there are both favorable conditions of the tract itself (the puerperium, trauma, etc.) and an exceptionally virulent infecting agent. An extension upward of the disease does not occur, according to his observation, either in experimental animals or in the human female. In the cases of tuberculosis of the upper genital organs the infection is received by way of the blood.

BLUTUNGEN UND AUSFLUSS AUS DEM UTERUS: IHRE URSACHEN UND BEHANDLUNG. Von Hofrat Dr. A. Theilhaber. Paper. Pp. 87, with illustrations. Price, 2.50 marks. München: Verlag von Ernst Reinhardt, 1909.

Theilhaber treats first the causes of uterine hemorrhage, giving especial importance to alterations of the muscular layer and the vessels in myomatous bleeding and to the psychic and nervous influences which may excite hemorrhage in the absence of any organic disease. Disease of the endometrium, which has usually been credited with the production of hemorrhage, is in his opinion only rarely the cause of such an occurrence. Discharge from the uterus may be of two kinds, mucous and purulent. After numerous careful investigations he concludes that discharge from the uterus may be occasioned either (a) by a hypersecretion of the uterine mucosa in consequence of venous stasis, chronic metritis, disturbances of circulation, psychic or erotic stimulation, masturbation, chlorosis, etc. (neurasthenia or hysteria particularly may often be a cause of a flow; in such patients the flow occurs after every severe psychic stimulation); or (b) by a genuine endometritis, which in the majority of cases is due to gonorrhea. In the first class the flow is commonly mucous; in the second generally purulent. Only a few pages are devoted to treatment which is along ordinary lines. Cauterization of the interior of the uterus with chlorid of zinc for hemorrhage or with nitrate of silver for obstinate discharge is recommended. Theilhaber does not advise sterilization by steam although he admits that it may be effective in skilful hands. He has found scarification of the vaginal portion very serviceable in some forms of bleeding as well as in obstinate leucorrhea.

THE GENERAL CHARACTER OF THE PROTEINS. By S. B. Schryver, Ph.D., D.Sc., Lecturer on Physiological Chemistry, University College, London. Cloth. Pp. 86. Price, 80 cts. New York: Longmans, Green & Co., 1909.

This is one of a series of monographs through which it is proposed to put before chemists and physiologists the latest knowledge concerning the chemistry of biologic products and its application to special tissues. Each monograph is to be complete in itself and to be written by a worker dealing with his special subject. The present number deals with the general characters of proteins, especially with reference to their value for isolation and identification of the individual members of the class. The descriptions are thorough and complete, so

much so that in some places the book may prove difficult reading for the general practitioner. For the chemist and physiologist, however, it will prove a very valuable collection of data on this subject.

AN EXPERIMENTAL STUDY OF SLEEP. (From the Physiologic Laboratory of Harvard Medical School and Sidis' Laboratory.) By Boris Sidis, M.A., Ph.D., M.D., Author of *Psychopathologic Researches in Mental Dissociation*. Paper. Pp. 106. Price, \$1. Boston: Richard G. Badger, 1909.

The uncertainty of the subject, an ill-defined feeling that sleep is not altogether a physiologic affair, together with the tendency of man to be interested more in active than in passive states—these facts are assigned by Sidis as the reason for the scant attention that is given to sleep in most textbooks of physiology. The advance of biologic knowledge no longer, however, allows even passive states to be ignored.

Sidis reviews the physiologic, histologic, psychologic and biologic theories of sleep, and discusses the difference between sleep and hypnosis and the peculiar states termed by him "hypnoidal," which lie on the borderland of waking, sleep, and hypnosis. A special characteristic of the hypnoidal states is the difficulty of fixing them for any length of time. They are the bridge that connects the waking state with hypnosis on the one hand and sleep on the other. To enter or pass out of sleep or hypnosis, one must traverse the intermediate, or hypnoidal, state. These subwaking states are characterized by the trait of suggestibility.

In the study of sleep, Sidis asserts, we must devote our attention to the investigation of these transitory, subwaking states. He undertook, therefore, in the physiologic laboratory of the Harvard Medical School, a series of experiments on frogs, guinea-pigs, cats, dogs, infants and adults. His point was to induce sleep and its allied states, subwaking and hypnoidal, keeping as close as possible to the conditions of normal and abnormal suggestibility. To this end, monotony, limitation of voluntary movements, and limitation of the field of consciousness were found to be essential. He records in separate chapters his experiments on the lower animals, which lead him to the conclusion that all these animals are subject to the same condition of sleep states; and that, phylogenetically, the hypnoidal is the primitive "rest state," out of which sleep and hypnosis have become differentiated. Experiments on children and adults confirmed the conclusions arrived at with increasing certainty by the experiments on animals.

In the second part of the work, Sidis discusses theoretically the results of the experiments recorded. He first defines the "threshold" of stimulation as "the minimal intensity below which stimulus remains ineffective;" in other words, the point at which reaction to stimulus first becomes perceptible. He then shows that the threshold rises under stimulation—i. e., that an increasingly greater stimulus is required to evoke a perceptible reaction, in proportion as a series of stimulations is kept up without variation. Finally, the stimuli fall altogether out of consciousness and fail to awaken the psychophysiologic systems which previously responded to them; then, so far as the particular stimulus is concerned, the cell may be regarded as asleep. What is true of the cell holds good also of systems of cells and neurons constituting a multicellular organism. Thus, sleep is produced by monotony.

The limitation of voluntary movements also plays an important part in the induction of sleep states. Throughout the scale of animal life, from the lowest to the highest forms, intelligence is intimately related to the degree of development of the muscular system and to the delicacy of motor adjustments. Experiments prove the same truth of the importance of motor elements in our mental life. It becomes much easier to memorize a series of syllables or numbers if we write them down, even though we do not look at them during the writing. Motor elements form the nucleus of consciousness. Sidis thus describes the difference between sleep and hypnosis: "The process of redistribution of thresholds takes place in the intermediary hypnoidal states. When the redistribution of thresholds in the hypnoidal states brings about a fall of thresholds, due to predisposition to, and further cultivation of, dissociations, the result is hypnosis; when the redistribution in the hypnoidal states brings about a rise of thresholds, the result is sleep."

The experimental evidence is particularly interesting. One point that seems to call for notice is the evidence, in the case of the experiments on puppies, that there is a true personal influence exercised by the operator, though this is in every way inferior to the factors of monotony and limitation of movement and consciousness.

The essay presents occasional lapses of grammar and of logical consecutiveness, and would bear revision in this respect; for these—as well as the discursive style adopted, which leads to much unnecessary repetition—inject some difficulties into the smooth reading of a very interesting study.

SELF-CONTROL AND HOW TO SECURE IT. By Dr. Paul Dubois, Professor of Neuropathology in the University of Berne. Cloth. Pp. 337. Authorized Translation by Harry Hutcheson Boyd. Price, \$1.50. New York: Funk & Wagnalls Co., 1909.

Prof. Paul Dubois seems to have desired to make his clerical followers, or we might perhaps better say, those who have adapted his teachings to such movements as Emmanuelism, understand more fully his position in regard to fundamental morality by writing this work. It contains a large amount of good moral teaching, but the author never lets us forget his unorthodoxy, and he intrudes his idea of what he calls moral determinism all through the work. This marked intrusion of his agnosticism in this volume appears to us a defect. It does not follow that the book may not be profitable reading. It is well written and full of good counsel and in some parts it is altogether excellent. He is a tolerant agnostic and, to a comparatively harmless extent, one of the kind mentioned by Sir Thomas Browne in his "Religio Medici"—one of those sceptics who, while professing to know nothing, think that they know more than all the world besides. The book is meant for the laity, but it will be profitable reading for the physician. The translation is admirably done.

A MANUAL OF PRACTICAL X-RAY WORK. By David Arthur, M.D., D. P. H., Medical Officer in Charge of X-Ray Department, West London Hospital, and John Muir, M.B., Ch.B., and B.Sc. (Pub. Health.) Cloth. Pp. 244, with illustrations. Price, \$2.50. New York: Rebman Co., 1909.

This work is offered as a practical hand-book of *x-ray* medical work and is written apparently with especial reference to the British public medical services. Its authors are well equipped for the task they have set themselves, write from first-hand knowledge of diagnostic *x-ray* work and are conservative. The work, therefore, as far as it goes, is good and is to be commended. Two hundred and twenty pages are given to the physics of *x-rays*, apparatus, and the diagnostic application of *x-rays*, and this part of the work is fairly complete. It is notable for clearness, sanity and conservatism. One chapter of seventeen pages is devoted to therapeutics. It is as sketchy as possible; contains little more than an enumeration of the affections that may be treated with *x-rays*, and is worthless. This chapter ought to have been omitted from the book. Then the work would have pretended to be no more than it is—a practical manual of *x-ray* diagnosis—and as such would have been open to no serious criticism.

CATHOLIC CHURCHMEN IN SCIENCE. Second Series. By James J. Walsh, M.D., Ph.D., LL.D., Dean and Professor of the History of Medicine at Fordham University School of Medicine. Cloth. Pp. 228, with illustrations. Price, \$1 net. Philadelphia: American Ecclesiastical Review, The Dolphin Press, 1909.

We are glad to see a second volume on the great contributors to science who were Catholic clergymen, following the one we noted some time ago. The historical side of medicine needs to receive more attention, and Dr. Walsh's contribution will help to make more clear the work done by some of the great founders in science. The books of this series have as an underlying motive an argument for the compatibility of science and faith. From the lives outlined in these chapters, Walsh remarks, it can readily be seen that most men may be devout believers in all the mysteries of religion, without having curtailed in any wise the powers for the searching investigations and inquiries that are so important for progress in science. The divisions of this second volume are: "Albertus Magnus, Philosopher, Theologian, Scientist;" "John XXI, Philosopher, Physician, Pope;" "Guy de Chauliac, Father of Modern Surgery;" Regiomontanus, Astronomer and Bishop;" "Clerical Pioneers in Electricity;" "The Jesuit Astronomers."

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SOCIETIES

Abbreviations:

- Acad.—Academy.
Am.—American.
A.—Association.
Conf.—Conference.
Cong.—Congress.
Coun.—Council.
Hosp.—Hospital.
Internat.—International.
M.—Medical, Medicine.
Pharm.—Pharmaceutical.
S.—Society.
Surg.—Surgical, Surgery, Sur-
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CURRENT MEDICAL LITERATURE

INDEX OF SUBJECTS

Explanation: The reading matter which appeared in THE JOURNAL is not indexed here, except the original articles and the abstracts of original articles. This index refers to the titles and the subjects of original articles published in the leading medical journals of the world, including THE JOURNAL, during the past six months. The titles of the articles and the names of the journals in which they appeared were listed weekly in the Current Medical Literature Department, and it is to them that references are here made. The figure in parenthesis refers to the paragraph; the number following, to the page in THE JOURNAL. For instance, "Abdominal Surgery in the Aged, (48) 923," refers to page 923 of THE JOURNAL, on which is found, in paragraph numbered 48, the title of the paper and the name of the author, viz., "Abdominal Surgery in the Aged. E. W. Hedges." This title is listed under the journal in which the article appeared, the *American Journal of Obstetrics and Diseases of Women and Children*, February, 1909. When "ab" follows a page number it indicates that the article was abstracted in THE JOURNAL; for instance, "Aberrations, Psychic, With Diseased Prostate, (45) 167—ab." On page 167, paragraph 45, will be found an abstract of this article, which appeared in the *Illinois Medical Journal*, November, 1908. Titles of articles which appeared originally in THE JOURNAL are indicated in the index by an asterisk (*) before the page number; for instance, "Abdominal Tuberculosis, Acute Forms of, *291," refers to page 291 of THE JOURNAL, on which is found the complete original article. The index to authors of all articles, both original and those listed under Current Medical Literature, appears separately on pages 2221 to 2236 of this index.

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PROGRESSIVE THERAPEUTICS

ORTHOFORM AN ANESTHETIC AND ANTISEPTIC, ITS ACTION IN DYSPHAGIA.

By DRS. LICHTWITZ and SABRAZES of Bordeaux

The authors conclude that Orthoform is a substance of mediocre bactericidal properties, but possessing a most remarkable sedative action on the surface of ulcerous lesions or defects of tissue. It has been applied in tuberculosis of the larynx, cancer of the larynx and after electrothermic amygdalotomy.

It is extremely difficult to alleviate the pain associated with the presence of tuberculous ulcers on the epiglottis arytenoid bodies; many patients prefer to die of hunger rather than to bear the pain of deglutition. The relief afforded by cocaine, morphin, antipyrin solutions, carbolated glycerin and the like is only partial and transitory. Orthoform acts better and during a much longer period, without giving rise to paresthesia like cocaine; the duration of the analgesia frequently exceeds 24 hours, and the drug is free from toxicity.

A few instances are given showing the efficacy of Orthoform. M. B., 18 years of age, with pulmonary tuberculosis and infiltrated and ulcerated epiglottis. The patient had eaten nothing for a fortnight; liquids were passed with difficulty, especially wine, and occasioned exquisite pain. Orthoform powder was insufflated on the epiglottis and arytenoid bodies. Two minutes after the man could drink water without pain and until the next day could eat and even drink wine with comfort. On several occasions one application of Orthoform produced analgesia for two consecutive days.

Another patient, with epithelioma on the margin of the arytenoid body and ventricular band on the right side of the larynx, had experienced for a month intense pains shooting across to the right ear, especially when swallowing saliva. Each application of Orthoform powder in situ brought relief for about two days. The pain subsequent to electrocautery was also relieved, the powder not being carried away mechanically by the movements of deglutition and salivation.

These results confirm the assertion made by Einhorn and Heinz relative to the anesthetic properties of Orthoform. It is indicated as topical in painful wounds not only of the integument, but also of the superficial and deeper mucous membrane; it is an analgesic of the first order and a mediocre antiseptic.

As regards dosage, Orthoform being absolutely nonpoisonous, may be applied to large surfaces or ulcers in any quantity. In ointment from 10 to 20 per cent. Orthoform, preferably with a lanolin or lanolin-adepts basis, is indicated. For internal uses doses of 15 to 25 grains Orthoform or Orthoform hydrochlorid may be given several times daily.—*Bulletin Medical*, 1897, No. 94.

ORTHOFORM REPORTS.

Dr. S. Solis-Cohen, of Philadelphia, in *American Medicine*, November 9, 1901, states that for temporary relief of the pain attending inflammatory and ulcerative affections of the throat, Orthoform applied in various ways is probably the best agent now at our command. For two years, he states, that he has been using lozenges containing from 0.008 to 0.06 gm. ($\frac{1}{8}$ to 1 gr.) each of Orthoform in cases of acute and subacute sore throat (tonsillitis, pharyngitis) whether of rheumatic or other origin, and in cases in which pain in swallowing has been caused by ulceration or infiltrative conditions involving the epiglottis and arytenoid eminences. In some cases adrenal extract has been used at the same time. He states that this treatment has afforded such relief as to enable the patient to eat with comparative ease. The improvement has been especially noticeable in cases of tubercular laryngitis, in which he prescribed the Orthoform

lozenges ten minutes before meals; it permitted the patient to take the food with a minimum of discomfort. The advantage of the lozenge over insufflation or other methods of application is that the patient can himself make use of the analgesic agent.

W. Freudenthal, in *Annals of Otology, Rhinology and Laryngology*, February, 1901, uses an emulsion of menthol and Orthoform on the mucous membrane of the ulcerated larynx and states that the anesthetic properties of the latter can not be doubted. The following emulsion produces a large area of local anesthesia and is very efficient:

Orthoform	12.0 gm.
Menthol	1.0-5.0 gm.
Ol. Amygd. dule	30.0 gm.
Vitelli ovarum	25.0 gm.
Aq. dest., q.s.ad	100.0 gm.

Fait. emuls. Sig.: Apply locally.

PEGNIN.

Von Dungern's process for treating milk (*Langstein Jahrbuch fur kinderheilkunde*, Vol. 4, 1902), is designed to prevent the deleterious hard clotting of the cheese-making materials in the stomach. The large curds which otherwise form when milk first reaches the stomach are by means of this process, formed outside of the body, and can then be speedily reduced by shaking and stirring.

The casein of milk so treated is finely divided when taken, is therefore easily digested and may be given to the youngest child without harm.

Milk treated with Peginin is administered successfully, to persons who cannot tolerate ordinary milk, and yet for whom a milk diet is apparently indicated. It is free from deleterious germs, and contains nothing which interferes with digestion.

Directions for use: All bottles and stoppers are to be well cleansed by boiling.

The milk required for the day is immediately upon delivery, placed in a large glass bottle; the bottle should not be quite full. This is placed in a vessel containing cold or lukewarm water, and the water raised to the boiling point, which should be continued for half an hour. Milk for infants should not be diluted with water at this stage.

After boiling, the milk is cooled to about 40° C. or 104° F. This cooling should be done gradually, in order to prevent the breaking of the bottle. If the milk becomes colder than 104° F. it is warmed again to this temperature.

To each quart of milk is added five measures of Peginin, a measure being supplied with each bottle, or one measure full to each 8 oz. of milk. After the powder has been well mixed by shaking the milk for a short time, a delay should take place sufficiently long for the milk to coagulate. This takes place within a few minutes, usually two to three. Should the milk not coagulate promptly it is highly probable that water has been added to it.

After the milk has coagulated the bottle is closed with a clean stopper, preferably glass or rubber, thoroughly shaken for a few minutes, or until all the clots have completely disappeared.

The milk is now ready for use. It must not be again strongly heated. If dilution with water is necessary, as with very young children, it should be done at this stage, but not more than an equal volume of water should be used for dilution. Boiled water, of course, is preferable for this purpose.

Milk thus prepared is kept in a well stoppered bottle in a cool place until required, when it is again shaken, put into the feeding bottle and warmed to 37.5° C. or 99° F. and given to the child.

The warming of the milk to the body temperature is best done by holding the bottle in lukewarm water. Stronger heating causes the finely divided curds to clot again.

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PROGRESSIVE THERAPEUTICS

ON THE VALUE OF AMYGDALATE (MANDELATE) OF ANTIPYRIN (TUSSOL) IN THE TREATMENT OF WHOOPING COUGH.

By DR. KARL URBAN.

Aside from diphtheria there is probably no disease which occurs by preference in children in which so many specifics have been vaunted in various ages as whooping cough.

The reason for this lies chiefly in the obscurity of its etiology, which is still dark. In general its epidemic distribution, its contagiousness and its course all speak for its infectious nature, but without any uniform view as to the seat and particularly the nature of the exciting cause. Concerning the latter Kuloff regards it as an ameba and Ritter as a diplococcus. Discoveries announced since the publications of these authors appeared have not progressed sufficiently for the settlement of the question.

With the obscurity as to etiology, the latter being the sole basis of rational treatment, it is not surprising that no unity exists as to therapy; and that as already mentioned a stately number of remedies exist, increased especially of late years. It is not the aim of this article to discuss the various remedies vaunted, mostly as specifics. For this aspect of the management of whooping cough, I refer the reader to Dr. Venetianer's article in the *Wiener med. Zeitung*, 1897, No. 30. I will only mention that in the course of time, I have personally investigated a large proportion of the remedies; and that penciling the throat with glyceric tannin, and also the use of quinin and antipyrin have given me very good results in many cases. But a not inconsiderable number of cases resist every form of therapy; so that I was obliged to subscribe to the maxim that whooping cough lasts until it stops of itself despite all pains to antagonize it. Aside from this many of the dispensary cases (which largely make up my material) stay away as soon as they do not note steady improvement, and either seek treatment elsewhere or renounce it entirely.

In the spring of last year I tested in certain cases of especially obstinate whooping cough, Tussol (see description New and Nonofficial Remedies), a remedy first recommended by Rehn and later by Rothschild; and was much astonished at my results.

Even by the sixth or eighth day a notable and permanent diminution in the cough was to be noted. At the outset I ascribed this to the operation of happy chance such as is not seldom experienced when the medicine is changed, even when inert substances are given. In order to satisfy myself as to whether Tussol actually possesses therapeutic value, I made use of it in a large number of cases (102). The non-medical treatment comprised sojourn in pure air, not too dry, with the largest, airiest and sunniest sleeping room possible (this often impossible even among the well to do); plentiful enjoyment of open air in good weather with eventual sojourn in the country; good roborant food; frequent lukewarm baths, etc., etc. If complications were present, as bronchitis or lobular pneumonia, these required some special medication; but otherwise the only drug given was Tussol.

The material according to age was:

Under 1 year.	23
1 to 4 years.	51
4 to 8 years.	26
8 to 12 years.	2

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Of this number 80 were simple or complicated only with slight bronchitis and were treated with Tussol alone. The others were complicated by extensive bronchitis or lobular pneumonia, and were further subjected in consequence to appropriate treatment. In order to control the action of Tussol, I had the parents, etc., of the children note the number of daily and nocturnal paroxysms, further dividing the day into forenoon and afternoon and the night in the same fashion.

The strength, frequency and duration of paroxysms were noted and also the presence or absence of vomiting. In about half the cases I obtained fairly good reports. In others the reports were exact for a part of the time only, other parts being summed up under the term "better." In 15 cases no reports were obtained, patients having disappeared entirely from observation. Five of these were known to have gone to the country.

It would lead me too far to give all the details of cases upon which this study is based, and I will therefore give only a brief summary. I have found that Tussol exerts a decidedly favorable influence on the number and severity of the attacks as well as on the duration of the disease, and this not alone in the simple but in the complicated cases as well. For the most part after the 8th to 12th day, but at times even as early as the 3rd or 4th day the number of attacks began to abate. The disease entirely disappeared in cases of medium severity in three or four weeks, and in severe or complicated cases in six or seven weeks. That the favorable action was due chiefly to the Tussol was probable from the fact that certain patients, whose parents were unable to have the remedy renewed experienced a rapid recrudescence of the original severity of the disease, and were again benefited when the remedy could be obtained.

In several cases despite the use of Tussol, the cough became worse instead of better during the first three or four days. Such cases were in children who were just entering upon the convulsive stage of the disease when treatment was begun. There were also some cases in which at the outset Tussol produced striking results (reduction of daily paroxysms from 25-30 to 10-12); yet after ten days or so of treatment the attacks reappeared in their old frequency, although less severe. Such relapses lasted for several days and then the cough suddenly abated. Tussol acts upon the violence and duration of the paroxysms more decisively than on the number. This behavior was as a rule noted by the parents themselves.

It appeared to me that under the Tussol treatment the complications of bronchitis and bronchopneumonia were less likely to occur. I saw hardly ten cases, and as far as I know none was fatal.

The favorable action of Tussol on the complications could not be overlooked. Of the 102 cases 5 ended fatally, but the lobular pneumonia which caused all the deaths was present from the first, before the patient came under treatment. Aside from the favorable influence upon the cough, Tussol (as already shown by Rehn), favorably influences the companion symptoms of vomiting and anorexia, the latter often so marked in pertussis. I believe Rehn was not far wrong when he claimed that the sedative, reflex depressing action of antipyrin was supplemented by the action of amygdalic acid upon the secretory excitation of the gastric mucosa.

Dose and Administration: I invariably prescribe Tussol in aqueous solution, with simple syrup. The not unpleasant taste may be further disguised by syrup of bitter orange peel, etc. As a rule, I prescribe for two days, and for 4 times as many centigrams as the child is months old, or 4 times as many decigrams as years of age, dissolved in 60 c.c.m. water. Of this quantity I give 4 teaspoonfuls a day, one in the forenoon, and 3 in the afternoon in 2-hour intervals. I have tried larger doses without any added advantage. As soon as the paroxysms begin to abate with some permanence, I reduce the daily dose cautiously in order to resume the original amount should an exacerbation occur. By following these principles I have seen no ill effects from Tussol. The latter is readily taken and well borne.

When I compare the results obtained with Tussol by those formerly secured with Antipyrin and quinin, I am forced to give preference to Tussol.

The aim of this paper will be fulfilled if I thereby contribute something to the welfare of little patients, by directing to Tussol the attention of my colleagues.—Reprinted from *Wiener med. Blatter*, Vienna, 1897, No. 40.

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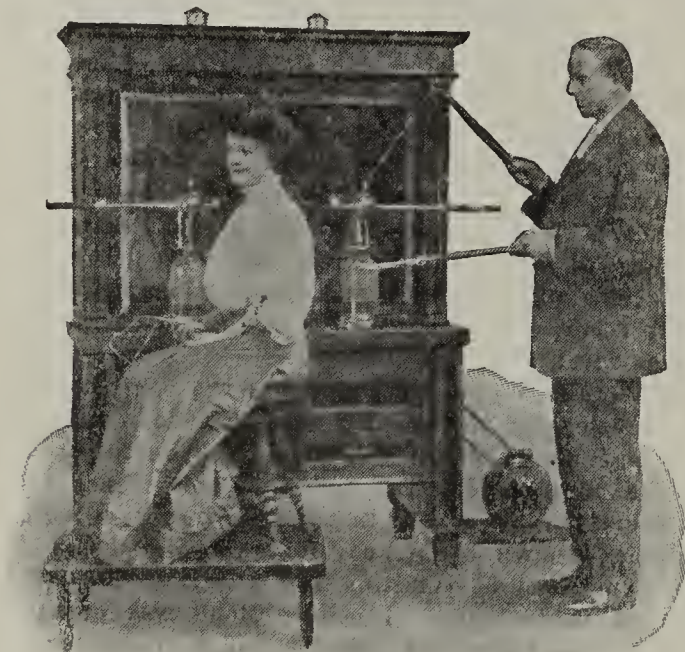
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PROGRESSIVE THERAPEUTICS

THE INCREASING USE OF LOCAL ANESTHESIA IN GENERAL SURGERY.

To one who has not given close attention to the subject, it is astonishing how many of the operations in general surgery, that formerly required ether or chloroform, can be done painlessly and in perfect safety under a local anesthetic, and without serious and disquieting consequences, such as vomiting, intestinal disturbances, pulmonary difficulties and suppression of urine.

Considering these advantages, it seems strange that the use of local anesthesia in general surgery remains so limited in the many cases suited to its employment. There are, however, reasons for this: the newness of reliable methods, the skepticism of surgeons, and above all, perhaps, the mental attitude of patients against operations during consciousness—a psychological inheritance having its foundation amongst the horrors of the ancient operating rooms. In fact, it will probably take years to establish that confidence in local anesthesia which it really merits, just as it will require another generation, with different ideas of height and equilibrium, to become accustomed to aerial navigation. In the meantime, however, surgeons should avoid the use of chloroform and ether as much as possible; not only as a matter of safety, but in order to accustom people to the employment of the better method, remembering always that success will depend not only upon having a suitable case, but also a suitable patient. This is being done abroad much more extensively than in this country, many surgeons doing much of their work in this way.

When cocaine was discovered, the problem of local anesthesia was thought to have been definitely solved, and many brilliant operations were done under its influence: but it soon became evident that the strong solutions employed were not free from danger, a number of deaths from poisoning being reported from time to time. Schleich now introduced his method of infiltration with very weak solutions, which, although safe, was not always satisfactory. It was then noticed that if the circulation was impeded by an Esmarch strap, a smaller amount of cocaine sufficed for a more prolonged anesthesia, while the danger of poisoning was materially decreased. Meanwhile, experiments were made with other less powerful drugs, such as eucain, alypin, Novocain, etc.; and finally, the discovery was made that the addition of a few drops of adrenalin produced through vascular contraction, much the same results as did the use of the Esmarch strap, even in situations where it was impossible to employ the latter, thus widely extending the usefulness and practicality of the method.

The technic varies according to the nature of the operation, and it must be carried out with great exactness, failure to do this often accounting for lack of success.

The best solution for general use is probably that recommended by Heinrich Braun, consisting of Novocain 0.25 gm. and normal salt solution 50 gm., together with 5 drops of adrenalin chlorid, the amount of Novocain being sometimes increased or decreased in special cases.

Very recently a new method of producing extensive local analgesia has been introduced by Bier, which promises much, as it permits of the performance of even such major operations as the amputation of limbs and the resection of joints. A weak solution of the anesthetic—Novocain (see description New and Nonofficial Remedies), for instance—is introduced through a vein into the field of operation, as in ordinary transfusion, the general circulation being protected by the use of an Esmarch bandage.

In fact, the whole subject of local anesthesia in general surgery is receiving so much attention at present that one can safely predict a great increase in its use as soon as its advantages and possibilities become more widely understood by the laity and by the profession.—Editorial from *Colorado Medicine*, Denver, October, 1908.

NOVOCAIN SUCCEDANEUM FOR COCAINE.

Novocain is the hydrochlorid of p-aminobenzoylethylaminoethanol and crystallizes from alcohol in colorless needles possessing a melting point of 150° C. It can be heated without decomposition to 120° C. It dissolves in equal parts of cold water, and the solution possesses a neutral reaction; in cold alcohol it dissolves in the proportion of 1 to 30. Caustic alkalies and their carbonates precipitate the free base from the aqueous solutions in the form of a colorless oil which soon solidifies to a crystalline mass. Alkaloidal reagents, such as potassium mercuric iodid, picric acid and potassium iodid solution, produce precipitates even in very dilute aqueous solutions of Novocain.

Novocain produces no mydriasis, no disturbance of the accommodation and no increase of intraocular pressure.

The drug possesses the same action upon the peripheral sensory nerves as cocaine; the 0.25 per cent. solution suffices to completely anesthetize even the thick nerve trunks, such as the sciatic nerve, in about 10 minutes. Applied locally, Novocain produces no by-effect; and particularly there are no symptoms of irritation whatever.

The general effect of Novocain on the system after its absorption is scarcely perceptible, neither the circulation nor the respiration being affected. The cardiac activity does not suffer. Practically no changes are observed in the blood pressure and respiration curves traced by the kymograph, when 0.15 to 0.2 gm. Novocain is injected subcutaneously into rabbits.

Experiments show that in all forms of employment Novocain is about six times less toxic than cocaine.

Pharmacological and clinical trials show further that Novocain not only does not reduce the action of suprarenalin, the active adrenal substance, but on the contrary increases it.

In ophthalmic practice 1 per cent., 5 per cent. and 10 per cent. Novocain solutions produce no dilatation of the pupils. If desired there may be added to each 10 c.c. of the solution 6 to 8 drops of suprarenalin solution 1 to 1,000.

In rhinolaryngology 5 to 10 per cent. solutions are employed for anesthesia of the mucous membranes; 10 to 20 per cent. Novocain solutions for anesthesia of the larynx and eain not only does not reduce the action of suprarenalin, the solution 1 to 1,000 may be added per 1 c.c.

Syringes sterilized with sodium carbonate solution must be rinsed with sterilized water or physiological salt solution before Novocain solutions are drawn in.—*The Homeopathic Eye, Ear and Throat Journal*, December, 1907.

LOCAL ANESTHESIA OF JOINTS.

Bier (*British Medical Journal*, Aug. 22, 1908), at the thirty-seventh German Congress of Surgery, held in Berlin in April, 1908, described a new method of applying local anesthesia, which he advised for operation on joints, especially the elbow or knee. The limb is first rendered bloodless by an Esmarch bandage, then a constricting bandage is left above and below the joint, and the first bandage is removed. A suitable vein is then exposed—the median or saphena answers well for the purpose—and 100 cubic centimeters of a ½ per cent. Novocain solution is introduced into the vein. Complete anesthesia results as high as the upper compressing bandage. In a few cases Bier only obtained analgesia, but in the majority complete anesthesia was present within a few minutes of carrying out the injection. The Novocain is dissolved in physiological salt solution, and 100 to 150 cubic centimeters suffices for all cases. Intoxication need not be feared, as the solutions used are weak. The lower bandage should be removed before the upper one is loosened, but Bier finds that the solution can be washed out of the vein with saline fluid if any apprehension of a toxic effect is present. In the case of amputations, the fluid escapes of itself.—Abstracted by the *Therapeutic Gazette*, Jan. 15, 1909.

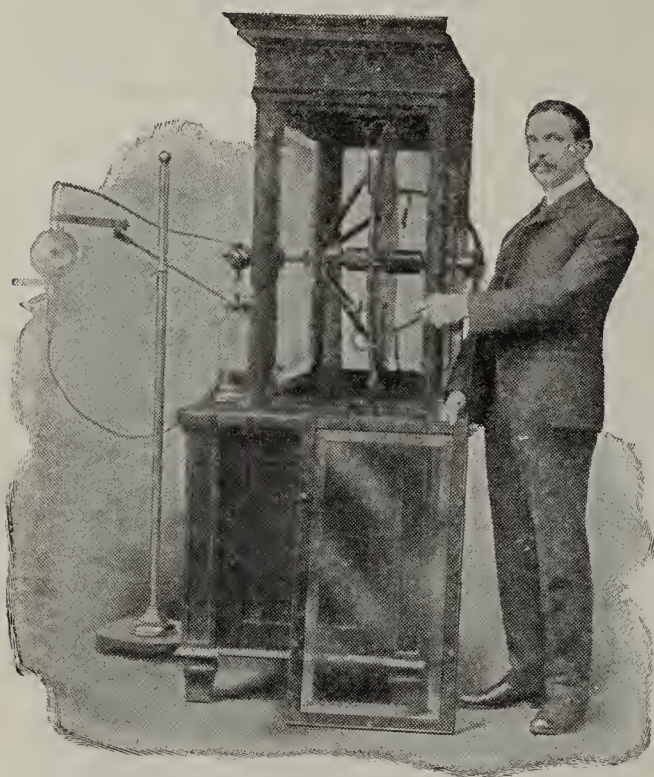
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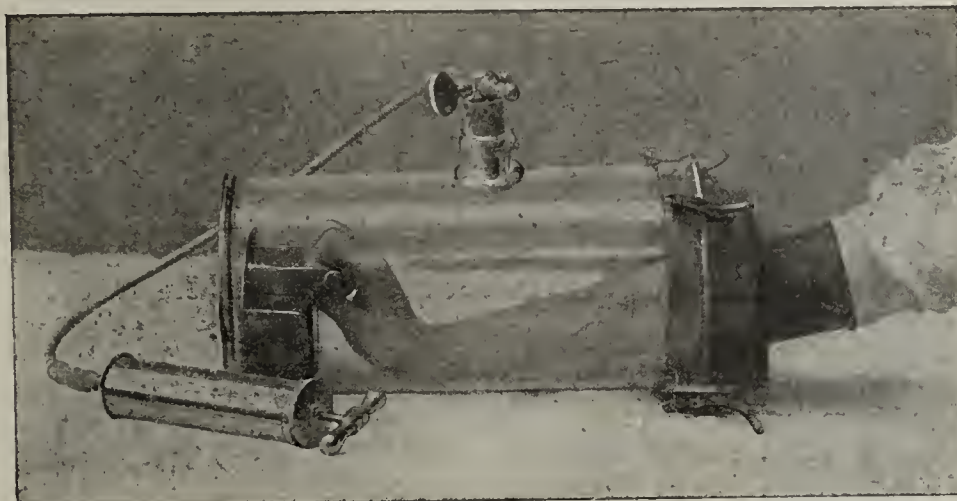
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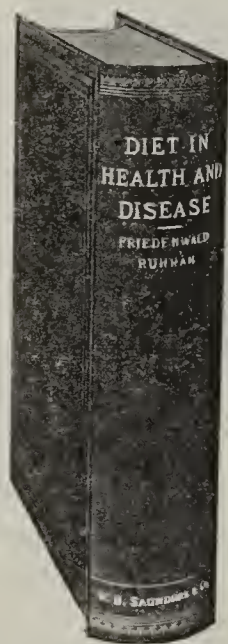
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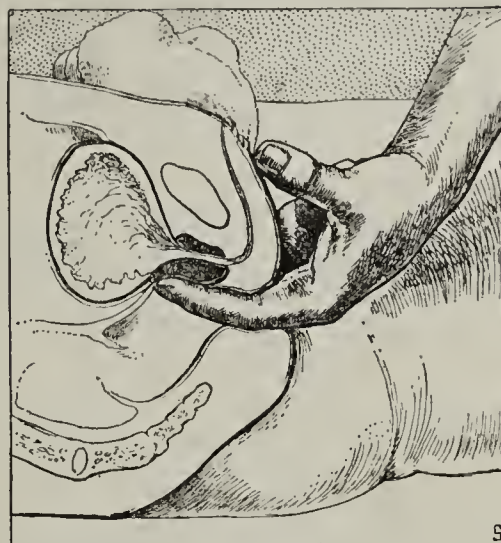
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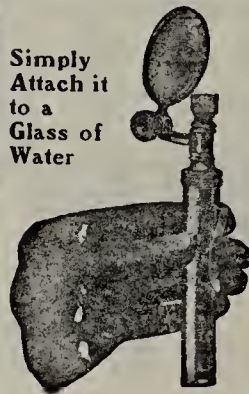
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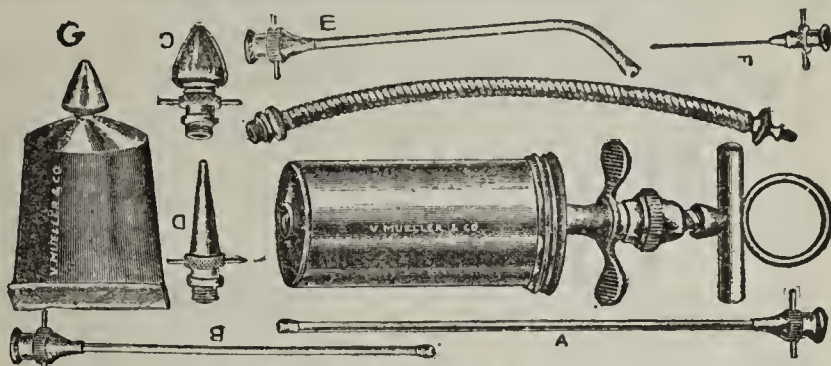
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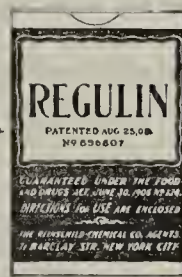
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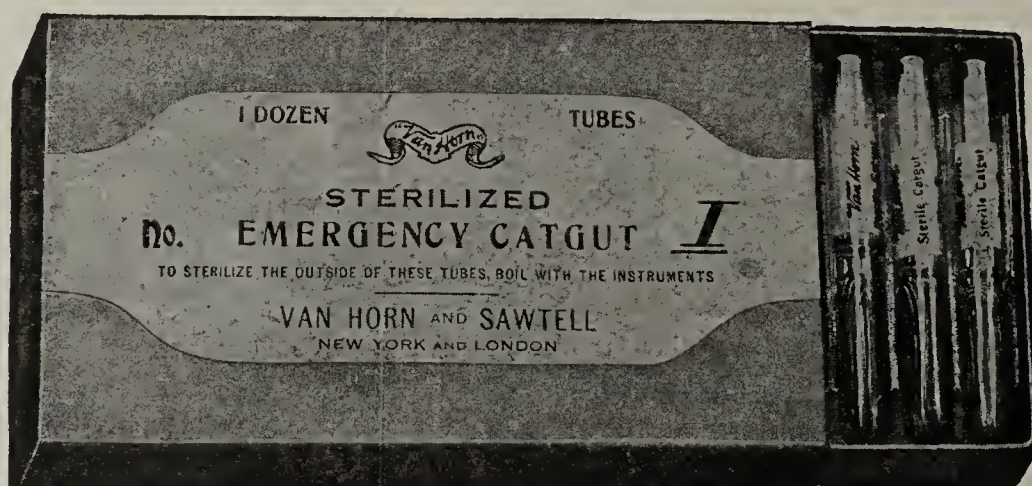
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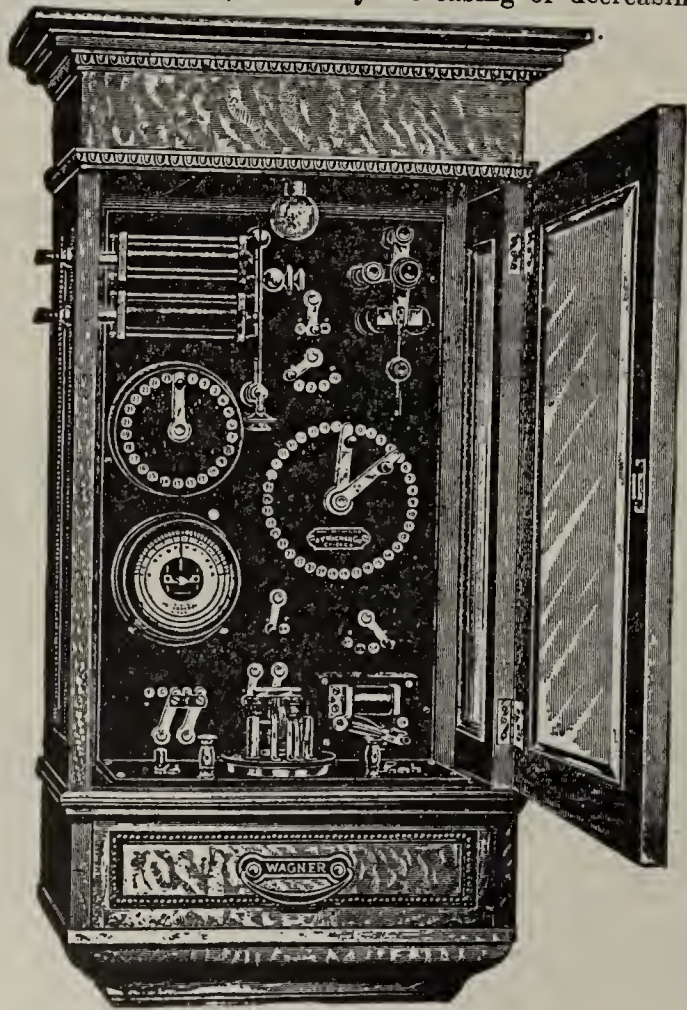
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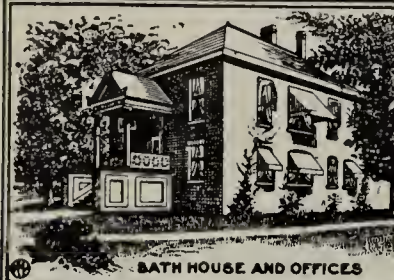
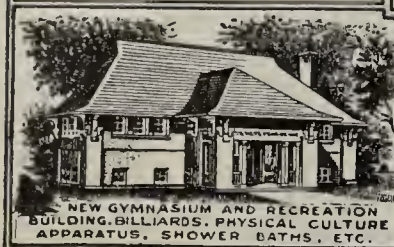
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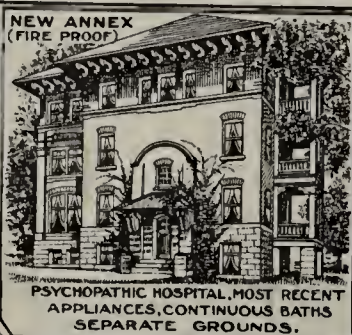
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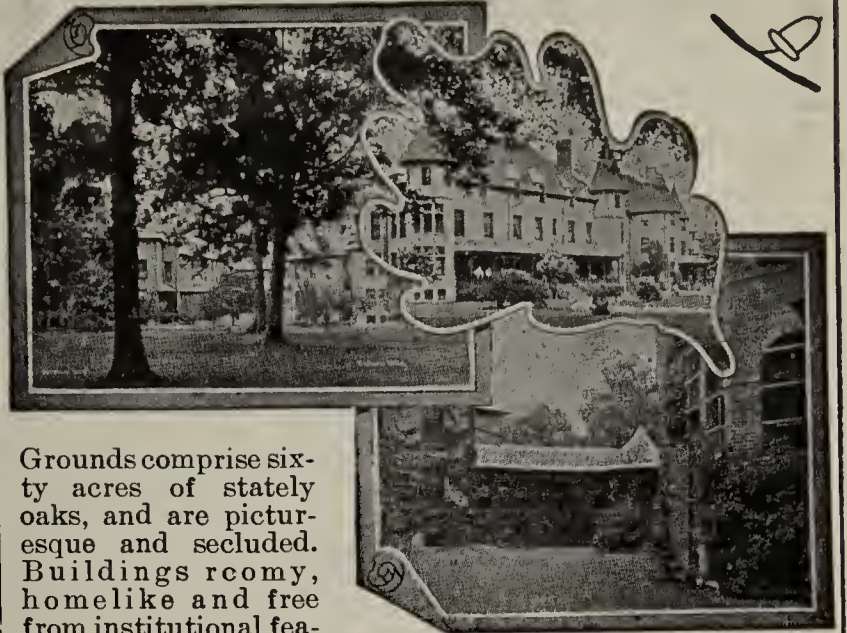
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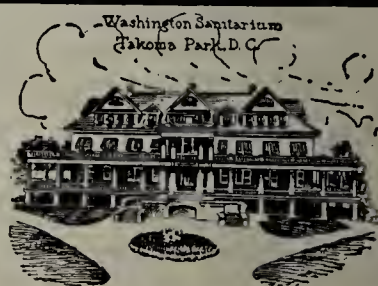
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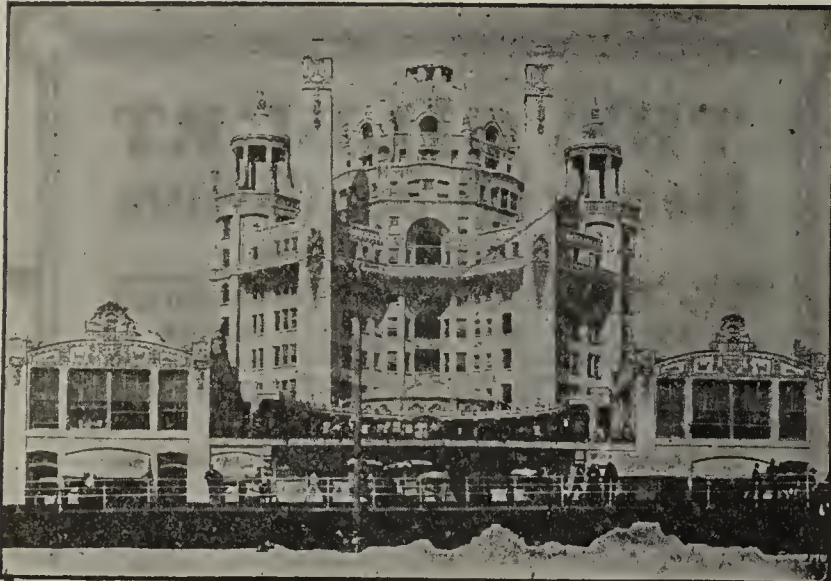
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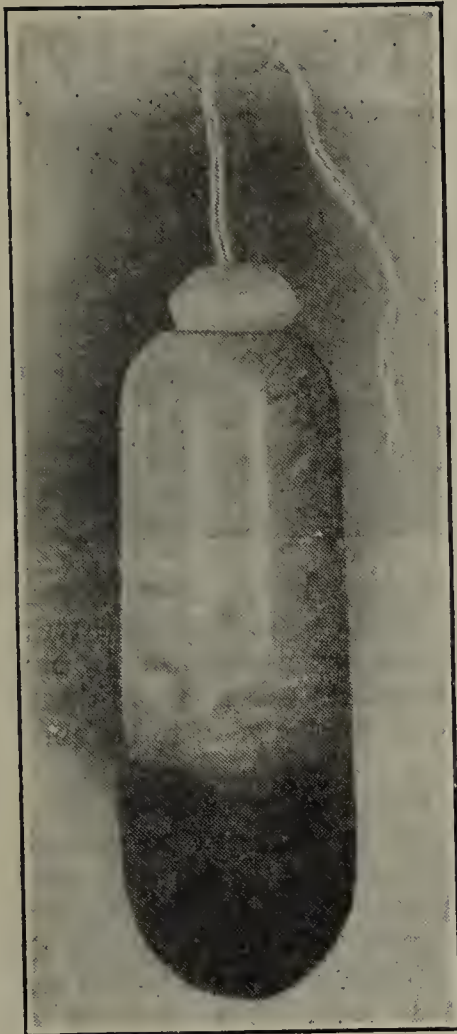
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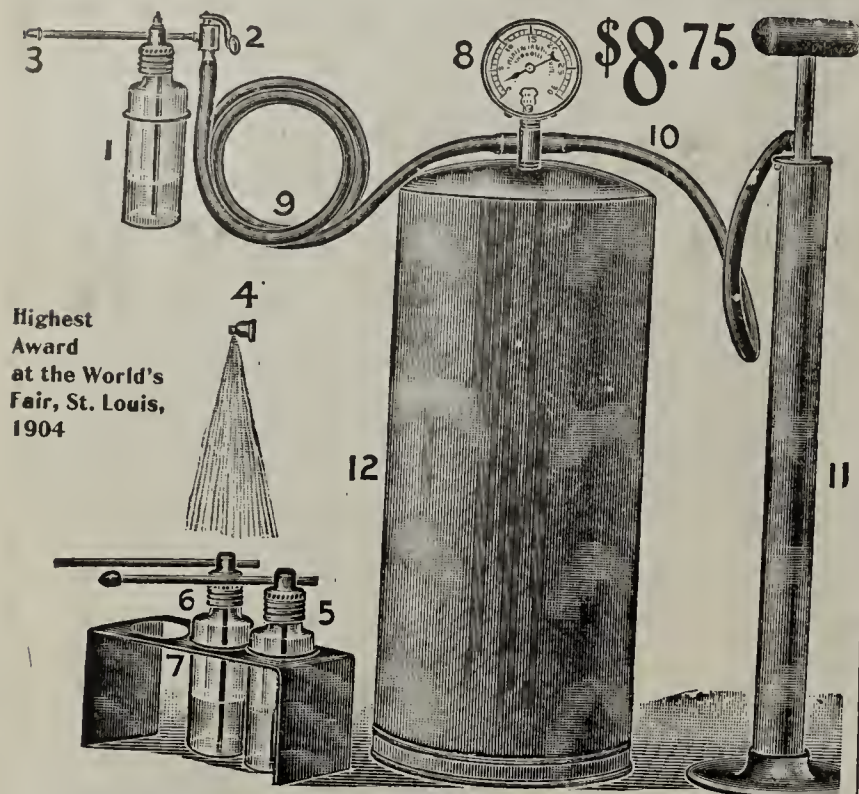
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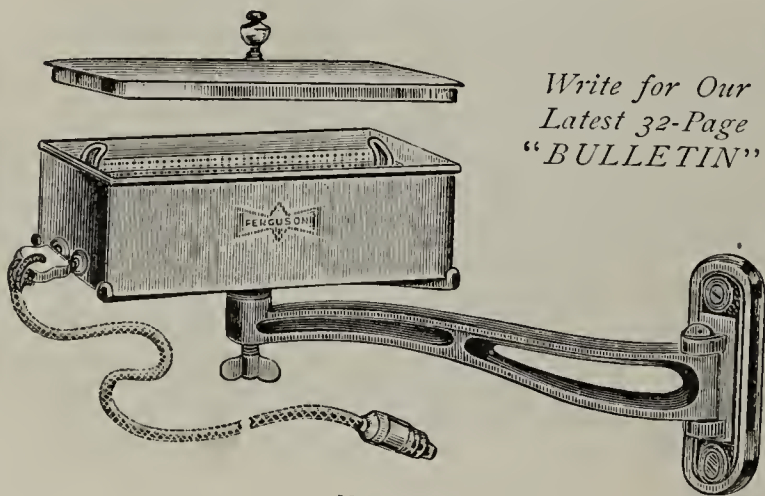
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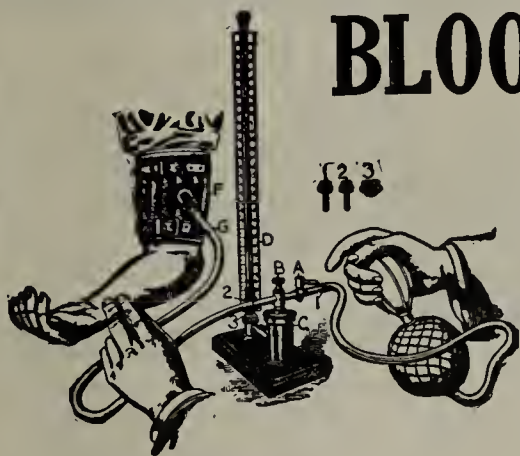
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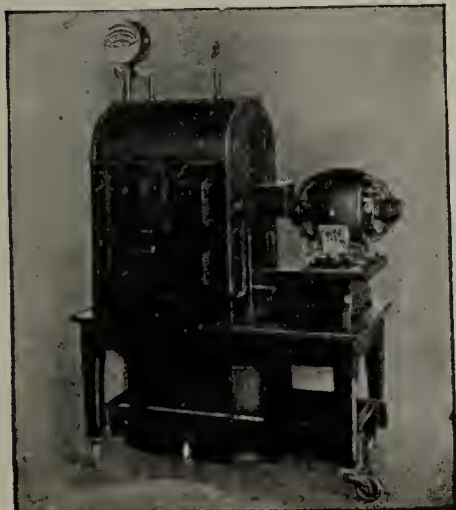
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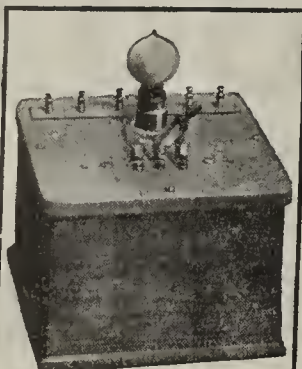
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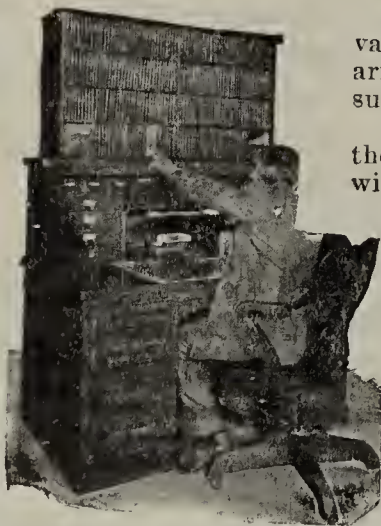
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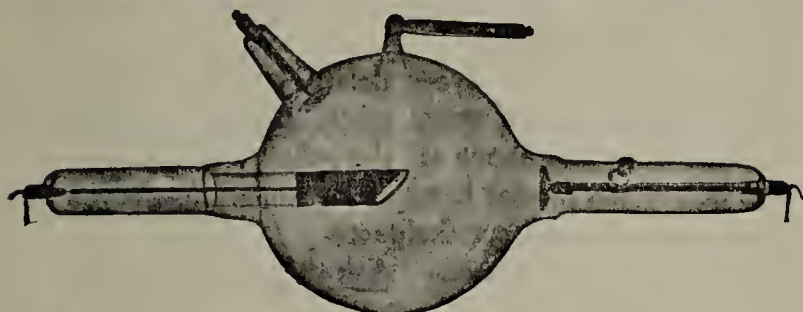
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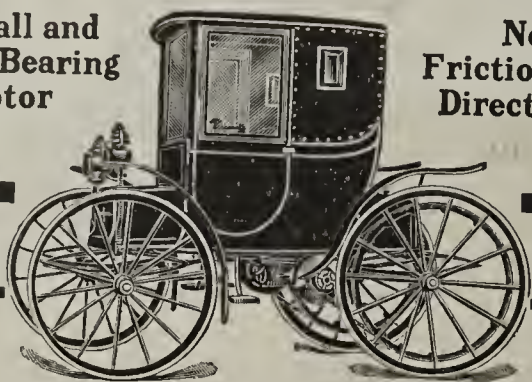
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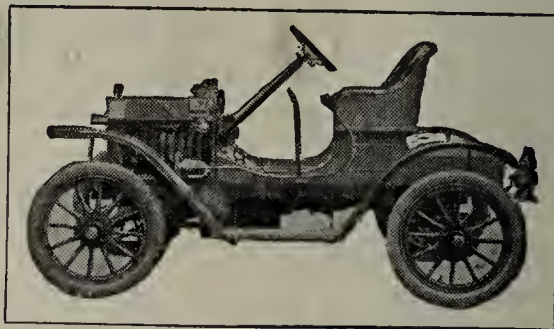
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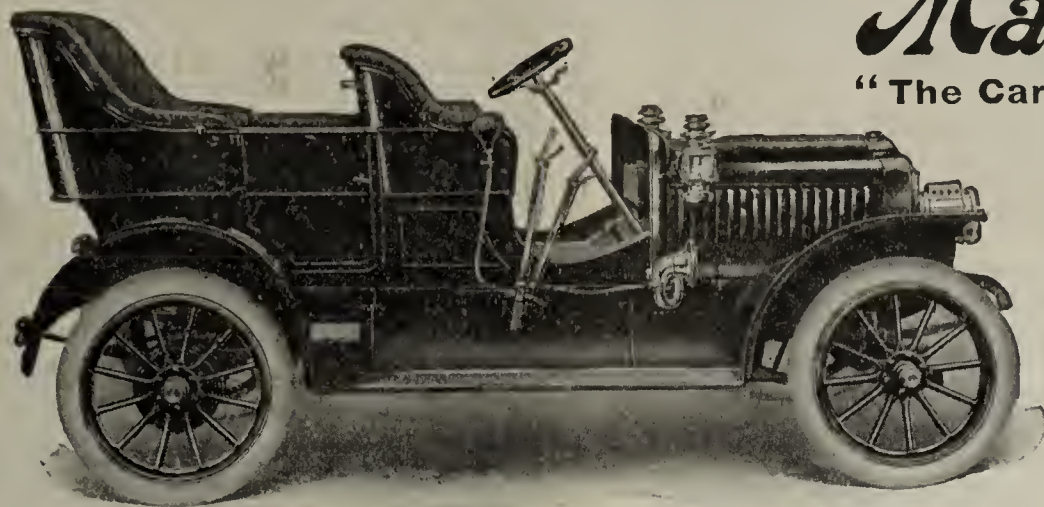
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"The power unit—engine clutch and transmission—was removed from the car and completely taken apart. It was the intention of the committee to measure all lost motion or wear in the main and important bearings before the boxes were opened; but as these bearings showed no appreciable wear the plan was abandoned."

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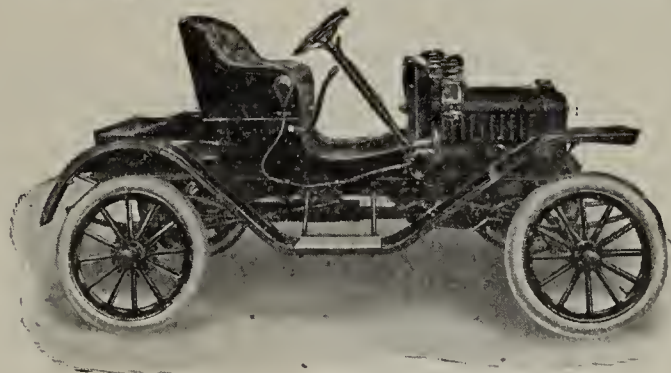
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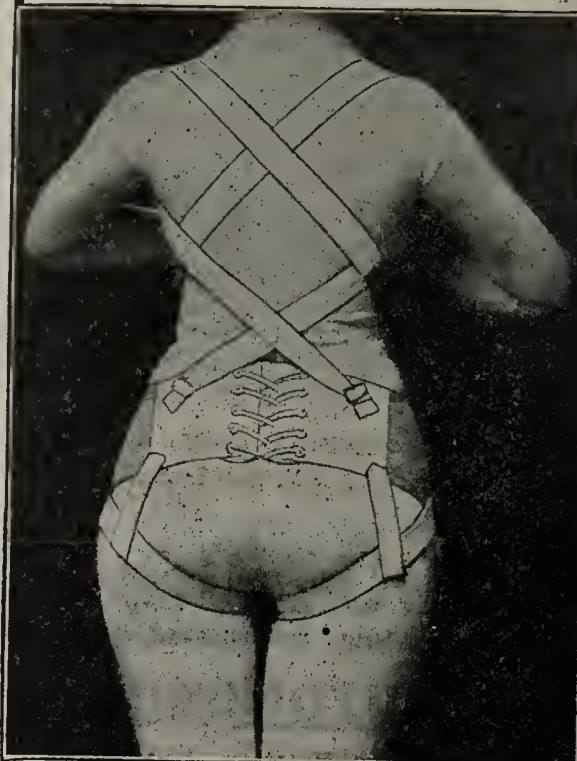
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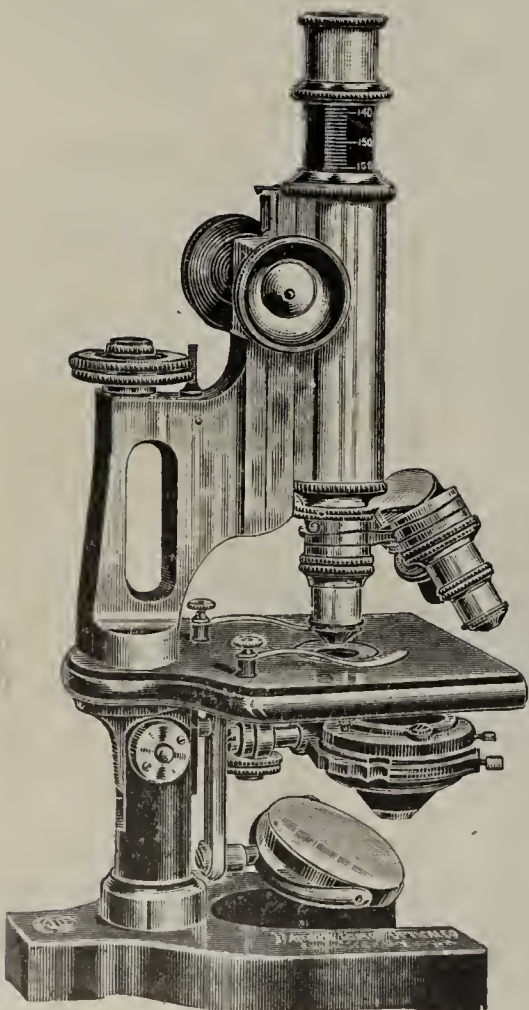
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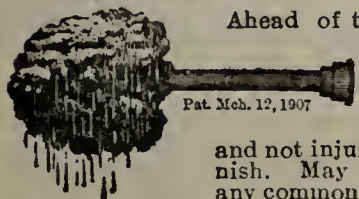


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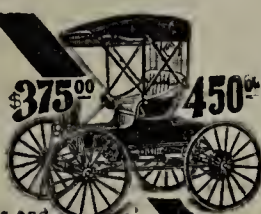
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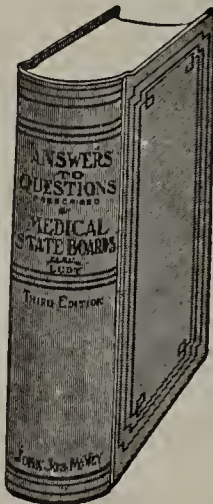
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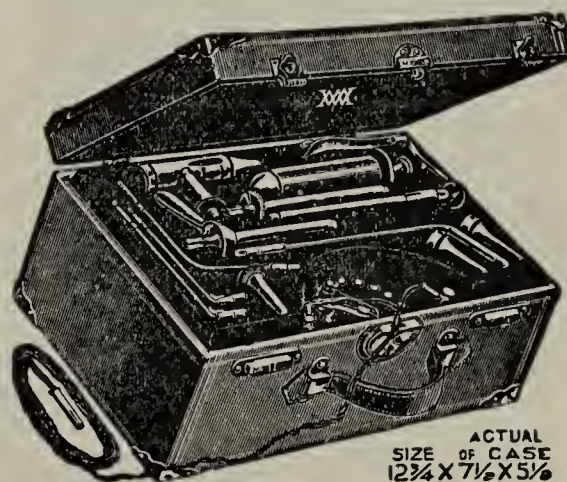
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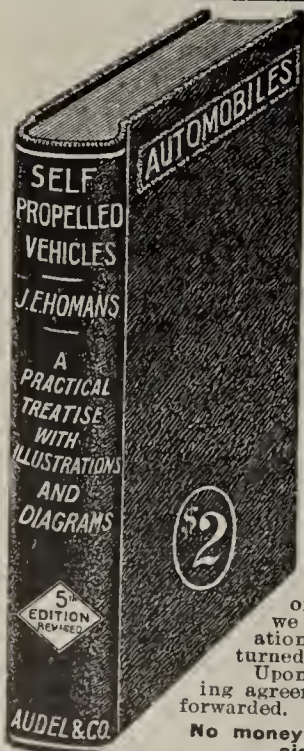
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(Continued on next page)



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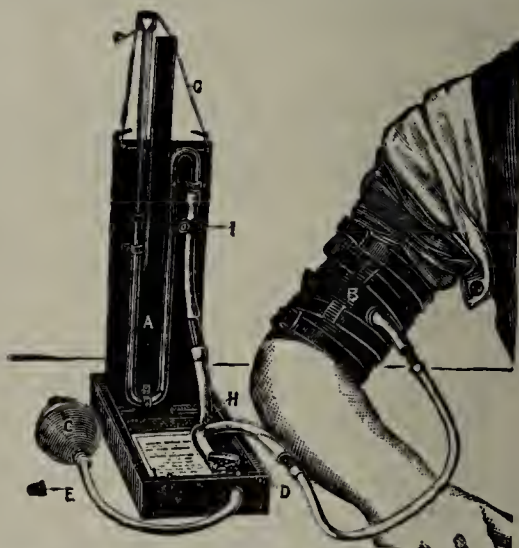
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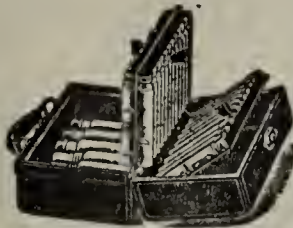
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(Continued on next page)

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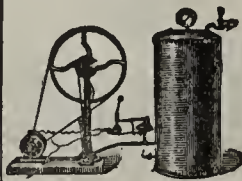
tion for woman physician in a live town of 5,000, and growing rapidly. Will transfer contract as medical examiner in two lodges, and introduce. Price, \$365, including office outfit, x-ray static machine and furniture of three living rooms. Reason, to specialize and move to city. Rent, \$25. Add. 7282, % AMA. N

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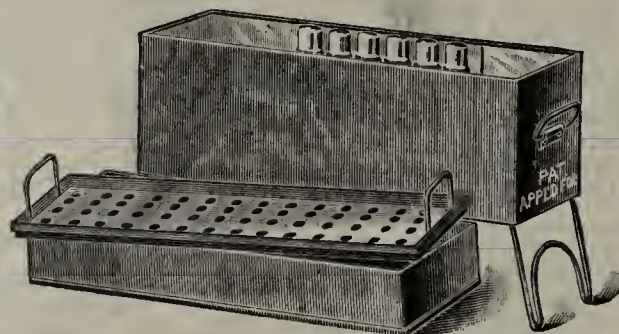
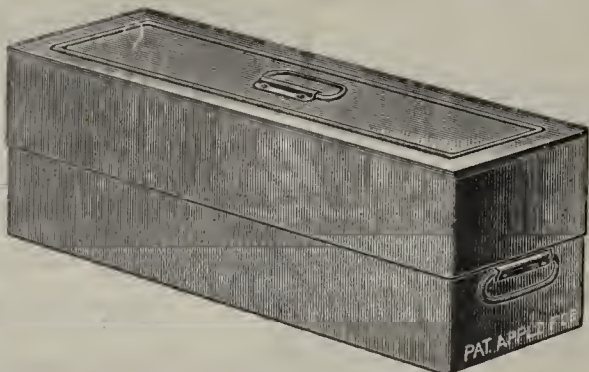
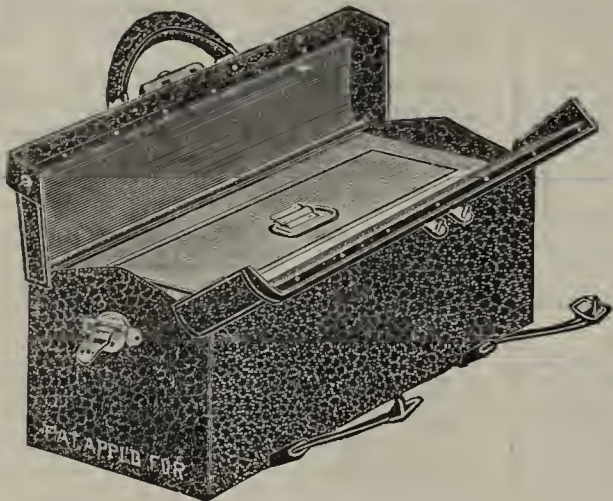
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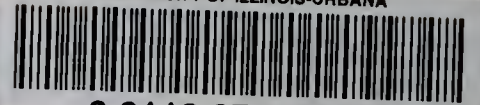
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